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OF
UPPER CANADA.



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TO THE HON. P. M. VANKOUGHNET,

Minister of Agriculture, &c., &c.

SIR :—

I have the honor to present to you the Transactions of the Board of Agriculture of Upper Canada, for the years 1856-7.

The facts and information embodied in the present volume shew the steady progress made in Agriculture since the date of the last Report, and furnish rational ground for indulging in cheering expectations of the future. The Agricultural Societies, upon the whole, are in a much improved condition, as shown by the Annual Returns; and the Provincial Association continues steadily to increase in usefulness and public favor.

The Board having made arrangements by which the AGRICULTURIST will, in future, be prepared and published, under its own direct supervision, and annexed to its Reports and Transactions, it is confidently hoped that by this means, that provision of the Statute, 20 Vic., cap. 32, will be more effectually carried out in practice, which requires "the Board to keep a record of its transactions, and from time to time publish, in such manner and form as to secure the widest circulation among the Agricultural Societies and farmers generally, all such Reports, Essays, Lectures, and other useful information as the said Board may procure, and adjudge suitable for publication."

The establishment of a BOARD OF ARTS AND MANUFACTURES, under this Statute, and the several improvements therein made in relation to the organization and management of Agricultural and Horticultural Societies will, there is good reason to hope, tend, in a yet higher degree, to the advancement of our agriculture, manufactures and commerce, and thereby increase the wealth and prosperity of the Province.

I have the honor to be,

Sir,

Your most obedient servant,

GEO. BUCKLAND,

Secretary, B. A., U. C.

Toronto, May 10th, 1858.

ERRATA.

The headings to pages 177, 181, 185, and 189, should be "County of Huron," instead of "County of Addington."

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Hind's Essay on Insects destructive to the Wheat Crop.

JOURNAL & TRANSACTIONS

OF THE

BOARD OF AGRICULTURE OF UPPER CANADA.

TRANSACTIONS OF TENTH YEAR, 1855-'56—*Continued.*

THE First Vol. of these Transactions concluded with an account of the Provincial Exhibition of 1855, at Cobourg; one of the County Agricultural Reports for which prizes were awarded that year, and a Report of the Delegation to the United States National Agricultural Society's Show at Boston. The other Prize County Reports of that year are now added.

REPORT ON THE INDUSTRIAL CONDITION, RESOURCES, PROSPECTS, EXTENT AND BOUNDARIES OF THE COUNTY OF SIMCOE.

BY MR. JOHN LYNCH, BRAMPTON, PEEL.

(To which was awarded the Prize offered by the Board, of £15.)

The County of Simcoe, as described in the Territorial Divisions Act of 1851, "consists of the Townships of Orillia, Matchedash, Tay, Medonte, Oro, Vespra, Flos, Tiny, Sunnidale, Nottawasaga, Gwillimbury West, Essa, Tecumseth, Adjala, Tossorontio, Mulmur, Mono, and Innisfil, together with the tract of land bounded on the East by the line between the late Home and Newcastle Districts, prolonged to French River; on the West by Lake Huron, on the North by French River, and on the South by the River Severn and the Township of Rama, and the Islands in Lakes Simcoe and Huron, lying wholly, or for the most part, opposite to the said County of Simcoe, or any part thereof and contiguous thereto."

And by a Return of the Crown Lands Department to the Legislature, in the same year, the following is given as the number of acres in each Township, and the number of inhabitants by the Census of 1850:—

TOWNSHIPS.	ACRES.	POPULATION
Orillia	74,200	546
Matchedash	47,400	7
Tay	50,400	274
Medonte.....	66,800	993
Oro	74,600	1,759
Vespra	66,400	1,254
Flos.....	64,400	405
Tiny	81,000	683

TOWNSHIPS.	ACRES.	POPULATION.
Sunnidale	55,200	154
Nottawasaga	100,000	1,411
Gwillimbury	33,600	3,816
Essa	68,000	1,223
Tecumseth	67,200	3,612
Adjala	46,200	1,754
Tossorontio	44,800	436
Mulmur	70,400	644
Mono	70,400	2,276
Innisfil	69,000	1,887
Total	1,150,000	23,134

"The tract of land" added to the Townships of Simcoe, extending along the Eastern Coast of the Georgian Bay, from the River Severn to French River, is about one hundred miles in length, with a breadth tapering from thirty at the south end to over forty on the north, and contains about two and-a-half millions of acres. It has never been surveyed or settled, but it contains some trading posts and several timber berths, and mill privileges have been leased there. There are also some settlers, and even some embryo Villages about the portages of the French River, which is the thoroughfare of communication between the Ottawa River and Lake Huron, and this large tract was probably attached to Simcoe, for judicial purposes, that any offences committed therein might be disposed of in this County.

The County of Simcoe, as composed of the surveyed and partially settled Townships, is bounded on the South by a portion of the County of York, the County of Peel, and a portion of the County of Wellington; on the East by Lake Simcoe, Lake Couchiching and the River Severn, which separate it from the County of Ontario; on the North by the River Severn, which separates it from the unsurveyed territory, and the waters of the Georgian Bay, and on the West by the County of Grey, and a portion of the County of Wellington. It is the largest County of Upper Canada.

The territorial divisions of this County have undergone frequent alterations. It formerly formed part of the late Home District. As early as 1798, it was formed into a County (in name) by Statute, but with very uncertain boundaries. In 1821, when some of the front Townships were partially settled, it was created into a County for the purposes of representation and registration, being then composed of the Townships of Luther, Proton, Melancthon, Osprey, Artemesia, Collingwood, (then called Alba), Euphrasia, St. Vincent, (then called Zero), Thorah, and Mara, in addition to the present Townships. By the same Statute, power was given to the Governor, to declare by proclamation, the said County of Simcoe to be a separate District, by such name as he might choose, but that no judicial arrangements must be established therein, until further statutory provisions were made.

In 1837, another Act was passed, authorizing the Governor and Council to declare the County of Simcoe a separate District, and the name of "The District of Simcoe," so soon as a sufficient Gaol and Court House should be erected therein, and providing that after the issuing of such proclamation, the County and District of Simcoe should consist of the Townships of West Gwillimbury, Tecumseth, Adjala, Mono, Mulmur, Tossorontio, Essa, Innisfil, Nottawasaga, Sunnidale, Vespra, Oro, Orillia, (north and south) Medonte, Flos, Tiny, Tay, and Matchedash. Proton, Luther, Melancthon and Amaranth were

to be attached to the County of Waterloo; and Thorah, Mara and Rama, to the fourth Riding of the County of York. No place was assigned to the Townships of Osprey, Collingwood, Artemesia, Euphraasi and St. Vincent. They were not named. In 1838, by another Act, the Magistrates of the Home District were authorized to lay an additional tax of one penny in the pound, on the assessed property of Simcoe, and the Magistrates of Simcoe authorized to raise by way of loan, the sum of four thousand pounds, on the security of such tax, for the purpose of building the Gaol and Court House.

At this time the County contained between ten and eleven thousand inhabitants. The erection of the public buildings proceeded but slowly, and in 1841 another Act was required, and passed by the United Parliament, authorizing the Magistrates to raise a further loan of three thousand pounds to complete the Gaol and Court House, and also authorizing them to collect the rates for redeeming such loan, within their own County, without passing through the hands of the Home District Treasurer. It was not till 1843 that Simcoe was finally established as a separate District for judicial and all other purposes.

The Township of Osprey, Collingwood, Artemesia, Euphrasia and St. Vincent were left in an anomalous condition, not having been included in the District of Simcoe, nor attached to any other District or County. It was a matter of doubt what County they belonged to, or if they belonged to any County. They were probably alluded to in the Act of Parliament passed in 1845, which states "that it had become uncertain in what Counties divers Townships and tracts of land are situate, and it is expedient to remove such doubts." This Act among other provisions, restored the Townships to Simcoe, in which they continued until the Territorial Division Act of 1851, which established the County with its present Territory. By that Act all that part of West Gwillimbury lying to the East of the West branch of the Holland River, was detached from Simcoe and attached to the Townships of East Gwillimbury and King in the County of York.

This County was represented in Parliament by one member, from 1824 to 1836, when by increase of the population it was entitled to and represented by two members, until the union of the Provinces, when its representation was again reduced to one. By the "Act to enlarge the representation of the people of this Province in Parliament," the County was divided into two Electoral Divisions, to be called the "North Riding," and the "South Riding." The North Riding to consist of Nottawasaga, Sunnidale, Vespra, Flos, Oro, Medonte, Orillia, Tiny, Tay, Matchedash, and the Town of Barrie. The South Riding to consist of the Townships of West Gwillimbury, Tecumseth, Innisfil, Adjala, Tossorontio, Mulumur and Mono. Each Riding is now represented by one member in Parliament.

FIRST SETTLEMENT.

Part of this County has been long settled, but owing to its remote position it has made less progress in wealth and population than many other Counties of the Province. It is over forty years since the first settlers entered the Townships of West Gwillimbury and Tecumseth, and not long afterwards scattering settlers were located further North, generally near the borders of the Lake.

The beauty of Lake Simcoe and Lake Couchiching, and the scenery around their shores, early attracted settlers to their neighbourhood: but the hardships and privations of a new settlement, far removed from the luxuries and conveniences, and even the necessary comforts of civilized society, are not well calculated to encourage or satisfy a taste for the beautiful and picturesque.

The idea of a beautiful farm on the shores of Lake Simcoe, with a tasteful cottage on a hill commanding a view of the lake, and a beautiful green bower dotted with flowers running down to the water's edge, is all very agreeable, with a neat little yacht to sail over the lake, stopping to rest and refresh on some romantic and beautiful island fragrant with wild roses; or, in the winter time, when the lake is covered with smooth ice, what a lovely place on a clear frosty evening, for a moonlight drive in a cutter, with a pleasant companion; or, what sport to skim along the glossy surface with skates, or better still, an ice boat, crowded with merry lads and lasses, sailing with railway speed around the lake.

These are not merely imaginary pleasures. There are facilities for enjoying all these and many more similar amusements, on the shores of Lake Simcoe. But alas, how sadly do such anticipations harmonize with the actual experience of the man, who with limited means sits down in the woods to work out a living for himself and family.

One of the greatest inconveniences experienced in a new settlement, is the distance from an old settlement, and from a market. This distance being generally over a horrid bad road. After the first year, the settlers can generally obtain from the land the bare necessities of life—that is, what will just keep them from actual starvation—but their luxuries and many of their comforts must be obtained from a distance; and, moreover, those luxuries and comforts can only be procured, in general, by exchanging for them portions of the produce of the land, which must also be conveyed the same distance, and over the same bad road. The new settler can produce on his farm, sufficient bread and meat, and some other articles, both of food and clothing; but tea and coffee, and many other articles which are necessary to the comfort of himself and his family, he cannot produce, and he can obtain them only by selling a portion of what he can produce, for money, or exchanging it for the articles he needs; and then it becomes of the utmost importance to have a market within a reasonable distance. A great distance, and a bad road to market, has the direct effect of lessening the value of every article produced for sale, and of increasing the cost of those articles required in return. The early settler may, after a few years' successful labour, have one hundred bushels of wheat to sell from the produce of one year, over and above what is required for the use of his family; and if he would sell that wheat at the market price on the frontier, it would bring a sum amply sufficient to supply all his wants; but it has frequently happened that one-half the value of his wheat has gone to pay the expense of conveying it to market. Persons unacquainted with the difficulties of the back settlers, consequent upon their distance from market, and the wretched state of their roads, may understand those difficulties better by reference to the following incident, which came under the observation of the writer some years ago, and which is not a solitary case of the kind. A person in a new settlement, not near so far from the market as the most convenient part of the County of Simcoe, had urgent occasion to raise a few dollars in ready money. He had in his barn nearly one hundred bushels of surplus wheat, of good quality; but wheat was not then so much sought after as it has been of later years, and he could not sell his wheat without carrying it a distance of nearly thirty miles. The only mode of conveying his wheat to market was with a pair of oxen and a wooden sled, but this was a hopeless undertaking, as it would be rather a serious affair to drag the empty sled on the bare ground for that distance. Something however must be done, and he finally went eight miles to a neighbor and borrowed a heavy clumsy ox-cart, the best vehicle he could procure; and with it drawn

by oxen, he proceeded to market with about fifteen bushels of wheat. He succeeded in reaching the market, disposing of his wheat for money, and returning home in the space of one week and one day; and the amount realized from his fifteen bushels of wheat and week's labour and time of himself and team, after paying expenses on the most economical scale, was within a fraction of five and-a-half dollars? The above is a fact, and there are many farmers of Simcoe who would if they were so disposed, tell incidents of a similar character.

The early settlers in this County have suffered in a more than ordinary degree, and for a longer time than usual, by their great distance from market, and the bad condition of the roads. The Lake Simcoe, which was the means of alluring many of them to its neighborhood, proved of but little benefit as a means of communication, or of conveying their produce to market. It was of little use to the farmer on the north side of the lake, to have his wheat conveyed to the south side by water, when it would then be forty miles distance from market, over a road which was bad at best, but became still worse as he approached Toronto. It is a fact well known to many, that for several years preceding the construction of the stone road on Yonge Street, at some seasons of the year, the very worst part of the road between Penetanguishene and Toronto was within two miles of the latter place, and Toronto was the only outlet for the produce of the County of Simcoe, and the only inlet for articles of consumption required from without. To the Toronto price of every pound of tea used by the farmer of Simcoe, had to be added the price and the profits of carriage from Toronto; and from the price of every bushel of wheat which he sold, had to be deducted the cost of conveying it to Toronto.

These inconveniencies were very discouraging to the settlers of Simcoe, and many of them at different times sold out their little farms at low prices, and left the place in disgust. There was no objection to the soil or the climate, good crops were obtained, and the locality possessed many advantages which were not found in other new settlements, but that long stretch of mud between them and a market, reduced the value of their produce almost by one-half, and deprived them of many of the comforts and enjoyments to be obtained in other more favourably situated places, though on poorer soil. It is true they had water communication on a great part of the northern boundary, with good harbours, and hopes were entertained of some relief in that quarter, and attempts frequently made to obtain an outlet in that direction, but no material advantage was to be expected from this scheme. When their wheat was shipped at Penetanguishene or Nottawasaga, it had then a rough and dangerous voyage of six or seven hundred miles to go, to reach as good a market as that within a comparatively short distance over the mud road. Under such discouraging circumstances, it was not surprising that the County of Simcoe made but slow progress. Some settlements were in fact retrograding instead of advancing, and the settlers were leaving the County, in many instances selling their farms for the cost of the improvements, and Simcoe was becoming a bye-word and a reproach. It was considered as a back out-of-the-way place, almost beyond the reach of civilization. A place unblest, and desirable only to be avoided; when suddenly relief appeared—relief the most effectual, the most complete, by the construction of the Northern Railway, which converted the County of Simcoe from one of the most remote and unapproachable Counties in Canada, substantially to a frontier County; or better—a County with a double frontier. A frontier is brought to run through its centre, with a market at the distance of every few miles, nearly as good as that of Toronto.

TORONTO, SIMCOE AND HURON RAILWAY.

It would be difficult adequately to decide the immense advantage which the County of Simcoe has received and is evidently destined to receive from the construction of this Railway. The wonderful facility of Aladdin, in building castles and palaces by the friction of a lamp, which so delighted and amazed us in our boyish reading, would not have appeared so very incredible to us if we had previously witnessed the effects of the Northern Railway in augmenting the value of property. If castles are not actually erected by the operation of the Railway, yet wealth sufficient to build many castles is acquired by the enhanced value of property, with even less trouble and exertion, on the part of the proprietor, than the rubbing of an old lamp. It is a rough assumption, made without much calculation, but I am quite sure it is a perfectly safe assertion, that the Northern Railroad has already virtually *created* far more wealth than was expended in its construction. The Huron and Ontario Railway is a work of great value and importance to Canada—to all. It is more particularly valuable to Toronto City, and to all the territory through which it passes, but, to the County of Simcoe its value and importance is beyond sober calculation, and it is only in respect to its influence and effects on this County with which we have at present any thing to do.

Its effect is not merely to *increase* the value of property, but it also gives actual value to articles which were previously perfectly worthless. And further still, articles that before were ruinous, are now, by the Railway, converted into valuable property. The enhancement of value is not confined to real property—to the rise in the price of land, but it pervades every item of the annual produce of the County, and everything that can be converted to the use of man. Every tree and stone has an increased value. The unsightly grove of wood which has long been an eye-sore to the farmer, who would gladly have it cleared away, but could not well afford the heavy expense, has now become, instead of an eye-sore, a lot of valuable property, and if he still wishes to have it cleared off, the removal will be a source of profit to him instead of an expense. An additional value is given to every pound of butter and cheese, and even to every egg that shall hereafter be laid in Simcoe, and the lucky hens of Simcoe, after depositing their eggs will doubtless give a louder and a prouder cackle, with the consciousness that they have produced a better article than was ever produced by their progenitors.

The fishes swimming in Lakes Huron and Simcoe, will also partake of this enhancement, and each White Fish, Trout, and Sturgeon, may well consider himself of more importance, and give his tail a more saucy curve, as he turns away; for he will be much more sought after, and his presence more appreciated. This may seem very silly twaddle, and perhaps it is, but it is undoubtedly as true as it is silly.

The extent of the Northern Railroad from Toronto to Collingwood, is 94 miles, 51 miles of which is in the County of Simcoe. It enters Simcoe at Bradford, forty-three miles from Toronto, and passes along the Eastern side of West Gwillimbury, near the mouth of the Holland River, having a station at Scanlan's, four miles from Bradford, thence seven miles to Lefroy Station, in Innisfil. Here there is a branch running down to Cook's Bay, on Lake Simcoe, about a mile and-a-half to where the new Town of Bell Ewart is growing up, and where the Cars meet the Steam-boat which makes the circuit of Lake Simcoe, and returns to meet the Cars in the evening. The Railway then makes a bend to the West and angles across Innisfil to the next station at the head of Kempeufeldt Bay, near Barrie, nine miles. It then makes a further bend to the left and runs a little to the South of West, near the Town line

between Vespra and Sunnidale on the North, and Innisfil and Essa on the South, to near the North-east corner of Tossorontio, having a station in Essa, five miles from Barrie. It then makes a bend to the north and runs a north-west course diagonally through the Townships of Sunnidale and Nottawasaga, to Collingwood harbour, having a station at Sunnidale, eight miles from Essa, and another in Nottawasaga, seven miles from Sunnidale, and eight miles from Collingwood.

The advantages of a Railway, connecting Lake Ontario with Lake Huron, were too apparent not to be easily discovered and appreciated, and the construction of such a work has been in agitation for the last quarter of a century. In 1836 an Act was passed by the Parliament of Upper Canada, incorporating a company with power to construct a Railway "in and over any part of the country lying between the City of Toronto, and some portion of the navigable waters of Lake Huron within the limits of the Home District." Preparations were immediately made by a number of individuals, some stock was subscribed and the first instalments paid, plans and surveys were made, and many indulged in the hope that the work would be speedily proceeded with. It was soon ascertained, however, that the ways and means were not to be found, that sufficient stock could not be obtained, and although at the next Session of Parliament an Act was passed, authorising the Government, on certain conditions, to advance by way of loan, the sum of one hundred thousand pounds, yet nothing effectual was done, and whatever hope might still be entertained of the early commencement of the work, were completely blasted by the breaking out of the unfortunate rebellion in the fall of 1837, which, though impotent and contemptible in itself, had the effect of paralyzing the energies of the Province for many years.

After several subsequent fruitless attempts, the Railway was finally commenced in good earnest in 1850, and opened through from Toronto to Collingwood in the latter end of the last year, 1854. It is now in active operation through its whole extent, and I believe doing a thriving business, of which a great portion is the transit of freight and passengers from the Western States of America. It is said to be one of the best conducted roads in America, and has so far been very fortunate in escaping many serious accidents.

GENERAL FEATURES AND PRODUCTIONS.

By means of the Railway, the County of Simcoe will probably soon become one of the most important Counties of Upper Canada. It has within itself many elements of wealth and prosperity, which have hitherto necessarily remained inoperative, but which will now, with the facilities afforded by the Railway, be brought into active and useful operation. It contains large quantities of valuable timber, and abundance of water power for mills and machinery; the Nottawasaga River stretching its branches to the most remote parts of the Southern and Western Townships, and also far into the East. I believe there are only four Townships in the County—Orillia, Matchedash, Tiny and Tay—that are not drained, wholly or in part, by the Nottawasaga, and its tributaries. There are various other streams affording mill privileges entering into the numerous bays and inlets on the North of the County, and the River Severn, which for some distance forms the boundary of the County, has almost unlimited water power. The Holland River, on the South-east of the County, also has water privileges in Gwillimbury and Tecumseth. Of its mineral productions I am not able to give a full description, but good building stone and limestone are abundant in many parts of the County, and in the Township of Nottawasaga there are grindstone quarries; on the East side of Lake

Simcoe, lithographic stone of good quality, and limestone, which was considered by Mr. Logan of such a superior quality, that he had samples of it taken to London and exhibited at the World's Fair in 1851.

The quality of the soil is much diversified, there being many varieties of clay, sand and gravel. There is also a good deal of swamp and poor land, but there is much good and rich land, and taken altogether it cannot be considered inferior in soil to many other counties of the Province. The climate is as good as may be expected between the forty-fourth and forty-fifth parallels of north latitude, but in this also there is considerable diversity—some parts being favorably affected by the lakes and rapid streams in the neighbourhood, and other parts, unfavorably by the proximity of marshes and swamps. Part of the County is nearly on a level with the waters of Lake Huron, and other parts on the height of land, many hundred feet higher than any of the lakes.

LAKE SIMCOE.

Lake Simcoe is a beautiful sheet of water, and now, in connection with the Railway, it will be found as useful as it is beautiful. The main body of the lake is about twenty miles long, from West to East, and sixteen miles in width from South to North. At its west end are two important arms, running into the land nearly at right angles with each other. First, Cook's Bay, stretching to the south, a distance of eight miles, with a breadth of from two to three miles, and dividing part of the Townships of Innisfil and West Gwillimbury from North Gwillimbury in the County of York. At its head, this Bay receives the Holland River, the west branch of which bounds the Township of West Gwillimbury on the south-east, dividing it from East Gwillimbury and King. About midway, on the west shore of this Bay is the rising Town of Bell Ewart, which has been mentioned before, and will necessarily be referred to again. At the mouth of the Bay are two Islands—Snake Island, the largest, containing two or three hundred acres, lies near the coast of North Gwillimbury, and is inhabited by about a hundred Indians of the Chippawa tribe, who are making some faint attempts to cultivate the land, which however is not very favorable to agriculture, being cold and stoney, and would require greater application and industry than can be expected of the Indians, to bring it into profitable cultivation. The other Island, Muskego, is something less than half the size of Snake Island, and lies about a mile north-west from it. It is uninhabited and covered with timber. I believe Snake Island, and probably both of those Islands belong to North Gwillimbury, in the County of York. Second, Kempenfeldt Bay, which runs into the land in a westerly direction, from a point about seven miles north of the mouth of Cook's Bay. It separates part of the Townships of Oro and Vespra, on the north, from Innisfil on the south. This is a beautiful bay, somewhat longer than Cook's Bay, but not so wide, and not so much indented with small bays. At the head of this bay is situated the Town of Barrie, the County Town of Simcoe.

At the extreme north of Lake Simcoe is "The Narrows," which is a narrow strait with a considerable current, by which the waters of Lake Simcoe enter Lake Couchiching in their course to Lake Huron. The passage is navigable for steamboats, but some care is required, as the channel is narrow and crooked.

A swing bridge is erected here across the strait, which opens a land communication with the County of Ontario, and a main road leads from here to the Town of Whitby on Lake Ontario. A line of railway has been surveyed from Port Hope to Sturgeon Bay on Lake Huron, passing over these Narrows, but as far as I am aware there is no immediate prospect of its being proceeded with.

The scenery about this place is the most beautiful and picturesque of all the

beautiful places around Lake Simcoe. On entering Lake Couchiching and rounding a point on the left, the neat little village of Orillia appears in view, sloping up from the water's edge with a gradual elevation to the height of fifty or sixty feet. And on the north, the beautiful lakelet is thickly studded with small islands covered with trees. Orillia was formerly the site of an Indian Village, but the Indians who inhabited it have been removed to the east shore, in the Township of Rama, where the Government has built them a village which may be seen from Orillia in a north-east direction.

Lake Couchiching extends to the north about nine miles, where it is drawn off by the River Severn, which circles round the Townships of Orillia and Matchedash, and after several abrupt falls, reaches the level of Lake Huron in Sturgeon Bay, in the Township of Tay.

The Holland River is the principal river emptying into Lake Simcoe, but it receives several considerable streams from the Counties of York and Ontario; the largest of which are the Talbot, the Beaver and the Black River.

THE NOTTAWASAGA RIVER.

The Nottawasaga is *the* River of Simcoe, and taking into consideration its extensive ramifications as well as its extensive usefulness, it is certainly no common river. Although its most remote source is not over forty miles in a direct line from its mouth, it drains a tract of a million of acres, or fifteen hundred square miles. It swallows up mostly all the other rivers of the County. Part of its waters come from that extensive swamp in the Counties of Wellington and Grey, from which proceed all the great rivers of the Western Peninsula. Other parts come from the height of land near the Counties of York and Peel, where the branches of the Nottawasaga interlace with those of the Humber and Credit, while others come from the east, from the Townships of Oro, Medonte and Vespra. One branch, which has its rise within seven or eight miles of Lake Huron, makes a circuit of from sixty to seventy miles before it enters the lake, not over fifteen miles from where it first started.

I have been told that the word "Nottawasaga," in the Indian tongue, signifies "Mouths of the Missisagas," and that there is an Indian tradition that the Chippawas who inhabited the shores of the Georgian Bay were "once upon a time" attacked by the Missisagas, who come down the Nottawasaga in great numbers, in canoes, and issued from the river by a great number of channels or mouths through which it then entered the lake. The attacking party was so numerous as to completely route the Chippawas, who thereafter gave the name of the "Mouths of the Missisagas" to the outlets of the river, in allusion to their having vomited forth such hordes of their enemies.

It is quite probable that at some former period the river did enter the lake by several channels, and it is also supposed that its *embouchure* was five or six miles further west than it is at present, and that its outlets being occasionally choked up by the swell from the north, the river has been forced along the shore to the eastward. It now enters the Nottawasaga Bay in the Township of Flos, near its north-west corner.

There is a good harbour for boats in the river, but the bar at the mouth renders it difficult to enter. It is also navigable for boats as far up the stream as within six or eight miles of Kempenfeldt Bay, but it is so crooked as to make the navigation of but little value, and it is not much used at present. It is used however, by the Indians who carry their canoes over the portage to Kempenfeldt Bay. This route was also formerly used in conveying stores to Penetanguishene, and sometimes by the servants of the north-west and Hudson Bay Companies.

EXTRACTS FROM MR. MURRAY'S REPORT.

Mr. Murray, in his Report on the Geographical and Geological features of the Province, dated 1848, makes the following remarks respecting the lake coast of this County:—"Nottawasaga Bay may be said to be quite destitute of shelter, though formerly a good refuge for boats was readily found at the mouth of almost any of its streams; but the lake has, within a comparatively short period, receded, and the exits of these streams have become inaccessible. At the south end of Christian Island there is a capacious bay facing the east, which, being sheltered on every side, and affording good anchorage and good camping ground, is in every respect an excellent harbour; and eastward of this there are safe covers and inlets both on the main shore and on the islands, and no part is much exposed up to Penetanguishene."

The following extracts from the same Report relate to the tract of land included in the County of Simcoe, to the north of the surveyed Townships:

"The French River is a continuous chain of long narrow lakes, which, lying at small elevations, one over the other, are connected with short rapids or falls; these lakes are crowded with large and small islands, the channels among which are frequently contracted to a few yards in width, and thus acquire in many places, fluvial semblance; and the waters of Lake Nipissing, after passing through these successive quiet intervals, join those of Lake Huron by four main outlets, about four miles apart from each other, which are included in a distance of fifteen or sixteen miles. From various points up these main channels, a multitude of narrow outlets break off, and the whole divide the land at the mouth of the river into a perfect labyrinth of small islands. The principal channel is the one farthest west, generally known as the north channel, and it was through this that the measurements and examination were carried; it joins the lake in latitude $45^{\circ} 57'$ north, and longitude $81^{\circ} 7'$ west, according to Captain Bayfield's chart; and a straight course from this point to the south side of the outlet of Lake Nipissing, would bear by compass north 75° east, the distance being fifty-nine miles. Following the bends of the channel, there are three general courses; the first north-easterly for a distance of seven miles; the second nearly due east for thirty-three and a half miles; while the third turns about two points to the northward of east, and reaches Lake Nipissing in twenty-one miles. The variation of the compass was found by azimuths of the sun to be one degree fifty-five minutes west, at the mouth of the river, and four degrees twenty-five minutes west, at a short distance from Lake Nipissing. Ascending the north channel, three outlets are met with, at the respective distances of six, nine-and-a-half, and ten-and-a-quarter miles, which are said to unite about two miles to the southward, and constitute the second main channel; two more outlets at the respective distances of twelve and twenty-four miles unite to form the third main channel, and the fourth separates in a single stream at the distance of twenty-eight miles.

"The country through which the north channel passes, is for the most part low and barren, affording little diversity of scenery; it is scantily clothed with timber, consisting of red, white, and pitch pine, the first two of which sometimes appeared to attain a tolerable size, but were in no case that came under my observation, of sufficient dimensions to be of commercial value; and the last is always of diminutive size. The immediate banks of the channel are abrupt and precipitous, sometimes rising vertically for nearly seventy feet; from their rocky nature landing is often found difficult, and eligible places for encampment are exceedingly scarce; indeed there were but three occasions on which we found, on pitching our tents, a sufficiency of soil to admit our tent pins being driven into the ground.

“After carefully levelling every part on the river where a current was visible, and making an allowance for those where no flow was perceptible, the total difference of height between Lakes Huron and Nipissing appears to be sixty-nine feet. In ascending the river it was found necessary to make seven different portages, but in descending, all these can be run by canoes, with the exception of two; these are the Chaudiere and the Grand Recollet, the former of which is about a quarter of a mile long, while none of the others exceeds a few yards.

“The description given in the last year’s report of the characteristic features of the country on the French River, is generally applicable to all such parts of the coast as we visited between the mouth of that river and Matchedash Bay; but the lateness of the season at which we passed along this coast, necessarily rendered our inspection hasty and superficial. Such parts of the land as came under our examination were in general low, rocky, and either perfectly barren, or very slightly covered over by dwarfish evergreens and moss. Long narrow arms and inlets were found to strike far into the mainland, and crowds of islands and rocks to extend for many miles out into the lake, rendering the voyage through them very intricate. Harbours for all sizes of vessels presented themselves in abundance, as might be expected among such a numerous assemblage of islands and inlets; but the approach to the coast, amidst reefs and sunken rocks, is at almost all parts dangerous and difficult. A pretty good description of soil was occasionally observed on flat lands between rocky knolls and ridges, where the timber was principally oak, but it would require a more minute and extended examination to ascertain where there is any great amount of surface valuable in regard to its capabilities for cultivation.

“Around the extremity of Nottawasaga Bay the land is low, but in the Peninsula, which lies between it and Matchedash Bay, a feature of the same kind as characterises the Manitoulin Belt is observed. From the south-west the land gradually slopes up, and falls in escarpments on the north-east at Point Adams and Point Gloucester—and the same form is carried out into the islands at the extremity of the Peninsula, from the south-west side of Christian Island to the Giant’s Tomb, whose bold north-eastern slope corresponds with that of Point Adams.”

TOWNSHIPS—WEST GWILLIMBURY.

West Gwillimbury is the oldest settled Township of the County—some settlers having entered it upwards of forty years ago, but not much progress was made until about the year 1820, when a good many additional settlers came in, since which time it has been steadily improving, but not very rapidly until the last few years, when the prospect of the railway has given it a further impetus. It is a small Township, a considerable portion of the south-east corner—that which was first settled—having been taken from it and attached to East Gwillimbury and King in 1851. It is situated on the south-east corner of the County, and is bounded on the south-east by the west branch of the Holland River, which separates it from East Gwillimbury and King. A broad marsh extends along both sides of this river, which renders it unsightly and disagreeable. The river is navigable for steamboats, and a boat formerly made daily trips to the landing near Bradford, but its visits have been discontinued since the railway has been carried to Barrie and Bell Ewart. The main river, being dead water, is not available for mill purposes, but several branches stretch westward into the township which afford good mill privileges, and on which a number of mills have been erected. The Railway enters this Township at the Village of Bradford, which is about midway on the southern boundary of the Township. Bradford is a very thriving place. It began to grow into a village about twenty years ago

and has made rapid progress, even without the aid of the railway, and now that it has that advantage it is progressing still more rapidly. It has now one thousand inhabitants, with the usual proportion of stores, shops and other places of business, and a railway station. There is another station in the Township, at Scanlan's, four miles north of Bradford. Bradford is forty-three miles from Toronto, twenty from Barrie, and fifty-one from Collingwood. There is a plank road from here to Yonge Street, but it is getting much out of repair. A leading road runs from Bradford north to Barrie, and another west through the Townships of Gwillimbury and Tecumseth, and continued through the Townships of Adjala and Mono to the County of Wellington. The town line between Gwillimbury and Tecumseth is also a leading road, which is continued north between Innisfil and Essa to Barrie, and South to Lloydstown. On this road are the villages of Bond Head and New Town Robinson, situate partly in Gwillimbury and partly in Tecumseth, and Cook's Town, at the four corners of Gwillimbury, Tecumseth, Innisfil and Essa. On the western road leading from Bradford, there is also a small village called Middleton, about two miles from Bradford. The soil of Gwillimbury is generally sandy, and some part of it stony. There is also some swamp, and a good deal of waste land along the Holland River. But there is also much excellent land, and good crops of wheat, barley, peas and oats are produced. There is a good steam grist mill near Bradford, and a large number of saw mills, and carding and fulling mills in the township. It would be difficult to give the average price of land with any precision, as the construction of the railway has made quite a revolution in the value of real property. Good improved farms, with pretty good buildings, would probably bring from seven pounds ten shillings to fifteen pounds per acre, according to the situation. Perhaps a purchaser would find prices rather above these figures. I have added a table, compiled from the assessment rolls, which will show the value of occupied land, unoccupied land, and all lands, as far as can be ascertained from the returns, but it should be remembered that the land is generally rated for assessment at the lowest figure, and in a general way from fifty to one hundred per cent. may be added to the assessed value, as the intending purchasers will probably find on enquiry.

For many other particulars, and other information respecting each Township, reference may be had to the accompanying tables, compiled from assessment rolls, census rolls, and other official returns.

TECUMSETH.

Tecumseth lies immediately on the west of Gwillimbury, and is in general a most excellent Township of land. It contains some pretty bad swamps, but the greater part of the Township is very good land, generally a loamy clay. It has long been celebrated for good crops of wheat and barley. It also produces good crops of peas, oats, clover and timothy, and abundance of root crops. It contains a large number of very good horses and cows, and also good sheep. It is now decidedly the most productive Township of the County, though it was formerly exceeded by Gwillimbury, until the latter was shorn of part of its territory. It was settled soon after Gwillimbury, and has made a steady, if not very rapid progress. It is well watered by the Nottawasaga and numerous branches which spread into all parts of the Township, affording abundance of water power. It has also a branch of the Holland River, on which there are mill privileges. There are at least two grist-mills, and from twelve to fifteen saw-mills, and several carding and fulling-mills in the Township. As the first settlers of this Township had to find their way through East or West Gwillimbury, the leading roads all run in that direction; and across Tecumseth from east to west, there are

several of these, besides the one mentioned in speaking of Gwillimbury, and one which runs along the base of Tecumseth, Adjala and Mono, to Mono Mills and Orangeville. There is a small village near the south-east corner called Penville, with about one hundred inhabitants. The price of land may be quoted a trifle lower in Tecumseth than in Gwillimbury, the proximity to the railway giving the latter a slight advantage.

ADJALA.

Adjala is the next Township on the west. It is not so good a Township as Tecumseth, being more sandy and hilly, especially on the eastern side. It also contains a considerable portion of swamp. It produces very good crops, however, particularly wheat. It is a small Township, only about two-thirds of the size of Mono. It was surveyed in 1820 or '21, and settled soon after. The first settlers had much difficulty to contend with, by their remote situation and the bad description of the roads to the old settlements. But they have (at least those who still survive) outlived those hardships, and are now very comfortable, with good farms, and all necessary comforts around them, and comparatively good roads. It has a leading road through the centre into Tossorontio, on which, near the north end of the Township is a small village called "North Adjala." There is also a village called "Keenansville" near the eastern side of the Township, and another at the four corners of Adjala, Mono, Mulmur and Tossorontio, known by the name of "Mulmur Corners," situated on a leading road between Adjala and Tossorontio on the east, and Mono and Mulmur on the west, and which road at the south connects with the sixth line road to Dundas Street and Toronto. Another road through the eastern part of the Township, connects with a road though Albion to Bolton's Hollow, and thence to Toronto. These last mentioned roads, and more particularly the sixth line, have heretofore been the principal outlets of the Township to a market; but since the construction of the railway much of this travel will be directed to Bradford, which should now afford a better market for Adjala than any other place within the same distance. Adjala is watered by branches of the Nottawasaga, and also by the head waters of the Humber, both of which streams, in this Township, have very high banks. There are three grist-mills and a considerable number of saw-mills in the Township, also several carding and fulling-mills and a brewery. The price of improved land is from three to seven pounds an acre, and wild land 15s. to £2.

MONO.

Mono is the next Township on the west, and forms the south-west angle of the County. It is not so good a Township as either of the foregoing, although there are some good farms in it. The soil is generally sandy. The south-eastern part is rough and hilly—these hills prevail over a considerable part of the Township, but the western boundary, from south to north, is almost a dead level, and is a succession of cedar, spruce and tamarack swamps, separated by strips of low, but comparatively dry land; the swamps however, very much exceeding the dry land. These are spurs or offsets from that tremendous swamp which covers a great part of the Townships of Luther, Proton, Amaranth and Melancthon, in the Counties of Wellington and Grey, and from which the water flows into the Saugeen, the Thames, the Grand River and the Credit, as well as the Nottawasaga. Many of those swamps have considerable streams in their centre, and as they proceed eastward into the Township, they collect and join to form longer streams, leaving the swamps behind them, and find their way to the Nottawasaga. As those streams flow to the east they become very rapid and are bound with very high banks; they afford good mill-sites. The head waters of the Humber

also rise in this Township and afford good mill power. The "Mono Mills" are on the Humber. The main branch of the Credit also has its source in this Township, and its head waters are not half a mile distant from those of the Notawasaga.

The thriving village of Orangeville is situated on the borders of this Township, partly in Mono, and partly in Caledon, but mostly in Garafraxa, in the County of Wellington. It is on Hurontario Street, which extends from Port Credit, on Lake Ontario, to Collingwood on Lake Huron. Another pretty good village, but of rather less pretensions than Orangeville, is Mono Mills, between Mono and the north-east angle of Caledon, and the north-west angle of Albion. From both these villages there are roads leading into and through the Township, most of which unite with one zigzag road, which angles across the Township to the north-west corner, where it is connected with the Toronto and Sydenham Road to Owen's Sound. Mono is one of the very few Townships of Simcoe which cannot derive much benefit from the Northern Railway. The usual outlet for market has been by Mono Mills down the sixth line to the mills on the Humber, and Toronto, or by Orangeville down Hurontario Street, to Brampton and Port Credit, and the Northern Railroad is scarcely near enough to divert the traffic from those channels.

The Grand Trunk Railway station at Brampton, will be much more convenient to this Township than Bradford or any point on the Northern road.

Besides the mills at Orangeville and Mono Mills, there are other two grist-mills and several saw-mills in the Township. Mono was surveyed in 1821, but was not much settled for several years thereafter. Considering its remote situation, and the bad character of much of the land, it has made very good progress, and it is now amongst the best producing Townships of the County.

INNISFIL.

Innisfil lies to the north of Gwillimbury, and is bounded on the east by Cook's Bay, and Lake Simcoe, and on the greater part of the north by Kempenfeldt Bay. The soil of this Township is not of the best quality, but its favourable locality makes the land valuable. The railroad enters the Township near the south-east corner, and takes a somewhat circuitous course through it, to the head of Kempenfeldt Bay, where it turns to the west, and passes along near the town line to the north-west angle. The soil is generally sandy—much of it poor light sand in knolls and ridges, and there is a good deal of swamp. This description applies more properly to the west side; on the east side there is more clay and better land, but not without some swamp. There is, however, but a small portion of the land that is not capable of cultivation, and very good crops of all kinds of grain are obtained. It contains a good deal of pine timber, which, since the construction of the Northern Railway has become very valuable, and the borders of the railway are dotted with new steam saw-mills for converting the pine trees into boards and planks, to be carried off by the cars to the Toronto market. Besides several smaller ones at short intervals along the line, there are two large mills of this description lately erected at the head of Kempenfeldt Bay, near the Barrie Station, and one very superior one at the new town of Bell Ewart on Cook's Bay. This mill is owned by Messrs. Sage and Grant, and is intended and adapted to do a very extensive business. It is built on the water's edge, and has a switch of the railway running to it. It has three steam-engines, each driving a set of saws. On the right is a gang with two saws, which takes a slab and a rough edge board off one side of the log—the carriage is then run back, the log shifted, and a similar operation performed on the other side. The carriage is then again shoved back, and the log rolled off, and with

a few turns brought on its flattened sides in front of the gang in the centre, consisting of twenty-one saws, where it is in a very short space of time divided into as many pieces of lumber as may be desired, not exceeding twenty-two. There is no carriage to this gang; but the log is propelled on fixed rollers, and when it has passed through the gang of saws, it is still pushed on by another log which follows, until its pieces are piled up on a car which stands along side, to convey them off on a wooden railway. On the left is a single saw, which appears to work independently of all others, and is employed as occasion may require. There are also two or more circular saws. That this mill manufactures a large quantity of lumber will appear from the fact, of which I have been informed, that the proprietors have contracted with the railway company to convey their lumber to market; and in consideration of a reduced rate of charges, have bound themselves to furnish sufficient to amount to at least one hundred pounds per month. They obtain logs from all parts of the borders of the lake by rafts. But rafting logs is precarious work—especially on this lake, where the wind frequently rises and changes very suddenly, and the raft is sometimes broken into fragments by the swell, and the logs sent scattering over the lake.

Bell Ewart is a new place in the woods; intended apparently to become a rising town through the influence of the Northern Railway. It is about midway on the western side of Cook's Bay. There is a wharf built here for steamboats; and a switch, leaving the railway near the Lefroy Station runs down to the town, and on to the wharf. An excursion train leaves Toronto for this place every morning, and arrives here about nine o'clock. The passengers then go on board the Steamboat *Morning*, which makes the circuit of the lake, touching at every place of importance except Barrie—the place of the most importance on the borders of the lake, or in the County. On her return, the boat arrives at Bell Ewart in time for the passengers to return by the cars to Toronto the same evening. The steamer *Joseph C. Morrison*, which was launched last summer, is now being fitted up with much elegance, and is probably intended to take the place of the *Morning*. The new boat is expected to make the circuit of the lake in a much shorter time. There is a new Inn erected at Bell Ewart, of pretty good dimensions, and respectable appearance; but its accommodations are pretty much monopolized by the employees of the railway, and at present, travellers can rarely get lodgings there. About a mile from Bell Ewart is the station of Lefroy, nine miles from Barrie. There is a pretty good Inn here, and a few other houses, the nucleus of a village.

A great part of the land of this Township fronting on Cook's Bay, Lake Simcoe, and Kempenfeldt Bay, is owned by absentees, and in a state of wilderness, so much to the injury of the inhabitants of the Township. There is a good grist-mill near the head of Kempenfeldt Bay, and saw-mills spread over the Township. The main road from Bradford to Barrie runs through near the centre of the Township, and the main road from the southern Townships to Barrie, along the town line between Innisfil and Essa.

ESSA.

Essa lies to the west of Innisfil and north of Tecumseth. There is much good land in this Township; there is a greater portion of clay soil than in Innisfil. The Nottawasaga River runs through the centre of the Township from south to north, and receives several branches on both sides, altogether supplying the Township with water in abundance. The main trunk of the Nottawasaga is not of so much service here as might be supposed, as it is too sluggish and level for mill purposes, and too crooked to be advantageously used for navigation.

There is also a good deal of wet land along its borders. The east and west sides of this Township are better than the centre, and the south is better than the north. It produces very good crops of wheat, oats, peas, and barley. There is a leading road across the south part of the Township on which are the two small villages of Elm Grove, and West Essa. Another road up the second concession connects with "Webster's Road," which angles across Tossorontio and Sunnidale to the Village of Creemore, in Nottawasaga. It has a grist mill near the eastern boundary, and several saw mills in various parts of the Township. A number of steam saw mills have lately been built along the line of railway. There is a good deal of pine timber and hemlock in the Township; but the greater part of the timber is hard wood. The railway passes through the Township near the northern boundary, with a Station near the centre, eight miles from Barrie.

TOSSORONTIO.

Tossorontio, on the west of Essa, is in some respects similar to the latter Township, but it is yet but thinly settled. It contains a fair portion of good land, with some swamp; it has a good deal of pine and hemlock timber. It would appear from a comparison of the two last census returns, that Tossorontio is improving rapidly, as it had more than doubled the aggregate quantity of its produce in the two years preceding 1852, although the population had not increased very materially. There is a leading road at the base of the Township, which extends along the base of Mulmur to "Hall's Corners," where it connects with the Toronto and Sydenham Road. The "Webster Road," mentioned above, also runs diagonally through the north end; this Township like most others, is well watered by various branches of the Nottawasaga. The railway stations of Essa and Sunnidale, are each about five miles distant from Tossorontio.

MULMUR.

Mulmur is the next Township on the west, and lies on the western boundary of the County. It is in general a good Township, but its remote position has retarded its settlement. The western boundary of this Township, as far north as the centre, is of a similar character to that of the western boundary of Mono, being a succession of swamps and small streams, with the water oozing out from the great swamp in Amaranth and Melancthon; but from the centre to the northern boundary on the west side—is a tract of very superior high table land, as yet but very little settled; there is also good land on the east side, but it is more broken. It is abundantly watered by a good number of branches of the Nottawasaga, many of which take their rise in the Township. This Township is on the summit level of Upper Canada. All the Townships of Mono, Adjala, Tossorontio, Mulmur, and the south-west part of Nottawasaga, are on the height of land between the lakes; and from these Townships there is a descent to the north-east to the bed of the Nottawasaga River, between Kempenfeldt Bay and Nottawasaga Bay—the river here being nearly on a level with Lake Huron. The principal roads through this Township are Hurontario Street, the town line between Mulmur and Melancthon, and the road on the base line mentioned above; in the south-east part, most of the concession lines are opened and travelled. This Township, as well as Tossorontio, has made a great advance in its agricultural produce during the two years preceding the last census; and I am much mistaken if the Township of Mulmur does not become better known and more heard of hereafter.

NOTTAWASAGA.

Nottawasaga lies to the north of Mulmur, and fronts on the Nottawasaga Bay.

It is a very large Township, containing, according to the Government Returns, one hundred thousand acres. It was first laid down on the Government Maps in two Townships, called Merlin and Java, but was finally surveyed into one Township with its present name; this is a first-rate Township of land, both in regard to the quality of the soil and to its general advantages.

A person travelling on the railway cars, on approaching Collingwood would be apt to form a very poor opinion of the land in this Township, as the railway passes through the worst part of it. In fact, the railway from Barrie to Collingwood passes through the very worst part of the County. From the cars there is nothing to be seen but a succession of swamps and sand hills, while away to the west and south is some of the finest land in Canada. The land of Nottawasaga on the lake shore is level and generally sandy, and so low that it is not much above the level of the water, and covered with cedar and other evergreens. On the western side, this description of land does not extend far back from the water but soon gives place to good hard-timbered land which increases in height as it recedes back from the water; but on the east the low land extends back for many miles. The quality of the land in the western part of this Township, is scarcely excelled in any part of the Province, subject however to the inconvenience, in some parts, of being rather hilly. A high ledge of land, in some parts, called the Blue Mountains, stretches from the neighbourhood of Owen Sound through the Townships of St. Vincent and Collingwood, increasing in height until it enters the Nottawasaga; where it presents a bold precipitous cliff facing the north-east, of several hundred feet in height. From this cliff can be seen the lands of Sunnidale, and a great part of Nottawasaga, Vespra, Flos, and Tiny, apparently spread out on a level with the water in the Georgian Bay. To the eastward of this cliff the range slopes gently down and loses its precipitous character.

Nottawasaga was surveyed and opened for sale about twenty years ago, at five shillings an acre; but its remote situation offered poor encouragement to purchasers or settlers, and but little was sold for several years; some lots were taken up along the lake shore, probably for speculation. About the year 1837, however, two small settlements were effected in the heart of the Township by the assistance of Government—one called the "Yankee Settlement," on Hurontario Street, about three miles from the southern boundary of the Township. This settlement was under the direction of Mr. Bowerman from the Bay of Quinte, who had some indirect support from the Government for procuring settlers in the neighborhood. The land in that part of the Township is of excellent quality, but rather hilly; the soil is generally a mellow clay. Mr. Bowerman erected a grist mill and saw mill on the Mad River, a branch of the Nottawasaga; but the settlement has not thriven so well as might be expected from the advantages in soil and water privileges; their remoteness from any other settlement, and from market, counterbalanced all their other advantages; it is true they were within twelve or fifteen miles of the Georgian Bay, but a lake without harbours or ships was of very little use to them.

The other was called the "Scotch Settlement," which was also on Hurontario Street, six miles further north, and was composed of indigent emigrants from the Highlands of Scotland. The Government, with the two-fold object of affording relief and employment to those poor people, and encouraging the settlement of this remote Township, employed the emigrants in clearing the land. Every man was allowed a "job" of five acres more or less, to clear, and advances of provisions and other necessaries were made to enable them to subsist in the mean time. A large number availed themselves of this opportunity, and a colony of the veriest Highlandmen, women, and children, was established in the

centre of Nottawasaga. Each family built a shanty on the lot of land they had to clear—say five acres, and a very prosperous village appeared in the woods. While clearing the land they grew abundance of potatoes and garden vegetables, and their wants being few, with what assistance they obtained from the Government, they made themselves very comfortable. Some of them afterwards became the purchasers of the farms they had cleared, and others with the little money saved from the price of clearing, were enabled to make a first payment on a wild lot, in the neighborhood. This settlement has continued to prosper, and the village of shanties of 1838, is now replaced by one of much better appearance called "Scotch Corners," seven miles from Collingwood.

The high land in this neighborhood occasions several precipitous falls, as the streams find their way to the lower level. At the south-west corner of the Township, there is on Mad River a perpendicular fall of forty or fifty feet. Near these falls there is a grindstone quarry, said to be of very good quality. There are also falls on another branch of the same stream, about seven miles further north, on the town line between Nottawasaga and Osprey, where there are grist and saw mills, and carding and fulling mills, owned by two brothers of the name of Sing. To this place they have given the appropriate name of "Sing-Sing"; but it is more generally known by the term of "Mad River Mills."

On the eastern side of the Township, on the united branches of the Mad River is the thriving village of Creemore. Mr. Webster is the patron of this village. About seven or eight years ago he commenced business in this place, and erected mills, &c. The place now contains a superior flouring mill, with three run of stones, built by Mr. Webster, a saw-mill, carding and fulling mill, a good hotel, and several merchants and mechanics' shops, with about two hundred inhabitants. There is another small village on Hurontario Street, three miles from Collingwood, called "Nottawa Mills," where there are mills and other appurtenances of a rising village on Pretty River. From Creemore there is a stage road to the Sunnidale Station, at the distance of seven miles, also the Webster road beforementioned, and roads connecting with all the principal thoroughfares. Hurontario Street is the leading road through the Township. A number of concession lines and cross roads are also used. One road running westward across the Township through Scotch Corners is called the Mountain Road, and another running through the Bowerman Settlement, is connected at Osprey with the Durham Road, which runs through the Counties of Grey and Bruce.

COLLINGWOOD.

We now come to the new town of Collingwood, which has of late attained to such importance that it would seem to belong more to the Province than to the County of Simcoe, and should perhaps more properly have a place in Mr. Hogan's Essay on Canada than in an humble County Report. Collingwood is at the terminus of the Hurontario Street, and has been selected as the northern terminus of the Ontario and Huron Railway, which has given to the place a degree of importance which it would never obtain by means of its own natural advantages. It now seems destined to eclipse anything heretofore witnessed in Canada in the "go-ahead line." It has often been objected that there is not sufficient "go-ahead-iveness" in Canada. It is true, we have far excelled our neighbours of the United States in the ratio of a steady and sound advance in population and wealth, as well as in improvements in agriculture and commerce. But in that sudden and feverish rise of some localities from a state of wilderness to the condition of rich and populous towns, we have been deficient, and this has been matter of complaint with many, who find fault with the slow, jog-trot course we have been pursuing. Indeed, so unostentatious and quiet has been our advance,

that some people cannot, or will not believe the fact that we have actually outstripped our neighbors in progress, because in Canada they do not see those prominent points of advance, which may be called salient points, and which stand out so conspicuously in many parts of the States. The lovers of this leaping or jumping process in Canada may now probably be gratified, as Collingwood appears to be in the act of a tremendous leap from the position of a cedar swamp to that of a rich commercial city.

It is only two years since it was selected as the railway terminus, when it was a dense wilderness, and it has now about a hundred houses, with over five hundred inhabitants, and is a place of much traffic. The Railway Company seem determined to make it a place of importance, and there is every probability that they will succeed. They are sparing no expense in improving the place. They are building very extensive station houses, engine houses, and other buildings for the convenience of the railway business. Their structures, however, are chiefly all wood, but complete and substantial. They have already built a large wharf and store houses, as well as piers and breakwaters to improve the harbour, and they are extending and adding to their works on a large scale. They have succeeded in attracting to this route a large portion of the traffic from the Western States, and steamboats are daily arriving from Chicago and other ports on Lake Michigan, with great numbers of passengers and heavy freights of produce for the Lower Provinces, or New York markets. No less than five large and splendid boats are employed by the Railway Company in a direct line to Chicago. Besides these there are other boats running regularly to Sault Ste. Marie, the Mines, Owen Sound, and other places. The place is very much crowded, and there is not hotel room or house room of any kind sufficient to accommodate half the persons requiring accommodation.

The appearance of the place at present, is anything but pretty or agreeable. The land has been cleared, as far as it is cleared, in a hurry, leaving much rubbish and all the blackened stumps on the ground, and with the exception of Hurontario Street, you cannot distinguish the locality of any street. The houses are generally poor and slight, made for temporary accommodation, but there are a few very respectable frame houses. The land is low, rising but little above the level of the bay, and it runs into the lake with such a gentle descent that the water is quite shallow for a long distance out from the shore, with large boulders here and there lifting their heads above the surface. The shoalness of the water is a serious obstacle to the attainment of a good harbour, but the Railway Company seem resolved to overcome every difficulty. They have carried a substantial wharf far into the bay, to deep water, and are building piers still further out, which, in connection with two small rocky islands in the distance, will, it is expected, protect the harbour from the open sea.

About a mile to the east is the comparatively old village of Hurontario, at the mouth of Pretty River, which I have mentioned before, and which is not inappropriately named. Grist and saw-mills were erected here some years ago, and the place was struggling hard to rise into a town, with but a very slight prospect of success, when the advent of the Northern Railway and Collingwood effected a change in its condition. The change at present appears unfavorable, as the little hamlet of Hurontario seems quite deserted, and its buildings going to decay, the "new come neebour" apparently attracting and absorbing every thing good in the locality. But it will not always be so. There is good water power here, and the old mills, which are not of the most substantial description, will probably be soon replaced by mills of a better character. I think this is now in contemplation, and this place will become the manufacturing portion of the town of Collingwood. The site of the Hurontario Mills, as well as a great part of the Town of Collingwood, I believe, belong to a company in Toronto,

Messrs. McMaster, Paterson and some other gentlemen, who have a great number of lots for sale in the town. A few weeks ago I witnessed a sale of Collingwood lots at Wakefield & Coate's Rooms, in Toronto, which was well attended, and at which lots were sold to the amount of nearly ten thousand pounds, and though the prices obtained were considered moderate—ranging from thirty shillings to three pounds per foot frontage—I do not think the same property could have been sold five years ago for as many pounds as it now brought thousands. Such are some of the effects of railways. Several buildings are going up in Collingwood this summer, but labour and materials are so expensive, and so difficult to obtain, that there cannot be so many houses built as are required. While I have been writing the foregoing, a large steam saw-mill has been erected in Collingwood, and is now in full operation.

There is another Railway Station in the Township of Nottawasaga, eight miles from Collingwood. With its numerous excellent water privileges, and the facilities afforded by the Railway, Nottawasaga has the prospect of becoming a good manufacturing Township. Besides the various branches of the Nottawasaga and Pretty River, there is a good stream called Batteaux Creek, which enters the lake four or five miles east of Collingwood, on which there is a grist-mill, near Scotch Corners, and several others in its course.

SUNNIDALE.

Sunnidale lies along side of Nottawasaga on the east. This Township contains a large portion of low swampy land, and is generally condemned as a poor Township. Its bad character has prevented many persons from settling in it. It does, however, contain some very good land which may now be more advantageously cultivated, in consequence of the increased facilities afforded by the railway. The soil is generally sandy. It has a good deal of pine timber, and several steam saw-mills have been erected along the railway for manufacturing the pine into lumber, to be carried off by rail. But the tallest and straightest pine trees are carried off bodily on the cars for masts. Very many pine masts are procured in this Township, and taken by the cars to Toronto to be shipped for Quebec. Forty years ago, it would have been a difficult matter to convey a quantity of masts from this place to Quebec. In 1815, the writer of this article, in the eastern part of Upper Canada, witnessed the operation of hauling masts on the snow from the woods to the bank of a stream, where, in the ensuing spring, they might be floated down to the St. Lawrence. Twenty-five to thirty pairs of oxen and two or three spans of horses were employed, tugging away at one pine tree, which they might, with good luck, move, from its place in the woods to the stream, a distance of one to two miles, in one day; but they would not expect that success every day. Now, in 1855, one iron horse goes into the heart of the forest and grapples hold of twenty pine trees and trails them off with ease at the speed of twenty miles an hour. This is certainly a great change in the process of hauling masts, and it is characteristic of the effects of railways in other matters. The railway runs through Sunnidale diagonally, and has a station about midway. A road was laid out with the first survey of the Township, from the front, nearly centrally to the south end, with a somewhat zigzag course, to avoid swamps.

The Nottawasaga, in its full size, after having collected nearly all the streams of the County, enters this Township from Flos, about three miles from the lake, and running nearly across Sunnidale, returns along the lake shore and re-enters Flos before finding an outlet to the lake. It is navigable for large boats all through this Township. There are several branches that join the river in this Township which have good mill privileges, some of which are made use of. It has several saw-mills, but I believe no grist-mill. Sunnidale is united with Vespera for Municipal purposes.

VESPRA.

Vespra is only a middling Township; but it is of importance as containing the County Town, and is favourably situated in its proximity to the railway, and to Lake Simcoe. The western part is mostly low and swampy, and in some parts flooded with a number of marshy lakes connected with the Nottawasaga River. The east side of the Township is pretty good land, generally clay; that part bordering on Kempenfeldt Bay is more sandy and stony, but it produces pretty fair crops; the timber is generally hardwood, but there is some pretty good pine, and a good deal of cedar, spruce, and hemlock. A leading road extends from Kempenfeldt Bay, on the south-east corner of Vespra, along the town line between Vespra, Flos, and Tiny, on the west, and Oro, Medonte, and Tay, on the east to Penetaanguishene. This road was first opened for military purposes in the war of 1812, but it has never been a very good road. There is another road from Barrie to the south part of Sunnidale, and "Lount's Road" runs diagonally through a good part of Vespra and Flos, to the north part of Sunnidale. The Township is sufficiently well watered by the main trunk of the Nottawasaga and several branches, among which are Matheson's Creek, and Willow Creek. There is one grist mill and several saw mills in the Township.

TOWN OF BARRIE.

Barrie, the County Town of Simcoe, is near the south-east corner of Vespra, on the north side of the head of Kempenfeldt Bay. Barrie has struggled for many years, against much discouragement, to attain a place among the Towns of Canada, and not in vain. It has not sprung up by a lucky chance like Collingwood, but has laboured hard for its position; and has advanced with slow but steady progress; its appearance is characteristic of its history. Every thing about the place has a healthy look, and bears the appearance of solidity and permanency. The buildings are of a more substantial and regular description, than those of most towns and villages of similar extent in Upper Canada. It is very pleasantly situated, with a southern front facing the bay, the ground rising gently from the water's edge to the back part of the town, where it attains a considerable elevation above the level of the lake. It has a fine appearance from the opposite side of the bay, the rising ground bringing every part of the Town directly into view. The Town is a mile or more from the railway station, but it is intended to have a branch constructed into the Town. Barrie now contains about fourteen hundred inhabitants, several good hotels, a large number of stores, and other places of business in proportion. It has a good number of very respectable buildings, public and private. Among the former may be mentioned four Churches, a rather tastefully constructed Gaol, and a Court House—which it is to be hoped proves more useful than it is ornamental.

There are some neat and elegant private dwelling houses; the residence of Judge Gordon, a little to the east of the Town, being among the best. Barrie was named in the Municipal Corporations' Act of 1849 as a Town, but without any Municipal organization. By a proclamation of the Governor in 1853, it was invested with Village Municipal powers.

An office of the Grand Trunk Telegraph was established in Barrie in the early part of 1853.

FLOS.

Flos lies to the north of Vespra, with the north-west corner facing on Nottawasaga Bay. This Township is much similar to Vespra, but it contains a larger proportion of good land. The western side is low, and much of it swampy.

The eastern part is high and generally good land, but some of it is rather hilly. The Nottawasaga enters the lake in this Township near the north-west corner. There is a good harbour in the river, but its value is much lessened by the usual bar at its mouth. The River Wye, a considerable stream, which runs north-east into Gloucester Bay, rises in this Township from several sources. Flos is but thinly settled, but it is advancing; and I see no reason why it should not yet become a populous and well improved Township.

TINY AND TAY.

Tiny and Tay are Townships at the extreme north of the County, and from their remote position, would scarcely have been settled to this day, but for the encouragement given to settlers in this quarter, by the Military and Naval establishments kept up at Penetanguishene. For several years past, a further support has been afforded by the travel to Lake Superior; and the mining establishments on that Lake and Lake Huron. A steamboat sailed from Penetanguishene or Sturgeon Bay, to Sault Ste Marie and the Mines, touching at intermediate ports, in connexion with a steamboat on Lake Simcoe, and freight and passengers were conveyed from one boat to the other across the Northern Peninsula, either on the Penetanguishene Road, or the Coldwater Road from Orillia—the latter route was more generally used of late, as it contained the least distance of land travel; being but nineteen miles from Lake Couchiching at Orillia to Sturgeon Bay. Both of these sources of industry and profit are now taken from this locality, the garrison and depot having been removed, and the new Town of Collingwood, and the Northern Railway effectually cutting off the travel from the route. The inhabitants must therefore now depend on their own resources; and the augmented value of their produce, occasioned by the contiguity of the railway, will probably amply compensate them for those deprivations. The great number of bays and inlets, which are all good harbours, afford them good facilities of communication with Collingwood, and all other ports on Lake Huron. The quality of the soil is much diversified, there being a good deal of swampy land, and also much that is hilly and broken; but there is a considerable portion of good land, and pretty good crops of wheat, oats, peas, and corn, are grown here, and very good crops of hay. Tiny is watered by the River Wye which runs through the Township, and enters Gloucester Bay, passing through Mud Lake, in Tay. One branch of the Wye proceeds from a very pretty lake near the south-west corner of Tiny, containing over a thousand acres. There are also several smaller streams in Tiny which afford mill privileges, on some of which mills are erected. Tay is well watered by the Hog, Sturgeon, and Coldwater Rivers, which empty into the Hog, Sturgeon, and Matchedash Bays. These are all good mill streams.

The main roads are the Penetanguishene Road, running between the two Townships and the Coldwater Road, leading from the Village of Orillia, through Oro, Medonte and Tay, to Sturgeon Bay, where there is a small village called Port Tay. There is also a portage road from the head of Penetanguishene Bay to Nottawasaga Bay through Tiny, a distance of five miles.

There is an Archipelago of Islands on the north-west, north, and east of these Townships, which divide them from the unsurveyed mainland on the north. The principal are the Christian Islands. There are Indians residing on some of them, but they are otherwise unimproved and uninhabited.

On Christian Island, the largest of the group, are several steam saw-mills, now employed in sawing lumber for the works at Collingwood. The Island contains a good deal of Pine timber, but much of it is too small for sawn lumber.

It is well adapted, however, for hewn lumber, and large quantities are hewed, made into rafts, and towed by steamboats to Collingwood for building the wharves.

Tiny and Tay are united, and form one Municipality.

PENETANGUISHENE.

Penetanguishene has long been a place of some note; a military fort having been established here during the late war with the United States, and kept up since that time, until, very lately, the garrison has been withdrawn. This circumstance attracted a good many settlers to the locality, and the place came to be a rather populous village. A considerable trade was kept up with the Indians in furs and skins, which with the business occasioned by the military and naval establishments, made this rather a stirring little town. The population was, not long since, about four hundred, chiefly Lower Canadians and half-breeds, independent of the garrison, but since the garrison has been withdrawn the population has been rather on the decrease. The bay forms a good harbour, and it was for some time considered probable that this place would be selected as the terminus of the Northern Railroad. The selection of Collingwood has not only cut off all such expectations, but has also deprived the people of Penetanguishene of the advantages they enjoyed by the stage and steamboat traffic. Penetanguishene has long been a Port of Entry in the County, but it would seem that in former years its shipping business was not large, as it is stated in Smith's work on Canada, that for eleven years there had not been an entry. During the last seven years, however, the entries have been more numerous, as the following tables compiled from official documents will show.

RETURN of the value of Exports and Imports, and amount of Duties collected at the Port of Penetanguishene, in each of the years, from 1848 to 1854, inclusive:—

YEAR.	IMPORTS.			EXPORTS.			DUTIES.		
	£	s.	d.	£	s.	d.	£	s.	d.
1848.....	not given.			279	17	7	14	4	4
1849.....	“ “			103	8	5	18	8	4
1850.....	121	4	0	83	5	6	17	4	1
1851.....	933	14	7	63	10	0	7	8	10
1852.....	612	2	3	115	16	1	20	13	4
1853.....	506	13	9	182	10	6	9	3	10
1854.....	153	3	6	454	16	2	63	18	2

There is a material and steady falling off in the Exports from 1851, and an increase in the Imports for the same period, in a somewhat similar proportion, but not to so great an extent. The following tables will show the nature of the change in the Imports and Exports for 1851-2 and 4. The returns for 1853 I have not been able to obtain.

STATEMENT of articles, and their value, Imported and Exported at Penetanguishene in the year 1851:—

IMPORTS.			EXPORTS.		
ARTICLES.	QUANTITY.	VALUE.	ARTICLES.	QUANTITY.	VALUE.
		£ s. d.			£ s. d.
Salt.....	110 bushels.	8 7 6	Battens, Knees,		
Fur.....		42 2 6	Sleepers, Scant-		
Manufactures of			ling & Trenails.	5 pieces.	0 13 0
Wood.....		2 0 0	Planks & Boards	314,000 feet.	548 18 1
Articles not enu-			Laths and Fire		
merated.....		1 5 0	Wood.....	2 cords.	0 12 6
Junk & Oakum..	2 cwt.	6 10 0	Shingles.....	109½ M.	32 17 0
Pitch & Tar.....	2 bbls.	3 5 0	Oxen.....	25	192 10 0
			Cows.....	18	79 15 0
			Horses.....	3	45 0 0
			Sheep.....	14	10 10 0
			Oats.....	154 bush.	9 12 6
			Potatoes.....	51 bush.	3 16 6
			Articles not enu-		
			merated.....		9 10 0
Total.....		63 10 0			933 14 7

Imports and Exports for the Year 1852.

IMPORTS.			EXPORTS.		
ARTICLES.	QUANTITY.	VALUE.	ARTICLES.	QUANTITY.	VALUE.
		£ s. d.			£ s. d.
Coffee.....	4 lbs.	0 2 0	Planks & Boards.	331,000 feet.	403 10 9
Sugar.....	26 lbs.	0 10 4	Shingles.....	8 M.	2 0 0
Snuff.....	2 lbs.	0 3 0	Pork.....	4½ cwt.	6 5 0
Glass.....		0 11 3	Cows.....	3	15 0 0
Rice.....	28 lbs.	0 4 0	Oxen.....	18	131 5 0
Candles.....		1 5 1	Sheep.....	5	3 2 6
Cotton, Manufac-			Meal.....	5 bbls.	3 15 0
tured.....		0 17 7	Oats.....	250 bush.	9 7 6
Manufactures of			Hops.....	7 cwt.	1 0 0
Wood.....		6 8 3	Buck Wheat.....	259 bush.	15 12 6
Manufactures of			Onions.....		2 18 0
Wool.....		0 7 9	Malt.....	2 bbls.	0 11 3
Coals.....	¼ ton.	0 7 6	Eggs.....	70 doz.	1 15 0
			Articles not enu-		
			merated.....		16 0 6
Total.....		115 16 1			612 2 3

Imports for the Year 1854

IMPORTS.					
ARTICLES.	QUANTITY.	VALUE.	ARTICLES.	QUANTITY.	VALUE.
	cwt. qrs. lbs.	£ s. d.			£ s. d.
Coffee, Green.....	1 1 25	5 3 2	Candles		2 15 8
Brandy	44½ gal.	11 2 6	Cotton		6 5 0
Gin	46 gal.	11 10 0	Iron & Hardware		12 14 8
Whiskey	205 gal.	13 17 5	Oil.....	82 gals.	18 11 0
	cwt. qrs. lbs.		Soap		1 10 0
Sugar, new.....	18 3 20	50 15 0	Manufactures of		
Tobacco	218 lbs.	10 5 7	Wood.....		11 9 5
Fruit, dried.....		4 18 11	Articles not enu-		
	cwt. qrs. lbs.		merated.....		3 8 10
Butter.....	1 0 15	4 16 6	Junk & Oakum.....		2 5 0
Cheese.....	1 3 0	4 13 2	Lard		15 3 11
Meat, salt.....	14 1 4	22 0 0	Pitch & Tar.....	2 bbls.	2 5 0
Fish, salt.....		8 3 11	Indian Corn.....	200 bush.	31 5 0
Pork	39 0 12	78 17 9	Salt.....	1250 bush.	140 18 9
Total value of Imports.....					454 16 2

The only Exports for 1854 are 30,000 Shingles,..... £9 6 0
 And 168 barrels Pickled Fish..... 143 17 6

£153 3 6

These Imports and Exports are all from and to the United States. The tables show no part of the coasting trade, and the diminution of Exports to a foreign country is probably owing to the new home markets which have sprung up by the settlements of Owen Sound, the Saugeen and Collingwood.

The planks and boards, which formed the greater part of the aggregate Exports in 1851 and '52 have entirely disappeared from the Exports of 1854; and these were the articles latterly in the greatest demand near home.

The Port of Penetanguishene has not been a source of great revenue to the Government. The gross revenue in 1851 was £7 8s. 10d., and the expenses of collection £25, making a loss of £17 11s. 2d. In 1854 it was something better, the gross receipts being £63 18s. 2d. and the expense £25, leaving a net revenue of £38 18s. 2d.

The receipts have been better in some former years. The duty collected in 1841 was £211 1s. 1½d.; in 1842, £156 4s. 11d.; in 1843, £118 13s. 11½d.; in 1844, £5 11s. 1½d.; in 1845, £29 7s. 5½d., and in 1846, £13 2s. 9d. The total value of Imports and Exports was, in 1845, £142 8s. 9d.; in 1846, £68 15s.

ORO.

Oro is perhaps the best Township of the Northern Division of the County. By the Northern Division I mean that peninsular portion lying to the north-east of Nottawasaga River. Its south end fronts on Lake Simcoe and Kempenfeldt Bay, and rises from the water's edge to a considerable height, the interior being generally high land. In common with other land, similarly situated, it is stony near the shore, but improves as it recedes from the water. The soil is generally a loamy clay. It is not so abundantly watered as most of the Townships of the County, but it sends a tributary to the Nottawasaga, and has other small streams which empty into Lake Simcoe and Sturgeon Bay. There are two or three saw-

mills in the Township. There is a landing near the south-east corner of the Township, called Hodges, where the steamboat calls every day. It has very little shelter, and it is difficult for the boat to approach the wharf when the lake is rough. From its favorable situation, and the average good quality of the soil, this Township cannot fail to improve.

MEDONTE.

Medonte lies to the north of Oro, in the centre of the Northern Peninsula. It is much similar to Oro, but it has a good deal of indifferent land, both swampy and hilly. It is well watered by the Wye, Sturgeon, and Cold Water Rivers, and contains a grist-mill, carding and fulling-mill and two or three saw-mills. A road called the Gloucester Road, angles across the Township, connecting the Penetanguishene Road with the road from Orillia to Sturgeon Bay. On the latter road is the little village of Cold Water, near the north-east corner of the Township. Though Medonte is situated somewhat remotely, it has the advantage of the two main thoroughfares from Lake Simcoe to Gloucester Bay. The road from Orillia to Sturgeon Bay passing through the east side, and the Penetanguishene Road along the western boundary. It is high land, descending to the north.

ORILLIA AND MATCHEDASH.

South Orillia, North Orillia and Matchedash, occupy the north-eastern portion of the County, stretching from Lake Simcoe to the waters of the Georgian Bay. They are joined together for Municipal purposes. South Orillia is very pleasantly situated on Lake Simcoe and Lake Couchiching. The soil is rather light and in some places stony; but it contains some good farms and good buildings. The land is high, rising up regularly from the water on the south and east, and from most parts there is a view all over the lake. The residence of James Sanson, Esq., warden of the County, though several miles inland, is conspicuous at a great distance on Lake Simcoe.

The Orillia mills are near the head of "Shingle Bay," on the south front, and there is a steam saw mill near Orillia Village, and several other saw mills in both south and north Orillia. The Village of Orillia is a very pretty place, containing a population of about four hundred, with two or three churches and other good buildings. The steam-boat calls here every day on her course round the lake. Though nearly one hundred miles from Toronto, a person leaving that City in the morning by the railway train, can, with ease, visit all the principal places on Lake Simcoe, spend an hour at Orillia and return to Toronto the same evening. The beauty of this place has induced some gentlemen in Toronto to purchase property here for summer residences.

North Orillia is not much settled except in the south-west corner. It contains a mixture of good and bad land, and is watered by the North River, which runs through this Township and Matchedash into Matchedash Bay in the Township of Tay, and by the River Severn, which bounds it on the east.

Matchedash is the *ultima thule* of the County of Simcoe, and is said by the frontier settlers to be, "back of God speed." When the projected railway from Port Hope to Sturgeon Bay shall be constructed—or when all the other Townships of Simcoe are densely populated, and land has become difficult to procure, or when from any cause it shall become desirable to make extensive use of the stupendous water power of the River Severn; then, in either of those cases, and probably not otherwise, will the lands of Matchedash be much sought after and settled. By the census returns of 1850 there appears to have been a popu-

lation of seven! In 1854 the occupied land assessed was one hundred acres, valued at one hundred and forty-four pounds, and the unoccupied land one thousand acres, valued at two hundred and forty-nine pounds.

LANDS OF NON-RESIDENTS.

One evil under which the County of Simcoe has laboured in a more than ordinary degree, as compared with other Counties, is the system of absenteeism. A great portion of the granted lands in Simcoe is held by capitalists at a distance. By the Assessment Rolls of 1854 there are returned, of occupied lands 324,495 acres, and unoccupied lands 342,675 acres; so that more than one-half the assessed lands of the County is held by absentees, and remains wholly unimproved—a serious drag on the industry of the country. Every person acquainted with the settlement of a new country, knows how anxiously the settlers look ahead for every lot to be settled on—how they will anticipate the additional days of “Statute Labour,” and the advantages of another clearing to let the sun shine upon the road, and will understand how discouraging to the actual settler, must be the fact that one-half the land in his neighbourhood is destined not to be settled at all; at least, in all probability, not in his lifetime. This evil has been felt in other parts of the country, but in a much lighter degree, where the new settlement was dotted with Crown and Clergy Reserves, standing green between the improved farms, sheltering the mudholes from the rays of the sun; and many persons will well remember the evident improvement which succeeded the sale and settlement of these reserves in the Townships where they most prevailed. In one respect, however, the unoccupied lands of individuals are less injurious than were the reserves, as the latter are liable to taxation and may thus be made, to some extent, to contribute to the general improvement, but still they are a great detriment in a settlement, and I believe Simcoe has suffered more severely from this evil than other Counties. I do not think any other County in Upper Canada has half its lands locked up by speculators. The following table from the Assessment Rolls of 1854, will show the quantity of occupied and unoccupied land in each Township and their valuation, by which it will be seen that the evil pervades every Township in the County, and that in a majority of the Townships there is considerably more than half the assessed lands unoccupied and held by non-residents.

It is to be hoped that the Railway, to which this County is already so much indebted, will also afford relief in this case, and that the increased nominal value of the lands occasioned by its construction, will induce the holders of those wild lands to sell them to actual settlers.

TABLE SHOWING THE QUANTITY OF LANDS OCCUPIED AND UNOCCUPIED IN THE SEVERAL TOWNSHIPS OF SIMCOE, AND THEIR VALUATION, FROM THE ASSESSMENT ROLLS OF 1854.

TOWNSHIPS.	OCCUPIED ACRES.	VALUE.			AVERAGE	UNOCCUPIED ACRES.	VALUE.			AVERAGE.	TOTAL	VALUE.			AVERAGE.
		£	s.	d.			£	s.	d.			£	s.	d.	
Barne	not given	71789	10	0		not given.	12645	10	0			£	s.	d.	
Orillia.....	not given.					" "	9550	0	0			85430	10	0	
Matchedash.....	100	144	0	0	28s. 9d.	1000	249	0	0	5s. 0d.	1100	not given.			
Tay	3295	1172	0	0	7s. 4d.	24710	8181	7	0	6s. 7½d.	26924	293	0	0	7s. 0d.
Medonte.....	22197½	19326	0	0	17s. 2d.	51190½	34459	0	0	13s. 5d.	72687½	9353	7	0	7s. 0d.
Oro	36105½	45827	0	0	25s. 4½d.	27234½	17759	0	0	13s. 0d.	63339½	53785	0	0	14s. 7d.
Vespra.....	13027	18895	0	0	29s. 0d.	not given.	16343	0	0			63586	0	0	20s. 0d.
Flos.....	9100	7975	10	0	16s. 10d.	23949	11896	0	0	10s. 0d.	32349	35328	0	0	
Sunnidale	5308	13827	0	0	52s. 1d.	13868½	10679	0	0	15s. 5d.	19176½	19871	0	0	11s. 11d.
Tiny	not given					34619½	11724	0	0	6s. 9d.		24506	0	0	25s. 6d.
Notawasara	39650½	44651	0	0	22s. 6d.	40733	45199	0	0	21s. 2d.	80283½	not given.			
Gwillimbury.....	not given.											87850	0	0	21s. 10s.
Essa	29389½	43956	0	0	30s. 0d.	22368	17882	0	0	16s. 0d.	51757½	143904	0	0	
Tecumseh	49318	138265	0	0	56s. 0d.	10717	7341	0	0	14s. 10d.	60935	61839	0	0	23s. 10d.
Adjala	no return.											146209	0	0	48s. 4d.
Tossorontio.....	9017	8718	0	0	19s. 4d.	21030	11226	0	0	10s. 8d.	30047	not given.			
Mulaur.....	20432	13592	0	0	11s. 4d.	34875	16796	0	0	6s. 3d.	54808	19944	0	0	13s. 3d.
Mono.....	47494½	38844	0	0	16s. 4d.	16799	9228	0	0	11s. 0d.	64293½	24889	0	0	8s. 10d.
Innisfil.....	39553½	61457	4	0	21s. 0d.	30073	27802	0	0	18s. 5d.	37355½	47072	0	0	15s. 0d.
												89259	4	0	47s. 9d.

The Tables cannot be given with any approach to correctness on account of the incompleteness of the Returns.

The following Tables, compiled partly from the Assessment Rolls, and partly from other sources equally trustworthy, will show at a glance the positive and the relative advance in population and wealth of each Township for various periods from 1836 to 1854 :

TABLE SHOWING THE NUMBER OF PERSONS ASSESSED, POPULATION, AND AMOUNT OF ASSESSED PROPERTY, REAL AND PERSONAL, FOR THE SEVERAL YEARS MENTIONED.

TOWNSHIPS.	NUMBER ASSESSED.			POPULATION.					AMOUNT OF ASSESSED PROPERTY.											
	1836.	1852.	1854.	1836.	1842.	1850.	1852.	1854.	1851.			1852.			1853.			1854.		
									£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Barrie.....	28	155	200				1007	1200										98465	10	0
Orillia.....	33	122	135	214	440	546	715	990				21900	0	0	30680	0	0	32408	0	0
Matchedash.....					1	7	10	15	21097	0	0	1399	0	0				443	0	0
Tay.....	36	97	49	315	202	274	600	480	15000	0	0	13242	0	0	14141	0	0	1200	0	0
Medonte.....	148	179	431	737	348	993	1116	2143	29185	0	0	30152	0	0	31236	0	0	37058	0	0
Oro.....	220	253	330	1052	1190	1759	2027	2250	68890	0	0	65623	0	0	67264	0	0	74311	0	0
Vespra.....	107	169	256	500	571	1254	626	1102	83232	0	0	77552	0	0				23302	0	0
Flos.....	27	75	156	192	202	405	545	600	27625	0	0	12000	0	0	134005	0	0	21406	10	0
Sunnidale.....	31	32	60	135	230	154	203	373	10500	0	0	9670	0	0				25256	0	0
Nottawasaga.....		308	415		420	1411	1887	2400	34269	0	0	55780	0	0	81236	0	0	93675	0	0
Gwillimbury.....	175	311	525	1718	2702	3816	3894	5000	209924	0	0	156398	0	0	133379	0	0	159639	0	0
Essa.....	59	238	253	269	534	1223	1507	1601	65833	0	0	80002	0	0	57302	0	0	65888	0	0
Tecumseth.....	360	569	592	1768	2191	3612	3998	4159	156280	0	0	155166	0	0	158069	0	0	170278	0	0
Adjala.....	139	339	312	705	890	1754	1994	2000	39741	0	0	39741	0	0	38074	10	0	39164	0	0
Tossonrentio.....		83	86		250	436	492	560	17336	0	0	3169	0	0	11632	0	0	21219	0	0
Mulham.....		124	170		215	644	763	1050	10197	0	0	23341	0	0	25631	0	0	37982	0	0
Mono.....	173	416	464	744	1020	2276	2689	2940	54127	0	0	51127	0	0	54533	0	0	52675	0	0
Innisfil.....	98	385	440	578	762	1887	2341	2640	195341	0	0	80772	0	0	75871	0	0	94409	0	0
Tiny.....	61	125	133	450	230	683	748	863	2066	0	0	18855	0	0	25926	0	0	26000	0	0
Total.....	1638	4834	5037	9368	12698	23134	27165	32266	950553	0	0	901487	0	0	758979	10	0	1075279	0	0

It would appear from the above table that the increase of the county in wealth, since 1851, has not kept pace with its increase in population, although the very reverse is the fact. The population has increased, from 1846 to 1854, forty per cent., while, according to the assessment rolls, the value of property has increased but little over thirteen per cent. in the last three years, which would go to show that the ratio of increase in the value of property is considerably less than half that of the increase of population. But the truth is that the value of property has increased in a *greater ratio* than the population, and every person much acquainted with the County is aware that the average value of property to each individual in the County was much greater in 1854 than in 1851. From this it would appear that some part of the returns are incorrect, and the incorrectness will be found to be in the Assessment Rolls and not in the returns of the population, and it may be easily understood why it is so. There is no reason why a man should not give a correct account of the number of his children and servants, because he has no interest in giving an incorrect statement, but every man knows that he will have to pay taxes in proportion to the value of his property as entered on the assessment roll, and he has a direct interest in having it valued as low as possible. Besides, the number of his children is a matter of fact, in which he cannot well be mistaken, while the value of his farm is a mere matter of opinion, and as opinions are liable to change, it would not be surprising that his opinion on that head might change materially between the visit of the assessor and the appearance of a purchaser. This system of keeping down the assessment is not confined to individual operations, but it prevades whole Townships. If the property of one Township is assessed relatively higher than that of the other Townships of the County, the people of that Township will have a proportionate higher tax to pay for County purposes, and this makes every person interested in keeping down his neighbour's valuation as well as his own, which greatly facilitates the process. The present system of assessment came into operation in 1851, and the assessment rolls of that year give a more correct statement of the value of the property of the County, than any that has been given since. The next year there was a falling off of nearly fifty thousand pounds, and in the next year, 1853, it came up again to about the same amount as it was in 1851, from which time the actual value of much of the property had been doubled. The assessment rolls of 1854, show a more healthy increase, and it is to be hoped that care will be taken to have the property in all parts of the County correctly and uniformly valued. The office of assessor is one of great trouble and responsibility, and none but persons of integrity and competency should be appointed to it.

As a matter of curiosity I insert the following table, showing the valuation of property and amount of assessment, for the four first years of the existence of Simcoe as a separate district under the old assessment laws:

	Valuation of Property.	Amount of Assessment.
1843.....	£145,786 0 0	£1897 18s. 10½d.
1844.....	157,791 0 0	2363 9s. 9 d.
1845.....	174,572 0 0	2539 15s. 1½d.
1846.....	185,169 0 0	2708 7s. 1½d.

MODE OF FARMING, IMPROVEMENT OF STOCK, &c.

The mode of farming in Simcoe does not differ materially from the usual course pursued in most parts of the Province. The same causes, which have been mentioned as retarding the County in the increase of wealth and population, have also prevented it from being the foremost in receiving benefit from the improvements in agriculture. But, though it is not the best cultivated County of

Canada, it is not among the worst—and though the causes before mentioned has tended to retard the progress of the County—other causes have a favorable tendency. A considerable portion of the original settlers were of a better educated, and more intelligent description, than the generality of the first settlers of a new district—many of them retired officers of the Army and Navy. Though this class of persons are not generally the most profitable settlers *to themselves*, or the best adapted to battle with the hardships and privations incident to a new settlement, and to accommodate themselves to the necessities of a bush life; yet the knowledge and enterprise they bring to a settlement, and the improved tone they give to society, are productive of good effects to the community generally; and among the results is a desire to take every opportunity of improving the condition of their agriculture. Much trouble has been taken, and much expense incurred in procuring the most improved breeds of cattle, and the best description of seeds and agricultural implements, and though the farmers have often been balked and disappointed in their attempts at improvement, and have sometimes found that they have, at a heavy expense, obtained an article or an animal far inferior to what they have discarded, yet those disappointments, instead of deterring them from further efforts, have taught them caution and discrimination, and they have generally endeavoured to procure the best description of stock and implements, so far as they were suitable to their soil and climate. They have now some very well bred cattle, mostly of the Durham breed, but they are confined to a few townships. In the remote and newly settled townships, it is difficult to introduce improved breeds of cattle, as they do not “bear starvation” as well as the natives. In some townships, the improvement in cows is manifested by the increased quantity of butter and cheese. According to the census returns, there were in Tecumseth, in 1851, 1,286 cows, which produced 83,105 pounds of butter and 3,700 pounds of cheese, being 64 pounds of butter and 3 pounds of cheese to each cow. This is considerably better than the average produce of Upper Canada, which is 54 pounds of butter and 7 pounds of cheese to each cow, and still more in excess of the County of Simcoe, the average of which is 49½ pounds of butter and 3 pounds of cheese. It is evident, from the returns, that from some cause or other, an immense increase in the quantity of butter and cheese from each cow had taken place in the County during the two years between the last census and the next preceding one. In 1849 the township of Tecumseth, from 1089 was produced 14,857 pounds of butter and cheese, an average of 13½ pounds each, just one-fifth of the average produce of 1851, showing an increase of four hundred per cent. in two years. The increase of the whole County was from 14 pounds to 52 for butter and cheese, being an increase of over two hundred and seventy per cent; and it is to be observed that the more remote and later settled townships have not advanced in as great a ratio as the old settled townships, where the better bred cattle have been introduced. I believe, however, that this great increase may be attributed more to the better feeding of the cattle than the improvement in the breed, but partly to both.

There are good horses in the county, especially in the older settled parts, of a great variety of breeds, from the large heavy Clyde to the small stout Lower Canadian. The breed of pigs has undergone very considerable improvement. The long legs and long noses have, in a great measure, disappeared and been superseded by mixtures of the Berkshires and Chinese, and in some places the large Yorkshire.

But little alteration has been made in the breed of sheep, and many persons are of opinion that the old class of sheep are the best adapted to the country. Some crossings, however, have been obtained which are evidently an advantage. There is an unaccountable falling off in the produce of wool, from 1849

to 1851, if we may believe the census returns, the average weight of the fleece being reduced from $2\frac{3}{4}$ pounds to $2\frac{1}{2}$. The number of sheep in 1849 was 24,659, producing 67,520 lbs. of wool, while in 1851, 26,954 sheep produced only 67,387 pounds, being an addition of 2295 to the number of sheep, with a diminution of 133 pounds in the aggregate weight of wool. This falling off does not appear so much in the front and older settled Townships as in the remote ones. It is not easy to account for this decrease, but the probability is, that the produce of 1849 was a more than usually large crop, standing out above those of the preceding and succeeding years. This theory is partially confirmed by reference to the adjoining Counties of York, Ontario and Peel, which exhibit a larger crop in 1849 than in 1851 or 1847, but not to so great an extent as appears in Simcoe. The average produce in those counties in 1849 was nearly $3\frac{1}{4}$ pounds, while in 1851 it was a fraction under 3 pounds, almost exactly the same as the produce of 1847 for the Home District. It would then appear that the produce of wool in 1849 had been more than usually large, and that the diminution in 1851 was not properly a falling off, but rather a return to the usual standing. The average produce of wool in Upper Canada in 1851 is about the same as that of this county, $2\frac{1}{2}$ pounds to the fleece.

IMPLEMENTS.

Among the most important improvements in agricultural implements, is the Horse power Threshing Machine and Separator. It is now about twenty years since the rude threshing machines were first introduced into the county, and those, imperfect as they were, were found a great improvement on the old slow process of threshing with a flail or with horses. Before the introduction of threshing machines, the task of threshing the grain of each season was a tedious and expensive process, and could not, in a general way, be completed before the end of winter. In those times a heavy crop of grain was a subject of serious anxiety to the farmer on account of the trouble and expense of threshing. Now, with the improved thresher and separator, twelve men and eight horses will thresh and clean from three to six hundred bushels of wheat in a day, and the largest crop in the county may be prepared for market in a few days. The South-western Townships obtain first rate machines of this description at the Foundry of Haggart & Brothers, Brampton, and the eastern Townships are mostly supplied from the establishment of J. Walton & Co., at the Holland Landing. The Seed Drill is another important implement lately introduced, but not yet generally used. It is considered by many that those implements are not as perfect in their construction as they ought to be, and as they may yet be expected to be. There can be no doubt that a good article of this kind will before long be appreciated, and become an indispensable farm implement on every large and well improved farm.

Next in importance to the Threshing Machines—if not of equal, or greater importance, are the Reaping and Mowing Machines, just now coming into use. Many farmers have procured reaping machines, and there is little doubt that they will soon be very generally and profitably used on large farms. The present high rate of labourers' wages has induced many to obtain them this year for the first time, and they have given the fullest satisfaction. The Mowing Machines have not yet inspired so much confidence, or been so much used, but they will, before many years become well tested, and if found sufficient will not be rejected.

Straw-cutters of almost endless varieties are much used in the county. I am not able to recommend any particular description above another, but I am certain that a good straw-cutter is a useful and valuable implement on a farm, for the purpose of manufacturing the rough straw of the farm, first into good food for

cattle and horses, and then into manure. By the usual manner of feeding the straw on most farms, a great part of it is wasted for any useful purpose.

One of the most serious drawbacks in the Agriculture of Canada is the great length and severity of our winters. A large portion of the best land of the farm is necessarily employed in growing crops for the sustenance of the cattle and horses during the winter season. To reduce this quantity of land to the smallest possible quantity, without stinting the stock in good nourishing food, or diminishing their number, is an object to be desired; for every acre that can be reclaimed from the use of the stock, may be profitably employed in growing some other marketable produce.

It is not desirable to reduce the number of cattle, because a large stock of cattle, judiciously managed, besides being profitable in themselves, will assist materially in the production of large crops of wheat. In providing food for the stock, the object of affording nourishment and sustenance to the animals, should be invariably connected with that of producing the greatest possible quantity of the best possible quality of manure. On a large grain-growing farm a great bulk of straw is produced, which contains a considerable portion of nutritious food for cattle, but which, in the usual way of feeding, is in a great measure lost, both for the purpose of food for the cattle and the production of good manure. When the straw is thrown to the cattle from the stack, unless they be starved to it, they will only eat a very small portion of it. The remainder is wasted in the yard, and is not even converted into good manure. The cattle in the meantime must be fed with hay or become poor, for they will not eat sufficient straw in its ordinary state, to keep them in good condition. By means of the straw-cutter, a far larger portion of the straw, by mixing with other matter, may be converted into good nourishing food for cattle, and answer the purpose of hay; a large portion of which may then be disposed with, more land will be available for growing wheat, and a better quality of manure will be obtained. Cut straw mixed with chopped oats or other grain is considered by many the best food for horses. Apart from the use of the straw-cutter, a good method to induce cattle to eat straw kindly, is to sprinkle it with pickle or salt water. This plan is somewhat troublesome, but it will amply repay all the trouble. I have myself tried it with much success. The expense of the material is nothing. A small quantity of salt dissolved in water and spread on the straw at feeding time, will induce the cattle to eat it up almost as clean as if it were hay. Perhaps it would be more convenient to mix in the pickle at the time of stacking the straw.

The plough most generally used is the wooden Scotch plough, but the iron plough of nearly the same pattern is coming more into use. An excellent plough, invented and patented by Isaac Modeland of Brampton, is much used in the south-western townships of the county. It is considered by good judges, superior to Morse's plough, which obtained the second prize at the world's exhibition at Paris.

There have been several new descriptions of harrows tried, and sometimes used for a considerable time, but they have most generally been discarded, and the old square harrow in two parts, fastened together by hinges and drawn by one corner, is most generally used.

CROPPING.

Wheat is the principal grain grown in the county, and the ground is generally prepared for it by summer fallow, but not always. It is sometimes sown after Peas, and less frequently after Oats. Nearly one-fourth of the cleared land is kept in Wheat, about two-thirds of which is sown after fallow, and the remainder after spring crops. A good deal of Spring Wheat is grown, but it does not yield so well as Fall Wheat, nor bring so high a price in the market. The Summer

fallow is a great tax on the farmer, and it would seem desirable that some other process could be adopted by which the Summer fallow might be dispensed with—at least in part. Perhaps it cannot be altogether discarded, as it may be necessary at certain times to give the land a thorough cleaning out—but there are some farmers in this county, who, by keeping their farms always in good condition, and free from all noxious weeds, do actually avoid a great part of the usual amount of summer fallowing, and that much to their advantage. There is no regular system of rotation in cropping established, and much as it may be desired, it really seems a difficult object to attain. I have not known any farmer to carry out a regular rotation for any considerable length of time, although I have known many who have commenced on various systems, but abandoned them before the cycle was completed, and commenced new rotations which were terminated in a similar manner. Nor is this at all surprising. In this age of improvement in every thing, and in agriculture as well as other arts and sciences, it can hardly be expected that a farmer should pursue the same plan of operations for six or eight years without changing his mind. Besides, the land is in a state of improvement and change as well as the science, and in a new settlement it is still more difficult to pursue a regular rotation.

When the farmer's latest cleared field is brought under complete subjection and cultivation, he may commence a rotation of crops, and may possibly carry it out to the end, if he is not interrupted by some new theory or improvement which will convince him that he has been pursuing a wrong course, and induce him to abandon it for some other plan more in accordance with his newly acquired knowledge. But although there is no regular *system* of rotation, yet there is some respect and attention paid to the *principle*, and some general rules of rotation observed. Two successive crops of the same kind of grain on the same ground is generally carefully avoided. Even this rule, however, is sometimes broken through, and parties sow wheat after wheat, but in such cases they generally suffer severely by the experiment, the second crop rarely producing enough to remunerate them for their labour.

Many who grow large crops of wheat, do regularly pursue that exhausting rotation, fallow and wheat—fallow and wheat, and this is the only rotation, I think, that is regularly adhered to. It produces good crops of the staple article, but it is undoubtedly impoverishing the land for future generations. Some attention is required in first breaking up a new field with the plough. The land when first cleared is generally seeded with grass, and remains in meadow or pasture for six or eight years, by which time the surface roots and smaller stumps have become rotten, and the ground is fit to be subjected to the plough. The first thing to be done, is, with a yoke of oxen and chain, to pull up all the stumps that can be removed, and burn them. This being done, the ground is ready for the plough. At this stage the land has all its primitive strength and richness, and is covered with a thick matting of grass and grass roots interlaced three or four inches deep in the mould. Much care is required in the first ploughing, in consequence of the thickness of the soil, and the unevenness of the ground, that the furrow is all properly turned over, so as completely to kill the grass. If the first ploughing is carelessly or imperfectly performed, the bad effects will be seen in the field for years afterwards; but if the first ploughing is done in a complete manner, the after culture will be comparatively easy. If the ground is to be fallowed, preparatory to wheat, it is generally cross-ploughed in the summer (the first ploughing being generally done early in the spring) and afterwards "ridged up" for the seed; but sometimes it is only ploughed twice, and then the second ploughing is the ridging up for seed. Many farmers, however, do not fallow their land for the first crop, but sow with peas or oats on the sod after the first ploughing. In my opinion, the most economical plan is to sow first

with peas, which, if it be a good crop, will thoroughly kill the grass, and leave the ground clean and in good order for wheat; but if it should not be so, it will be in good order for fallowing the next year. By fallowing the ground in the first instance, if the land be rich and strong, and especially if it be level, with a good deal of vegetable mould, the wheat is apt to grow too large and be subject to rust. If it escapes the rust it will probably be a heavier crop than could be expected by sowing after the peas, but the extra produce will not by any means be equal in value to the crop of peas grown the first year, with less labor than would be required for fallowing. I have seen it stated that good crops of fall wheat might be obtained from rich land with one ploughing, by turning over the sod just before seeding, but I have tried that plan, and would not recommend any body else to make the experiment.

There is no general economic system of preserving or increasing manure, nor can it be expected in a county where so many of the townships are but new settlements. For some years after the first settlement on a lot of wild land, the manure is considered a nuisance, and as so much rubbish in the way. A story is told of a Dutchman who had allowed the manure to accumulate about his barn to such an amount that he was obliged to move his barn off to some distance to get it out of the way of that big dung heap, and who was forced, either to take that course, or to remove the manure, a task which he could not think of undertaking. For several years after the first settlement, the manure is scarcely ever used, except for gardens, and occasionally for potatoes and corn. In many parts of Simcoe, however, that time has passed away, and the manure is not allowed to go to waste, but still there is not much skill or science used in its preparation. The usual mode is to throw it up in a heap in the Spring for the purpose of fermentation and decomposition. It is sometimes turned in the course of two or three weeks, but it is more generally allowed to remain undisturbed till it is drawn on to the field for use. It is mostly used on summer fallows, and spread on the ground just before the second or third ploughing.

Tecumseth and Gwillimbury are both very good wheat growing Townships, and Tecumseth has also been celebrated for fine crops of barley. Excellent crops of peas and oats are grown in most parts of the county, but Indian Corn is not much cultivated. Potatos and turnips are grown in abundance, and the potato crop has not been so injuriously affected in this county by the prevailing disease, as in other parts of Canada. Some other roots are grown, but not to any considerable extent.

The following tables which have been compiled from the census returns, will exhibit the relative quantities of the principal crops grown in the respective Townships, in acreable produce, and in the aggregate.

It may be remarked that the census returns are very imperfect and erroneous, that many errors are observable on a casual reference to them, and that they doubtless contain many more that are not discovered, and therefore cannot be depended on. But in reply to this, it may be confidently stated, that they are more to be depended on than any other source from which we can obtain the same description of information; and though they may not be quite so trustworthy as some of the demonstrations of Euclid, yet they give us more information—and more correct information, respecting the condition and production of the country than we can obtain from any other source whatever. One person may have a more correct knowledge of one small locality than what is contained in the census returns; but there is no available means of ascertaining the general character and condition of a County, or even a Township, which can be depended on nearly so much as these census returns, and I think it desirable that they should be referred to on all convenient occasions, that any errors they do possess may be exposed, and as far as possible avoided at a future census.

Tables, showing the produce of each Township in Wheat, Barley, Peas, and Oats. The Townships giving the largest acreable produce being first in order—from the census returns of 1852:—

WHEAT.				BARLEY.			
TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.	TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.
			bus. lbs.				bus. lbs.
Tecumseth.....	5049	99032	19.36	Adjala.....	2	65	32.24
Gwillimbury.....	4974	93601	18.49	Tecumseth.....	19	508	26.36
Adjala.....	1931	34955	18.6	Nottawasaga.....	70	1649	23.24
Tossorontio.....	506	8839	17.30	Gwillimbury.....	82	1899	23.2
Essa.....	2300	37683	16.23	Oro.....	71	1575	22.5
Innisfil.....	2794	42929	15.21	Orillia & Matchedash.....	3	66	22
Tiny.....	284	4064	14.18	Flos.....	6	123	21.16
Nottawasaga.....	1675	22270	13.24	Sunnidale.....	1	18	18
Mulmur.....	721	9408	13.2	Mono.....	35	628	17.45
Vespra.....	572	7462	13.2	Innisfil.....	20	347	17.16
Flos.....	496	6315	12.41	Medonte.....	11	190	17.13
Mono.....	2409	30194	12.32	Vespra.....	11	168	16.13
Tay.....	73	869	11.54	Essa.....	26	364	14
Orillia & Matchedash.....	921	327	11.54	Tiny.....	19	257	13.25
Medonte.....	921	10349	11.46	Tossorontio.....	4	50	12.24
Oro.....	1645	19221	11.41	Mulmur.....	10	110	11
Sunnidale.....	147	1351	9.11	Tay (none)			
County.....	26762	432421	16.9	County.....	399	8013	20.26
Upper Canada*.....	798275	12682550	15.53	Upper Canada.....	30129	625452	20.34
Or*.....	782115	12632852	16.13				

* The first statement is from the second volume of the Census—and the last from Appendix (C.) to the Journals of Assembly. Mr Hutton, in the first volume mentions the average at 16 bushels 14 pounds.

PEAS.				OATS.			
TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.	TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.
			bus. lbs.				bus. lbs.
Essa.....	567	11515	20.18	Tay.....	55	2138	38.29
Gwillimbury.....	2011	36270	18.2	Adjala.....	820	30446	37.4
Tecumseth.....	1740	31190	17.55	Tecumseth.....	2206	77283	35.1
Innisfil.....	1010	18091	17.54	Gwillimbury.....	2200	65534	31.7
Vespra.....	256	327	16.42	Sunnidale.....	61	1680	27.18
Adjala.....	350	5688	16.11	Essa.....	828	22000	26.19
Tiny.....	115	1854	16.7	Tiny.....	176	4448	25.9
Mono.....	290	4641	16.	Vespra.....	350	8754	25.
Orillia & Matchedash.....	89	1387	15.35	Orillia & Matchedash.....	179	4383	24.16
Oro.....	603	8927	14.48	Tossorontio.....	187	4415	23.20
Tossorontio.....	97	1295	13.21	Oro.....	1169	26172	22.13
Flos.....	143	1972	13.20	Medonte.....	494	11023	22.10
Medonte.....	281	3799	13.7	Flos.....	254	5390	21.7
Mulmur.....	100	1282	12.49	Nottawasaga.....	547	11168	20.14
Nottawasaga.....	300	3803	12.40	Mulmur.....	293	5752	19.21
Sunnidale.....	48	550	11.27	Mono.....	1454	27906	19.6
Tay.....	23	196	8.29	Innisfil.....	1216	163	4*
County.....	8007	136367	17.	County.....	12489	311650	*24.32
Upper Canada.....	186643	3127081	16.45	Upper Canada.....	413058	11391807	27.19

* There is evidently some error respecting the produce of Oats in Innisfil. It is hard to believe that in that Township, 1216 acres of Oats produced only 153 bushels, or an average of four pounds to the acre! By leaving out Innisfil the average produce of Oats in the County is 27 bushels 21 pounds—a little better than the average of the Province of Upper Canada. There is not much Corn, Rye or Buckwheat grown in the County. The Townships giving the best acreable produce of Corn are—Tecumseth 27 bush, 24 pounds; Adjala 26.10; Gwillimbury 24.40; Sunnidale 18; Tossorontio 17.30; Vespra 16.49; Innisfil 16.40; Orillia and Matchedash 16.17; Tiny 15.20; Nottawasaga 15.8; Oro 14.26. The quantity of Corn produced in 1851, in Oro, is nearly one-fourth of the whole crop of the County. The produce of the County was 452 acres, producing 6830 bushels, being fifteen bushels and three pounds to the acre—a long way below the average of Upper Canada, which is 23 bush, 26 pounds.

POTATOES.				TURNIPS.			
TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.	TOWNSHIPS.	ACRES.	BUSHEL8.	AVERAGE.
Orillia & Matchedash.....	58	5809	100	Innisfil.....	32	1056	331 3-32
Tossorontio.....	65	6238	96	Tecumseth.....	30	28197	287
Vespra.....	81	7534	93	Orillia & Matchedash.....	30	6180	206
Mono.....	460	41160	89	Oro.....	163	33141	203
Nottawasaga.....	265	22033	83	Gwillimbury.....	146	29451	201
Essa.....	187	15511	85	Tiny.....	22	4203	191
Oro.....	246	19719	81	Vespra.....	57	10540	185
Tiny.....	61	4754	78	Tossorontio.....	4	673	168
Innisfil.....	268	20551	76	Adjala.....	19	2934	157
Tecumseth.....	413	31340	76	Mulmur.....	16	2513	157
Adjala.....	307	23295	76	Sunnidale.....	2	300	150
Sunnidale.....	30	2176	72½	Flos.....	41	6083	148
Medonte.....	162	11594	71	Medonte.....	67	9781	146
Mulmur.....	145	10181	69½	Essa.....	39	4980	127
Gwillimbury.....	360	22711	63	Tay.....	2	240	120
Flos.....	80	4319	60	Mono.....	48	5519	1 5
Tay.....	65	3889	58	Nottawasaga.....	72	5510	76
County.....	3254	253641	78	County.....	858	160900	187½
Upper Canada.....	77966	4982186	64	Upper Canada.....	17048	3110318	182

AGRICULTURAL SOCIETIES.

The people of Simcoe, notwithstanding their remote location, were among the first to promote and encourage Agricultural Societies. After the first "Act to encourage the establishment of Agricultural Societies in the several Districts of this Province" was passed in 1830, an Agricultural Society was established in the Home District, of which Simcoe then formed a part, and many individuals of this county became members of that Society, and continued to give it their assistance and support as long as they continued to form part of that District; and when the county became a separate District, a Society was established here. Upon the organization of the Provincial Agricultural Association, the Agricultural Society of the District of Simcoe, annually contributed to the funds of that Association, for the purpose of increasing the premiums at the Provincial Exhibitions, although the inhabitants of the District, from their location, were not enabled to participate in the benefits of those Exhibitions so much as other Districts which did not contribute anything. Since the year 1852, when the Act was passed establishing the Agricultural Institutions of the Province on their present favourable foundations, the Agricultural Society of Simcoe has been in a flourishing condition, and has been in the receipt of the annual Legislative grant of £250, less ten per cent. authorised to be retained for the use of the Board of Agriculture. Many of the Townships also have Societies and participate in the grant, which, with the members' subscriptions, enables them to maintain pretty respectable exhibitions.

I have looked over the list of prizes awarded at the Provincial Exhibitions for the two last years, held at Hamilton and London, and I can find but two prizes for the County of Simcoe, viz. :—For the best Boar, one year and over (small breed), Thomas Drury, Barrie, £3 0s. ; 3rd best, Thomas Drury, Barrie, £1 0s. It is to be hoped Simcoe will make a better figure at the approaching Exhibition at Cobourg. It has heretofore been difficult for the people of Simcoe to get their articles conveyed to the exhibition, but that difficulty is entirely removed, and there is no county that has now better facilities for travelling than Simcoe.

ROADS.

Although I have already given some description of the principal Roads in the County, while describing the several Townships, yet it may be proper, though it will involve some slight repetitions, to make a summary reference to those of the most general importance.

Before the construction of the Railway, the most important road in the county, or in any way connected with it, was that extending from Toronto to Penetanguishene, which passing through Newmarket enters the county of Simcoe at Bradford and proceeds thence to Barrie, a distance of twenty-one miles. It then follows along Kempenfeldt Bay about two miles to the South-east angle of Vespra, where it turns and runs North between Vespra, Flos and Tiny on the West, and Oro, Medonte and Tay on the East, to Penetanguishene, thirty-three miles. This Road has long been the main thoroughfare between the two lakes, but since steamboats have been built on Lake Simcoe, that part of the Road between Bradford and Barrie has been less used in the summer time, and still later, the remainder from Barrie to Penetanguishene has been partially abandoned, and superseded by the Road from Orillia to Sturgeon Bay, called the Coldwater and Sturgeon Bay Road. From Bradford a branch of this Road (the Toronto and Penetanguishene road) stretches away to the West, through Gwillimbury, Tecumseth, Adjala and Mono, to the county of Wellington, by which the inhabitants of the South-western townships have access to the Toronto

Road. Another branch goes westward from Barrie, and by several minor branches opens a communication for the North-western Townships.

Hurontario Street was intended for a main Road of communication between Lakes Ontario and Huron, but it has not come to be of so much general use through this county, as was expected, and parts of it are not yet opened or travelled. Other parts, however, are used to a considerable extent, and connected together by off-sets and parallel roads, the general course being preserved as a thoroughfare between Lake Huron and Orangeville, from which place Southern Hurontario street is a very public and much travelled Road south of Simcoe, this road as well as the Sixth Line Road, from Mono Mills, form main outlets for the South-western townships.

The working of the Railway will necessarily soon effect a considerable change in the direction of the leading roads within the county. The several Railway Stations will become points of attraction upon which roads from all parts of the county will concentrate, and many of those now in use will become comparatively of little importance.

Numerous grants have been made by the Legislature at different periods, from 1830 to 1841 inclusive, for improving the roads of this county, amounting in the whole to about thirty-five thousand pounds. Subsequent to 1841, when the Municipal Councils were established, no such grants have been made, and each Municipality had to depend on its own resources for making roads, or for any other improvement.

Although I have already made abstracts of the census returns, I have thought it advisable to append more full returns of the census of 1852, and also some extracts from previous returns, to show the ratio of increase, as I consider those returns afford more information with regard to dry facts, than can be found in any other similar space.

FISHERIES.

Both Lake Simcoe and the Georgian Bay abound with Fish of many varieties, white fish, salmon trout and sturgeon being the most valuable. These are caught in abundance on all parts of the coast from Collingwood to the mouth of the River Severn, and there is, probably, good fishing ground all the way to the mouth of French River. The trout and white fish are principally found in the open Lake from two to ten miles from the shore. They never run up the rivers. The sturgeon are mostly caught in the gulph and inlets, East of the Christian Islands, and the rivers running into those inlets. At certain seasons of the year they crowd up the rivers and streams as far as they can go, and are there caught in great numbers, with but little trouble. Isinglass has been manufactured from them in a small way at Penetanguishene, and judging from the price of that article in the shops at Toronto, I should think the manufacture might be extended with profit. There were 693 barrels of fish cured in this county in 1851, only four counties exceeding it in the produce of fish, viz.: Prince Edward, Bruce, Northumberland and Huron. A considerable impetus has been given to the fishing business, by the greater facilities for conveying the article to market afforded by the Railway, and several fishing establishments are in operation at Collingwood, which compete with the Toronto Fishermen in supplying the Toronto market with fresh fish. The fish taken out of Lake Huron in the morning is frequently dressed and eaten for dinner at Toronto on the same day. There can be little doubt that the fisheries of this county will ere long become of considerable importance. Besides the larger fisheries, all the

branches of the Nottawasaga, and other rivers of the county, as well as a number of small lakes, abound with speckled trout, bass, pike, pickerel, and many other varieties of good fish.

CONCLUSION.

That the construction of the Northern Railroad is destined to have an immense influence in promoting the prosperity of the County of Simcoe, is becoming more evident every day. You can scarcely take up a Newspaper without meeting with a reference to some locality in Simcoe, remarking upon some advantageous or striking feature, or some newly discovered source of wealth, the existence of which was heretofore concealed from the outward world. These notices are not confined to local or to Canadian papers, but the County of Simcoe is becoming an object of much interest in the principal towns and cities of the United States. By the passage through the county of Simcoe, the people of the Northern and Western States are brought into more immediate communication than they have ever before been, or than they can be by any other route; and so highly do they value this route, that the advantages they have already realized only stimulate them to endeavour to obtain further facilities in the same direction. The people of the Western States were the first to agitate the construction of a Ship Canal from the Georgian Bay to Lake Ontario, and they were probably seconded by those of North-western New York, as well as by the people of Toronto. Whether or not this project is likely to be carried into effect, I cannot say, but the good people of Simcoe have, in their generation, seen stranger things than that of a British merchant ship discharging her silk and woollen fabrics on the pier at Barrie or Orillia, and taking in a return cargo of wheat and flour, or perhaps pine masts, for Liverpool.

As I have laid considerable stress upon the advantages this county has received from the Railway, it may be inferred that I consider the county indebted to the Railway for every good that it possesses, and that the Railway has brought to the county all the prosperity and wealth it now enjoys, which might, instead, have been carried to any other locality with the same facility. But that is not the case. The benefits arising from the Railway are reciprocal—the county has given as good as it received. If it *had* nothing, the Railway would have *brought* it nothing. We have not the vanity to suppose that when the merchants of Green Bay started the project of a Ship Canal from the Georgian Bay to Lake Ontario, their only aim was to advance the interests of the people of Simcoe. Neither do we believe that the Railway was constructed solely for our accommodation. Yet, if those works are beneficial to their promoters and to the public, they will undoubtedly be beneficial to this county as well. Not by bringing riches to it, but by bringing the means of making available the immense riches in its possession. Before the construction of the Railway, Simcoe was naturally rich, in her location, as occupying a great part of the isthmus which divides the extensive navigable waters of the west from those of the east. It was rich in good land, valuable timber and minerals, fisheries, superior water power for machinery, navigable waters and harbours, and it was for the interest of Canada, and the neighbouring countries, as well as for Simcoe, that those riches should be developed, and made available to the world, and the result has been beneficial to Canada and the neighbouring States as well as to Simcoe.

If Simcoe had been destitute of those natural riches and advantages, the construction of a Railway through her territory, would have been comparatively barren of good results to the County, to the Railway Company, and to the public.

I should have stated in another place, that the County of Simcoe invested fifty thousand pounds in the construction of the Railway, which, though not a large sum among Railway figures, will appear considerable when it is known, that at the time, it constituted one-fifth of the assessed value of all the real and personal property of the county.

SUMMARY ABSTRACT OF CENSUS RETURNS OF 1848, FOR THE COUNTY.
—Acres cultivated, 72,313; Grist-mills, 15; Saw-mills, 37; Horses, 2565; Oxen, 2526; Cows, 5970; young Cattle, 2471; Amount of Rateable Property, £210,974.

SUMMARY ABSTRACT OF CENSUS RETURNS OF 1850. FOR THE COUNTY.
—Acres under Crop, 43,109; under Pasture, 21,353; Grist-mills, 16; Saw-mills, 38; Wheat, 335,419 bushels; Barley, 2,731 bushels; Rye, 2,992 bushels; Oats, 143,477 bushels; Peas, 95,369 bushels; Indian Corn, 6,531 bushels; Potatoes, 267,175 bushels; Buckwheat, 223 bushels; Mangel Wurzel, 428 bushels; Turnips, 128,794 bushels; Hay, 11,183 tons; Maple Sugar, 180,639 lbs.; Wool, 68,526 lbs.; Cheese, 5,615 lbs.; Butter, 79,236 lbs.; Cattle, 18,402; Horses, 3,924; Sheep, 24,659; Hogs, 16,810; Assessed Property £257,734.

ABSTRACT OF RETURN OF MILLS, MANUFACTORIES, HOUSES, PUBLIC BUILDINGS, AND PLACES OF WORSHIP IN THE COUNTY, FROM THE CENSUS RETURNS OF 1852:—Inhabited Houses, of Stone, 17; Brick, 70; Frame, 433; Log, 2904; Shanties, 371; Total, 3795; Number of Families, 3927; Vacant Houses 13; in course of building, 44; Shops and Stores, 155; Inns and Taverns, 55; Schools, 42; Public Buildings, 2; Churches and places of Worship, 50; Grist Mills, 13; Saw Mills, 42; Carding and Fulling Mills, 7; Distilleries, 1; Tanneries, 1.

STATEMENT OF AGRICULTURAL PRODUCE FOR 1851-2,—FROM THE CENSUS RETURNS OF 1852.

TOWNSHIPS.	Occupiers of land.	LANDS.		Wood and Wild Lands.	WHEAT.		BARLEY.		PEAS.	OATS.	POTATOES.	TURNIPS.	HAY.	WOOL.	MAPLE SUGAR.
		Held.	Under Cultivation.		Acres.	Bushels.	Acres.	Bushels.							
Orillia.....	59	6635	1789	4846	284	3875	3	66	1387	4383	5809	6180	504	1322	2885
Matchedash.....															
Tay.....	62	3865	665	3200	73	869	192	2138	3889	240	179	260	6800
Medonte.....	178	17811	4326	13485	921	10849	11	190	3799	11023	11594	9781	909	3561	6708
Oro.....	325	30632	8489	22143	1645	19221	71	1575	8927	26172	19919	33141	3287	5631	15815
Vespra.....	109	19433	2799	7634	572	7462	11	168	3927	8754	7435	10540	141	1393	3030
Flos.....	84	7801	1662	6139	496	6315	6	128	1972	5390	4819	6083	260	995	4534
Tiny.....	135	8851	1322	7529	284	4067	19	257	1854	4448	4754	4203	360	518	12566
Sunnidale.....	32	3680	542	3138	147	1351	1	18	550	1680	2176	300	95	672	264
Northwasauga.....	139	28540	6509	22031	1657	22270	70	1649	3803	11168	22033	5510	881	4380	7946
Gwillimbury.....	343	35403	18914	16489	4974	95601	82	1890	36276	68534	22711	29451	2288	12800	12324
Essa.....	224	21763	8272	13491	2300	37683	26	364	11515	22000	15511	4980	934	3754	5795
Tecumseth.....	380	43631	21900	21731	5049	99032	19	508	31190	77288	31340	28197	2229	13670	16522
Adjala.....	284	25357	7323	17534	1931	34955	2	65	5668	30446	23295	2994	577	4564	6778
Toscoronto.....	73	6887	1769	5118	505	8839	4	50	1295	4415	6238	673	193	964	2153
Mulmur.....	118	11958	2509	9458	721	9409	10	110	1282	5752	10181	2513	332	1503	5432
Mono.....	169	36307	8407	28100	2409	30194	35	628	4641	27906	41160	5519	1089	4966	12382
Innisfil.....	318	30349	11499	18850	2794	42929	20	347	18091	153	20551	10595	1526	6434	12283
Total.....	3032	330103	109192	220911	26762	432421	390	8013	136367	311650	253514	160900	16084	67387	134217

OTHER ITEMS FROM THE CENSUS—TOTAL FOR THE COUNTY.

Occupiers of Land, 10 acres and under, 165; 10 to 20 acres, 82; 20 to 50, 529; 50 to 100, 1842; 100 to 200, 378; above 200, 36; Land under Crops, 75,761 acres; under Pasture, 29,660; in Gardens, 771 acres; Acres in Fy, 175. Produce 2,076 bushels; in Peas, 8,007 acres; Oats, 1,248 acres; Buckwheat, 87 acres, 1,149 bushels; Indian Corn, 452 acres, 6,830 bushels; Potatoes, 3,254 Acres; Turnips, 858 acres; Grass Seeds, 1,153 bushels; Carrots, 698 bushels; Mangel Wurzel, 181 bushels; Beans, 27 bushels; Hops, 147 lbs.; Flax and Hemp, 527 lbs.; Tobacco, 122 lbs.; Cider, 2968 gallons; Filled Cloth, 14,046 yards; Linen, 46 yards; Flannel, 45,220 yards; Bulls, Oxen and Steers, 6,899; Milch Cows, 7,944; Calves or Heifers, 7,904; Horses, 5,913; Sheep, 26,953; Pigs, 26,169; Butter, 394,613 lbs.; Cheese, 23,413 lbs.; Beef, 2,561 bbls.; Pork, 11,061 bbls.; Fish, 693 barrels.

COUNTY OF SIMCOE.

POPULATION.

Natives of England and Wales, 1755 ; of Scotland, 2191 ; of Ireland, 8106 ; Natives of Canada, 14568 ; of United States, 450 ; Germany and Holland, 26 ; All other places, 52 ; not known, 17 ; Colored persons, 126 ; Total population, 27,165.

PROFESSIONS, TRADES AND OCCUPATION.

Agents, General and Insurance...	3	Musicians	3
Architects	1	Painters	9
Auctioneers	2	Pailmaker	1
Bakers	5	Pedlars	6
Bailiffs	4	Pensioners	25
Barristers and Attorneys	5	Plasterers	3
Barber and Hairdresser	1	Postmasters	22
Bar-keeper	1	Potash Manufacturers	2
Bookseller and Stationer	1	Physicians and Surgeons	6
Book-keeper	1	Printers	4
Boot and Shoemakers	130	Pumpmakers	2
Blacksmiths	57	Ploughmakers	6
Brickmaker	1	Private means	30
Bricklayers	9	Male Servants	94
Brewer	1	Female Servants	205
Butchers	4	Seamstresses	2
Cabinet makers	19	Saddlers and Harness-makers	13
Carpenters	171	Sawyers	20
Civil Engineers	3	Sexton	1
Chairmaker	1	Shingle-maker	1
Clerks	3	Stage Proprietors	2
Clergymen	4	Storekeepers	15
Clock and Watchmakers	4	Stonecutter	1
Constable	1	Straw-workers	2
Customs Collector	1	Tailors	41
Coopers	27	Tanners	5
Distillers	2	Tavernkeepers	11
Dressmakers and Milliners	11	Teachers, Males	46
Engineers	9	Teachers, Females	6
Farmers	2848	Tinsmiths	4
Gardener	1	Teamsters	7
Gunsmiths	11	Tobacconist	1
Innkeepers	22	Tinker	1
Labourers	2207	Toll-bar keepers	2
Land Surveyor	1	Trader	1
Lastmaker	1	Tailoress	1
Lathmakers	2	Waggonmakers	16
Lumbermen	7	Wool Merchant	1
Mail Conductor	1	Wheelwrights	22
Masons	18	Whitewasher	1
Merchants	29	Washerwoman	1
Millwrights	12	Weavers	81
Millers	26		

[The Editor has been obliged to condense Mr. Lynch's statistics, in order to adapt them to the size of the page. Mr. Lynch adds to his report the note on next page on the prices of land.]

PRICES OF LAND.

Since the foregoing was written, there has been a sale of Crown and Clergy Lands of this county, at Barrie, and considering that the result of that sale would afford more correct information respecting the value of wild land in the respective townships than anything I have already given, I have ascertained the average prices of land sold in each township, and arranged the result in the following table. For convenience of reference and comparison, I have inserted in the same table, the average valuation of lands in the same townships as ascertained from the Assessment Rolls of 1854.

Over forty thousand acres were put up for sale to the highest bidder, limited by an upset price of from 6s. 3d. to 20s. an acre for Crown Lands, and 15s. an acre for Clergy Reserves. A great number of persons were present, and the bidding was in most cases rather spirited, but still I do not think the land was sold for its full value. The greater part appeared to be purchased by capitalists, who considered they had a good margin for profits, and it might be remarked, that in cases of keen competition the party wishing to obtain the land for actual settlement, was generally out-bid by the purchaser for mere investment.

T A B L E

Showing the average price at which the Crown and Clergy Lands were sold by public auction on Wednesday, 22nd August, 1855, in each of the following Townships of the county of Simcoe; and also the average value of occupied lands, unoccupied lands, and all lands in the same Townships, as given by the Assessment Rolls for 1854:—

TOWNSHIPS.	AVERAGE PRICES OF SALE.	AVERAGE VALUE FROM ASSESSMENT ROLLS, 1854.		
	1855.	Occupied.	Unoccupied.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Essa	1 10 10	1 10 0	0 16 0	1 3 10
*Gwillimbury	0 18 9	not given.	not given.	not given.
Medonte	1 0 0	0 17 2	0 13 5	0 14 7
Oro	1 9 4½	1 5 4½	0 13 0	1 0 0
Orillia, S.	2 0 0	not given.	not given.	not given.
*Orillia, N.	0 18 0	“ “	“ “	“ “
Sunnidale	1 10 5	2 12 1	0 15 5	1 5 6
*Tecumseth	1 0 0	2 16 0	0 14 10	2 8 4
Tiny	1 0 6	not given.	0 6 9	not given.
Flos	1 8 11	0 16 10	0 10 0	0 11 11
Matchedash	0 18 5	1 8 9	0 5 0	0 7 0
Mulmur	1 9 10	0 11 4	0 6 3	0 8 10
Nottawasaga	2 0 0	1 2 6	1 1 2	1 1 10
*Tay	1 8 0	0 7 4	0 6 7½	0 7 0
Tossorontio	1 0 6	0 19 4	0 10 8.	0 13 0
Vespra	0 19 5	1 9 0	not given.	not given.

*The low prices obtained for lands in the old settled and rich Townships of Gwillimbury and Tecumseth cannot be taken as any indication of the general value of lands in those Townships, as all the good land had doubtless long since been taken up, and the lots sold at this sale were inferior, and such as probably would not be taken at any price a few years ago.

REPORT ON THE COUNTY OF SIMCOE, BY MR. WM. E. O'BRIEN, OF BARRIE.

The following Report on the County of Simcoe, written by Mr. Wm. E. O'Brien, of Shanty Bay, near Barrie, County of Simcoe, was awarded a second or Discretionary Prize of £5, at the Cobourg Exhibition, 1855 :—

A REPORT, &c. ON THE COUNTY OF SIMCOE.

Introduction—Geographical position of the County—Its History—Soil—Agriculture—Agricultural Societies—Value of Land, Trade and General Resources.

INTRODUCTION.

Few Counties in the Western part of Upper Canada possess greater natural advantages with respect to geographical position, means of internal communication, general fertility of soil and value of productions, salubrity of climate, and beauty of scenery, than that which is the subject of this report; and it may without presumption be added, that in general good conduct, industry and enterprise, its inhabitants, almost entirely emigrants from various parts of the three kingdoms, will vie with those of any other County in the Province. The statistics of crime speak very favorably for the morals of the population. The common schools are flourishing, and sufficiently numerous for the wants of the people, and there are several excellent Grammar Schools, where the rudiments of all the higher branches are taught. This County has the honor of being the first to grant money for Railroad purposes, and was one of the first to reap the advantages to be derived from the construction of these most useful works. The amount of stock taken in the Ontario, Simcoe and Huron Railroad being £50,000, was fully as much as the then resources of the County could bear, but the gain in the increase of the value of landed property has been almost beyond conception, and the stimulus to business generally, and the increase of the population consequent thereon, has been very great. Individual enterprise has not been behind hand in taking advantage of these circumstances, for the promotion of every branch of trade and production; and from this, coupled with the high prices of provisions of every description and abundant harvests, the actual wealth of the County must have increased at least four-fold during the last two years. The effect of this influx of property upon the agriculture of the County has been very striking, in the improvement of stock and farm implements, the greater use of plaster for meadows, enlarged clearings, better fences and farm buildings, and improved tillage everywhere to be seen. Freed from the pressure of contracted means, the farmer has more spirit as well as more leisure to turn his attention to the study of the science of agriculture. Works upon such subjects are eagerly sought for, and more care and judgment shewn in the management of agricultural societies. In some localities, it is true that agriculture is still in a very backward condition, but not more so than in other parts of the Province similarly situated. When the first settlement in a large tract of

In South Orillia, one small parcel of eight acres, bordering on Lake Couchiching, sold for £7 15s. an acre. This was so far above the ordinary prices, that it was not taken into account in making up the average in the Townships.

It will be observed that in nearly all the Townships the land at the sale, which was all wild, brought considerably higher prices than the assessed average value of the occupied lands, including all buildings and improvements.

the present North Riding was made, the most outrageous land-jobbing was perpetrated by some of the Government agents, the best lots were secured by non-residents, and a large number of immigrants, unused in their native land to any but the rudest system of agriculture, and incapable of judging of the quality of the soil, were placed upon lands comparatively unfit for cultivation. These, in addition to the ordinary hardships always to be overcome by first settlers, had everything to learn, with very bad material to work upon; and it is, therefore, little to be wondered at if their progress has been but slow. With such exceptions as these, the tillage is generally adapted to the soil and circumstances of the country, and even in the most unpromising sections, every year shows marked improvement.

In fine, throughout every branch of trade and agriculture, industry, intelligence and enterprise are the characteristic features, and with all the bustling energy of a new country, a pleasing tone of hearty British feeling pervades all classes, and a sturdy independence of thought and action far removed from the offensive assumption too often met with in the frontier counties.

It has not been deemed necessary to give any general averages of population, or of the number of acres cultivated, or of the amount of their production, as they would be almost useless in speaking of so extensive a county, in which some few townships are almost wholly unsettled, and where others again are well inhabited. Several tables, however, will be found at the end, giving the produce per acre in the best cultivated townships in the two Ridings, with other statistical matter carefully compiled from the last census report.

In describing the system of tillage, &c., no allusion is made to those, who, though tillers of the ground, cannot properly be called farmers, and whose operations, devised to suit the exigencies of the moment, or entered upon at hap-hazard, and, as slovenly executed as ignorantly planned, afford no guide or information for future settlers, and add nothing to the general knowledge of husbandry.

GEOGRAPHICAL POSITION.

The County of Simcoe, lying principally between the 44th and 45th parallels of latitude, and longitude $79^{\circ}33''$ — $80^{\circ}30''$ —commences about 30 miles directly North from Toronto, and extends from thence in a northerly direction to Lake Huron, its extreme length being about 60 miles. Lake Huron bounds it upon the North; the River Severn, Lake Couchiching, Lake Simcoe and the Holland River on the East, the Counties of York and Peel on the South, and the County of Grey, which formerly formed a portion of Simcoe, on the West. It is divided into two Ridings, the North and South. The latter consists of the following townships:—West Gwillimbury, Tecumseth, Adjala, Mono, Mulmur, Tossorontio, Essa and Innisfil. The North Riding is composed of the townships of Nottawasaga, Sunnidale, Vespra, Oro, Orillia (north and south), Medonte, Flos, Tiny, Tay, and Matchedash. It contains one million one hundred and fifty-nine thousand acres, of which only three hundred and forty thousand are occupied by actual settlers, of which about one-third, or one-tenth of the whole area, is under cultivation.

A short glance at the map will be sufficient to point out the immense natural advantages which are afforded to this county by its geographical position, and a very slight consideration will show the extent to which they may be made available for the development of its own resources, as well as those of the Province at large, and of the vast regions of the West.

From the earliest period of its settlement the intersection of this part of the Province by Lake Simcoe has been found of the greatest advantage to the townships bordering upon it, by bringing them so much nearer to their markets than

they would otherwise have been, while the proximity of Lake Huron on the other hand afforded the means of disposing of valuable productions otherwise unavailable, and formed a high road to the markets caused by the working of the mines upon its northern shores.

Situated in the direct line of traffic between the great producing countries of the west, and the markets of the east, the county of Simcoe has been one of the very first to reap the benefit of railway communication, an advantage which might otherwise have been as doubtful to-day, as it was unthought of two years ago. Another vast national undertaking, which will doubtless be carried into effect before many years have gone by, and by which, from her position, this county will be the first to benefit, is now under careful consideration. This project here alluded to, is the connection of the waters of Lake Huron and Ontario by a ship canal, which can only be effected through Lake Simcoe. The whole distance is but one hundred miles, and water communication already exists which could be made available for more than half the distance, at a very trifling expense. By the completion of this work, the route for the conveyance of bulky articles, from the western shores of Lakes Huron and Michigan to the southern parts of Lake Ontario, would be shortened by 300 miles. For the construction of such a work, the situation of a great natural reservoir like Lake Simcoe, midway between the two great lakes, and at a greater elevation than either, and almost directly communicating with the higher of the two by a splendid river, like the Nottawasaga, navigable for the greater portion of the distance, affords incalculable advantages. The completion of the Northern Railroad has already opened a communication between the Atlantic sea-board and the extreme west, which, though not actually the shortest in point of time, far exceeds any other in the ease and comfort it affords to travellers, and with the aid of such a work as that now contemplated, the amount of traffic passing through this county would be immense.

The north-eastern portion of the County of Simcoe, lying between the eastern extremity of the Georgian Bay, with its numerous harbors, and the Nottawasaga Bay, with the fine river flowing into it from the very heart of the country, and which from the nearest and most accessible portions of Lake Huron, is geographically of vast importance, for at some point within it all lines of traffic from the east of Toronto to the vast territory going to the north and west of Lake Huron, and on Lake Superior, must terminate. While thus at some future day the value of the land will be greatly increased, the ready access to all the markets of the east and west must render the culminating point, whenever that may be, one that for commercial importance will be among the first in the Province.

Lake Simcoe, which for its extent, may in some respects be, without partiality, considered the finest sheet of water in Canada, forms with its beautiful little outlet, Lake Couchiching and the River Severn, a source of attraction of great benefit to the county, in addition to those of a more substantial nature already referred to. It may be roughly described as forming a square of about twenty miles (exclusive of Kempenfeldt and Cook's Bays) lying nearly north and south. The shore in many places rise to a considerable height, and are entirely free from swamp, and beautifully wooded with birch, poplar, and evergreens of various kinds, the silvery bark of the former forming at all seasons a matchless contrast with the deep colouring of the latter. The water is very deep, clear, and transparent, and, flowing over a hard bottom of sand and large stones, never loses its sparkling brilliancy. Several islands of various extent render the scenery of the eastern shore extremely picturesque, especially about the Narrows, by which the waters of Lake Simcoe empty into Lake Couchiching, and from thence by the Severn into Lake Huron. Lake Couchiching extends due north from the Narrows for about ten miles. It varies in width from one to four miles, and

is studded with numerous well-wooded islands of all shapes and sizes, which, with its high sloping shores render it extremely rich in that quiet, though picturesque beauty so peculiar to Canadian waters.

The principal streams in this county are the Nottawasaga and the Severn; the former rising to the south of the county, and flowing through the townships of Tecumseth, Essa, Vespra, Flos, and Sunnidale, into Nottawasaga Bay. The Severn, as already described, connects Lake Simcoe with Lake Huron, emptying into the eastern extremity of the great Georgian Bay. It is interrupted by several falls and rapids, all exceedingly beautiful, as well as capable of being easily turned to account for manufacturing purposes. The land through which it passes is very rugged and broken, composed principally of ridges of granite, and is almost entirely uninhabited, being on the eastern shore only partially surveyed. The water power of this stream is exhaustless. The Nottawasaga, with the exception of two or three rapids, is navigable for a long distance. It has considerable water power, and has abundance of valuable timber on its banks. The Holland River emptying into Cook's Bay at the southern extremity of Lake Simcoe, is one of its principal feeders. It is a sluggish stream, flowing through an immense tamarack swamp for many miles, and is navigable for large vessels for a considerable distance. There are several other streams of considerable size, all affording more or less water power, but of no importance in other respects.

Barrie, the County Town, has an excellent situation at the head of Kempenfeldt Bay. It is a thriving country place, with a population at the taking of the last census, of 1200. As the population has very much increased since the opening of the railroad, the foregoing estimate would now be very much too small. There are several large villages, the principal of which is Bradford, a very thriving little Town of nearly a thousand inhabitants, in the Township of West Gwillimbury. Collingwood Harbour, the northern terminus of the Northern Railroad, entirely built during the last year, and rapidly increasing, in the Township of Nottawasaga. Penetanguishene, formerly a naval and military station, but now only garrisoned by a small force of pensioners. Orillia a very prettily situated country village on Lake Couchiching in the township of the same name. Mono Mills, a flourishing village in the township of Mono. There are several other villages which in a few years will become of considerable importance.

HISTORY.

To a county so recently settled as this, none of those shining historical recollections belong, which give an undying interest to some few spots in the Province, and there is but little to mention beyond such facts as for statistical purposes may be worth recording. During the war, military communication was maintained with the Upper Lakes by a route leading from Toronto (then York) by Yonge Street to Lake Simcoe, and across the water to where Barrie now stands. From there a short portage led to the Nottawasaga River, at the mouth of which a small fort was built, the remains of which may be still seen. From this spot a short coasting voyage led to Penetanguishene, a beautiful harbor on the Georgian Bay, where a permanent naval and military station was established. Soon afterwards, to facilitate communication, a road was opened, leading directly from the landing on the north shore of Lake Simcoe, to Penetanguishene; and subsequently this road was met by one leading round the west side of the Lake from Holland Landing. There are on the Christian Islands, a small group not far from Penetanguishene, the remains of an old Jesuit establishment; and from a very early period a small settlement of French and half breeds has existed on the mainland in the neighbourhood. Shortly after the opening of the Penetanguishene Road, a few adventurous families settled upon it, and maintained them-

selves principally by supplying the garrison with provisions; but no regular settlement was made in that part of the country until about twelve years afterwards.

In the year 1819, the Townships of West Gwillimbury and Tecumseth were surveyed, and in the following year a number of settlers came in. In 1821, Innisfil was surveyed, and the following year opened for settlement. The adjacent Townships were surveyed and settled in succession, and in 1827 the county of Simcoe was set apart by proclamation, being still attached for judicial purposes to the Home District. In the following year, the first election was held. In 1832, the remaining Townships, being those which form the present North Riding, were opened for settlement, and the site of the present County Town selected, and laid out. In this and the following year, a considerable number of immigrants were settled under the auspices of Sir John Colborne. Among these were several half-pay officers of the Army and Navy who had been awarded grants of land, on condition of occupying them, and who expended large sums of money in improving their properties.

As is generally the case, emigrants from the different parts of the three Kingdoms settled together in bodies on their first arrival, according to their several nationalities; and as on their friends and acquaintances coming out, they naturally joined those who had formerly been their neighbours, the various country people are still found living together as they had done in their native land. Thus in the townships of West Gwillimbury, Tecumseth, Mono, Essa, and Innisfil, the population is principally composed of Protestants from the North of Ireland. The township of Adjala is chiefly inhabited by Roman Catholic Irish, large settlements of whom are also to be found in the townships of Vespra, Flos, and Medonte. Natives of the Island of Islay form the majority in a large part of the township of Oro, in which there is also a large settlement of English. The township of Nottawasaga is almost entirely settled by Highlanders. Irish form by far the largest portion of the population. The Scotch rank next in numbers, and English last.

Since 1832, no great influx of immigrants has taken place, but the population has continued steadily to advance, though more slowly than in some more favoured localities. This is partly owing to the fact of the Government having of late years given larger tracts in newly opened townships free of cost to actual settlers, and also to the representations constantly made till within the last few years, partly through ignorance, and partly from more interested motives, that the land about Lake Simcoe was, from the severity of the climate and sterility of the soil, quite unfit for cultivation. The opening of the Northern Railroad has now happily put an end to such misrepresentations, and in no part of the Province has land risen more in value and become of greater request.

In the year 1843, the county of Simcoe was set apart for judicial and municipal purposes, being then styled the District of Simcoe. The usual officers were appointed, and a gaol and court house erected. By the Representation Act of 1853, the county was divided into two ridings, as already described, the population of the South Riding being 17,000, and that of the North 10,000. Each riding returns one member to Parliament, the first election under the new Act being held in the summer of 1854.

In 1850, Mr. Capreol set on foot a scheme for the construction of a railroad from Toronto to Lake Huron, via Lake Simcoe, which, after much opposition, and considerable modification, was successfully carried into effect, and the work finally completed in the year 1854. To forward the undertaking the County of Simcoe took stock to the amount of £50,000.

SOIL.

Although generally fertile, the principal characteristic of the soil of this county is the great irregularity of its composition, especially in the Northern Riding. The soil most available for cultivation, and which forms the principal part of the land of the county, is a rich loam, considerably varying in the proportions of sand and clay of which it is composed, as well as the depth to which it extends. The subsoil is generally clay, with a substratum of clay and gravel. Occasionally the pure clay rises to the surface in patches of various sizes, and in some spots the soil is a rich vegetable mould of considerable depth. There are also several sandy ridges covered with large punky pine, and in places utterly devoid of water. The land generally is much interspersed with patches of cedar swamps, and black ash swales, greatly varying in extent, with a few tamarack swamps. A very large one of the latter description, extends for many miles along the shores of the Holland River, and for a considerable distance on either side. The face of the country is gently undulating and much broken with ravines, some of which are very sudden in their descent, and of considerable depth.

Beech, maple, and basswood, are the most numerous varieties of hardwood. Elm, ash, butternut, and red oak, are also to be found—the latter on light sandy soil, and mixed with scrubby pine. Hemlock is very abundant, and is generally found in rich black loam. Cedar abounds in most localities, and grows to a large size. White oak is not generally abundant, but what is found is of the very best quality. Pine of a first-rate quality exists in large quantities in every township; it is generally found scattered over hardwood land, and when it grows in clumps is generally of an inferior kind.

AGRICULTURE.

TILLAGE.—In a country so recently cleared of the original forest, as the principal part of the County of Simcoe has been, and where the soil is of so varied a nature, it is in vain to expect any very extensive use of a regular and scientific system of rural economy, either in the tillage of the ground, or in the breeding and feeding of stock. In the North Riding, fall wheat has, until the last two or three years, been considered too uncertain a crop to be generally grown; and as spring wheat has suffered heavily from rust, the actual value of the wheat crop has been comparatively small, and the production per acre rather under the average. In the old settled townships, such as West Gwillimbury and Tecumseth, fall wheat is the staple production, and the farmers will vie in cultivation and extent with those in any of the adjoining districts.

On newly cleared ground, the first crop is generally spring wheat, with a small patch of potatoes, turnips, and Indian corn; what is sown to wheat is at once laid down with timothy and clover, and for meadows, until the stumps decay sufficiently to allow the use of the plough, which in hardwood land will take place about the sixth year. The ground planted with potatoes or turnips is also sown down with spring wheat the following year. The first crop is occasionally fall wheat, but the land is laid down in the same manner, until the meadow so formed is fit to break up; the settler generally devotes all his energies to the clearing of fresh land, so that by the time the first field is ready for the plough, he will have a cleared farm of from thirty to sixty acres, according to his means, or the amount of his available labor. Summer fallowing is generally adopted by good farmers on breaking up the first meadow, as the only available mode of getting rid of the couch grass, which rapidly grows up among the timothy and clover, and as affording time to get rid of the stumps, and to level the ground, and clear it of any rubbish remaining after the first logging. The ground thus

prepared is sown with fall or spring wheat. The next crop is generally oats, followed by peas. This last crop is the almost invariable preparation for fall or spring wheat, after which the ground is again laid down with timothy and clover. Occasionally root crops are planted after oats, and followed by spring wheat or barley; or if the ground is very rough or foul, it is perhaps fallowed again and sown with fall wheat. In new farms, however, the main object is the clearing the land from stumps and old roots, stones and other rubbish, as well as various kinds of weeds which harbor round the stumps, and any method that will most effectually accomplish this is generally preferred to rigidly carrying out a system of rotation of crops. In the older settled townships wheat is generally sown after summer fallow, or a crop of peas; the use of clover as a crop preparatory to wheat being seldom adopted. Barley is but little grown, wheat, oats, peas, and potatoes being the crops on which the farmer chiefly relies.

The cultivation of root crops in regular rotation with cereals, is practised by only a few of the best farmers, new ground being generally used, and the quantity of turnips grown is much too small for the number of cattle bred, even if not a single beast is stall fed. The census return for 1851-52, shows that but one acre out of 100 acres cultivated, is planted with turnips, and the entire produce, which, according to the same authority is little over 180 bushels per acre, would give each head of cattle and sheep in the county $3\frac{1}{2}$ bushels of turnips for one year's consumption, or about one-fiftieth part of a bushel per day during the winter months, and this often with nothing for the cattle but rusty wheat straw, and sometimes barely enough of that. No wonder that cattle on the verge of starvation are often seen prowling about for browse, or anything else they can pick up in the way of provender, before the grass comes in. No wonder that fresh meat is hardly to be purchased in our county town at any price, and that butchers are compelled to bring into the slaughter house sheep and cattle hardly fit for a barn yard! No wonder that for want of manure, crops of all kinds are so often comparative failures, all the blame of which is laid on the weather, or the rust, or drought; or some other name as easily found, is made to account for the deficiency. With such a state of things we may rather thank our genial climate and fertile soil, that any crops are grown at all, and the rich pasture that our woods afford, that such a thing as a piece of beef is ever to be met with.

It is very difficult to arrive at any thing like a correct idea of the average amount of bushels per acre for various crops. The census returns for 1851-52, give only from 17 to 19 bushels of wheat per acre for the best townships, and the whole average is much lower. In good years this would certainly be much too low. Under favorable circumstances, and when ordinary good cultivation was adopted, the reporter is of opinion that for fall wheat 25 bushels per acre, and 18 bushels for spring wheat would be a fair average. For the last two years the wheat crops have been very good, especially the fall wheat, which has in consequence been grown to a much greater extent than formerly. In the back townships where the rust is prevalent, and the fields not free from stumps, the number of bushels per acre just given would be considered very good crops. The Hutchison wheat is generally used for fall sowing; and for spring wheat, no variety has been found so generally good, and so safe from rust as the Fife, introduced about three years ago. Previous to that the club wheat was in great request, but is now found to be exceedingly liable to rust. The Golden Drop has been found to answer exceedingly well.

The oat crop is generally pretty good, although for two years previous to the present one, owing to the want of rain, it was in many places a complete failure. The highest average according to the census, is 37 bushels per acre, and that is in the Township of Adjala, where the wheat crop averages very low. The average for the whole county is only 25 bushels per acre. The pea crop is very

small, comparatively, as to the yield per acre, the whole average being but 17 bushels. Barley is very little grown. Potatoes generally yield a good crop and of excellent quality. According to the census the best crop is grown in the Township of Orillia, where the average is 100 bushels per acre. Mangel Wurzel is seldom grown as a field crop, although the soil is well suited for it, as it is also for carrots, which, with proper care, will yield an abundant crop.

Stock.—At a very early period Devon, Hereford, and Durham cattle were imported direct from England into this county, and in consequence the horned cattle are generally of a very superior quality. In this respect the North Riding stands first, chiefly owing to the efforts of Mr. Thomas Mairs, in the Township of Vespra, whose Durham Cattle have always held a high place, and to the enterprise of other gentlemen, who imported stock many years ago. Both in the North and South Ridings there are some excellent sheep bred from Leicester rams, and of late years they have been much improved by crossing from the stocks of the best Provincial breeders. The land being in general high and dry, is well adapted for sheep; but it may be doubted if the pasturage is at present sufficiently rich to keep the heavy Leicester to advantage. There are some excellent pigs of the smaller breeds, but there is still in most Townships vast room for improvement.

In the South Riding the farm horses are exceedingly good, but in the North they are very deficient in size and bone. It is to be hoped however, that the liberal prizes offered by the County Society, will induce greater attention to the breeding of this most valuable animal, of all others the least understood. The generality of farmers, in the back townships especially, appear to think the saving of a few dollars of far more importance, than securing the services of a good stallion; and so long as this is the case, it is useless to look for improvements. The same remark will hold good with every description of stock. People generally appear to imagine that stallions, bulls, rams, and boars, are kept merely for the convenience of the public, who should derive all the advantage, free of charge, totally forgetful of the fact that the first cost of animals of this description which are worth breeding from is very considerable, and that the cost of keeping them is also very great. Nothing is more grudged, and harder to be collected than even the smallest fees for stock-getting animals.

Among horses, the stock of the old Simcoe Messenger has long been the favorite, and for speed, endurance, and gentle temper, they are seldom surpassed. Of late years several other excellent breeds have been introduced.

In this, as in all other newly settled counties, there are three great obstacles in the way of the successful breeding of horned cattle. The first is the general overstocking of the farms; the want of sufficient shelter during the winter, which is long and severe, is another, and the third has been already noticed—the want of sufficient turnips for winter provender. The high prices that have been given for any description of cattle during the last year or two, and the severe lessons of experience, have materially lessened the first of these evils, and increasing means will before long effect a great change with regard to the second. No matter how hardy the cattle may be, the less they are protected against the severity of the cold, the more food will be required to keep them in the most moderate condition; but when the shelter is bad, and the food insufficient, the consequences are most disastrous, and so to their cost the farmers of this county, particularly in the back townships, often find.

The third evil acts in more ways than one, for not only do the cattle suffer for want of food, but the land deteriorates every year for want of manure, which can only be gained in sufficient quantities by means of stall-feeding, and this without turnips can never be carried on. In summer time, instead of being pastured on the farm, the cattle are wandering about the woods and deserted clearings, and

in winter they are either in the choppings looking for browse, or standing about anywhere and everywhere, round the doors, or in the lanes, or blocking up the roads and increasing the general untidiness, instead of accumulating the wherewithal to enrich the land for their future benefit, and that of their master.

IMPLEMENTS.—In some of the older townships mowing and reaping machines are extensively coming into use, and except in the very remote settlements, where the implements are necessarily of a ruder description, cultivators, horse-rakes, and ploughs and harrows of a superior description, are generally adopted.

In all the villages and towns excellent mechanics are to be found, and in a short time it is to be hoped that every implement essential to an improved state of husbandry, will be manufactured within the county. Excellent ploughs and harrows, and waggons and sleighs, of the best workmanship, can be everywhere obtained at reasonable prices.

FARM BUILDINGS, FENCES, &c.—Dwelling houses and farm buildings, are generally of wood, but in the old townships substantial brick houses and good frame barns and outbuildings, are rapidly supplanting the original log edifices; much improvement may be noticed in the arrangement of the barns and buildings, for stock of all kinds. Rails are at present the almost universal material for fences. Board fencing is generally used about gardens and houses, but the present high price of lumber has doubtless some effect in preventing its more general use, as there can be no question but that it is in the end the most economical. Sufficient attention is not paid to putting up proper and lasting gates. Most farmers could make them themselves during the winter, and the saving of time and the greater security of the crops amply repay the trouble.

MANURES AND DRAINAGE.—The worst that can be said of any farmer in the present advanced state of agriculture, is that he does not understand the use and proper treatment of manure. It is true that there are very few who are entirely ignorant of the subject, but far too many trust so long to the richness of the long course of manuring that nature has given their land, that in the end they see their crops gradually becoming lighter and lighter, and they have not half enough manure to supply the deficiency, and what they have is not by any means so carefully preserved as it should be. A great deal is wasted for want of attention in cleaning out the stables, and from not being properly fermented, they carry to the field with their manure the seeds of a multitude of weeds, which it will cost them no small trouble to eradicate. What stable manure there is is used for potatoes, or in preparing for wheat, but the quantity is very deficient. Plaster of Paris is the only mineral manure ever employed, and its effects on the grass crops, beyond which its use does not extend, are found to be very beneficial.

From the number of swales which everywhere abound, a great deal of excellent land will be unavailable, until thoroughly drained; but anything beyond a little surface draining is entirely unknown, and except in some few localities will, for many years to come, be little thought of.

AGRICULTURAL SOCIETIES.

COUNTY SOCIETY.—The County Society was first established in the year 1837, and its operations have gone on steadily ever since. Owing however, to the great extent of the county, and the want of any good means of communication, as well as to an unfortunate jealousy that has long existed between the inhabitants of the northern and southern divisions, its benefits have been confined to the three, or at most four townships in the immediate neighbourhood of the county town. It may, however, now be reasonably expected, that since the opening of the Northern Railroad has given great facilities for the transportation of stock through the best settled part of the county, the annual shows will be better

attended than they have been of late years; and it is greatly to be hoped that the efforts which have been lately made by the officers of the society to do away with all existing prejudices, so far as agriculture is concerned, may be successful.

At the last annual show, the directors decided upon giving prizes to breeding animals only, and in consequence the premiums, though fewer in number, were sufficiently large to give substantial encouragement to the successful competitors. Although no one can question the correctness of this principle, much dissatisfaction was felt by a large class of individuals who appear to imagine that the great object of agricultural exhibitions is to gratify the vanity of the greatest number of persons, rather than to encourage the breeding of such animals only as are really qualified to be of lasting benefit to all, by improving the stock generally. In consequence of this the attendance was smaller than usual, although the quality of the animals exhibited was exceedingly good.

For two years past the show of Stallions has been held early in the spring, and a discretionary prize of £20 offered on condition of the successful animal serving mares during the season within the county. This has been found highly successful, although on neither occasion did the judges deem any animal worthy of the full amount. The Board gave notice this summer, that at the ensuing show, which is to be held on the 16th October, very handsome extra prizes would be given to bulls, boars, and rams, imported since the last show, which shall take the first prize in their respective classes.

TOWNSHIP SOCIETIES.—There are now six township societies in operation—those of West Gwillimbury, Tecumseth, Innisfil, Oro, Vespra and Orillia. They are all in flourishing condition, and are steadily increasing in the number of their members and the quality of their exhibitions. It is much to be regretted that in many instances their annual Reports are so carelessly and imperfectly made out that it is not easy to derive much information from them.

VALUE OF LAND, TRADE, AND GENERAL RESOURCES.

The opening of the Railroad and the general prosperity in all branches of trade partly consequent thereon, and partly arising from good harvests and remunerating prices, have caused such an entire revolution in the value of landed property, under all circumstances, and in the most remote localities, that it is no easy matter to arrive at any very correct estimate. There has been such a thorough mania for land speculation, that much has been forced up to a value, which, if not entirely fictitious, can hardly be maintained under circumstances less favorable than the present. At the railway stations, land formerly worth no more than £1 per acre, has been sold in quarter acre lots as high as £400 per acre, and from that to £50 and £100 per acre. This, of course, was partly on speculation, but many lots were purchased at very high prices by mechanics and others intending to settle. Many of these lands were purchased from the first proprietors at from £10 per acre, and upwards, and have been constantly changing hands at advancing prices. It is much easier, and far more useful to settlers, generally, to arrive at the actual value of land for farming purposes. In the front townships, well cleared farms will easily realize £10 per acre, and wild land from £2 10s. to £4, according to quality. Along the railroad, prices are much influenced by proximity to stations, &c. Partly cleared farms on the shores of Lake Simcoe, will fetch £5 per acre, when the land is good, and wild land from £1 10s. to £2 10s., according to situation and quality. Further back the value is of course less, but no good land can now be purchased anywhere under 20s. per acre, and when the lots border on main roads, the price is considerably higher.

The trade of the county is principally confined to agricultural produce, lumber, and the retail country trade. The first of these has not been exported in any large quantities, except from the old settled townships of the South Riding, which grow a large quantity of wheat, increasing every year. The number of new-comers, partly engaged upon the railroad while in course of construction, and the rapid increase of the county-town, greatly increase the consumption in the home market, so that the amount exported from the North Riding, will not, till this year, be in proportion to the increase of the amount produced. There can be no doubt, however, that if the wheat crop in the northern townships continues to be as successfully cultivated as it has been for the last two years, the quantity for export will, in a short time, be very much increased. In compiling the calculation of the probable amount of surplus wheat from the whole county for the present year, which will be found at the end of this report, an addition of 5,000 has been made to the population, as given by the last census, which no one who knows the state of the county at the present time, will think too high an estimate of the increase since that was taken. The number of acres under wheat has been set down as increased 10 per cent, and the average produce per acre raised, from 16 to 18 bushels, which the appearance of the present harvest fully justifies. This gives a total surplus of 369,884 bushels of wheat, of which a considerable proportion is spring wheat.

The lumber trade of this county is yet but in its infancy, but the prospect is very encouraging. The census returns will give us no assistance here, and there is no reliable data upon which to found any very accurate estimate. From the number of mills now going into operation, the quantity manufactured annually will not be less than thirty million feet, of which over two-thirds will be for export, a great deal of this will probably be shipped via Collingwood for Chicago, and other western markets. It is impossible to tell to what extent this trade may yet increase, but the quantity of timber is sufficient to keep it fully supplied for many years to come, and to double the extent to which it is now carried on.

The local country trade is well supplied, and appears to be in a prosperous condition. Several new grist mills have been erected during the last year, and wheat is purchased freely at all. There are several asheries, but the business done in this article is not very large. There are no other manufactories beyond what are barely sufficient for the home consumption, such as tanneries, breweries, distilleries, &c., and as the last census gives a very imperfect account of what existed at the time it was taken, and there have been many new ones lately established, it is impossible to give any correct statement of them or of any other branch of trade.

A new steambot of large dimensions, and most luxuriously fitted up, has been launched this year upon Lake Simcoe, by the Northern Railroad Company; and two schooners of large size were built last year for the trade of the lake.

In addition to the pine timber, there is a large quantity of oak which, although too small for squaring, is admirably suited for shipbuilding—a business which might be carried on to a vast extent in the event of the construction of the proposed canal.

TABLE I.—AGRICULTURAL PRODUCE.—(Per Census.)

WHEAT.			PEAS.			OATS.		
Acres.	Bushels.	Av. per acre.	Acres.	Bushels.	Av. per acre.	Acres.	Bushels.	Av. per acre.
26,762	432,431	16	8,007	136,367	17	12,489	311,650	25

TABLE 2.—ESTIMATE OF SURPLUS OF WHEAT.

1852.—Population 27,000. Home Consumption 135,000 bushels. Produce per census 432,421 bushels.....	bush. Surplus 297,421
1854.—Population 32,000. Home Consumption 160,000. Produce say 29,438 acres at 18 bush. 529,884.....	“ 369,884
Estimated increase in surplus of wheat.....	<u>72,463</u>

TABLE 3.—VALUE OF EXPORTS.

Wheat, 369,884 bushels @ 7s. 6d. per bush.....	£138,701
Lumber 20,000,000 feet @ 30s. per M.....	<u>30,000</u>
	£168,701

COUNTY AGRICULTURAL SOCIETIES.

STATEMENT showing the amount of Subscriptions of the County and Township Agricultural Societies in each County, for the year 1855, at the time of the Treasurer of the County Society transmitting his affidavit to the Secretary of the Board, as required by the Act Vic. 16, chap. 11, the amount of public grant received by the Board from Government on account of each County Society, and the amount retained by the Board from each grant for the use of the Provincial Agricultural Association:—

COUNTY SOCIETIES.	AMOUNT OF SUBSCRIPTION.			AMOUNT OF GOVERNMENT GRANT.			RETAINED BY BOARD.		
	£	s.	d.	£	s.	d.	£	s.	d.
Addington.....	35	5	0	105	15	0	10	11	6
Brant.....	156	1	1	250	0	0	25	0	0
Bruce.....	83	4	10½	150	0	0	15	0	0
Carleton.....	148	10	0	250	0	0	25	0	0
Dundas.....	49	10	0	148	10	0	14	17	0
Durham.....	210	11	3	150	0	0	15	0	0
Elgin.....	156	10	0	250	0	0	25	0	0
Essex.....	104	0	0	250	0	0	25	0	0
Frontenac.....	68	0	0	150	0	0	15	0	0
Glengary.....	59	0	0	150	0	0	15	0	0
Grey.....	108	15	0	250	0	0	25	0	0
Haldimand.....	104	5	0	250	0	0	25	0	0
Halton.....	124	10	0	250	0	0	25	0	0
Hastings.....	88	0	0	250	0	0	25	0	0
Huron.....	167	10	0	150	0	0	15	0	0
Kent.....	171	2	6	250	0	0	25	0	0
Lambton.....	108	0	0	250	0	0	25	0	0
Lanark.....	159	0	3	150	0	0	15	0	0
Leeds and Grenville.....	127	15	0	250	0	0	25	0	0
Lenox.....	42	10	0	127	10	0	12	15	0
Lincoln.....	190	10	0	150	0	0	15	0	0
Middlesex.....	317	3	5½	250	0	0	25	0	0
Norfolk.....	117	0	0	250	0	0	25	0	0
Northumberland.....	176	0	0	150	0	0	15	0	0
Ontario.....	211	10	0	250	0	0	25	0	0
Oxford.....	330	2	6	250	0	0	25	0	0
Peel.....	134	10	0	150	0	0	15	0	0
Perth.....	144	5	0	250	0	0	25	0	0
Peterboro'.....	131	0	0	150	0	0	15	0	0
Prescott.....	60	5	0	150	0	0	15	0	0
Prince Edward.....	99	10	0	250	0	0	25	0	0
Renfrew.....	50	0	0	150	0	0	15	0	0
Russell.....	53	0	0	150	0	0	15	0	0
Simcoe.....	201	0	0	250	0	0	25	0	0
Stormont.....	37	5	0	111	15	0	11	3	6
Victoria.....	90	10	0	150	0	0	15	0	0
Waterloo.....	123	3	0	250	0	0	25	0	0
Welland.....	148	0	0	150	0	0	15	0	0
Wellington.....	285	5	0	250	0	0	25	0	0
Wentworth.....	217	15	0	250	0	0	25	0	0
York.....	390	5	0	150	0	0	15	0	0
	5779	18	11	8143	10	0	814	7	0

MEETING OF THE BOARD OF AGRICULTURE.

A meeting of the Board was held in Toronto, pursuant to notice, on the 27th February, 1856.

Present.—Messrs. E. W. Thomson, (President); J. B. Marks, (Vice-President); Hon. A. Fergusson, John Harland, R. L. Denison, David Christie, Asa A. Burnham, H. Ruttan, Professor Buckland, (Secretary.)

The following is an abstract of business done:—

COMMUNICATIONS.

A Communication was received from Mr. Evans, Secretary of the Lower Canada Board of Agriculture, stating that the Exhibition for that section of the Province for the year 1856, would be held at Three Rivers on the 17th, 18th and 19th September.

From Mr. B. P. Johnson, Secretary of the New York State Agricultural Society, stating that the next Annual Exhibition of that Society would be held on September 30th, and October 1st, 2nd and 3rd.

From Mr. J. H. Charnock, of Hamilton, suggesting the propriety of the Board using its influence with the Legislature of the Province, to obtain a General Drainage Act, with an Annual Public Grant, to be loaned under proper control to parties desiring to effect drainage improvements on cultivated lands, and to be repaid by the borrowers by instalments.

From Mr. C. A. Jordison, of Port Hope, and Mr. Thomas Briggs, of Kingston, suggesting some changes in the Prize List for the Provincial Exhibition.

From Mr. Henry Moyle of Brantford, suggesting the propriety of the Board taking some action in promoting immigration of a desirable class.

Communications on various other matters were also submitted.

It was then Resolved, that the next Annual Exhibition of the Association should be held at Kingston on the 23rd, 24th, 25th and 26th September following.

Mr. Marks submitted a list of names of persons proposed for the Local Committee at Kingston, viz: O. S. Gildersleeve, Mayor of Kingston; D. Roblin, Warden of the United Counties of Frontenac, Lenox and Addington; the President of the County of Frontenac Agricultural Society; the President of the County of Lenox Agricultural Society; the President of the County of Addington Agricultural Society; A. Cameron, Thomas Briggs, Judge McKenzie, James O'Reilly, Dr. Litchfield, Dr. Barker, Jno. Flanigan, W. Dickson, Sheriff Corbett, M. W. Strange.

This list was adopted by the Board, and Dr. Litchfield and Mr. W. A. Geddes, named as Secretaries.

Certain statements were submitted and read in reference to the erection of Buildings for the Fair.

Resolved,—That the Local Treasurer be authorized to draw upon the Treasurer of the Board for funds when required.

Mr. Denison stated that a suite of Rooms had been offered for the use of the Board, by the Minister of the Bureau of Agriculture, Sir Allan MacNab, and it was resolved that the Board should take immediate possession of the same.

The Board then adjourned till next day.

THURSDAY, Feb. 28th, 1856.

The Board met at 10 a. m.

Present.—Messrs. Thomson, Ruttan, Denison, Burnham, Marks, Christie, Fergusson and Buckland.

A Committee was appointed to revise the Prize List, and to consider any suggestions that had been, or might be received in reference to the same; the committee consisting of Messrs. Thomson, Fergusson, Christie, Denison and Buckland.

Resolved, That the day for closing the accounts of the Association, as provided in By-Law, clause 12, be 1st September in each year.

Professor Buckland read a Report of his observations during a tour through certain parts of the Province, and in which he had delivered several lectures. The Report was ordered to be published in the transactions.

The subject of localities where the Provincial Exhibition may probably be held, obtaining grounds and erecting buildings of a permanent character for exhibition purposes, being considered, it was resolved—

Whereas the several localities at which the Annual exhibitions of the Agricultural Association may be held in future, may by their permanent structures contribute to the accommodation of such exhibitions, *Resolved*, That the Association will contribute towards such expense in proportion to the facilities afforded.

Mr. Charnock's communication in reference to a General Drainage Act being considered, it was

Resolved, That the Board is not at the present time prepared to advocate the appropriation of public funds to this object, though fully aware of its importance; and the Board is further of opinion that in the present position of the country, and for some time hence, it will not be practicable to carry out drainage improvements by any other means than through private enterprise.

Mr. Moyle's letter in reference to the promotion of immigration was considered, and the Board feeling that the funds of the Association would be wholly inadequate to carry out the scheme proposed, the Secretary was instructed to convey the thanks of the Board to Mr. Moyle for his communication, and to express the hope that he may continue to urge the matter on the consideration of the Minister of Agriculture.

Some discussion took place upon the subject of the publication of the transactions of the Board, three thousand copies of the first volume having been recently published, and the publication not being self-supporting, it was resolved to apply to Government for a grant to defray the expenses that had been incurred, and also for an annual grant to aid the publication in future, or to request that the same should be published by the Bureau of Agriculture.

Resolved, That the future fee for admitting persons at the gates during the Exhibitions be 1s. 3d., but children under 14 years of age to be admitted at half that sum.

Resolved, That the same encouragement that was given by double and treble premiums last year for animals imported since the previous exhibition, and taking the first prize in their class, be continued the present year.

Notice was given by Mr. Denison, that he would at the next meeting of the Board move, That for the future, the Refreshment Tickets heretofore distributed to the judges, officers and others at the annual show, be discontinued, and that the sum of £1 be paid to each of the Judges upon the delivery of their Report to the Secretary.

The Counties which should be eligible to compete for Prize Agricultural Reports, for the year 1856, were then balloted for, and the counties of Addington, Haldimand and Huron were chosen.

Resolved, That an instrument for testing the draught of Ploughs competing for prizes at the exhibitions be procured for the Association.

The Board adjourned till next day at 10 a. m.

FRIDAY, Feb. 29th, 1856.

The Board met pursuant to adjournment.

Present.—Messrs. Thomson, Fergusson, Burnham, Christie, Marks, Denison and Buckland.

It was *Resolved*, That the Produce grown on the Experimental Farm, of the imported seed Barley, be placed in the hands of the seedsman of the Association, Mr. James Fleming, to be sold by him at 5s. per bushel, in quantities not exceeding six bushels to any one purchaser, up to the 10th day of May, and after that date any remaining on hand to be sold to any applicant, to the best advantage.

A pamphlet and some communications relating to the Chinese Potato (*Dioscorea Batatas*) being submitted, and the question of introducing the cultivation of the plant being discussed, it was

Resolved, That the Secretary be authorised to order a quantity of the seed of the Chinese Potato from New York, to be cultivated on the Experimental Farm.

On motion of Mr. Marks, it was

Resolved, That a premium of £15 be offered for the best machine, worked by steam, for breaking stones for macadamizing Roads, exhibited at Kingston, in operation, to the satisfaction of the Association, on the show ground.

Resolved, That tickets be given to the members of the Association, at the Exhibitions, instead of Badges, as heretofore.

In reference to the question choosing Judges for the Exhibition, it was

Resolved, That the County Societies be each requested to furnish the names of six persons competent and willing to act as Judges, to the Secretary of the Board, on or before the first of July next, and that the Board do take the responsibility of selecting from the lists so received, the Judges required, and that the Secretary do notify those so selected on or before 1st September next, and request their attendance at the exhibition without fail.

Resolved, That in the opinion of the Board it is of great importance to the Agricultural interests of the country, and the Agricultural Chair of University College, that Professor Buckland should devote a considerable portion of his time to delivering lectures on Agriculture, &c., in the various counties of the Province.

After some further detail business the Board adjourned.

FINANCES OF THE ASSOCIATION.

The following is the Balance Sheet of the receipts and expenditure of the Association for the Financial Year, commencing before the Provincial Exhibition at London in 1854, and ending before the Exhibition at Coburg in 1855:—

R. L. DENISON, TREASURER, IN ACCOUNT WITH THE PROVINCIAL AGRICULTURAL ASSOCIATION, FOR THE YEAR 1854 '55:

Dr.	£	s.	D.
To Balance from Account of 1853-'54.....	1332	14	4
“ Government Grant.....	1000	0	0
“ Canada Company's Grant.....	35	0	0
“ Rent of Booths and Stables on Show Ground.....	150	5	0
“ Middlesex County Agricultural Society Grant.....	133	0	0
“ Essex do. do. do. do.	12	10	0
“ Middlesex County Council.....	500	0	0
“ London Town Council.....	500	0	0
“ Elgin County Council (net).....	197	12	6
“ Members' Subscriptions.....	414	10	0
“ Ten Life Members' Subscriptions.....	25	0	0
“ Carriage Admission Tickets sold.....	6	5	0
“ Horsemen “ “ “	1	13	9
“ 25,150 Single Admission Tickets sold, at 7½d.....	785	18	9
“ Premium Money returned.....	3	0	0
“ Government Grants to pay County Societies.....	8198	0	0
“ Produce sold from Experimental Farm.....	116	18	6
	<hr/>		
	£13412	7	10

Cr.	£	s.	D.
By Paid on Account of Agricultural Association, for erection of Buildings for Exhibition, Premiums, Assistants, Constables, and for other expenses at Show, Salaries of Officers, Printing, &c.....	3347	0	5
“ Paid to County Agricultural Societies.....	7378	4	0
“ Paid on account of Board of Agriculture.....	99	1	6
“ Paid on account of Experimental Farm, and Buildings and Improvements on do.....	1590	1	9
September 20th, 1855, By Balance in hand.....	998	0	2
	<hr/>		
	£13412	7	10

We, the undersigned Auditors, appointed to examine the accounts of the Treasurer of the Provincial Agricultural Association, certify that we have done so for the period commencing 21st September 1854, and terminating 20th September 1855; that we find by the books, that including the balance of £1332 14s. 4d. currency, at the last audit, the sum of Thirteen Thousand four hundred and twelve pounds seven shillings and two pence currency (£13,412 7s. 10d.) has been received, and the sum of £12,424 7s. 8d. currency has been paid, as per vouchers produced, leaving a balance in the hands of the Treasurer of nine hundred and ninety-eight pounds and two pence, Provincial currency.

(Signed,)

G. P. RIDOUT, }
JNO MAULSON, } Auditors.

Toronto, C. W., July 14, 1856.

TRANSACTIONS OF THE AGRICULTURAL ASSOCIATION AND
BOARD OF AGRICULTURE.

ELEVENTH YEAR—1856-'57.

OFFICERS OF AGRICULTURAL ASSOCIATION, 1856 :

President—BARON DE LONGUEUIL, Kingston.
1st. Vice-President—GOERGE ALEXANDER, Esq., Woodstock.
2nd. Vice-President—D. B. STEVENSON, Esq., Picton.
Treasurer—R. L. DENISON, Esq., Toronto.
Corresponding Secretary—PROFESSOR BUCKLAND, Toronto.
Recording Secretary—HUGH THOMPSON, Toronto.
Consulting Chemist—PROFESSOR CROFT, University College, Toronto.
Seedsman—JAMES FLEMING, Toronto.
Bankers—BANK OF UPPER CANADA.

MEMBERS OF THE BOARD OF AGRICULTURE, 1856-'57.

E. W. THOMSON, York Township, *President*.
J. B. MARKS, Kingston, *Vice-President*.
HON. P. M. VANKOUGHNET, Toronto, *Minister of Agriculture*, (ex-officio member.)
BARON DE LONGUEUIL, Kingston, President Provincial Agricultural Association, (ex-officio member.)
R. L. DENISON, Toronto, *Treasurer*.
PROFESSOR BUCKLAND, Toronto, *Secretary*.
HON. ADAM FERGUSSON, Woodhill, Flamboro East.
SHERIFF RUTTAN, Cobourg.
DAVID CHRISTIE, M. P. P., Brantford.
JOHN HARLAND, Guelph.
ASA A. BURNHAM, Cobourg.

COUNTY AND TOWNSHIP AGRICULTURAL SOCIETIES.

The following is an abstract of the Reports received by the Board in 1856, from the various County Agricultural Societies in Upper Canada, embodying the proceedings of those Societies, and of their Township Branches, for the year 1855 :—

COUNTY OF ADDINGTON.

The County Society of this County consisted in 1855 of sixty-three members, subscribing collectively the sum of £16 15s. ; amount deposited by Township Branches according to Statute, £21 5s. ; amount of Government Grant, £95 3s. 6d; total receipts £133 10s. 6½d. The amount paid over to the Township branches, including return of their deposits, was £62 10s. ; amount paid in Premiums at County Show £51 1s. 3d. ; expenses of management, £15 1s. 10½d. ; Balance remaining in Treasurer's hands, £4 17s. 5d. No general remarks on the progress of agricultural improvement.

TOWNSHIP BRANCHES.

AMHERST ISLAND—The Society in this Township, consisted of 45 members, subscribing 5s. each. Amount of Government Grant received through County Society, £21 15. Amount paid in premiums, £29 10s. No further report.

CAMDEN—No Report given, further than the names of officers appointed for 1856. The Society held no show in 1855.

ERNESTTOWN—The Society in this Township had in 1855 sixty-five members, subscribing collectively £18 ; apportionment of Government grant received, £19 10s. ; total receipts, including balance from previous year, £43 15s. 3d. Amount paid for Premiums, £34 10s. ; expenses of management, £3, 7s. 9d. ; total expenditure £37 17s. 9d. ; Balance in Treasurer's hands £5 17s. 6d.

SHEFFIELD—Thirty-one members ; amount of subscription, £10. This subscription appears from the Report to have been intended for the year 1856, and no further report is given of proceedings of 1855.

BRANT.

COUNTY SOCIETY—This is an energetic and prosperous Society ; it consisted in 1855 of 321 members ; amount of subscriptions, £81 10s. ; amount deposited by Township Branches, £144 14s. 1d. ; Grant from County Council, £25 ; Government grant, £225 ; Admission and Entrance Fees at Exhibitions, £75 17s. 6d. ; total receipts, including balance of £40 2s. 6d. from previous year, £580 8s. 7d. Amount paid over to Township Societies, £106 0s. 6d. ; amount paid for Premiums, £275 9s. 11d. ; expenses of management, buildings for exhibition, printing, &c., £161 15s. 11d. ; Total disbursements, £543 3s. 7d. ; balance in Treasurer's hands carried to account of 1856, £37 5s.

Extract from Directors' Report.

The President and Directors in presenting their Report of the last year's operations of the "County of Brant Agricultural Society" have great pleasure in expressing their entire satisfaction in its generally prospering condition.

During the last two years, the high price of produce has increased the agricultural wealth of the County to an unprecedented extent, rendering the farmers at once the most thrifty and independant class of the community.

The Premiums which the Directors offered in the early part of the year for the best Stallions, induced owners from a distance to compete; and the agriculturists of the County were thus enabled to greatly improve their stock, by the use of horses which would not otherwise have been available; nearly twenty horses entered the lists for competition, a number of which were imported.

The Fall show passed off with more than ordinary spirit and success. The weather was delightful, and, all things considered, the Exhibition was one of the best and most successful ever held in Western Canada. The show of Stock deserves especial commendation; not less than 1256 entries having been made. The Horses it was declared by parties competent to judge, were superior to those at the Provincial Exhibition.

The exhibition of Durham Cattle both in respect of numbers and quality, was considered very creditable; and the Leicester Sheep unrivalled. Among the latter were several Rams valued at more than fifty pounds.

The Fruit and Vegetables also were abundant, well flavored and excellent, strikingly exhibiting the deep and increasing interest taken by Farmers in Horticulture, &c.

The articles of domestic manufacture, the product of the leisure hours of wives and daughters, spoke volumes for home industry and the prosperity of the County.

The Farm Implements exhibited were numerous and excellent, many of them being so simple, though ingenious in their structure, that they could not fail to satisfy even the most fastidious.

On the formation of this Society a new system was introduced and advocated by Mr. O'Neal, of Dumfries, namely, that of enabling adjoining Counties to compete with us. At first our neighbours did not reciprocate the privilege then accorded them; but happily, during the last year, many of the Societies of the neighboring Counties have thrown open their exhibitions, thereby encouraging a spirit of generous rivalry.

The Society labours under great and increasing disadvantages from the circumstance of having no grounds for the purpose of exhibitions. The expenses incurred by the purchase of lumber, erection of fences and buildings, and watching of the premises, amounted during the last year to the sum of £70; and a similar or larger amount will be required every year, even with the most economical management, until the society shall possess a permanent location.

The Directors, therefore, would urge upon the members the necessity of making some exertion to obtain so desirable an end; and in order more effectually to accomplish the object, they would beg to suggest the propriety of purchasing a permanent place, where the County Exhibition may in future be held, and that application be made to the County Council for debentures to pay for the property, &c., and the Society could create a sinking fund to redeem at maturity.

CHAS. PURLEY,

President.

JOHN McNAUGHT,

Secretary and Treasurer.

TOWNSHIP BRANCHES.

ONONDAGA—Number of members in 1855, 92; amount of subscription, £28 7s. 6d.; apportionment of Government grant, £33 15s.; total receipts, including balance from 1855, £80 12s. 6d.; amount paid for premiums at Fair, £50 15s.; amount paid for premiums at Ploughing Match, £9 5s.; expenses, £10 13s. 2½d.; total disbursements, £70 13s. 2½d.; Balance in hand, £9 19s. 3½d.

Extract from Report.

The Township of Onondaga is one of the smallest Municipalities of the County of Brant, raising by assessment only about £550 both for County and Township purposes; it was surveyed by Government so lately as '42-43, being inhabited before that time by a few straggling whites settled among a thin population of Indians; yet it has been enabled to establish a Society which has raised upwards of £80 towards the advancement of Agriculture. In 1843 the farmers on the Western side of Fairchild's Creek—the most improved part of the Township—were only able to raise on an average about six acres of wheat, and now most of them have between thirty and forty acres of that grain to harvest.

The Show held during the past year at the village of Onondaga displayed some excellent specimens of thorough-bred cattle, and the horses for farming purposes were of an excellent quality; a marked improvement was also noticed in the breed of sheep, which in a few years is likely, under the management of the present energetic farmers, to become as valuable as the cattle.

While the Directors rejoice at the present prosperity of the Township Society, they would urge upon the farmers not to forget the larger one of the County. Gentlemen, support them both, and the farmers of the County of Brant in a few years shall claim the praise of the whole Province.

SOUTH DUMFRIES—The amount of subscription of this Society for 1855 was £111 9s. 1d.; which was merged in the funds of the County Society for that year, for the purpose of holding a joint Fall Show at Paris in October, as mentioned in the Report of the County Society. There was consequently nothing further to Report from Onondaga for that year.

CARLETON.

COUNTY SOCIETY—Fifty-one members; amount of subscription £44 10s.; amount deposited by Township Societies £109; Government grant £225; total receipts £384 0s. 6d.; amount paid for copies of *Agriculturist* for members, £9 5s.; paid over to Township Societies £243 18s.; amount paid for premiums on crops in the field, stock, produce, &c., £103 10s.; total expenditure £403 10s. 1d., leaving a balance due Treasurer of £19 9s. 7d.

Extract from Report.

Your Office-bearers would urgently press upon all members of the Society to take active measures to get additional subscribers and keep up the subscription list, otherwise if the falling off continues in proportion for the present year, the Society will fall under the number required by law and become extinct—immediate and earnest attention is solicited to this point.

It will be observed from the statements herewith submitted, that the Society is indebted to the Treasurer in the sum of £19 9s. 7d., a state of things which cannot be permitted to exist any longer.

The annual County Exhibition in October, was on the whole satisfactory. The animals would compare favourably with any former year. The manufactured goods, and the "handy works" of farmers' daughters were also very creditable. They regret, however, to remark that the samples of cereals were not generally so plump and heavy as on former exhibitions.

TOWNSHIP BRANCHES.

GLOUCESTER.—Fifty-one members; amount of subscription, £32; Government grant, £39 12s.; total receipts, including balance from previous year, £89 18s. 7d.; amount paid for premiums, £64 6s. 1d.; general expenses, £17 18s. 2½d.; balance in Treasurer's hands, £7 14s. 3½d.

HUNTLEY.—Amount of subscriptions, £20 5s.; Government grant, £25 1s. 3d.; amount paid for premiums of stock, and Agricultural produce, and for expenses, £45 5s.; balance in Treasurer's hands, 1s. 3d.

MARCH.—Amount of subscriptions, £20 5s.; Government grant, £25 1s. 3d.; amount paid for premiums, £12; expenses, £3 15s.; balance due Treasurer, 8s. 9d.

NORTH GOWER AND MARLBOROUGH.—Thirty-seven members; amount of subscription, £17 5s.; Government grant, £18 11s.; amount paid for premiums, £28 16s. 6d.; expenses, including keeping of a Boar owned by Society, £6 7s. 6d.; balance in Treasurer's hands, 12s.

OSGOODE.—Forty-one members; amount of subscription, £20 10s.; Government grant, £25 7s. 6d.; total receipts, £45 17s. 6d.; amount paid for premiums, £32 17s. 6d.; general expenses, £9 0s. 9d.; balance in Treasurer's hands, £3 19s. 3d.

Extract from Report.

Your Directors have to report that the crops of the past year are now generally threshed out; the yield is a fair one, although there has been a partial failure in the wheat crop, owing to early frosts, and other circumstances over which the farmer can have no control, but upon the whole they feel confident, on account of the unusually large breadth of land sown, that there is a large surplus in the Township.

The remunerating prices prevailing in the Ottawa markets, are adding much to the wealth of the farmers of Osgoode; which they appear to be expending judiciously, as a great many of them are surrounding themselves with unmistakable evidences of material comfort and prosperity.

Your directors regret (notwithstanding many visible signs of progress) to have to remark, that the great body of the farmers have not yet taken that interest in the Society which they ought, but hope that when its benefits become better appreciated, they will become more alive to their own interests, and form an association of spirited and enterprising agriculturists, who will introduce into the Township of Osgoode what it very much needs, choice breeding animals of horses, cattle, sheep, and swine, the beneficial effects of which would soon manifest themselves in improved and more valuable stock.

DUNDAS.

COUNTY SOCIETY.—Fifty-four members; amount of subscription, £51 10s.; Government grant, £133 13s.; total receipts, including balance from previous

year, £192 16s. 1½d. Amount paid for premiums, £164 17s. 6d.; general expenses, £7 5s. 7½d.; balance in Treasurer's hands, £20 13s.

No Township Societies reported from this County.

DURHAM.

COUNTY SOCIETY.—Eighty-six members; subscription, £21 10s.; amount deposited by Township Societies, £228 16s. 3d.; Government grant, £135; total receipts, £385 6s. 3d. Amount paid over to Township Societies, £282 16s. 3d.; amount granted to Provincial Association to aid Provincial Exhibitions at Cobourg in 1855, £64 10d.; paid Treasurer balance due him from 1854, £32 11s. 8d.; total disbursements, £385 13s.; balance due Treasurer, 6s. 9d. The Society held no Exhibition in 1855, having merged its funds with those of the Provincial Association for that year.

TOWNSHIP BRANCHES.

CAVAN.—One hundred and forty members; amount of subscription, £35; apportionment of Government grant, £8 16s. 9d.; total receipts, including balance from previous year, £48 11s. 11d.; amount paid for premiums, £30 17s. 6d.; general expenses, £6 4s. 5d.; balance in Treasurer's hands, £11 9s.

CLARKE.—One hundred and fifty-three members, subscribing 5s. each; amount of Government grant, £10 2s. 3d.; total receipts, £53 1s. 1½d.; amount paid for premiums, £30 15s.; paid for Agricultural papers, £12 7s. 6d.; total disbursements, including balance due Treasurer from previous year, £57 6d.; balance due Treasurer at close of account for the year, £3 19s. 4½d.

DARLINGTON.—Two hundred and thirty-five members; amount of subscription, £70 5s.; donations, £9; proportion of Government grant, £18 9s.; entrance tickets at Fall Show, £14 11s. 10d.; total receipts, £113 5s. 10d.; amount paid for premiums, £81 11s. 3d.; paid for 230 copies of *Agriculturist* for members £28 15s.; Total expenditure, including balance due Treasurer from 1854, £130 8s. 9d.; balance due Treasurer, £17 2s. 11d.

HOPE.—One hundred and seventy-three members; subscription, £44 10s.; apportionment of Government grant, £9 9s.; total receipts, £53 19s.; amount paid for premiums, £24 15s. 3d.; 170 copies of *Agriculturist*, £22 5s.; total disbursements, £53 9s. 4d.; balance in Treasurer's hands, 9s. 8d.

MANVERS.—Eighty-four members; subscription, £22; public grant, £4 18s.; total receipts, £26 18s.; amount paid for premiums, £21 5s.; expenses, £2 11s. 3d.; balance in Treasurer's hands, £3 1s. 9d.

ELGIN.

COUNTY SOCIETY.—Sixty-one members; amount of subscription, £15 5d.; amount deposited by Township Societies, £142 10s.; receipts for use of bull "Hawthorn," owned by Society, £13 15s.; Government grant, £225; total receipts, £396 10s.; amount paid over to Township Societies, a portion being on account of year 1854, £347 8s. 4d.; amount paid for premiums and expenses,

£9 19s. 2d. ; balance in Treasurer's hands, £39 2s. 6d. The Directors state in their report that a balance had been due from the late Treasurer, to the Society, on his retirement from office, of £263 14s. 1½d., which had been paid off, up to the time of making the report, 29th January, 1856, to the amount of £161 12s. 3d., leaving the balance then due to the Society, £102 2s. 7½d.

TOWNSHIP BRANCHES.

ALDBOROUGH.—One hundred and fourteen members ; amount of subscription, £128 5s. ; Government grant on account of 1854 and 1855, £52 10s. 11d. ; grant from Township Council, £25 ; total receipts, of which £50 appears to have been borrowed by the Society, £256 1s. 6d. ; total expenditure, for premiums, expenses, &c., including (apparently) repayment of loan, £244 5s. 9d. ; balance in Treasurer's hands, £11 15s. 8½d.

BAYHAM.—Fifty-one members ; amount of subscription, £13 5s. ; Government grant, £9 5s. ; total receipts, £38 8s. 9d. ; amount paid for premiums, £28 11s. 3d. ; expenses, £3 10s. ½d. ; balance in hand, £6 6s. 11½d.

MALAHIDE.—One hundred and seventy-seven members ; amount of subscription, £45 15s. ; Government grant, for years 1854 and 1855, £110 9s. 11d. ; total receipts, £160 7s. 2d. The funds of the Society appear to have been expended chiefly in the purchase and maintaining of improved stock for breeding purposes ; the total expenditure being £188 2s. ½d. ; balance in Treasurer's hands, £15 1½d.

SOUTHWOLD AND DUNWICH.—One hundred and eighty-one members ; amount of subscription, £46 10s. ; Government grant, £44 1s. ½d. The report gives no further information.

YARMOUTH.—Seventy-three members ; amount of subscription, £18 5s. ; Government grant, £15 5½d. ; receipts from bull "North Star," owned by Society, £10 18s. 9d. ; total receipts, including balance from previous year, £72 1s. 10d. ; amount paid for keeping stock and other expenses, £8 18s. 9d. ; balance in Treasurer's hands, £63 3s. 1d.

ESSEX.

COUNTY SOCIETY.—Seventy-five members ; amount of subscription, £18 10s. ; amount deposited by Township Societies, £91 10s. ; Government grant, £225 ; total receipts, including balance of £10 from previous year, £345 ; amount paid over to Township Societies, £226 10s. ; amount paid for premiums and expenses of management, £97 11s. 7d. ; balance in Treasurer's hands, £20 18s. 5d.

Extract from Report.

The Board of Directors in presenting their Annual Report, have nothing very interesting to bring before the Society, still they believe that Agriculture in all its branches is making progress in the county. The reports of the branch societies are not as explicit as we would wish, yet we can gather details enough from the Treasurers' reports to see that the attention of the Townships is still

vigorously directed to the improvement of stock, and from personal observations of many acquainted with the county, it is apparent that a marked improvement has taken place within the last few years in almost every Township. We are sorry to have to report the failure of one Township society at this time, more especially as an impetus needs to be infused into the inhabitants, affected by the said society's operations. Agriculture is in a more backward state where this society has failed than in any other part of the county, consequently it is in such localities that the Agricultural Societies are the most required.

TOWNSHIP BRANCHES.

COLCHESTER.—Seventy eight members; amount of subscription, £19 10s.; balance from previous year, £100 12s. 3d.; government grant, £28 8s. 1d.; received on account of Bulls sold by Society, £9 10s.; amount received for use of Stallion owned by Society, £27; further balance received from transactions of previous year, £31 18s.; total receipts, £216 18s. 3½d.; amount paid per order of President (not stated what for), £123 16s. 9d.; paid for keeping Stallion owned by Society, £35; total expenditure, £158 18s. 9d; balance in Treasurer's hands, £57 19s. 6½d. The operations of this Society appeared to be confined principally to the purchase of animals for the improvement of stock in the township.

Extract from Report.

The Society still keep their entire horse, and as the Directors can now speak with more certainty of the valuableness of his stock of colts than could be done last year, they have every reason to believe that they will prove generally satisfactory. Your Directors would further beg leave to report that there were two bulls of very superior breed bought during the last year, in accordance with the resolution of the last annual meeting, but they are sorry to inform this meeting that the Devon, which was bought at a cost of \$125, was maliciously injured by some person while in pasture, and therefore will not be of any use to the Society as a stock animal.

The Directors have arranged to keep the stallion owned by the Society to the end of the next season (till last of June) for \$106. Your Directors would further report that the Society still progresses, and they are warranted in their expectation of seeing considerable additions made to the members during another year.

The Officers and Directors are sorry to have to revert to the great failure of our staple crop, (the wheat), through the inclement harvest weather, which has caused a damper, as it were, upon the business of Agriculturists, but they hope that it may be long before such another harvest is seen in the Township of Colchester.

GOSFIELD AND MERSEA.—Fifty-four members; amount of subscription, £13 10s.; Government grant, £19 18s. 4d.; amount received from County Treasurer, £37 10s.; total receipts, including balance from previous year, and proceeds of live stock owned by Society, £123 18s. 11½d; amount expended in purchasing and keeping horse, bulls, and boars for the Society, £97 19s. 0½d.; total disbursements, £99 5s. 10½d.; balance in Treasurer's hands, £24 13s. 1d.

MALDEN AND ANDERDON.—One hundred and seven members; amount of subscription, £27, apportionment of Government grant received, £39 9s. 4d.;

balance from 1854, £38 14s. 1d.; cash on account of horse owned by Society, £30 3s. 9d.; total receipts, £141 7s. 2½d.; amount paid groom for services travelling stallion owned by Society, £32 1s. 3d.; amount paid for Premiums at Fair, £66 10s. 4d.; total disbursements, £109 8s. 6½d.; balance in Treasurer's hands, £31 8s. 8d.

ROCHESTER, MAIDSTONE, AND TILBURY WEST.—Seventy-eight members; amount of subscription, £19 10d.; Government grant, £28 15s. 5d.; balance from previous year, £28 3s. 7d.; total receipts, £88 18s. 5d.; amount paid for bulls for Society, £30; boars for do., £7 10s.; total expenditure £41 15s.; balance in Treasurer's hands 29th January, 1856, £47 3s. 5½d.

FRONTENAC.

COUNTY SOCIETY.—Amount of subscriptions, £36 5s.; amount deposited by Township Branch Societies, £51 5s.; Government grant, £135; proceeds of Sale of Oats, &c., £15; total receipts, £237 10s.; amount paid over to Township Societies, £132 5s.; amount paid for Premiums, £69 8s. 9d.; various accounts, including expenses of management, seed oats and ploughing ground occupied by Society, &c., £74 16s. 1½d.; total expenditure, £276 9s. 10½d.; balance due Treasurer, £38 19s. 10½d.

TOWNSHIP BRANCHES.

KINGSTON TOWNSHIP.—Amount of subscription reported, £13; Government grant, £16 4s.; amount of Premiums awarded at Fair in June, £28 13s. 4d. The Report is imperfect.

LOUGHBOROUGH.—Amount of subscription, £15 5s.; Government grant, £16 4s.; total receipts, £31 9d.; amount paid for premiums and expenses, £29 2s. 4d.; balance in Treasurer's hands, £2 6s. 8d.

PITTSBURG.—Amount of subscription, £15; Government grant, £16; total receipts, £31; amount paid for premiums, £22 15s.; general expenses, £8 5s.

No Reports from the other Township Societies in this County. The Reports from this County are all more or less imperfect.

GLENGARY.

COUNTY SOCIETY.—Ninety-three members; amount of subscriptions paid, £23 5s.; amount deposited by Township branches, £39 11s. 10½d.; Government grant, £135; total receipts, including balance from previous year, £200 14s. 2½d.; amount paid over to Township Societies, £120 11s. 10½d.; amount paid for Premiums, £64 6s. 5d.; expenses £5 13s. 4d.; total expenditure, £190 11s. 7½d.; balance in Treasurer's hands, £10 2s. 7d.

TOWNSHIP BRANCHES.

CHARLOTTENBURG AND LANCASTER.—Sixty-seven members; amount of subscription, £25 3s. 4½d.; Government grant, £40 10s.; total receipts, including balance from 1854, £70 7s. 8½d. Amount of premiums paid at Fairs

and Ploughing Match, £46 1s. 11d.; amount paid for *Canadian Agriculturist*, £3 15s.; general expenses, £9 12s. 6d.; balance in Treasurer's hands, £10 18s. 3½d. No Report from any other Township Society in this county.

GREY.

COUNTY SOCIETY.—One hundred and thirteen members; amount of subscription, £31 5s.; balance from 1854, £71 7s. 6d.; deposited by Township branches, £77 10s.; Government grant, £225; received for seed wheat sold, £14 13s.; total receipts, £423 0s. 6d.; amount paid over to Township Societies, £212 10s.; amount paid for 60 bushels of wheat from Toronto for seed, and expenses upon the same, £38 19s. 4½d.; paid for Premiums, £90 13s. 9d.; general expenses, £54 10s. 4½d.; total expenditure, £396 13s. 5½d. The Directors report a gratifying improvement in the progress of the Society.

TOWNSHIP BRANCHES.

DERBY.—Forty-six members; amount of subscriptions, £12 10s.; Government grant, £21 15s. 6d.; amount paid in premiums at Fair, £21 5s. 6d.; expenses, £7 1s. 3d.; balance in Treasurer's hands, £5 18s. 9d.

HOLLAND.—Fifty-four members; subscription, £13 15s.; Government grant, £23 19s.; amount paid for premiums, £30 4s. 5½d.; general expenses, £7 9s. 7½d.

ST. VINCENT.—Ninety-five members; subscription, £23 15s.; Government grant, £30 18s. 5d.; total receipts, £54 13s. 5s.; amount paid in premiums, £35 3s. 9d.; contingent expenses, £9 17s. 5½d.; balance in Treasurer's hands, £9 12s. 2½d.

SULLIVAN.—Fifty-one members; amount of subscription, £12 15s.; Government grant, £22 4s. 4d.; total receipts, £34 19s. 4d.; amount paid in premiums, £24 2s. 6d.; general expenses, £5 13s. 1½d.; balance in Treasurer's hands, £5 3s. 8½d.

SYDENHAM.—Eighty members; amount of subscription, £20 15s.; Government grant, £36 2s. 10d.; total receipts, £57 11s. 3½d.; amount paid in premiums, £30 19s. 4½d.; general expenses of management, £17 13s. 7½d.; balance in Treasurer's hands, £8 18s. 3½d.

HALDIMAND.

COUNTY SOCIETY.—Amount of subscription, £14 16s. 3d.; deposited by Township Societies, £88 10s.; Government grant, £225; total receipts including balance from previous year, £368 15s. 3d.; amount paid to Township Societies, £173 15s.; Premiums, £136 15s.; Agricultural papers, £8 10s.; expenses, £1 10s.; balance in Treasurer's hands, £50 5s. 3d.

TOWNSHIP BRANCHES.

SENECA, ONEIDA, AND NORTH CAYUGA.—One hundred and ninety-one members; amount of subscription, £47 7s. 6d.; balance from 1854, £50 2s.

1½d.; Government grant, £45 5s.; total receipts, £142 14s. 7½d.; amount paid in premiums at Shows and Ploughing Match, £113 10s.; expenses, £21 12s.; total disbursements, £135 2s.; balance in Treasurer's hands, £7 12s. 7½d.

WALPOLE.—One hundred and sixty-one members; amount of subscription, £41 15s.; Government grant, £39 15s.; balance from 1854, £43 12s.; total receipts, £126 7s.; amount paid in premiums, £70 7s. 6d.; expenses, £9 13s. 9d.; cash in Treasurer's hands, £46 5s. 9d.

HALTON.

COUNTY SOCIETY.—One hundred and fifty-seven members; subscription, £39 5s.; deposited by Township Societies, £110; Government grant, £225; total receipts, £386 10s.; amount paid over to Township Societies, £245; premiums, £132 5s.; expenses, £25 7s. 1d.; total disbursements, £402 12s. 1d.; balance due Treasurer, £16 2s. 1d.

Extract from Report.

The annual Autumn Show of the Society was held in Milton on Wednesday, the 17th day of October last; the ploughing match was held the day previous, and on no former occasion did the people evince such a marked interest in the exhibitions of the Society as they did last year. The ploughing match was very numerously attended, and the work done was of a very superior description. The Directors consider it unnecessary to refer to the complete success of the Fall Show; the superior description of horses, cattle and sheep exhibited, and the vast number of the farmers of the County that were present on that occasion, was a sure indication of the prosperity of the Society. The Directors are pleased to state, that that part of our Exhibition consisting of grain, roots, fruit, cheese and butter, domestic manufactures, agricultural implements, and other mixed articles, was well sustained. Some of the manufactures of our county exhibited at our own Show were also subject to competition at the Provincial Show, and obtained some of the highest premiums. The Directors this year, in order to avoid and prevent the indiscriminate rush of spectators into the grain, &c., Hall, adopted the system of charging all persons not members of the Society, the small sum of one York shilling each, and by this means the sum of twelve pounds five shillings was realised, and disorderly persons excluded from the hall. The Directors, on the whole, flatter themselves that the operations of the Society have this year been very successful, and would record their congratulations to their brother farmers for the very abundant crop that has this year been secured in our favoured county.

TOWNSHIP BRANCHES.

ESQUESING.—One Hundred and one members; amount of subscription, £26; Government grant, £24; total receipts, including balance from previous year, £75 15s. 6d.; total disbursements in premiums and general expenses, £62 15s. 0½d.; balance in Treasurer's hands, £13 0s. 5½d.

NELSON.—Eighty-seven members; subscription, £22 7s. 6d.; Government grant, £19 5s.; grant from Township Council, £5; total receipts, £56 1s. 4d.; total disbursements, for premiums, &c., £32 16s. 4d.; balance in hand, £23 5s. No Reports from the other Township Societies in this county.

HURON.

COUNTY SOCIETY.—One hundred and three members; amount of subscription, £26; deposited by Township Branches, £150; Government grant, £135; balance from previous acc., £52 3s. 10½d.; proceeds from sale of clover and other seeds, £41 3s. 1d.; proceeds of Premium Wheat sold, £16 5s.; total receipts, including former dues collected, &c., £443 4s. 5d.; amount paid to Township branches, £224 12s. 3d.; paid for clover seed, £34 3s. 9d.; turnip do., £5 10s.; Premiums, £124 8s. 9d.; other general expenses, £64 0s. 1½d.; total disbursements, £452 14s. 10½d.; balance due Treasurer, £9 10s. 5½d.

Extract from Secretary's Report.

The prospects of the County of Huron in connection with agriculture, are truly flattering.

The Crown Lands in the Townships of Grey, Morris, Howick, and Turnberry, and the Canada Company's lands being brought into market and settling up fast, are steps in the right direction; the Crown lands are all bought up, and every 200 acres settled upon, and the remaining part of the Canada Company's lands are expected to be sold this coming summer; this in connection with gravelling the leading roads in the County the ensuing summer by the County Council, a by-law having passed to raise a sum of money for that purpose at their late sitting; and with the anticipation of the early completion of the Buffalo and Lake Huron Railroad, which runs through the County as far as Goderich, are all that is wanted to make the County of Huron in an agricultural point of view, second to none in Upper Canada.

A large majority of the new settlers in those Townships lately sold in this County by the Crown, are the sons of those sturdy yeoman who have made such rapid improvements, and realised such splendid homes in the middle section of this Province; they have brought up here with them a great amount of experience, and with that experience we may look forward to the clearing up of those townships, and a greater improvement than in the older settled localities.

With reference to the breed of stock in this County, the farmers are paying much more attention to that branch of agriculture up here, than they have hitherto done, a number of them having got their farms paid for and deeds from the Crown, or the Canada Company, they are now paying more attention to the breed of stock, and particularly in horned cattle, and sheep; one farmer in the Township of Colborne, Mr. Alexander Young, bought a superior Durham Bull this winter, and gave the price of \$325 for him; another gentleman not to be outdone is now, I have been informed, away to purchase equally as good if not a better one, and I am persuaded that a competition of this kind will spring up in this County after a while, when the farmers can see their way better as regards money matters; for we have to my own personal knowledge some of as good practical farmers in this County as perhaps could be found in any County in Upper Canada.

TOWNSHIP BRANCHES.

BAYFIELD.—Consisting of residents in Stanley and Goderich Townships. One Hundred members; subscription, £25. This being a new Society makes no further Report than list of subscriptions for first year.

CLINTON, (Township of Hullett).—Amount of subscriptions, £35; Government grant, £14 17s. 3d.; money borrowed, £60; receipts for use of Bulls

owned by Society, £9 2s. 6d.; total receipts, including balance from 1854, £133 6s. 2d.; amount paid for a thorough bred Durham Bull, £75; premiums, £24 18s. 9d.; expenses of procuring and keeping stock, management of Society, &c., £31 7s. 5d. Two bulls owned by the Society, one Durham, and the other Devon, are valued at £175; for which, and expenses connected with them, the Society remained indebted to the amount of £60 3s. 8d. in January, 1856.

EXETER, (Township of Stephen).—Eighty-six members; amount of subscription, £24 10s.; Government grant, £11 12s.; total receipts, £38 16s. 10½d.; amount paid for premiums, £34 2s. 6d.; expenses, £7 14s. 9¼d.; balance due Treasurer, £4 0s. 5d.

HAY.—Eighty-four members; amount of subscription, £23 5s.; Government grant, £9 17s. 4½d.; total receipts, including balance from previous acc't, £48 6s. 3½d.; amount paid in premiums, £33 1s. 3d.; expenses, £7 11s. 10½d.; balance in hand, £7 13s. 2d.

No Reports were received from the other branch societies in this County.

KENT

COUNTY SOCIETY.—Amount of subscriptions, £19 5s.; deposited by Township Branches, £153 2s. 6d.; Government grant, £225; donations and other amounts received, £82 12s. 6d.; total receipts, £480; amount paid Township Societies, £287 17s. 6d.; premiums, £77 12s. 6d.; total disbursements, including payment of balance due Treasurer from previous year of £45 0s. 6d.; £461 4s. 5½d.; balance in hand, Feb. 1856, £18 15s. 6½d.

Extract from Report.

In some of the Townships, considerable energy and spirit have been displayed in the getting up of exhibitions in their respective localities, and which have had a very beneficial and useful effect, one which reflects great credit upon their respective officers, and it is to be hoped that the example set by the Harwich and Orford Branch Society, in having annual shows, will be followed out by the other societies; and there is no doubt but their reports another year will show a large and growing increase. They would point out the utility and desirableness of frequent and friendly meetings among the farmers, for the purpose of discussion, and relating their experience, so that all may benefit by information they disseminate as regards agriculture. It is to be hoped that some Township will at once set the example by establishing a *Farmers' Club*, and having discussions periodically. We have no doubt that when once such *clubs* have been established, that we shall all feel and acknowledge their usefulness.

As an effort for furthering the great object of distributing practical information, the Directors ordered one copy of the *Canadian Agriculturist* to be given to each of the county subscribers, and the Directors take this opportunity of urging upon the several branches to subscribe for so invaluable a publication, and we have no doubt much prejudice will be removed by its perusal.

The grant given by the County Council in 1853 of £75, was given for the purpose of enabling the Directors to put up necessary and suitable buildings for the accommodation of exhibitors at the annual fair, and the Directors feel much pleasure in having an opportunity of expressing their acknowledgments of a very liberal *grant* of the County Council, the past year, of the sum of £150 for the

same purpose. Such buildings are absolutely necessary; the growing importance of this County now demands such accommodations, and as such improvements are for the benefit of all, it is to be hoped that the smaller Municipalities will contribute.

The annual show this last year was a decided improvement upon any former year, double the entries were made, and the articles exhibited, and the stock shown went to prove that Kent does not intend to be behind any other County for its enterprise. The Directors have not made any purchase of stock.

Your Directors (although they must remark that the great body of Agriculturists in this County have not taken that interest in the society which they ought) have upon the whole just cause to be satisfied that so much has been done.

TOWNSHIP BRANCHES.

CHATHAM.—Forty-nine members; subscription, £13 5s.; Government grant, £11 13s. 2½d.; money borrowed, £25; total receipts, including balance from previous year, £71 15s. 7½d.; amount expended in purchase of a bull, £35 15s. 4½d.; loan repaid, with interest, £25 15s.; total expenditure, £69 16s. 1½d.; balance in hand, £1 19s. 6d.

HARWICH.—Ninety-one members; subscription, £22 16s. 10½d.; apportionment of public grant, £19 9s. 4½d.; various amounts received in payment for stock, seeds, implements, &c., sold, £133 2s.; total receipts, £175 8s. 3d. The funds of the Society appear to have been expended principally in the purchase of bulls, sheep, cultivators, horse-rakes, &c., which were sold again by auction to members of the Society, on a limited credit. Amount paid for premiums at Fair, £10 1s. 3d.; total expenditure, £157 17s. 8d.; balance in hand, £17 10s. 7d.

HOWARD.—Seventy-nine members; subscription, £19 15s.; Government grant, £13 0s. 6d.; proceeds from use and sale of sheep, £53 3s. 9d.; Total receipts, £104 0s. 6d.; amount expended, £48 11s. 9d.; balance in hand, £75 3s. 9d.

Extract from Report.

The Officers and Directors in presenting their Annual Report for the past year, beg to say their attention has chiefly been directed to the improvement of stock, for which purpose they purchased twenty-one Rams, for the sum of three hundred and twenty dollars, at the Provincial Exhibition held in London, the year previous, for the use of the Society. A great loss has been sustained by this transaction, as they were sold at auction to the members of the Society for (\$175 75cts.) They have much satisfaction, however, in reporting that much good has resulted from it, as there is a marked difference in the quality of the sheep now raised. We have appropriated what funds we now have on hand to the purchase of a Horse for the use of the Society, and it is to be hoped the benefits resulting from this will remove the opposition which has hitherto existed, and that our Society will meet with a cordial support. We have a soil and climate second to no other township in Canada, and there is a growing disposition to raise and improve stock and grain of all kinds. We have no statistics at hand, whereby we can come at the quantity of wheat raised during the past year; but for quantity and quality we do not hesitate to say it will compare

favorably with any of the oldest Townships in Canada West. The high price of labor and scarcity of laborers, has been a great disadvantage to farmers in this section, and prevented many improvements which otherwise would have been made.

ORFORD.—Forty-nine members; subscription, £15 15s.; Government grant, £11 0s. 9½d.; donations, £6 12s. 6d.; balance from 1854, £35 2s. 8d.; total receipts, £62 3s. 5½d.; amount paid in premiums, £6 12s. 6d.; purchase of Bull, £33 16 10½d.; expenses, 11s. 4½d.; balance in hand, £27 15s. 2½d.

RALEIGH.—One hundred members; subscription, £25; Government grant, £22; total receipts, £60 3s.; amount paid for keeping and travelling a stallion owned by Society, £25; paid for keeping other stock, £17 16s. 3d.; contribution to County Society, £5; general expenses, £4 17s. 6d.; balance in hand, £7 9s. 3d.

ROMNEY.—Twenty-two members; subscription, £11; balance from 1854, £16 19s. 3d.; Government grant, £9 13s. 7d.; total receipts, £37 12s. 10d.; amount paid for three Ploughs, £11 14s. 6d.; two Straw-cutters, £6 8s. 6d.; contribution to County Societies' Prize List, £3; balance in hand, £16 17s. 10d.

TILBURY EAST.—Fifty-seven members; subscription, £25; balance from 1854, £31 12s. 4d.; Government grant, £22; total receipts, £78 12s. 4d.; amount paid for an eight-horse power Thrashing Machine, purchased of Messrs. Haggart and Brother, of Brampton, County Peel, £64; freight and charges on same, £11 15s.; paid for copies of *Agriculturist*, £2 10s.; contingent expenses, 7s. 4d.

ZONE.—Amount of subscriptions and Government grant, £53; total receipts, £68 5s.; paid for *Agriculturist*, £3 15s.; premiums and general expenses, £20 13s. 4½d.; balance in Treasurer's hands, £43 16s. 7½d.

LAMBTON.

COUNTY SOCIETY.—One hundred and seventy-eight members; subscription, £45; deposited by Township branches, £63 10s.; Government grant, £225; receipts from disposal of stock, &c., £43; balance from 1854, £104 19s. 2½d.; total receipts, £481 4s. 2½d.; amount paid over to Township Societies, £142 17s. 6d.; paid for premiums at shows, £59 17s. 6d.; *Agriculturist* for each member, £22 10s.; total expenditure, £289 9s. 2d.; balance in hand, Feb., 1856, £191 15s. 0½d.

Extract from Report.

The Directors would suggest to their successors the necessity of securing, by lease or purchase, some suitable place in which the Public Exhibitions of the Society could be conveniently held. To help to defray the extra expenses which would thus be incurred, perhaps a special subscription might be raised.

Your Board feel pleasure in adverting to the general prosperity of the County. In some localities considerable damage was done to the wheat crop, by the various insects which prey upon it. Probably from this cause there was a loss of from 20 to 25 per cent. on the entire crop of winter wheat in the County. Spring wheat was much less injured, and proved an excellent crop. Oats and

other spring crops were generally abundant. The prices of most kinds of Agricultural produce, continue high. This adds to the business, and increases the profits of tradesmen and mechanics, keeps up the demand for labor, and tends to the general prosperity of the County.

The southern Townships of this County have already received much benefit from their contiguity to the "Great Western Railroad." Wild lands within seven or eight miles of the railway, which a few years ago, were of little more than nominal value, are now worth from ten to fifteen dollars per acre. The "London and Sarnia Railroad," now in progress, promises to add greatly to the advantages of the central Townships of this County; and will doubtless cause a great increase in the value of real estate in the vicinity of its course.

TOWNSHIP BRANCHES.

MOORE.—One hundred and seventy-six members; subscriptions paid, £40 10s.; Government grant, £49 7s. 6d.; total receipts, £89 17s. 6d.; amount paid in premiums, £28 15s. 7½d.; 110 copies *Agriculturist*, £13 15s.; expenses keeping bulls, £5 12s. 6d.; total disbursements, £78 7s. 1½d.; balance in hand, £11 10s. 4½d. This Society reports encouraging progress in the success of its efforts to enlist the interest of the community generally, which the Directors attribute principally to the improvement effected in stock by the purchase of two superior bulls by the Society, and they recommend the purchase of two others. Agricultural produce for the season is reported of fine quality.

WARWICK.—Amount of subscriptions, £24; Government grant, £30; total receipts, 60 0s. 11½d.; amount paid in premiums, £34 11s. 11½d.; paid for keeping stock, £7 15s.; general expenses, &c., £10 1s. 9d.; balance in hand, £7 17s. 3d. The Directors report a lack of general support of the Society, with a falling off in the number of subscribers, and recommend as a means of inducing persons to become members, to purchase a superior bull for a particular quarter of the Township.

LANARK.

COUNTY SOCIETY.—One hundred and four members; subscriptions, £37 8s. 9d.; amount deposited by Township Societies not stated; Government grant, £135; apportionment of Government grant to Beckwith and Ramsay Society, merged in funds of County Society, £6 11s. 4d.; total receipts, £179 10s. 1d.; portion of Government grant paid to Township Branches, £81; amount paid in premiums, £74 2s. 6d.; Agricultural publications, £14; Crop viewers, £4 10s.; paid for keeping Boars owned by Society, £23 15s.; total expenditure, £235 4s. 8d.; balance due Treasurer, £55 14s. 7d.

Extract from Report.

The display of stock, implements, cloth, fruit, roots, seeds, and fancy articles, at the usual Exhibition in September, was very satisfactory; and it is the opinion of the Directors, that in horned cattle, pigs, and sheep, the County of Lanark will compare favorably with any other County in Canada.

A larger quantity of fall wheat than usual was sown in the fall of 1854, but it was so much injured during the winter, and from other causes, that it was to a great extent a failure; the quantity harvested being probably not more than

one-third of an average crop. This deficiency, however, was counter-balanced, to a considerable extent, by the abundance and excellence of almost all kinds of spring crops. Scotch spring, and Black Sea wheat, were unusually productive, particularly the first named, which was considerably more than an average crop. Oats and Peas were also unusually good; and a very large quantity of these are produced in this County for hog feed—pork being one of the staple articles.

Potatos, turnips, and other roots, were about an average crop, and would have been even more had they not been injured by an early frost. Root crops are beginning to be cultivated to a much larger extent in this County than they were a few years ago.

The high price of butter and other dairy produce, has induced many of our best farmers to turn their attention to this branch of the business; and it is found to be quite as profitable as the production of grain. The County of Lanark butter is noted for its excellent quality, and is eagerly sought after by purchasers.

The practice of ploughing in the fall or spring, and taking a crop of peas off the land intended for fall wheat, instead of summer fallowing it, has been introduced, and followed to a considerable extent in this neighborhood, and is found to succeed remarkably well.

The introduction of the more expensive descriptions of agricultural implements and machinery, such as reaping, mowing, and threshing machines; the manufacture of a superior description of home-made carpets, cloths and shawls, and the large number of comfortable dwelling houses which are being erected, all indicate the degree of prosperity enjoyed by the agricultural portion of the community.

TOWNSHIP BRANCHES.

DALHOUSIE.—Amount of subscription, £11 7s. 6d.; Government grant, £4 7s.; amount received for clover and turnip seed sold to members, £10 13s. 6d.; balance from 1854, £20 10s. 9½d.; total receipts, £46 13s. 9½d.; amount paid for copies of *Agriculturist*, £4 7s. 9d.; paid for clover seed, £15 18s. 1d.; paid in premiums, £9 18s. 9d.; total expenditure, £44 5s. 5d.; balance in hand, £12 8s. 4½d.

LANARK.—Fifty-four members; subscription, £14; Government grant, £6 14s. 5d.; proceeds from sale of clover and garden seeds, £16 17s. 2d.; total receipts, £46 4s. 1½d.; amount paid for copies of *Agriculturist*, £3 15s.; seeds from Toronto, £20; paid for rams, £5 15s.; paid in prizes, £12 2s. 6d.; total expenditure, £47 9s. 1d.; due Treasurer, £1 4s. 11½d.

PERTH.—Sixty-six members; subscription, £41 10s.; Government grant, £29 13s. 11½d.; dues from previous years collected, £13 6s. 9¾d.; total receipts, £87 5s. 9¼d.; amount paid in premiums, £44 5s.; paid for agricultural works, £3 15s.; general expenses, £24 8s. 1d.; total disbursements, £72 8s. 1d.

SMITH'S FALLS.—Sixty members; subscription, £48 19s.; Government grant, £24 5½d.; received from sale and use of bulls, £12 17s. 6d.; total receipts, £104 10s. 7d.; amount paid for purchase and keeping of a bull, £29 9s. 6d.; paid on account of a stallion, £25; amount paid in premiums, £21 10s.; agricultural papers, £2 10s.; total expenditure, including fencing of show ground, officers' salaries, &c., £104 10s. 7d.

LEEDS AND GRENVILLE.

UNITED COUNTIES' SOCIETY.—One hundred and thirty-three members; subscriptions paid, £25; deposited by Township branches, £102 15s.; Government grant, £225; proceeds from sale of cattle, £38 16s. 6d.; total receipts, including balance from previous year, £414 16s. 11½d.; amount paid over to Township Societies, £237 14s. 11d.; paid in premiums, £66 18s. 9d.; paid on account of Library, £34 10s.; total disbursements, £384 16s.; balance in hand, £30 11½d. The Directors report that during the past year a Library of 192 volumes was procured for the Society, at a cost of £34 10s.; and they are happy to be able to say that the books had been much sought for and well read. They commend this movement to the attention of the Society, and recommend that a further appropriation be made in the succeeding year, for the same purpose. The Directors report the agriculturists of the County in a highly prosperous condition.

TOWNSHIP BRANCHES.

BASTARD AND CROSBY.—Thirty-eight members; subscription, £49 7s. 6d.; apportionment of Government grant, £60 11s. 6d.; total receipts, £111 10s. 9d.; amount paid in premiums, £98 15s.; crop viewers, £6; expenses, £4 17s.; balance carried to account of 1856, £1 18s. 9d.

ELIZABETHTOWN AND YONGE.—Amount of subscription, £23 10s.; Government grant, £28 18s. 1d.; total receipts, £56 14s. 8d.; amount paid for premiums, £55 10s.; crop viewers, £4 10s.; agricultural papers, £4 11s. 8d.; total expenditure, £71 19s. 2d.; balance due Treasurer, £15 4s. 6d.

GANANOQUE.—Amount of subscription, £25; public grant, £32 16s.; total receipts, £57 16s.; paid premiums awarded at Show, £44; Ploughing Match, £6 5s.; expenses, £2 13s. 9d.; balance in hand, £4 17s. 3d.

Extract from Report.

Last year in this neighbourhood a large breadth of wheat was sown; some of the crop was injured by excessive moisture, and some by early frost, but on the whole the yield was satisfactory. Black Sea wheat seems to be falling into disfavor, and a decided preference is given to the variety popularly known as "Fife" or "Scotch" wheat. The crop of Oats and Peas was very good last year, and there was abundance of potatoes. In some cases the rot shewed itself, but it was not general. On the whole the farmers in this section of the country are in a prosperous condition—comfortable houses and commodious barns are springing up on every side, and plenty universally prevails.

KITLEY.—Forty members; subscription, £11; Government grant, £13 2s. 9d.; paid in premiums, £23; expenses of crop viewers, £2 5s.; balance due Treasurer, £1 2s. 3d.

LENOX.

COUNTY SOCIETY.—One hundred and five members; subscription, £26 15s.; deposited by Fredericksburg Branch Society, £17 10s.; Government grant, £114 15s.; total receipts, £166 14s. 1d.; amount paid to Branch Society, £50; paid in premiums, £95 1s. 3d.; expenses, £18 5s.; balance in Treasurer's hands, £3. 8s.

FREDERICKSBURG BRANCH.—Eighty-one members; subscription, £20 15s.; Government grant, £32 10s.; total receipts, £63 16s. 6d.; amount paid for 100 copies *Genesee Farmer*, £10 10s.; paid in premiums, £42; expenses, £10 1s. 3d.; total expenditure, £62 11s. 3d.; balance, £1 5s. 3d. No other Township Society reported from this County.

LINCOLN.

COUNTY SOCIETY.—One hundred and two members; subscription, £29 5s.; deposited by township branches, £166; Government grant, £135; total receipts, £338 4s. 10½d.; amount paid to Township Societies, £247; paid in premiums, £73 8s. 9d.; expenses, £18 9s. 3½d.; balance, 13s. 2d.

TOWNSHIP BRANCHES.

CAISTOR.—Sixty members; amount of subscription and share of Government grant, £32 11s. 2d.; amount paid in premiums, £16 15s.; 53 copies of *Agriculturist*, £6 12s. 6d.; expenses, £4 2s. 6d.; balance in hand, £5 1s. 2d.

GRANTHAM.—Two hundred and seventeen members; subscription, £77; share of public grant, £40 11s. 4d.; total receipts, £138 3s. 1½d.; amount paid in premiums, £101 2s. 6d.; expenses, £4 13s. 9d.; balance in hand, £32 6s. 10½d.

GRIMSBY.—Amount of subscription and share of public grant, £27 0s. 4d.; other receipts, £2 10s. 3d.; amount paid in premiums, £23 3s. 6½d.; expenses, £4 6s. 11½d.; balance in hand, £2 0s. 1d.

LOUTH.—Total receipts, subscription, Government grant, &c., £34 5d.; amount paid in premiums, £28 14s. 4½d.; expenses, £4 12s. 6d.; balance in hand, 18s. 1½d.

NIAGARA.—One hundred and twenty-three members; subscription, £38; Government grant, £18 1s. 1d.; total receipts, £68 3s. 8½d.; amount paid in premiums, £49; expenses, £8 6s. 4½d.; balance in hand, £10 17s. 4½d.

Extract from Report.

Those who are in the habit of attending our Fairs, must be satisfied that quite an improvement is manifest therein, as the spirit of rivalry and the increased number of entries as exhibited at our last Show must be evidence of that fact.

The number of entries for competition exceeded by about one-third that of any former year. The members of your Society are also increasing, and now number 123, which exceeds that of any former year. There are in the Township nearly 200 persons who are directly engaged in the pursuit of Agriculture, 89 only of whom are members of this Society, the remaining 34 members are of the Town.

The natural fertility of the soil of our Township is not surpassed by any in the Province, and is well adapted for the growth of all kinds of grain; but still we find on referring to statistical reports, and comparing the number of acres of arable land in our Township, with those of several others in the Province, we do not produce an equal quantity of grain, and the cause we assign is this, that several people in the Township occupy several hundreds of acres of land, but do not invest a corresponding amount of capital in the management of their farms to

make them either productive or profitable, and many farmers in our Township would be ten-fold richer at the end of a given number of years, were they to dispose of half of their lands, and employ their whole capital upon the remainder, than by attempting to farm the whole of it.

MIDDLESEX.

COUNTY SOCIETY.—Three hundred and nineteen members; subscription, £81 15s.; balance from previous year, £60 18s. 2d.; deposited by Township branches, £247 8s. 5½d.; received from the Treasurer of the County of Middlesex, in payment of a loan to the said County by the County Society, £1300; received on account of rents, £37 10s.; Government grant, £225; total receipts, £1952 11s. 7½d.; paid for premiums at spring fair, £41 5s.; amount paid to Township Branches, £382 8s. 5½d.; amount paid in premiums, Fall Show, £124 15s.; General expenses of management, and expenditure in clearing, draining and otherwise improving and erecting an Agricultural Hall, pens, &c., upon land owned by the Society, £1364 9s. 8½d.; total expenditure, £1912 18s. 2d.; balance in Treasurer's hands, £39 13s. 5½d.

TOWNSHIP BRANCHES.

ADELAIDE.—Seventy members; subscription, £19 2s. 6d.; Government grant, £10 18s. 4d.; total receipts, £41 6s. 8d.; amount paid on account of bulls, £40 8s. 9d.; copies of *Agriculturist*, £1 10s.; expenses, £2 12s. 3d.; total expenditure, £44 11s.; due Treasurer, £3 4s. 4d.

Extract from Report.

This Society, since its formation till the year 1853, continued uniformly to provide male animals of improved breeds for the free use of its members. The wisdom of which has been fully developed in the marked improvement of the stock of the Township. The Directors for the year 1853 disposed of all the animals, and offered premiums for the best male animals of certain breeds kept for public use in the Township, but finding their expectations not realized, they returned to their former system, and during the year 1854 they purchased one thorough-bred Devon bull, one boar and four rams, to be kept for the use of the Society; and this year the Directors have purchased one thorough-bred Durham bull, all of which are now in possession of the Society.

CARRADOC.—This is a new Society, organized in January, 1856; fifty-eight members; amount of subscription, £15.

DELAWARE.—Fifty-eight members; subscription, £15 15s.; balance from previous year, £20 15s. 6d.; Government grant, £5 9s. 1½d.; total receipts, £41 19s. 7½d.; amount paid in premiums, £18 13s.; contingent expenses, £8 2s.; balance in hand, £15 4s. 7½d.

NORTH DORCHESTER.—Eighty members; subscription, £44 10s.; Government grant, £21 8s. 7½d.; total receipts, £65 15s. 7½d.; paid in premiums, £40 5s.; expenses, £6 8s. 1½d.; balance in hand, £19 2s. 6d.

LOBO.—One hundred and twenty-five members; subscription, £32 5s.; Government grant, £17 12s. 0½d.; total receipts, £53 17s. 3d.; amount paid for

keeping bull, £24 17s. 6d. ; amount paid for rams, and keeping do., £15 10s. ; premiums, £9 6s. 9d. ; expenses, £2 16s. ; total expenditure, £53 17s. 6d.

LONDON.—One hundred members ; subscription ; £31 ; Government grant, £16 18s. 3½d. ; balance from 1854, £14 6s. 11d. ; total receipts, £62 5s. 2½d. ; amount paid in premiums, £46 ; expenses, £7 14s. 3d. ; balance, £8 10s. 11½d.

METCALFE.—One hundred and sixty-four members ; subscription, £50 18s. 9d. ; Government grant, £26 19s. 6d. ; total, £77 18s. 3d. ; amount paid for two boars and a ram, £15 7s. 2d. ; keeping stock and other expenses, £40 13s. 5d. ; balance in hand, £21 17s. 8d.

Extract from Report.

The Directors would observe that hitherto their attention has been chiefly directed to the introduction of a good stock of cattle, sheep, and hogs, &c. ; and they feel gratified to find that their efforts have been attended with great success, as a general improvement has taken place in the stock of the Society, which enables them to compete with richer and larger townships in this County.

MOSEA.—Eighty-four members ; subscription, £20 10s. ; Government Grant, £8 11s. 10½d. ; balance from 1854, £32 9s. 2d. ; total, £61 11s. 0½d. ; paid for Agricultural papers, £3 ; premiums, £26 ; expenses, £1 10s. 6d. ; balance in hand, £31 0s. 6½d.

WESTMINSTER.—One hundred and fifty-six members ; Subscription, £42 12s. 6d. ; Government grant, £19 8s. 8½d. ; total receipts, £62 1s. 2½d. ; paid in Premiums, £37 13s. 9d. ; *Agriculturist*, £3 5s. ; expenses, £12 4s. 1½d. ; balance in hand, £4 19s. 7d.

WILLIAMS.—Sixty-one members ; subscription, £16 8s. 5½d. ; public grant, £8 2s. 8½d. ; total receipts, £25 12s. 3d. ; paid in Premiums, £15 16s. ; expenses, &c., £9 13s. 9d. ; balance in hand, 2s. 6d.

NORFOLK.

COUNTY SOCIETY.—Two hundred and one members ; amount of subscriptions and entrance fees collected, £85 9s. 4½d. ; amount deposited by Township Branches, £104 ; Government grant, £225 ; sundries, £2 6s. 6½d. ; total receipts, £416 15s. 11d. ; amount paid Township Branches, £18 17s. 6d. ; paid in premiums at Fairs, £141 ; *Agriculturist*, £2 10s. ; sundry accounts, £26 11s. 6d. ; general expenses, £21 5s. 11d.

TOWNSHIP BRANCHES.

CHARLOTTEVILLE.—Seventy members ; subscription, £17 10s. ; Government grant, £17 18s. 9d. ; total receipts, £47 10s. 9d. ; amount paid in premiums, £30 2s. 6d. ; general expenses, including keep of a Stallion, £11 15s. 11s. ; balance in hand, £4 12s. 4d.

TOWNSEND.—One hundred and twenty-three members ; balance from 1844, £27 3s. 4½d. ; amount received on account of horse owned by Society, £73 10s. ;

amount of subscriptions and Government grant, £53 16s. 3d.; total receipts, £154 9s. 7½d.; amount paid expenses connected with keeping horse, £87 16s. 10d.; other liabilities paid, £41 5s.; balance in hand, £25 7s. 9½d. This Society reports having suffered the loss of a valuable horse, considered to be worth £250; and that the affairs of the Society are depressed in consequence, but the Directors hope by the continued support of the members of the Society that it will recover from the bad effects of the loss.

WALSINGHAM.—Seventy members; subscription, £17 10s.; Government grant, £13 2s. 6d. No further report.

WINDHAM.—Fifty-one members; subscription, £12 15s.; Government grant, £9 11s. 3d.; total receipts, £27 10s. 7d.; amount paid in prizes, £22 8s. 3d.; expenses, £2 17s. 6d.; balance in hand, £2 4s. 10d.

WOODHOUSE.—Balance in hand from 1854, £16 5s. 3½d.; subscriptions and Government grant, £43 5s.; total receipts, £59 10s. 3½d.; amount paid in prizes at Ploughing Match and Fair, £24 6s. 3d.; amount paid for keeping stallion owned by Society, £27 5s. 4d.; total expenditure, £52 1s. 7d.; Balance in hand, £7 8s. 8½d.

NORTHUMBERLAND.

COUNTY SOCIETY.—Eighty-one members; subscription, £20 5s.; balance in hand, £40 3s. 2½d.; amount deposited by Township Societies, £155 15s.; Government grant, £135; total receipts, £351 3s. 2½d.; amount paid to Township Societies, £235 15s.; amount paid to Provincial Association for exhibition at Cobourg, 1855, £100; total disbursements, £244 8s.; balance in hand, £6 15s. 2½d. The following Township Societies are in connection—Hamilton, Haldimand, Cramahe, Brighton, Seymour, Alnwick and Percy.

ONTARIO.

COUNTY SOCIETY.—One hundred and twenty members; subscriptions, £31; balance from previous year, £30 10s. 3½d.; deposited by Township Branches, £193 10s.; Government grant, £225; total receipts, £480 0s. 3½d.; amount paid over to Township Branches, £328 10s.; premiums at Annual Show, £79; expenses, £19 13s. 6d.; total disbursements, £427 3s. 6d.; balance carried to account of 1856, £52 16s. 9½d.

Extract from Report.

The Annual Exhibition was well attended; the animals and articles exhibited were generally of a superior order, as was evinced by the premiums awarded to many of them at the Provincial Show held at Cobourg on the following week. The exhibition of domestic manufactures and implements was not as large as might have been expected, but the articles exhibited in both these departments were highly creditable to the exhibitors, and it is to be hoped that in future there will be more competition in these highly important departments. On the whole the exhibition showed a decided improvement on former years. It is however, a matter of regret that so many of the farmers of the County of Ontario

seem to take no interest whatever in the success of the Agricultural Society, which says but little for their taste or enterprise. Every farmer in the County should be a member of the Agricultural Society, and a subscriber to that most excellent farmer's journal the *Canadian Agriculturist*, now furnished at so cheap a rate that no farmer should be without it; it would be highly beneficial to himself and family.

Your Officers and Directors still adhere to the opinion expressed in a former report, that it would be advantageous to County Societies to have the Act so amended as to allow their shows or exhibitions to be held at any place within the County, which the Directors may from time to time select, without interfering with the funds of the Branch Society of the Township in which such show or exhibition might be held. And also to have the Act further amended by giving County and Township Societies each nine Directors, to hold office for three years; one-third of them to retire annually, eligible however to be re-elected, this would always insure a number of experienced men in the direction of the Societies, and would afford to enterprising Directors, an opportunity of maturing plans and carrying them into effect during their term of office.

Your Officers and Directors beg to express their entire concurrence in the remarks and suggestions of the Directors of the Pickering Branch of this Society, relative to farm buildings, and would respectfully call the attention of the Board of Agriculture thereto. They also fully concur in the remarks of the same Directors on the important subject of draining; and in conclusion they would say to every farmer in the County of Ontario, drain thoroughly, manure liberally, and plough deeply, and verily thou shalt have thy reward."

TOWNSHIP BRANCHES.

BROCK.—Seventy-seven members; subscription, £19 5s.; Government grant, £13 8s. 7d.; total receipts, £32 13s. 7d.; amount paid for *Canadian Agriculturist*, £8 14s. 6d.; amount paid in premiums, £23; expenses, 19s. 1d.

PICKERING.—One hundred and sixty-eight members; subscription, £46 5s.; balance from 1854, £70 12s. 2d.; Government grant, £27 18s.; admission fees to Floral and Ladies' department of Show, £12 6s. 10½d.; total receipts, £162 17s. 8d.; amount paid in premiums at Shows and Ploughing Match, £100 18s. 9d.; expenses, £4 6s. 3d.; balance in hand, £57 12s. 8d.

Extract from Report.

In reporting from year to year the progress of agricultural improvements, very little can be stated as new, in a branch of industry so cumbrous, and from its nature necessarily slow in its movements. Yet the Directors of the Pickering Township Agricultural Society have great confidence in stating, that all their movements are in the right direction; and that, altho' the progress is not very rapid, yet it is marked and healthy. The prize lists of the Provincial Association show that this township has stood high as a prize-taking township, and that in the last exhibition there was no falling off.

The cultivation of root crops and raising of clover seed is still making progress, the former in particular; and the supply of fat animals afforded by the agriculturists of this township is now greatly increased, and vastly superior to what it formerly was. A great proportion of this supply is disposed of at our public chartered fairs, established at Greenwood, and which take place on the first Wednesday in March, June, September and December.

The great proportion of lands in this township are now cleared of stumps, and are rapidly being freed of stones. Draining, too, is now beginning to occupy more of the attention of our members; but this most important and radical improvement is in most cases performed in a too partial and imperfect manner; the most part of those who have drained at all doing as little as will merely do, and that not in the most substantial manner. Now there can be little danger of carrying this improvement too far, for we are convinced, that before what are now termed dry lands be drained, our fields will not stand the droughts of summer well, nor yield such luxuriant crops, as they will do when thoroughly drained. Draining is a most expensive improvement, but notwithstanding that, (when well and permanently performed,) it is, perhaps, the cheapest method of bringing strong adhesive soils into good tilth, and rendering manure and other fertilizers and stimulants beneficial to them. There is little of the land which we term dry but what produces those aquatic plants, which are the surest evidence that there is a superabundance of water in, or under it. Probably the most profitable way would be for farmers to drain what are termed their dry lands, leaving those wet places which are swampy and springy; for it may be observed, that in such places there is sufficient water to prevent the surface from getting parched, even in the driest summers; and whenever this is the case, such places will produce, either in pasture or hay, a surprising amount of food for stock: always under this condition, that the water be prevented from stagnating upon the surface.

Your directors have great pleasure in noticing in this report the great improvement made within the Township in the agricultural buildings which have been so numerous raised in all parts of it, of late,—the many large and substantial barns, with excellent stabling for horses and cattle; the extensive ranges of shades surrounding the well sheltered straw-yards, and what has now become a necessary building upon many farms, the substantial frost-proof root-house, together with the brick or stone-and-lime mansion-house, ample, elegant and complete. Such are now the comfortable rural homes of our thrifty and prosperous farmers.

It is to be regretted that better plans are not adopted in many instances, both as regards the houses and farm offices. We think, that a plan may be designed which would, in a great measure, be suitable for all arable farms, by simply altering the size of the buildings to correspond with the extent of the farm. We recommend this as a proper subject for county societies to take up, and more especially for the Board of Agriculture to bring forward at the exhibition of the Agricultural Association. We look upon it as a subject of great weight and importance, and think, that the architectural talent of the Province ought to be fully called out to bear upon this subject, by the offer of very liberal premiums, for the best plans of a farm steading, with specifications corresponding thereto, proper for a farm say of one hundred and fifty acres, or any given extent.

Although not, strictly speaking, an agricultural subject, and no way under the control of this society, the roads and bridges of our township are of essential importance to us, and we think it proper to remark, that they are lately greatly improved. Roads are of great importance in a community; and for assisting or facilitating in every other improvement, they ought to be in all cases a primary object of attention.

The great increase in the expense of hired labour has been the cause of many farmers obtaining reaping machines. These are of different constructions, and by different makers, but generally have been found of great advantage in forwarding the gathering of the crop. The mowing machine has also been introduced with advantage.

Facilities for home manufacture are getting abundant in the township,—the

converting of wool into cloth and cloth-dressing is now, at different places, carried on in all its branches; grist mills both for flour and oatmeal are many and valuable, and still on the increase; a barrel-stave factory has been carried on in a spirited way for some years past; a chair factory and several other works have been lately started, all which have a tendency to condense and increase our population, to supply our wants, and to create a home market for our produce.

For want of any recent and correct census, we cannot state our farming statistics, except in a comparative way. Many of our farms are now divided into proper fields, and a rotation of cropping followed, so that the business is carried on in a uniform manner; and in most cases no great variation takes place, either in the products of the soil, or the raising of live stock. Perhaps the rise in the grain market caused a greater breadth of land to be put down in wheat, in the fall of 1854, than was well prepared for it: last fall we think about the fair usual extent, and generally upon well prepared summer fallows.

With regard to live stock, we estimate, that probably horned cattle remain about the same in number, horses considerably more numerous, and sheep much less so, but all greatly improved in breed and quality.

REACH AND SCUGOG.—One hundred and eighty nine members; subscriptions, £49 15s.; balance from 1854, £18 10s. 8½d.; Government grant, £32 12s.; total receipts, £102 17s. 1d.; amount paid for premiums at Shows and Ploughing Match, £75 2s. 6d.; general expenses, £13 16s. 8d.; balance in hand, £13 17s. 11d.

THORAH.—Amount of subscriptions, £18.; Government grant, £12 11s. 2d. No further report.

UXBRIDGE.—Fifty-eight members; Subscriptions, £14 10s.; Government grant, £10 2s.; received for a Ram sold, £13.; total receipts, £39 18s. 4d.; amount paid for premiums and expenses, £32.; balance in hand, £7 18s. 4d.

WHITBY.—Two hundred and twenty-six members; subscriptions, £56 10s.; balance from 1854, £12 4s. 3d.; receipts for entries and pens, £11 15s.; Government grant, £38 7s. 6d.; total receipts, £118 16s. 9d.; amount paid in premiums, £82 7s. 6d.; general expenses, £21 17s. 6d.; balance in hand £14 11s. 9d.

OXFORD.

COUNTY SOCIETY.—Two hundred and thirty-nine members; subscriptions, £70 17s. 6d.; balance from 1854, £15 11s. 9d; deposited by Township Branches, £163 10s.; Government grant, £225; receipts from horse owned by Society, £101 10s.; received on account of horse sold, £50.; received on account of Bulls, £36 1s.; received for Wheat, £23.; total receipts, £805 10s. 3d.; paid for *Agriculturist*, £12 10s.; paid over to Township Branches, £418 10s.; premiums, £94.; promissory note, £125.; expenses keeping horse, £61 1s. 11d.; other expenses and disbursements, £59 9s. 10d.; total disbursements, £771 1s. 9d.; balance in hand, £34 8s. 6d.

Extract from Report.

The Directors are happy in being able to report most favorably of the present position and prosperity of the Society, while the returns which they have received

from the Branch Societies, viz. Blenheim, Durham, East Oxford, East Zorra, Ingersoll, Norwich, and West Zorra, bear abundant testimony of a healthy and vigorous progress in those rich and promising districts. If such annual exhibitions are to be regarded as an index of the country's growth, and the present honorable spirit of competition and enterprize continue to produce such marked results, while so much wealth is flowing into the Province from the heavy exportation of valuable produce, we may look forward with the most sanguine hopes to a bright and prosperous future.

With respect to the affairs of this Society, the Directors have again to report a considerable accession of new members, while the inhabitants of Woodstock have continued to give it a very liberal support, and although a much larger Prize list was issued last year than upon any former occasion, there will be still sufficient means to pay the balance of the debt incurred for the purchase of the Suffolk horse.

The Directors are happy to learn that the Society's horse is more and more valued as his stock becomes known, and it is proper they should mention for the general information of the members, that they recently received from parties residing near Guelph, an offer of £325 for the horse. It is stated that some of his stock in that quarter have fetched very high prices, and that many are anxious to get him back into that neighbourhood.

The Directors would further add that although the Society has been steadily advancing, and at the present moment enjoys a large share of public confidence, they are of opinion that its sphere might still be considerably enlarged—possessing a beautiful show ground, handsomely fenced, with its permanent sheep pens and buildings, and deriving from the Government annually £90, it is a matter of surprise that every farmer who is in a position of comfortable independence does not support it—a society so essentially and truly instituted for the farmer's own benefit, stimulating the introduction of the most valuable bred stock of every description, and the improvement of all those implements by which the varied work on the farm can be done in the most approved and expeditious manner. The Directors would desire to give prominence to those views which they entertain respecting the higher claims of such a society as this upon the farmer's support, because they feel that great results cannot be expected from such institutions, unless a general interest is felt in their success, and a large part of the community co-operate heartily in the work. A reluctance to join the society is not unfrequently expressed upon the grounds that the parties have nothing to exhibit that would be likely to carry off the premiums. To this objection may it not be replied, that every farmer in the country, whether he be rich or poor, is indirectly receiving a benefit from such societies. Is it not freely admitted by all that they have already been instrumental in stimulating the introduction of an inconceivable amount of improved stock? Do we not see the beautiful grades of the Short-horn and the valuable crosses of the Leicester and Southdown becoming so abundant in every district, that they will soon be within the reach of the poorest settler? And it may be further asked, where is the obstacle to any enterprising person becoming a successful competitor, if not perhaps the first year, at no distant period? Industry and perseverance have generally been successful in carrying off the honors of these annual gatherings, and the Directors sincerely hope that their successors in office will meet with every encouragement and assistance in labouring to carry out the noble objects of this institution.

(Signed) GEORGE ALEXANDER,
President.

TOWNSHIP BRANCHES.

BLENHHEIM.—One hundred and seventy-three members; subscription, £46 7s. 6d.; Government grant, £16 6s. 2d.; balance from previous year, £31 5s.; total receipts, £95 9s. 11d.; amount paid in Premiums, £48 1s. 3d.; *Canadian Agriculturist*, £3 2s. 6d.; expenses, £7 18s. 4½d.; total expenditure, £59 2s. 1½d.; balance in hand, £36 7s. 10½d.

DEREHAM.—Balance from 1854, £24 4s. 0½d.; subscriptions, £23 5s.; Government grant, £6 13s. 5d.; total receipts, £54 2s. 5½d.; amount paid in Premiums, £36 1s. 3d.; expenses, £4 1s. 3¼d.; balance in hand, £13 19s. 11¼d.

INGERSOLL.—One hundred and sixty-eight members; amount of subscription, £130 2s. 6d.; balance from 1854, £58 10s. 9d.; Government grant, £61 19s. 3d.; Wood sold, £2 10s.; total receipts, £253 2s. 6d.; amount paid for *Agriculturist*, £2 12s. 6d.; expenses keeping horse, bulls, boars and sheep, owned by the Society, £115 1s. 3d.; premiums, £59 13s. 9d.; general expenses and sundries, £24 16s.; balance in hand, £50 19s.

NORWICH.—One hundred and seven members; subscription, £30 8s. 9d.; balance from 1854, £9 4s. 7d.; Government grant, £9 12s. 9½d.; total receipts, £49 6s. 2d.; paid for prizes, £36 6s. 3d.; *Agriculturist*, £1 10s.; expenses, £9 4s. 1d.; balance in hand, £2 5s. 9½d.

EAST OXFORD.—Sixty-five members; subscription, £24 7s. 6d.; balance from 1854, £9 18s. 9d.; Government grant, £11 7s. 5d.; total receipts, £45 13s. 8d.; paid for *Agriculturist*, £6 5s.; premiums, £18 17s. 6d.; general expenses, £5 13s. 9d.; balance in hand, £14 17s. 5d.

EAST ZORRA.—Seventy-one members; subscriptions, £39 17s. 6d.; balance from 1854, £10 8s. 11d.; Government grant, £17 17s. 2d.; cash borrowed for twelve months, £160; donations, £6 5s.; Rams sold, £5 10s.; total receipts, £239 18s. 7d.; amount paid groom for travelling horse, £23 19s.; premiums, £26; paid Promissory Note and interest, £114 10s. 4d.; 100 copies of *Agriculturist*, £12 10s.; other payments, £23 9s. 3d.; total expenditure, £239 18s. 7d.

Extract from Report.

This year, the officers of the Society have sold the horse they purchased last year for the use of their members, and, in the course of time, will dispose of all the sheep in their possession—having decided that it is better for Societies such as theirs to possess no stock at all; the pitch to which breeding has now arrived being such that the best breeders are unwilling to use males belonging to the Society—they not being of a class sufficient to meet their wants—and the poorer ones can be supplied by their richer or more enterprising neighbors, leaving the Society free to use its funds in a way better calculated to benefit the members in general. Hence this resolution to keep no stock at all.

Our show ground this year presented a very marked advance over the show of last year, especially in the number of thorough-bred cattle brought forward.

This, we think, justifies us in having established a separate and properly divided prize list for thorough-bred cattle, an example which was followed by the County Society this year, and which, we think, will tend to enhance their success. We would venture to assert that the value of a Society can be judged very well by the number and quality of the thorough-bred cattle on the show ground. Their great value shows the possessor to be a man of energy and enterprise, and surely such men are the best upholders of agriculture, and they afford their poorer neighbors an opportunity of crossing and improving their own stock, which they would otherwise be unable to obtain. It is not our province to enter here upon speculative arguments on the relative values of the different breeds of cattle and sheep; but we would urge those who possess good stock of any description, to commence a series of experiments on their feeding or milking properties, which would eventually form a good basis for comparison and selection.

The best pair of long-wooled ewes in the County Society's show having come from this township, besides four other prizes out of eighteen in that class, is good evidence of the improvement in sheep; and the fact of our having taken all the first prizes among ewes, is a guarantee that the breed is not likely to die out. Long-wooled sheep are altogether the favorites in the county—the short-wooled being, except by a few, comparatively neglected; and recent experiments in England seem to show that the Leicesters are rather better, both in feeding and giving wool, than the Southdowns—both being, however, surpassed by the Cotswolds. These, however, are so large that the mutton must be of inferior quality, even to the Leicester, which is again vastly inferior to the Downs. We hope, however, there will always be enough wealth in the country to prevent the finer breeds from being utterly exterminated.

The same idea prevails concerning cattle, the larger Durhams being always preferred to the smaller breed; in fact, there is but one herd of Devons in the township, whilst there are many possessors of Durhams. The course of experiment, as recommended previously will, however, tend to settle this moot point also.

The harvest this year has been very fair, as indeed it always is in this favored township, in spite of the showers that fell regularly every other day during hay and part of wheat harvest. Some hay has been spoiled and some wheat has sprouted, but there has been no destruction by the fly, as so much complained of in other parts of the country. Wheat has been altogether a good yield, as well as all sorts of grain; roots and potatoes, have also been good both in quality and quantity. Land is high in all parts of the township—between £4 and £5 an acre having been given for wild land not on the main gravel road, and such prices are maintained everywhere. The immense difficulties attending any attempt to procure the services either of carpenters or framers, is proof positive of the great number both of houses and outbuildings perpetually rising up, and a better proof of general prosperity cannot be wished for. The late hard times consequent on the war, may have affected our farmers to some extent, but only to a very small one, as the prices obtained for produce and stock, both in the market and at auction, show the existence of much solid wealth. This township, however, only shares in the general prosperity attending the present development of the strength and wealth of Canada, and therefore its circumstances need not be particularly dilated on. Reaping machines have been introduced in two places, and of one, McCormick's, we hear a good report; of the other, but an indifferent one; but the crops were all so laid by the rain and wind that the cutting of them was an arduous task for the machines to undertake. Other machines, such as mowing machines, drills, &c, are totally absent, and we only know of one fixed threshing machine; in fact, the plough and har-

row are as yet the only implements used in putting in the crops, and the scythe and cradle for harvesting them. We would except, however, the wheel cultivator, deservedly a great favorite.

WEST ZORRA.—One hundred and sixteen members; subscription, £29 11s. 3d.; Government grant, £11 3s. 9d.; balance from 1854, £19 18s. 6d.; total receipts, £61 3s. 6d.; amount paid in premiums, £41 8s. 9d.; expenses, £9 8s. 7d.; balance in hand, £10 6s. 2d.

PEEL.

COUNTY SOCIETY.—One hundred and twelve members; subscription, £38 12s. 6d.; balance from 1854, £5 5s. 2½d.; deposited by township branches, £99; Government grant, £135; sundries, £6 5s.; total receipts, £284 2s. 8½d.; amount paid over to township branches, £180; premiums, £79 7s. 6d.; *Agriculturist*, £6 17s. 6d.; hurdles for pens, £11; general expenses, £9 15s. 5½d.; balance due Treasurer, £2 17s. 9d.

TOWNSHIP BRANCHES.

ALBION.—Fifty-nine members; subscription, £16; balance from 1854, £6 5s. 0½d.; proportion of Government grant, £15 15s.; total receipts, £38 0s. 0½d.; amount paid in prizes, £30 5s.; expenses, £2 15s. 10½d.; balance in Treasurer's hands, £4 19s. 2d.

CALEDON.—Forty-six members; amount of subscription, £22 12s. 6d.; public grant, £18; fees, £2 15s. 9d.; total receipts, £43 8s. 3d.; paid in premiums, £35 7s. 8½d.; copies of *Agriculturist*, £3 2s. 6d.; expenses, £5 1s. 6d.; due Treasurer, 3s. 5½d.

CHINGUACOUSY.—Ninety-two members; subscriptions and donations, £31 7s. 6d.; public grant, £18; total receipts, £49 7s. 6d.; amount paid in prizes, £43 10s.; expenses, £5 13s. 6d.; balance in hand, 4s.

TORONTO TOWNSHIP.—Thirty-five members; subscription, £15; public grant, £12 5s.; total receipts, £27 5s.; amount paid in premiums, £26 7s. 6d.; expenses, 17s. 6d.; total expenditure, £27 5s. The Society making this report, terminated in 1856, and another Society was organized for the township in its place.

GORE OF TORONTO.—Fifty-two members; subscription, £24 10s. 6d.; public grant, £16 15s.; total receipts, including balance from 1854, £51 7s. 6d.; amount paid in premiums, £43 17s. 3d.; expenses, £2 10s. 4½d.; balance in hand, £4 19s. 10½d.

PERTH.

COUNTY SOCIETY.—One hundred and thirty-nine members; amount of subscriptions, £55 17s. 6d.; deposited by Township Branches, £99 15s.; balance from 1854, £66 12s. 7d.; donation from Canada Company, £10; proceeds of sale of premium Wheat, £6 3s. 1½d.; Government grant, £235; total receipts, £473 8s. 2½d.; amount paid on purchase of bulls, £149 10s.; *Agriculturist*, £7

10s. ; paid over to Township Branches, £234 15s. ; premiums, £100 15s. ; general expenses, £38 6s. 4½d. ; total disbursements, £534 16s. 4½d. ; balance due Treasurer, £61 8s. 2d.

TOWNSHIP BRANCHES.

BLANSHARD.—One hundred and ninety-four members ; subscription, £48 15s. ; grants from St. Mary's and Blanshard Municipalities, £7 ; Government grant, £74 3s. ; proceeds from service of bull, £16 17s. 6d. ; proceeds from sale of land, £50 ; total receipts, including balance of £17 3s. 4½d. from 1854, £214 3s. 10½d. ; amount paid in premiums, £52 ; paid for bull, £56 5s. ; expenses on and keeping do. £17 ; other expenses, £56 18s. 9d. ; Agricultural papers, £31 5s. ; total disbursements, £214 8s. 9d. ; balance in hand, 4s. 10½d.

FULLERTON, LOGAN AND HIBBERT.—One hundred and twenty-eight members ; subscriptions, £47 13s. 9d. ; balance from 1854, £29 1s. 3d. ; Government grant, £60 17s. ; total receipts, £137 12s. ; amount paid for keep of bull, £15 ; premiums, £39 16s. 3d. ; *Agriculturist*, £10 ; general expenses, £30 17s. ; balance carried to account of 1856, £41 17s. 10d. ; liabilities £44 15s. 9d.

PETERBOROUGH.

COUNTY SOCIETY.—One hundred and forty-nine members, subscribing 5s. each ; balance from 1854, £68 1s. 3d. ; proceeds of promissory note, £196 17s. 6d. ; deposited by Township Branches, £95 15s. ; received for clover seed sold, £321 18s. 7½d. ; received for plaster sold, £160 19s. 6d. ; Government grant, £135 ; total receipts, £1017 1s. 10½d. ; amount paid for clover seed, £298 16s. ; paid for plaster, £192 19s. 11d. ; paid in premiums, £68 10s. ; paid promissory note, £200 ; paid over to Township Branches, £163 1s. 8d. ; paid to Provincial Association for Exhibition at Cobourg, £75 ; general expenses, including freight and charges on clover seed and plaster, &c., £23 3s. 7½d. ; total disbursements, £1021 10s. 6½d. ; balance due the Treasurer, £4 8s. 8d.

Extract from Report.

A profitable Agriculture is considered the basis of national prosperity, and as such, the success of every organization, which in any measure tends to improve the husbandry of a country, must be viewed with interest by every true patriot. As Agricultural Societies claim to be established for the improvement of the art of husbandry, a general interest should be felt in these societies, and that interest will be proportioned to the successful accomplishment of this end ; if, however, a society fails to accomplish what might be expected, the institution itself should not be condemned, as this failure may arise from the difficulty in devising and carrying out the best means to accomplish the end in view. Whether the operations of this society during the past year have been successful or not, is not for the managers to judge. They can say, however, that they have endeavoured to find out and pursue that course, which to them appears most likely to subserve its interests. They are happy to add that in this good work they have co-operated with the greatest harmony and good feeling.

During the past year events have occurred bearing very favourably upon the

agricultural interest of this community, and one of the most important is the easy transport of our produce to the frontier by the Cobourg and Peterboro' railroad. This mode of transit has become a matter of fact which, until then, was only an object of hope. The farmer can now obtain a price for his products proportioned to that given elsewhere, which, to the bitter experience of many, has, prior to this, seldom or ever been realized.

The fair average crop of this year, and the high prices now ruling, place the farmer in a very prosperous and independent position, bearing a great contrast to that of former years, when markets were so low as to discourage the most enthusiastic tiller of the soil in pursuing his avocation.

It is interesting to mark the evident prosperity of the Province generally, and to see the deep interest and enthusiasm manifested in agricultural pursuits, and the time is not far distant when Canada will vie with older and more settled countries in agricultural products. Even now she holds an honourable position in relation to other countries, as seen more recently at the Paris Exhibition. At this Fair some of her products and manufactures were exhibited, and with the world for her rival, to her was adjudged some very creditable premiums. She stood on her own merits, was judged accordingly, and the verdict given has been as gratifying to her best wishers as they could anticipate. Sufficient of her products, manufactures, &c. were shown to convince all that Canada is an important country, and one probable result will be, an increased intercourse both commercial and social, with the other nations of the world.

Your Society gave of its funds to assist the Directors of the Provincial Show in carrying out their plans for the exhibition. In this way being more identified with it, as also in its proximity to this place, a more particular interest is taken in the success of the Fair of last year. The display of stock and articles of produce, manufactures, &c. was certainly very creditable to this Province. Particular reference was universally had to the quality and quantity of stock exhibited, and considered by many superior to any former show. In the credit thus generally given, the County of Peterboro' had a particular part, as the highest prize for stock was taken off by this county, and as large a share of prizes generally was taken by this county as any other in the Province. Frequent comparisons were made with the show held in the same place seven years before; the superiority of that held in 1855 over that of 1848, being an evident and unmistakable evidence of the improvement effected in the Province during that interval.

Your Board purchased 600 barrels of plaster, of which 200 was sold to the Smith Society; of the 400 left, 204 have been disposed of, and the balance of 196 barrels is still on hand. The purchase and distribution of plaster has always been a source of trouble and loss to the Society, owing in great part to the distance from the mills, and inconvenience often attending its delivery. It may be hoped that the amount of plaster required to supply this neighbourhood will increase so much as soon to warrant the erection of a plaster mill in Peterboro', when each farmer can be supplied at the time he wishes and obtain the quantity he requires. Your Board, while on the subject of plaster, might suggest the propriety of the farmers of this county using other fertilizers, such as salt, bones, guano, &c., these substances being now easily obtained. The use of these manures has been attended with success in other places, and why may they not be useful as fertilizers in this part. The success elsewhere certainly warrants the trial. Salt has been used in this vicinity with good effect. Guano and bones have been used on a very limited scale on turnips, the result has been such as to induce a further and more extended trial another season. The effect of the guano was very marked in the particularly healthy and rapid growth of the young plant, thus giving it the best means of resisting the depredations of

its greatest enemy, the turnip flea, in the first stages of its growth. The safest plan is for each to experiment for himself, basing his theory and practice upon the result of his observations, taking care these be correctly taken. By collecting the information thus obtained, correct data may be formed and the comparative and special value of the various manures under different circumstances be correctly established.

Your Board purchased a quantity of clover seed, of which the Smith Society received 37 bushels, the balance has been sold exclusively to members for their own use and benefit. The attention of farmers is now being directed to the raising of clover seed, so that ere long this Society may be able to supply itself at home without seeking for it at a foreign market. A premium was offered for clover seed, but no sample was shown. Your Board entertain the hope that their successors in office will be able to report a spirited competition in this product.

A discretionary premium was adjudged to a very good sample of timothy seed, exhibited at the fall show. Your Board would take this opportunity of recommending greater attention to the culture of this seed, as much of it is now required, and there is great difficulty in getting good clean samples.

Another seed which should be introduced as speedily as possible into this vicinity is a new variety of Spring Wheat. Whether this be better effected by private individuals or through this Society is worthy of serious consideration, since it is a matter of such importance to the farmers of this County. The varieties now in cultivation have been fast deteriorating, and the fact that the produce of this year is so much injured by the worm or grub, demands a very determined effort to get a new variety from some locality free from the ravages of this insect.

The competition in Turnips and Carrots exceeded that of any other year, and your Board are happy to report the superior quality of the crops entered for competition. May this care in the culture of these roots become so general that instead of ten competitors there shall be one hundred.

The usual Spring and Fall shows have been held during the year. At the Fall show the display of stock was excellent, and favorably impressed strangers with the enterprise, energy and spirit of the agriculturists of this County. There were 174 entries, comprising 51 horses of all ages; 31 cattle, do.; 71 sheep, do.; 7 pigs; 19 samples of wheat; 6 lots of butter; 3 lots of cheese; 4 lots of apples; 7 pieces of cloth; 2 specimens of blankets; 1 sample of timothy seed.

At the annual ploughing match the competition was not large, but the workmanship, as a whole, good. And the boys, as on former occasions, did their work much to their credit.

TOWNSHIP BRANCHES.

ASPHODEL, BELMONT, AND DUMMER.—Ninety-five members; subscription, £23 15s.; Government grant, £16 14s. 7d.; received for garden seeds sold, £1 16s. 4d.; total receipts, £42 6s. 5d.; amount paid for general expenses, £7 16s.; balance in hand, £34 10s. This society purchases clover and other seeds for the use of the members, but does not appear, so far as the report shows, to have made any use of its funds during 1855.

DUMMER AND DOURO.—One hundred and twenty-nine members; subscription, £35 5s.; balance from 1854, £36 1s. 7½d.; received for plaster sold, £30 3s. 2d.; Government grant, £24 15s. 11d.; total receipts, £176 5s. 8½d.;

amount paid for clover seed, £48 9s.; paid for plaster, £30 3s. 2d.; premiums, £29 0s. 3d.; expenses, £7 1s. 0½d.; balance in hand, £61 12s. 3d.

OTONABEE.—Seventy-one members; subscriptions, £18 15s.; received for clover seed sold, £71 12s. 3d.; plaster, £58 1s. 6d.; turnip seed, £12 13s. 6d.; Government grant, £13 3s.; total receipts including balance from previous year, £177 4s. 5d.; amount paid for agricultural papers, £7; paid for clover seed, £69 1s. 4d.; 200 bbls. plaster, £62 10s.; turnip seeds from England, £15 14s. 7d.; prizes at ploughing match, £7 5s.; general expenses, £16 3s. 6d.; balance due Treasurer, 8s.

Extracts from Report.

The Society imported swede and other turnip seeds, from Rendle's seed store, Plymouth, England, and found them superior to any which they had grown lately.

Many stone fences have been made in the township, they appear to be coming much into use, to stand well and make a good fence.

Draining continues to be executed to a larger extent than ever, and would be more so, but for the high price and scarcity of labour.

There is a decided improvement in the erection of farm buildings.

SMITH.—Eighty-three members, subscribing 5s. each; Government grant, £12 13s. 2d. The Society appears to have expended £254 18s. 10½d. in the purchase of clover and turnip seeds, and plaster, and to have received therefor, the larger portion of the plaster being unsold, £143 13s. 10½d.; amount paid in premiums, £27 10s. There is no distinct statement of receipts and expenditure.

PRESCOTT.

COUNTY SOCIETY.—Fifty members; amount subscribed, £12 10s.; deposited by township branches, £50; Government grant, £135; total receipts, including balance from 1854, £200 3s. 3d.; paid in premiums, £57 5s.; paid township branches, £131; expenses, £12 18s. 2d.; balance due Treasurer, 19s. 11d.

TOWNSHIP BRANCHES.

CALEDONIA.—Twelve members; amount subscribed, £10; Government grant, £16 2s. 6d.; amount paid in premiums and expenses, £25 17s. 6d.; due Treasurer, 5s.

HAWKESBURY.—Thirty-nine members; amount subscribed, £29 10s.; Government grant, £32 8s.; total receipts, £61 18s.; paid in premiums, £44 15s.; total expenditure, £61 5s.; balance in hand, 13s.

LONGUEIL.—Sixteen members; amount subscribed, £12; share of Government grant, £16 4s.; total receipts, £28 4s.; paid in premiums, £23 5s.; expenses, £4 16s.; balance in hand, 4s.

NORTH PLANTAGENET.—Thirty-one members; amount subscribed, £14 5s.; Government grant, £16 4s.; total receipts, £30 19s.; paid in premiums, £20 15s.; paid judges examining growing crops, £6; other expenses, £2 10s.; balance in hand, £1 14s.

PRINCE EDWARD.

COUNTY SOCIETY.—Ninety-one members; amount subscribed, £22 15s.; balance from 1854, £34 17s. 6d.; deposited by townships, £82 5s.; Government grant, £225; total receipts, £364 17s. 6d.; paid for copies of *Agriculturist*, £10 15s.; paid township societies, £215 10s.; paid for moving building, £72 7s. 6d.; premiums, £70 1s. 3d.; general expenses, £20 3s. 4d.; total disbursements, £390 2s. 1d.; due Treasurer, £25 4s. 7d.

TOWNSHIP BRANCHES.

AMELIASBURGH.—Amount subscribed, £15; Government grant, £24 10s. 10d. No further report.

HALLOWELL.—Seventy-three members; subscriptions, £18 15s.; balance from 1854, £10 8s. 3d.; Government grant, £29 7s. 2d.; total receipts, £58 10s. 5d.; paid in premiums, £35 18s.; expenses, £5 13s. 9d.; balance in hand, £16 18s. 8d.

ATHOL.—Amount of subscriptions £12 10s.; share of grant, £20 9s. No further report.

MARYSBURGH.—Twenty-nine members; subscription, £20; Government grant, £32 14s. 5d.; amount paid for three Leicester rams, bought at Provincial Fair, £15 2s. 6d.; paid for nineteen Leicester ewes, £36 5s.; expenses, £1 6s. 3d.

SOPHIASBURGH.—Sixty-six members; subscription, £17 10s.; Government grant, £26 3s. 7d.; total receipts, £48 8s. 5d.; paid in premiums, £46 10s. 4d.; expenses, £2 15s. 3d.; due Treasurer, 17s. 2d.

RENFREW.

COUNTY SOCIETY.—One hundred and twenty-four members; subscription, £31; balance, from 1854, £93 9s. 2d.; deposited by McNab township branch, £15 15s.; cash borrowed, £16 5s.; Government grant, £135; received on account of stallion, £35; for wheat sold, £29 12s. 5½d.; amount paid for seed fall wheat, £28 1s. 9d.; clover seed, £10; stumping machine, with freight and costs, £51 16s. 6d.; inspectors of crops, £10; premiums on field crops and fences, £23; premiums at Fair, £76 12s. 11d.; paid money borrowed, £16 15s.; general expenses, £35 0s. 0½d.; total disbursements, £251 6s. 2½d.; balance in hand, £105 5s. 5d.

Extract from Report.

The Directors in the last Annual Report, having given an outline of the features, resources and climate of the County, as applicable to agriculture, do not deem it necessary to revert to these subjects.

The Directors, with the view of fully carrying out the objects for which the Society was established, awarded Premiums to the amount of £23 for the best standing crops of Fall and Spring Wheat, Oats, Peas, Barley, Corn, Potatoes, and Fencing; which from the Report of the Judges were highly creditable to the County.

In the month of October last, the Annual Exhibition of Live Stock, Agricultural Implements and Domestic Manufactures, was held at the village of Renfrew, at which Premiums to the amount of £76 12s. 11d. were awarded. This Exhibition was highly successful, and compared favorably with similar Exhibitions held in much older and more wealthy counties. The attendance of the Yeomanry of the County was large and respectable—thereby evincing the lively interest taken in the success of the Society.

The want formerly felt in the County from the paucity of Stud Horses, was the past season almost entirely removed by the number of Horses which travelled the County.

Since the last Annual Report the Directors were induced to purchase a Stumping Machine, which they regret to state has not worked efficiently, either through the want of knowledge in its working, or its defective parts; they trust, however, to overcome any difficulty that may have been experienced in its working.

At the Annual Meeting of the Board of Agriculture for Canada West, and the Annual Provincial Exhibition, both held at the town of Cobourg, the Directors thought proper to send a delegate to represent the Society, and Mr. George Ross, the Secretary, was chosen for that purpose. Mr. Ross reports that notwithstanding the many facilities afforded to farmers in the Western Counties, from their length of settlement, wealth, railroads, water communication, and other means of transit, that in many articles the County of Renfrew would equal those exhibited. Many implements there shown, however, would, if introduced into this County, prove advantageous to the advance of Agriculture, and the saving of time and labour to the farmer.

The display of live stock was very extensive, and comprised a great variety of breeds, but the enormous prices demanded for them, precluded the possibility of their being introduced into this County for some time to come.

The McNab Branch Agricultural Society still continues to prosper, and promises to promote Agricultural knowledge in that township; that, however, is the only Branch Society in the County, and the Directors regret that other Townships have not, as yet, shown any disposition to arouse from their lethargy, and follow the example, although many of them possess superior natural resources, and have good practical farmers.

In reference to the progress of the County Agricultural Society, the Directors have pleasure in stating, that it is advancing prosperously—still not at such a rate as the great and important interests of the County demand; hundreds of farmers contiguous to the village of Renfrew have not as yet become members; farmers whose interests are identical with those of the members of the Society. The apathy of many of our Agriculturalists in joining the Society exhibits a bad indication of their tact and enterprise. This, however, is not the fault of the Directors, every inducement having been held out. The highest premiums have been offered—seeds purchased and superior Live Stock introduced. They hope, however, the incoming year will show a great advance in the number of members and the quality of Stock, Grain, and Agricultural Implements; but to be able to accomplish this, in order that the County of Renfrew may take her station on the same stage of Agricultural excellence with her more favored sisters of the West, they trust and expect that all those Farmers who have not entered the Society, will lose no time in doing so, and prove themselves to be possessed of that public spirit, without which no country can be expected to arrive at that degree of prosperity which is so marked a feature in Agricultural pursuits in the Counties to the West of the County of Renfrew.

MC NAB BRANCH.—Twenty-four members; amount of subscription, £16 5s.; share of Government grant, £30 15s. 7½d.; total receipts, £47 0s. 7½d.; paid

in premiums, £12 16s. 3d.; general expenses, £8 9s. 7d.; balance in hand, £62 15s. 7½d.

Extract from Report.

The yeomanry of Renfrew, with laudable zeal, first established a County Agricultural Society in the year 1853, and those of McNab, organized a Branch Agricultural Society the following year; neither is it surprising that little exertion was made earlier; for, till lately, the farmers depended on the lumbering operations carried on in their vicinity, and the almost total want of communication with the markets of the Province, retarded much the agricultural advancement of this part of the country.

To a certain extent these evils are now fading away, and civilization and improvement making rapid progress where a few years ago was an unbroken wilderness, occupied alone by the beasts of the forest.

The Directors are deeply impressed with the necessity of making important changes in the mode of agriculture that has been heretofore pursued in this part of the country.

In September last, a show of live stock, grain, &c., was held on Mr. D. Dewar's farm. The Directors considered that many premiums, though low, were preferable to high premiums and few. The attendance was numerous and respectable, and great interest seemed to be taken in the objects of the Society, particularly the ploughing.

The Directors state, without hesitation, that they believe the soil and climate of McNab to be most favorable for agricultural pursuits, and hope that under a more judicious management, the average yield might be double.

RUSSELL.

COUNTY SOCIETY.—Fifty-two members; amount subscribed, £53; Government grant, £135; received for a bull sold, £8 10s.; total receipts, £196 10s.; amount paid in premiums on crops, stock, &c, £143 13s. 9d.; Agricultural papers, £4; inspectors of crops, £11 7s. 6d.; other incidental expenses, £22 9s. 3d.; balance in hand, £14 19s. 6d. There are no other Township Societies reported from this County.

Extract from Report.

Referring to the statements of the Inspectors of Crops, the Directors are glad to report a progressive improvement in the agriculture of the County, as well as an increase in the implements necessary for efficient culture.

The chief impediment seems to be a want of capital, which is common to all partially settled townships,—the greater number of the farmers having had to pay for their land from the proceeds of their labor, which has left little to apply in improvements; but this evil is getting less year by year, and an increase to the members of the society and to its usefulness will follow. It appears that where fall wheat has been sown after a crop of early peas, that the increase was invariably greater than elsewhere, and the land cleaner from weeds. The Directors would urge on the Society a greater attention to this mode of culture, which has proved beneficial wherever it has been adopted on this continent. There has been a considerable increase in the quantity of turnips raised last season, an article essential to the growth of young cattle, without which (with our long winters and dry feed) they cannot come early into the hands of the butcher.

There still seems to be a great want of system as to the rotation of crops, and

lands in sundry localities are being run out from too long cropping, and are overrun with weeds. A liberal sowing of clover, (three or four times the quantity which is usually sown here, and cut twice in the season, or the second crop grazed) would tend to restore such land, and after two or three years, would be a suitable precursor for wheats or turnips.

The Directors would congratulate the Society on the greatly improved quality and condition of the stock which appeared on the grounds at the last exhibition, and likewise on the increased numbers brought forward for competition; and they have every reason to believe that a spirit of enterprise is now on foot which will result in the general improvement of the county in agriculture.

SIMCOE.

COUNTY SOCIETY.—Amount of subscriptions, £35 11s. 6d.; deposited by township branches, £178 15s.; cash from Bank of Upper Canada, £132 18s. 7d.; Government grant, £225; received for bull, &c, £6; total receipts, £578 0s. 1d.; amount paid Treasurer, due him from 1854, £15 13s.; paid for clover seed, £93 15s. 10d.; paid on bull and expenses, £41 15s. 7½d.; paid township branches, £313 14s. 10d.; paid Bank of Upper Canada, £85; *Canadian Agriculturist*, £9 7s. 6d.; premiums and general expenses, £75 2s. 5½d.; total disbursements, £634 9s. 3d.; balance due Treasurer, £56 9s. 2d.

Extract from Report.

Owing to circumstances, which being well known to all the members, it is not necessary here to recapitulate, the funds at the disposal of the Board during the past year were very limited, and it was necessary to use every possible economy. With this view the Directors decided upon having only one show in the fall, instead of the usual spring and fall shows, so that by combining the two, larger prizes could be given than would have been possible had they been held in the usual manner. The spring show of stallions was held as usual, and a large number of horses exhibited. The good effects of this measure are already to be seen in the improvement noticeable in the young stock of the past year. Much gratification may also be derived from the display of grains and dairy produce. Some specimens of the former would have done credit to the Provincial Exhibition; and with regard to the latter, the Directors have no hesitation in saying that better articles of the kind could be found in no part of the Province. The display of horned cattle, although decidedly better than that of last year, especially in the younger classes, showed that but little had been done in the importation of fresh stock, so necessary to keep up the fine qualities of any breed, no matter how great the purity of the original strain. The show of other animals displayed no marked improvement upon that of previous years.

The Society was represented at the Provincial Exhibition by the President, and the Directors have much much pleasure in learning that among the finest animals there exhibited, were some from stock imported to, or bred in, this county.

At a very moderate expense, the Board have been enabled to fence in the show ground in a neat and substantial manner, and they trust that their successors will be able to carry out the contemplated improvements in the erection of proper buildings for the display of fruits, vegetables, and dairy produce.

The Directors have much pleasure in recording the increase in the number and means of the township societies. Since the last meeting, a flourishing society has been established in the township of Innisfil.

TOWNSHIP BRANCHES.

WEST GWILLIMBURY.—One hundred and fifty-four members; subscription, £44 15s.; balance from 1854, £24 7s. 5d.; Government grant, £30 4s. 7d.; total receipts, £99 7s. amount paid in prizes, £79 12s. 6d.; general expenses, £12 18s. 1d.; balance in hand, £6 16s. 5d.

INNISFIL.—One hundred and fifty-five members; amount subscribed, £50 17s. 6d.; Government grant, £34 15s. 3d.; total receipts, £85 12s. 6d.; amount paid in prizes and expenses, £65 13s. 8d.; balance in Treasurer's hands, £19 18s. 10d.

MULMUR.—Twenty-eight members; amount subscribed in 1856, £11. This Society was only established in 1856, and consequently has no report for 1855.

ORJILLIA.—Thirty-four members; amount subscribed, £22 10s.; Government grant, £16 15s.; total receipts, £39 7s. 6d.; paid for *Agriculturist*, £4 7s. 6d.; prizes, £18 15s.; expenses, £16 17s. 8½d.; due Treasurer, 12s. 8½d.

ORO.—Fifty-two members; subscription, £24 5s.; Government grant, £16 16s. 3d.; received for clover seed and sundries, £12 13s. 2½d.; total receipts, £53 14s. 5½d.; paid for agricultural papers, £5 8s. 9d.; clover seed, £7 0s. 7½d.; premiums and expenses, £42 5s. 2d.

TECUMSETH.—One hundred and one members; subscription, £27 15s.; Government grant, £20 8s. 4d.; balance from 1854, £7 14s. 5½d.; total receipts, £55 17s. 9½d.; paid premiums at show and ploughing match, £37 17s. 6d.; expenses, £5 18s. 1½d.; balance in hand, £12 2s. 2d.

VESPRE.—Forty-four members; subscription, £22; Government grant, £16 10s. 5d.; amount of prizes awarded, £53 17s. 6d. Report not complete.

STORMONT.

COUNTY SOCIETY.—Fifty-one members; amount subscribed, £12 15s.; deposited by township branches, £24 10s.; Government grant, £100 11s. 6d.; total receipts, £137 16s. 6d.; amount paid in premiums, £68 16s. 3d.; paid township branches, £34 17s.; Treasurer, due from 1854, £29 0s. 8d.; expenses, £34 15s.; total disbursement, £206 8s. 11d.; balance due Treasurer, £69 12s. 5d. The townships of Cornwall and Osnabruck have Societies in connection, but no reports are received from them.

Extract from Secretary's Report.

Our farmers are paying more attention to roots than formerly; there were exhibited some very large mangel wurzel and carrots at the exhibition last fall. Many are also paying more attention to the sowing of clover seed, with other crops. Some of them enter into the spirit of improvement at once, others drag on in the old way. Many of our farmers sow more fall wheat than they did some years ago. A great deal of the wheat was injured by the rain last harvest by sprouting.

Hops are being cultivated by some of our farmers; soil in this vicinity being well adapted to the plant. Oats were a very good crop last year. The potatoes

promised well in the field, but many of them were destroyed by the rot at digging time; since then there has been very little rot among them. In stock we are behind the times, but those who have taken advantage of the bulls brought here by the Society have every reason to be thankful. The same may be said about horses, sheep and hogs.

VICTORIA.

COUNTY SOCIETY.—Seventy-nine members; amount subscribed, £19 15s.; balance from 1854, £76 18s. 6d.; deposited by townships, £84 5s.; received for clover seed sold members, £17 10s.; Government grant from Board of Agriculture, (£20 in addition to the usual 10 per cent. being deducted by request of the Society for the purposes of the Provincial Exhibition,) £115; total receipts, £313 8s. 6d.; amount paid for clover seed, £33 15s.; paid township branches, £129 4s. 0½d.; premiums, £36 1s; expenses, £15 6s. 8d.; total disbursements, £214 6s. 8½d.; balance in hand, £99 1s. 9½d.

TOWNSHIP BRANCHES.

EMILY.—This Society merged its funds with those of the County Society for 1855, for the purpose of holding a joint exhibition, and consequently makes no report for that year.

MARIPOSA.—One hundred and thirty-six members; amount subscribed, £34; balance from 1854, £41 9s. 8d.; Government grant, £24 17s. 8½d.; details of expenditure not reported.

Extract from Report.

As a grazing country this township is excellent, bearing very heavy crops of grass, and turnips in abundance, and where the lands are properly managed and thoroughly worked, the beet and carrot flourish, outstripping even the turnip itself.

As to wheat and oats we can compete with the best. Barley, generally speaking, not so good. Rye seldom ever sown, but have seen some very fine crops. Indian corn grows well, but owing to the shortness of the season is not considered profitable for large cultivation.

It appears that the more the lands are worked and the older the field, the better the crop; for instance, a field having been cleared and cropped for from ten to fifteen years and then properly summer-fallowed, yields more wheat to the acre than it ever did before, or than a new fallow immediately alongside will to this day, demonstrating the probability of this being a very superior old township—we consider it as a young one, one of the best Canada can produce, and consequently one of the best in America.

OPS.—One hundred and sixty-seven members; subscription, £41 15s.; balance from 1854, £46 17s. 7d.; Government grant, £28 11s. 7d.; total receipts, £122 9s. 2d.; paid for clover and other seeds, £29 5s. 10d.; premiums, ploughing match and show, £19 6s. 3d.; expenses, £8 9s. 6½d.; balance in hand, £64 7s. 6½d.

Extract from Report.

Your committee have to report on the state of the crops for the past year having been good—the average crop of wheat about 20 bushels to the acre. The

lands of the township are in general of very good quality, and best suited for raising wheat, oats, hay, and spring crops generally. The only drawback to the township is the want of facilities of getting to market, which appears now to be in a fair way of being remedied by the completion of the Port Hope and Lindsay Railroad, which it is generally believed will be in running order in the course of the ensuing summer. This, with the building of a stone lock at Lindsay in contemplation by the Government, and the completion of the lock at Bobcaygen in the rear, will leave this township second to none in Canada for Agricultural pursuits.

WATERLOO.

COUNTY SOCIETY.—One hundred and sixteen members; amount subscribed, £42 10s.; balance from 1854, £22 2s. 5½d; deposited by townships, £98 5s.; Government grant, £225; entry fees and admission tickets, £35 1s. 3d.; lumber sold, £22 3s. 9d.; total receipts, £446 2s. 5½d.; amount paid in premiums, £176 16s. 3d.; paid township branches, £149 15s.; sundry accounts, including general expenses of management, £127 2s. 10½d.; total expenditure, £453 14s. 1½d.; balance due Treasurer, £7 11s 8d.

TOWNSHIP BRANCHES.

WELLESLEY.—Eighty-six members; amount subscribed, £26 15s. 6d.; balance from 1854, £10 5s. 6d.; Government grant, £34 5s.; total receipts, £71 5s. 6d.; amount paid in premiums, &c., £57 18s. 1d.; balance in hand, £13 7s. 5d.

WILMOT.—Eighty-eight members; amount subscribed and advanced by Directors, £37 10s.; Government grant £34 5s.; total receipts, £74 17 0½d.; paid in premiums, £45 6s. 3d.; paid Directors amount advanced, £21 2s. 6d.; expenses, £6 14s. 8d.; balance in hand, £1 13s. 6½d.

WOOLWICH.—Sixty-nine members; amount subscribed, £20 13s.; Government grant, £18; total receipts, £42 14s. 3d.; premiums, £27 10s.; expenses, £12 5s.; balance in hand, £2 19s. 3d.

NORTH DUMFRIES.—Amount of subscription deposited with County Society, £35. The funds of this Society were merged in those of the County; the joint show being held in the township, and consequently the Society makes no report for the year 1855.

WELLAND.

COUNTY SOCIETY.—One hundred and nineteen members; amount subscribed, £32 5s.; balance from 1854, £14 5s. 6½d.; deposited by townships £120 15s.; public grant, £135; total receipts, £302 5s. 6½d.; amount paid in premiums, £84 18s. 10d.; paid townships, £201 15s.; expenses, £15 11s. 3½d.; balance in hand, 5d.

TOWNSHIP BRANCHES.

BERTIE.—Seventy-six members; amount subscribed, £20; Government grant, £13 18s. 6d.; total receipts, £35 3s. 5d.; paid in premiums, £40 18s. 3d.; expenses, £3 2s. 6d.; balance due Treasurer, £8 17s. 4d.

CROWLAND.—Forty-nine members; subscribed, £12 5s.; public grant, £8 4s. 1d.; paid in premiums, £18 6s. 8d.; expenses, £1 7s. 1½d.; balance in hand, £1 2s. 0½d.

HUMBERSTONE.—Fifty-six members; subscription, £15 15s.; Government grant, £10 4s. 3d.; total receipts, £25 19s. 3d.; paid premiums, £28 16s. 1d.; expenses, £2 13s. 9d.; balance due Treasurer, £5 10s. 7d.

PELHAM.—Seventy-five members; subscription, £19 15s.; public grant, £11 14s. 6d.; paid premiums, £30; expenses, £1 18s. 9d.; due Treasurer, 9s. 3d.

STAMFORD.—Sixty-three members; subscription, £17 10s.; Government grant, £10 1s. 6d.; total receipts, £29 2s. 10½d.; paid premiums, £28; expenses, £1 1s. 3d.; balance in hand, 1s. 7½d.

THOROLD.—One hundred and five members; subscribed, £25 15s.; Government grant, £17 5s. 7d.; total receipts, £43 0s. 7d.; paid in premiums, £33 11s. 4d.

WAINFLEET.—Sixty-six members; subscription, £16 10s. No further report.

WILLOUGHBY.—Twelve members; subscription, £15; Government grant, £10 1s. 6d.; paid in prizes, £24 17s. 6d.; expenses, £1 2s. 9d.

WELLINGTON.

COUNTY SOCIETY.—One hundred and sixty-two members; amount subscribed, £40 10s.; balance from 1854, £3 3s. 10d.; deposited by townships, £258 15s.; government grant, £225; total receipts, £526 13s. 10d.; amount paid townships, £387 7s. 6d.; paid in premiums, £90; incidental expenses, £52 16s. 3½d.; balance due Treasurer, £3 9s. 11½d.

Extract from Report.

After the very lengthy report of last year, the Directors think it proper to make this as brief as possible, and they will therefore only add that the predictions of constant and rapid improvement then made are being fully borne out by facts, in proof of which it is only necessary to mention that one individual in the County imported from England, in the course of the year 1855, thirty-six pure Costwold sheep, one pure short horned bull, four short horned cows and twelve short horned heifers, all of which have been selected from the best stock of the kind in the world!!

Many other importations on a minor scale have been made into the County; the spirited farmers have redoubled their efforts to make improvement in every branch of their art, and the Directors in concluding this report are happy to say that the motto of the agriculturists is still, 'Onward.'

TOWNSHIP BRANCHES.

ERAMOSA.—One hundred and forty-nine members; subscription, £39; Government grant, £22 5s.; total receipts, £64 13s. 7½d.; paid in premiums, £52 15s.; expenses, £4 9s. 3½d.; balance in hand, £7 9s. 4d. The Directors report the progress of the society as highly satisfactory, and the system of farming, as well as the different breeds of live stock, rapidly improving.

ERIN.—One hundred and thirty-one members; subscription, £32 17s. 8d.; Government grant, £16 9s. 6d.; total receipts, £49 7s. 2d.; paid in premiums, £34 8s. 9d.; total expenditure, £52 12s. 10d.; due Treasurer, £3 5s. 8d.

GUELPH.—Two hundred members, subscribing 5s. each; subscribed by Canada Company, £5; balance from 1854, £3 4s. 8½d.; Government grant, £27 10s.; total receipts, £55 14s. 8½d.; paid premiums at fair, £57 12s. 6d.; ploughing match, £5; incidental expenses, £20 1s. 8d.; balance in hand, £3 0s. 6½d.

NICHOL.—Amount of subscriptions and Government grant, £55 1s. 6d.; total receipts, £53 9s. 3½d.; paid in premiums, £46 5s.; expenses, £5 16s. 5½d.; balance in hand, £4 10s.

ORANGEVILLE.—Subscriptions, £17 8s. 9d.; public grant, £9 5s.; total receipts, £28 3s. 9d.; paid in premiums, £22; expenses, £5 6s. 5½d.

PILKINGTON.—One hundred and thirty-one members; amount subscribed, £36 19s. 11d.; balance from 1854, £3 14s. 10d.; Government grant, £16 2s. 6d.; total receipts, £56 17s. 3d.; paid in premiums, £42; expenses, £12 5s. 3½d.; balance in hand, £2 11s. 11½d.

PUSLINCH.—One hundred and ninety-three members; subscription, £55 5s.; balance from 1854, £2 12s.; Government grant, £26; total receipts, £83 17s.; paid premiums, at show and ploughing match, £70; expenses, £9 17s. 6d.; balance in hand, £3 19s. 6d.

WENTWORTH.

COUNTY SOCIETY.—One hundred and ten members; amount of subscription, £27 8s. 9d.; balance from 1854, £7 11s. 11d.; deposited by townships, £205; Government grant, £225; total receipts, £465 0s. 8d.; amount paid in premiums, £73 5s.; paid township societies, £340; expenses, £34 16s. 6d.

TOWNSHIP BRANCHES.

ANCASTER.—Ninety-three members; subscription, £27 15s.; Government grant, £16 9s. 3d.; grant from Township Council, £10; donations &c., £4 16s. 8d.; total receipts, £58 15s. 11d.; paid in prizes at ploughing match, £8 15s.; amount paid for books awarded as prizes at fair, £32 8s. 7½d.; expenses, £17 4s. 7d.; balance in hand, 7s. 8½d.

BEVERLEY.—One hundred and eighty-three members; subscriptions, £46 11s. 3d.; Government grant, £23 6s. 10d.; total receipts, £72 18s. 1d.; paid balance due from 1854, £4 16s. 11d.; premiums, £55 10s.; expenses, £16 16s. 7d.; total expenditure, £77 3s. 6d.; balance due Treasurer, £4 5s. 5d.

BINBROOK, BARTON, GLANFORD, AND SALTFLY.—Forty-seven members; subscription, £12 10s.; Donation by Mr. W. Blair, £5 5s.; grant of £5 from the Municipal Council of each township—£20; Government grant, £19 15s. 3d.; total receipts, £57 10s. 3d.; amount paid in premiums, expenses, &c., £61 0s. 7d.; balance due Treasurer, £3 10s. 4d.

EAST FLAMBORO'.—Two hundred and ten members; amount subscribed, £85 18s. 9d.; balance from 1854, £8 16s. 7d.; Government grant, £52 13s. 7d.; total receipts, £147 8s. 11d.; amount paid in premiums at annual show, £103 17s. 6d.; ploughing match, £10 5s.; expenses, £19 9s. 8d.; balance in hand, £13 16s. 9d.

WEST FLAMBORO'.—Balance from 1854, £22 16s. 4d.; amount of subscription, £34; Government grant, £29 15s. 1d.; grant from Township Council, £5; total receipts, £81 11s. 5d.; amount paid in premiums at fair and ploughing match, £69; expenses, £3 3s. 11½d.; balance in hand, £4 7s. 5¼d.

YORK.

COUNTY SOCIETY.—One hundred and twenty-five paying members; amount subscribed, £45 15s.; balance from 1854, £19 17s. 9d.; deposited by township societies, £381 5s.; Government grant, £135; total receipts, £581 7s. 9d.; amount paid in premiums, £87 5s.; paid township societies, £455 11s. 9d.; expenses, £34 3s. 1¼d.; balance in Treasurer's hands, £4 7s. 10¼d. The amount of premiums awarded during the year in live stock, grain, implements, &c. was £117 5s., a portion remaining unpaid.

TOWNSHIP BRANCHES.

NORTH YORK.—(Consisting of members residing in Whitechurch and adjacent townships,) amount of subscription, £49; Government grant, £9 15s.; paid in premiums, £43 15s.; expenses, £5 15s. 1d.; balance in hand, £9 4s. 11d.

ETOBICOKE.—Three hundred and thirteen members; amount subscribed, £131 7s. 6d.; balance from 1854, £42 4s. 6d.; Government grant, £28 8s. 9d.; total receipts, £202 10s. 9d.; amount paid in premiums at Spring and Fall fair and ploughing match, £143 17s. 6d.; expenses, £28 0s. 5¼d.; balance carried to account of 1856, £30 12s. 9¼d. There was also a sweepstakes turnip match got up under the auspices of this society, for the best two acres of turnips, examined on the ground, the entrance fee being £2 10s. There were eleven entries, and the prize, amounting to £27 10s. was awarded to Mr. Alexander Shaw, city of Toronto.

REPORT of the Committee appointed to decide the sweepstakes for the best two acres of turnips among the undermentioned competitors.

To E. MUSSON, Esq., President Etobicoke Agricultural Society.

SIR,—We the undersigned, judges of the sweepstakes for the best two acres of Swedish turnips, beg respectfully to report as follows:—

On Tuesday, November 6th, we commenced a tour of inspection, calling on the different competitors in the following order:

1. Mr. Wm. R. Scott, of Mimico; but as he declined competing, and being anxious to proceed with as little delay as possible, we did not see his turnips.

2. Mr. Richard Withers also declined competing. We saw his turnips,

which in some places were good, but as a whole very uneven; they were sown too late, and had not received the cultivation necessary for procuring a large crop.

3. Mr. Wm. Duck, near Port Credit. A pretty piece of turnips, but few vacant places, bulbs of medium size, of good quality, well adapted for the table, rather too thick and in a growing state; sown broadcast, July 9th, manured with barn-yard dung, of about 15 waggon loads to the acre; soil, a pretty strong loam clay; cropped the previous year with oats; well cultivated and quite clean. Measured off a square of 25 feet, or 625 square feet, being within a fraction of the 70th part of an acre, as a fair average of the two acres; topped and rooted them in the ordinary way, and found the yield to be $5\frac{1}{2}$ bushels, or at the rate of about 367 bushels per acre. Mr. Duck's crop would evidently have been much larger in weight if he had sown earlier and in drills. The variety was the purple-top and pretty-pure.

4. Mr. Donald McFarlane, Etobicoke. As Mr. McFarlane declined competing we took only a general view of his turnips, a large portion of which, under ordinary circumstances, would be pronounced good. It was a heavier crop than Mr. Duck's, but not near so even nor so well cultivated. Weeding and hoeing had not been sufficiently attended to during the harvest. Notwithstanding, it will be a paying crop. Purple-top, a portion quite pure—sown in drills from 10th to 13th of June. Soil, fresh and rich, but rather heavy and wet.

5. Mr. John Clayton, Mimico. A beautiful looking piece of purple-top, sown broadcast, June 13th, after a good dressing of barn-yard manure; well cultivated and set out, but the plants generally were too thin. Fair sized bulbs of excellent quality. A square of 25 feet, taken as an average of the whole, yielded 10 bushels, being at the rate of very nearly 700 bushels per acre.

It is proper to remark that Mr. Clayton's soil is a light sand, which in its natural state produced nothing but pine and inferior brushwood, and was considered a few years since quite worthless for cultivation. The present result cannot be otherwise regarded than as highly creditable.

6. Mr. Wm. Gamble, Milton Mills. We found here about 6 acres of turnips in a field of very uneven surface, which must have required no small amount of skill and capital to have brought it into its present highly productive condition, from a recent state of comparative worthlessness. The soil like the former case is a light sand, forming a part of the Humber plains. Purple-top and Laing's improved, sown in drills about 30 inches apart, after a liberal dressing of manure, consisting, we understand, of farm-yard dung and a slight dressing of guano.

The bulbs on the top and drier part of the field were of great size and pretty uniform, but there were many blank places. Laing's improved, although not so large as the purple-top, look beautifully, so true and even. This was a specimen of turnip culture, which would be rarely exceeded in the finest parts of Britain. A space of 25 feet, taken as an average of the upper portion of the field, including both purple-top and Laing's improved, yield $12\frac{1}{2}$ bushels, or at the rate of 875 bushels per acre. Night coming on we had to postpone examining the remainder to another day.

In consequence of the extreme wetness of Wednesday, we did not resume our task till Thursday morning, Nov. 9th, when we visited—

7. Mr. E. W. Thomson, of Aikenshaw, Township of York. The soil, like that of the two preceding ones, is a loose sand, formerly thought little of and neglected, but by judicious management and proper treatment, it is capable, as is apparent on Mr. Thomson's farm, of producing remunerating crops. The turnips consisted of purple-tops and Laing's improved, drilled in rows about 27

inches asunder. The whole of the ground had been manured with farm-yard dung, about 40 cart loads to the acre, with about 250 lbs. guano in one part, and eight bushels of fine bone dust in another. The difference was not very perceptible, but the bones seemed to have increased the growth of the tops. From some cause or other the plants did not come up thick enough, consequently there were numerous blanks—so much so as to diminish the crop—probably 25 per cent. 25 feet square yielded 10 bushels, being at the rate of 700 bushels per acre. The crop proved much better than mere appearances indicated. The seed was sown too thin, only 1 lb. to the acre. We would generally recommend 2 lbs. per acre at the least.

8. Captain Shaw, Toronto. The field lies near Trinity College, consisting of a rich sandy loam, the lower part rather wet: it was manured with farm-yard dung, about 35 cart loads per acre, and sown in drills 24 inches apart, on June 7th, with the purple-top kind. The whole appeared all but perfectly uniform, with scarcely a blank worth mentioning. Everything evincing the most skillful and attentive management.

The first average taken, yielding only a peck over that of Mr. Gamble's, we were induced to try two others with the following results:

1. 25 feet square,	12 $\frac{1}{2}$ bushels,	at the rate of 895 bushels per acre.
2. 25 do.	14 $\frac{1}{2}$ do.	do. 1015 do.
3. 25 do.	13 $\frac{1}{2}$ do.	do. 945 do.

9. Mr. R. A. Goodenough, Toronto. Soil a strong loam, resting on dry, highly manured the previous year, and cultivated in the most thorough and perfect manner. Purple-top and a few of Laing's improved, sown in rows, 33 inches apart, the last week in June, and nicely set out in the drills at wide and uniform distances. Everything denoted that no labour or expense had been spared, and to appearance the crop looked remarkably luxuriant, the tops being green, juicy and growing. It was a pattern of neat and exact cultivation. There were no blanks worth noticing, and the whole crop was evidently so uniform as to render a choice for an average a matter of indifference. We selected two which yielded as follows:—

1. 25 feet square, including a relative proportion of each sort, yielded 10 bushels or 700 bushels per acre.
2. 25 feet square, (all purple-top) yielded 10 $\frac{1}{2}$ bushels, or 825 bushels per acre.

We are of opinion that the great width of the drills, and heavy manuring of this kind of soil, have acted injuriously on the crop. The spaces between the turnips were too great, and the vacancies were in a great measure hidden, from the excessive growth of tops, stimulated by the richness of the soil, which was much better suited to cabbage than to turnips.

Having now completed our assigned task, and having ascertained that the competition lay between Captain Shaw and Mr. Gamble, and although we felt pretty well assured that the former was the winner, yet as we had taken only one average of Mr. Gamble's turnips, and feeling anxious not only of satisfying ourselves, but also all others interested in the result we might bring out, we determined to go back to Milton at once, and take two more averages of Mr. Gamble's crop. The result was as follows:—

1. 25 feet square (formerly taken) yielded 12 $\frac{1}{2}$ bushels or 875 bushels per acre.
2. 25 feet yielded 13 $\frac{1}{2}$ bushels, or 945 bushels per acre.
3. 25 feet (taken at the lower end of the field) yielded 9 $\frac{1}{2}$ bushels, or 665 bushels per acre.

Having, we believe, fairly ascertained the above-mentioned facts, we feel it to be our duty to award the sweepstakes to Captain Shaw, of Toronto, whose turnips appear to have been sown and set out at those distances suited to the soil and season, so as to yield the greatest amount of produce on a given space. We have been much gratified in witnessing the results of several of these specimens of turnip culture, and cannot but hope that the tendency of such kinds of competition will be highly beneficial, and we would respectfully suggest, in case of any similar enterprise for the future, that two, if not three prizes, should be awarded.

(Signed)

GEO. BUCKLAND,
JAMES FLEMING,
GEORGE LESLIE.

Toronto, Nov. 13th, 1855.

GEORGINA AND NORTH GWILLIMBURY.—Two hundred and forty-nine members; subscription, £62 15s.; Government grant, £13 3s. 3d.; amount awarded in premiums, £64. Report not complete.

EAST GWILLIMBURY.—A Society was formed in this township in the spring of 1856, consisting of 201 members, subscribing 5s. each.

KING.—One hundred and thirty-eight members; amount of subscription, £36; public grant, £7 16s.; total receipts, £61 7s.; paid in premiums, £47 5s.; expenses, £7 1s. 2½d.; balance carried to account of 1856, £7 0s. 9½d.

MARKHAM.—One hundred and ten members; subscription, £43 5s.; public grant, £5 18s.; total receipts, £49 3s. There was awarded during the year the sum of £65 in premiums. There had been paid, up to the time of holding the annual meeting, 26th January, 1856, for premiums and general expenses the sum of £19 2s. 9d., leaving in the Treasurer's hands £30 1s. 3d., and liabilities amounting to £55 5s.; excess of liabilities over assets, £25 2s. 9d. This debt the report states to have been cancelled by the members of the society on the day of the annual meeting.

SCARBORO'.—Eighty members; subscription, £39 15s.; Government grant, £5 8s. 4d.; total receipts, £47 9s. 8d.; paid in premiums at fair and ploughing match, £43 15s.; expenses, £2 7s. 6d.; balance in hand, £1 7s. 2d.

YORK TOWNSHIP.—Two hundred and thirty-three members; subscriptions paid, £33 2s. 4½d.; Government grant, £10 16s. 8d.; balance from 1854, £7 12s. 11d.; total receipts, £52 16s. 11½d.; paid for prizes, £33 12s. 6d.; *Agriculturist*, £4; general expenses, £7 12s. 11½d.; balance in hand, £7 11s. 6d.; subscriptions due, £33 10s.; liabilities, £23.

In reference to the above Abstract of reports, it is to be observed that where the amount of the government grant is stated, as received by County Societies, it means always the net amount received from the Board of Agriculture; ten per cent. of the amount first granted by Government to each County Society, being retained by the Board for purposes of the Provincial Agricultural Association, as authorized by Statute. Only such a summary of the reports has been given as was thought necessary to exhibit the amount of funds placed at the disposal of the

Directors of the Societies, and the modes in which such funds have been used. Extracts have also been given from the body of some of the reports, when they were of a nature to exhibit the usefulness, or otherwise, of the operations of the Societies, or to convey information as to the capabilities and resources of the Townships or Counties reported upon. It will be seen by referring to the abstract, that improved breeds of horses, cattle, &c., as well as new and valuable kinds of grain, other seeds of various sorts, and artificial manures, have been introduced into many of the Counties and Townships, through the agency of the Societies, where, without such mutual co-operation of many individuals, aided by the liberal legislative grant, such desirable measures of improvement would have been much longer in being attained, owing to the newness of the settlements, and the comparative want of means of the residents in them. Many of the reports contain strong complaints, which, however, it has not been thought necessary to copy, of a want of support, by the farmers, of the Societies. Such apathy must arise either from carelessness and a want of public spirit, or from disbelief, either well or ill founded, of the value of such institutions. It is submitted that such disbelief can scarcely be well founded in the majority of cases, for there is scarcely a farmer, but who will find on examination, that he is constantly benefitting, more or less directly, from the diffusion of some improvement in stock, grain, or farm machinery, first introduced or brought into more general notice through the operations of some of the Agricultural Societies. And if such benefit cannot be denied, farmers should be willing to admit their own obligation to aid in promoting further general advancement, by giving the societies their liberal support. Perhaps in some cases the funds have not been expended in the most judicious or economical manner, but the members of societies have it always in their power by their action at the annual meetings, to prevent the recurrence in future of any error that may have been fallen into.

MEETINGS OF THE BOARD OF AGRICULTURE.

A meeting of the Board, convened by order of the President, was held at Kingston, on June 10th, 1856, at 10 o'clock, a. m., in the County Council Office. Present,—Messrs. E. W. Thomson, President; J. B. Marks, Vice President; R. L. Denison, Sheriff Ruttan, Asa A. Burnham, Geo. Buckland.

The minutes of last meeting were read and confirmed. The Secretary read a communication from the Bureau of Agriculture, officially stating that Messrs. E. W. Thomson, R. L. Denison, John Harland and Sheriff Ruttan, retiring members of the Board, having received the greatest number of votes at the Annual Meeting of the County Societies in February, were thereby re-appointed members of the said Board, agreeably to the terms of the statute.

The President then vacated the chair, which being taken by Professor Buckland, it was moved and

Resolved,—That E. W. Thomson, Esq., be President of the Board for the current year.

Resolved,—That J. B. Marks, Esq. be Vice President.

A communication from the Chief Superintendent of Education for Upper Canada was read, requesting space for a building, 40 feet by 20 feet, in the Exhibition grounds, for exhibiting Models of Farm Implements, School Apparatus, &c., whereupon it was

Ordered,—That as this application comes from the department of Public Instruction, the required accommodation be provided.

In order to meet the Local Committee at noon, the Board then adjourned to 6 o'clock p. m.

SAME DAY, 6 P. M.

The Board resumed according to adjournment. Present,—the same members as in the morning, and Baron de Longueuil, President of the Provincial Association.

The Board had in the mean time met the Local Committee, and with them visited the Show ground, a portion of the Penitentiary Farm Lot having been chosen for that purpose, examined the plans, &c., and spent several hours in considering the same, and other matters relative to the preparations. The President of the Association, Baron de Longueuil, offered to supply, free of charge, what hay would be required for Cattle, &c. at the Exhibition.

The Board, after considering a number of details in reference to the business arrangements of the Association, and preparations for the Show, adjourned till 9 a. m. next morning.

WEDNESDAY, June 11th.

The Board met at 9, a. m.; the same members being present as on the previous day.

The Treasurer submitted a letter from Professor Wilson, of Edinburgh, on the subject of a Dynamometer, and Duplicates of Models of Agricultural Machines and Implements, which he had to dispose of, whercupon it was

Resolved,—That in consideration of the interest taken by Professor Wilson in the Agricultural and general prosperity of Canada, both at the London and Paris Exhibitions, and also during his visit to Canada in 1853, he be and is hereby elected an Honorary Member of the Agricultural Association of Upper Canada; and that Mr. Denison transmit the purport of this resolution to Professor Wilson, and request him to forward a list of the models he has to dispose of, and the prices thereof.

A Committee was appointed to draft a circular to be printed and sent to each County Agricultural Society, for the purpose of calling attention to the approaching exhibition, also in reference to the appointment of Judges, in accordance with a previous resolution; and requesting that from two to five persons be named from each County Society for that purpose—from which nominations the Board would select the requisite number of Judges.

Resolved,—That a fee of 10s. be given to each of the Judges at the Exhibition, on their handing in their reports, instead of refreshment tickets, which are to be discontinued.

The proof sheets of the prize list were examined and adopted.

Resolved,—That the Secretary's reply to the Senate of the University, respecting the portion of the ground that that body requires from the Experimental Farm, be approved.

Resolved,—That it is desirable that this Board should interchange seeds, &c. with the Lower Canada Board and other bodies, both in America and Europe, as far as practicable, and that the Secretary be authorized to carry out this object.

The following memorandum was ordered to be entered on the minutes :

“The Board having had a consultation with the Local Committee, an understanding was come to with that Committee to the effect that the Board would forego any claim upon the locality for the thousand pounds promised, on the condition that the Local Committee complete the arrangements for the accommodation of the Exhibition, according to the plan submitted, and upon which has been marked by the President (in pencil) the buildings and space required, and that the whole of the arrangements be completed in time for the show in September next.”

The Board then adjourned.

THE PRIZE LIST FOR 1856.

The Prize List was, as usual, published in June. There were some slight changes made, and a few additional articles enumerated, for which premiums were offered—making the total amount offered a little more than the preceding year, when it was upwards of £2,300. The changes were, however, not important. The encouragement offered of double and treble premiums for imported stock, remained the same as in 1855. The Canada Company's liberal prizes for wheat, hemp and flax, were continued. The President of the Association, Baron de Longueuil, offered a prize of £15 for the best labor-saving Implement or Machine. The Counties named to compete for premiums for the best County Agricultural Reports, were Addington, Haldimand and Huron. The Exhibition was appointed to take place at Kingston, on the 23rd, 24th, 25th and 26th September following.

MEETING OF THE BOARD.

TUESDAY, September 9th, 1856.

The Board met this day, pursuant to notice from the Secretary, at Kingston, at 10 a. m., in the County Council Office.

Present,—Messrs. E. W. Thomson, President; J. B. Marks, Vice President; Baron de Longueuil, President of the Provincial Association; R. L. Denison, Sheriff Ruttan and Geo. Buckland.

The Minutes of last meeting were read and confirmed. The Auditor's bill for auditing the accounts was ordered to be paid, and it was agreed that for the future, the President of the Board be empowered to associate with himself any person or persons he may deem competent to assist him in auditing the accounts.

Mr. Fenison read a letter from Professor Wilson, of Edinburgh, in reference to procuring a Dynamometer for the use of the Board; but as there would not be time to get an instrument out soon enough for the approaching exhibition, the matter was deferred, and the Treasurer instructed to communicate to Professor Wilson the thanks of the Board for the information and promise of assistance he had given.

The Secretary submitted returns from the County Societies of lists of persons nominated as Judges, and the President, Secretary and Treasurer, were authorised to complete, as far as practicable, the necessary arrangements in reference to the Judges for the various departments of the Exhibition.

The following Communication from the Local Committee was submitted by the Secretary :

“ That it be recommended to the Board of Agriculture, that all persons who have paid ten dollars and upwards to the funds of the Association, the members of the Local Committee, and the members of the City and United Counties’ Councils, be admitted, with their families, in carriages or on foot, free, during the Exhibition, and that distinctive tickets or badges be given them accordingly.”

It was also requested that the Troops in Garrison be admitted to the Show free of charge, in such numbers and at such times as might be deemed convenient.

After discussing the matters referred to in this communication, it was

Resolved,—That in reference to the application made by the Local Committee by resolution, the Board is of opinion that a precedent of this kind might, without due caution, lead to exceedingly inconvenient results ; but in order to meet as far as practicable and expedient, the wishes of the Local Committee, the Treasurer be authorised to place at the disposal of the Chairman of that Committee, such a number of single admission tickets as he may require, to be distributed by him at his discretion.

In consequence of two communications having been brought before the Board, unfavorable to the admission of Penitentiary manufactured articles to the Exhibition for competition, the subject underwent considerable discussion. Sheriff Ruttan moved, seconded by Mr Buckland,

That the competition of convict with free labor was not considered at the time of adopting the Rules of the Association, and that until those rules be re-considered, and for the present, articles produced by convict labor form a separate class and receive discretionary premiums only.

Mr. Denison moved in amendment, seconded by Mr Marks,

That it is now too late to take up the question of convict labor for the coming Exhibition, and that last year’s plan be adopted this year, and that the matter be referred to the consideration of a full meeting of the Board hereafter.

The amendment was put and lost, and the original resolution was carried.

The Board adjourned at 2 o’clock, in order to meet the Local Committee on the grounds, till 9 o’clock next morning.

WEDNESDAY, Sept. 10th.

The Board met pursuant to adjournment, at 9, a. m.

The same Members present as on preceding day.

After reading the Minutes, the subject of admitting articles from convict labour in competition, was reconsidered, after fuller information had been obtained. Mr. Denison moved, seconded by Baron de Longueuil,

Resolved,—That the resolution passed yesterday by the Board, regarding convict be rescinded, which was carried,—Mr. Ruttan dissenting.

It was agreed that single stalls erected on the show grounds be let for 15s. and double stalls for 25s. each.

The Board then adjourned to 4 o’clock, and proceeded to the show grounds to

meet and consult the Local Committee, on various matters of detail relative to the arrangements for the exhibition.

The Board again met at 4 o'clock, the same members being present. The arrangements, buildings, &c., under the direction of the Local Committee, were considered most satisfactory, and progressing favorably. After reviewing proceedings and deliberating on a number of details pertaining to the regulations and preparations for the approaching exhibition, the Board adjourned to Tuesday, Sept. 23rd, then to meet in the committee room on the show grounds at Kingston, at 10, a. m.

MEETING OF THE BOARD.

TUESDAY, September 23d, 1856.

This day, being the first day of the Exhibition, the Board met, pursuant to adjournment, in the committee room on the show grounds. Present, E. W. Thomson, President; Baron de Longueuil, President of the Provincial Association; J. B. Marks, R. L. Denison, Asa A. Burnham, and Geo. Buckland.

The Minutes of previous meeting were read and approved. Several communications were laid on the table referring to the business of the Show,—among them a letter from Mr. C. W. Cooper, in reference to his Essay on the united Counties of Frontenac, Lennox and Addington, which on account of its length could not then be examined. The matter was therefore deferred.

No Prize Essay had been received for the County of Haldimand, and only one each for the Counties of Huron and Addington. The two latter being considered worthy of the approval of the Board, it was accordingly

Resolved,—That Dr. Barker's report on the County of Addington, and Mr. McQueen's report on the County of Huron, be announced as Prize Reports in the declaration of premiums.

The Board adjourned till next day, Wednesday, at 9, a. m.

WEDNESDAY, Sept. 24th.

The Board met at 9, a. m., the same members being present. The Secretary read letters from Messrs. Christie and Ruttan, stating their inability to attend, from indisposition. Several matters of detail were considered and arranged in reference to the business of the Show. The Judges' names were called, and the list finally completed, when the Judges entered on their duties.

The Board adjourned to Friday morning at 9 o'clock.

FRIDAY, September 26th.

The Board met at 9 a. m., the same members being present as on previous days. After disposing of various matters relating to the conducting and conclusion of the Exhibition, the Board adjourned for the Annual General Meeting of the Agricultural Association, which was to be held at 10, a. m., and agreed to meet again on Saturday morning at 9 o'clock.

ELEVENTH PROVINCIAL EXHIBITION.

The Eleventh Annual Exhibition of the Agricultural Association of Upper Canada, took place, as appointed, at Kingston, on September 23rd, 24th, 25th, 26th, 1856. The ground chosen for the Exhibition was a portion of the Penitentiary Farm Lot, consisting of about 20 acres, situate about a mile out of the town of Kingston,—level, dry land, and otherwise well suited to the purpose. On this piece of land, of which the Government granted a license of occupation for the term of twenty years, on condition that it should be resumed before the expiration of that period if required, the Local Committee erected a large and handsome building, or Crystal Palace, being composed chiefly, except the frame, flooring and part of the roofing, which are of wood, of thick ribbed glass, imported from England for the purpose. The Building was designed to be a permanent structure, and to be used for Agricultural Exhibitions, and other similar purposes, in future. The Building is in the form of a Greek cross, each of the transepts being 190 feet in length, and 56 feet in breadth. The general height is 34 feet, that of the cupola 60 feet. The transepts run east and west, and north and south. There is a spacious door for entrance or exit in each of the four ends. The transepts are large enough to allow a double row of stands for fruit, &c., in the middle of each, and also along each side, with space for the spectators to pass between. The structure proved convenient, safe, and of very ornamental appearance. The twenty acres of ground was enclosed with a substantial permanent board fence, and on the inner side of this were placed in suitable positions, an abundance of strongly constructed stalls and pens, for the use of horses, cattle, sheep, &c. on exhibition. The offices and other temporary structures were, as usual, erected in different parts of the grounds as required. The whole expense of erecting the Crystal Palace, with the fences, offices, &c., and all other expenses borne by the Local Committee, was found on balancing the accounts to be £3918 3s. 1d. The amounts received by the Local Committee towards defraying this expenditure, were: from the Agricultural Societies of the Counties of Frontenac, Lennox and Addington, and Leeds and Grenville, £320; from the Corporation of the city of Kingston, £750; from the County Council of the United Counties of Frontenac, Lennox and Addington, £700; from subscriptions, rent of booths and stalls, sale of material, and all other sources, £1213 3s. 3d.; in all amounting to £2983 3s. 3d.; leaving liabilities to the amount of £934 19s. 10d. to be provided for.

The Weather, during the week of the Exhibition, was on the whole favourable, although one day, Thursday, it was rather wet and disagreeable. The number of visitors was large, although not quite equal to some previous Exhibitions, or so large as would have been the case, had the Grand Trunk Railroad

been finished and in operation. The whole number of entries in the Secretary's books, of articles for exhibition, was over 3,700, several hundreds more than at any previous Show. Of the articles and animals entered, however, a large number in many of the departments were not brought upon the ground, either from the difficulty and expense of transporting from a distance, or some other unexplained reason, which induced parties to change their original intention of exhibiting. The exhibition, on the whole, might be pronounced equal to any of its predecessors, in the quality of animals and articles exhibited, and although a considerable number entered did not make their appearance upon the grounds, still the whole number shown, probably exceeded that at any former show. In the following classes, viz:—Agricultural Horses, Galloway Cattle, small breed Pigs, Poultry, Field products, Fruits and other Horticultural products, Dairy products, Implements, Manufactures in Metals, Cabinetware and Carriages, Woollen Goods, Ladies' Work, the entries considerably exceeded the average of the last four preceding exhibitions. In Agricultural products, Horticultural products, and Dairy products, especially, there was a very large increase, the entries in these classes being in the aggregate fully one-third more than the average above mentioned. In the classes of Blood Horses, Durham Cattle, Devon Cattle, Leicester Sheep, Southdown Sheep, Merino and Saxon Sheep, large breed Pigs, Manufactures of Leather and Furs, Fine Arts, Foreign Agricultural Implements, the number of entries was less than the average of the four preceding shows. An abstract statement will be found on a following page of the number of entries and the amount of prizes awarded in each class. The names of the exhibitors of all the best animals and articles, according to the awards of the judges, are given in the Prize List. During the week of the exhibition several meetings were held in the evenings for the discussion of subjects relating to the advancement of the Agricultural and other general interests of the country.

VISIT OF HIS EXCELLENCY THE GOVERNOR GENERAL TO THE EXHIBITION.

On Thursday, the 25th, His Excellency Sir Edmund W. Head, Governor General of the Province, visited the Exhibition Grounds, in company with His Excellency the Hon. Myron H. Clarke, Governor of the State of New York. Sir Edmund Head was also attended by several members of the Provincial Administration. His Excellency and Suite having taken their place upon a stand erected for the occasion, he was presented by Baron de Longueuil, President of the Association, with the following Address:—

MAY IT PLEASE YOUR EXCELLENCY.

It is again the pleasing duty of the President of the Agricultural Association of Canada West, to have the honor of addressing your Excellency on behalf of

its Agricultural Population, and to thank your Excellency for the kindly interest taken by you in the progress and prosperity, manifested by your Excellency's presence for the second time, at their yearly Exhibition.

These annual gatherings, for the purpose of exhibiting and comparing the advancement made in the Arts, Manufactures, and Agricultural Productions of the country, afford an opportunity of judging what progress has been made since our last meeting, and we trust your Excellency will see this day, that the noble Province it has pleased Her Gracious Majesty to confide to your Excellency's Government, is striving to keep pace with the spirit of the times in the march of improvement.

I need not assure your Excellency of the loyal devotion and attachment to the Crown and Constitution of Great Britain, which, I am proud to say, are marked characteristics of the Farmers in common with all other classes of the community of this Country. I may, however, express their fervent hope, should it please God to continue your Excellency and family in good health during your stay amongst us, that you will frequently give them the opportunity of manifesting their personal respect to your Excellency on such occasions as the present.

Signed on behalf of the Association,

LONGUEUIL, President.

The Governor delivered the following reply:—

MR. PRESIDENT AND GENTLEMEN,

These annual gatherings of the Agriculturists of Canada, and the exhibitions of the produce of your land and your workshops, possess a peculiar charm for those who view with interest and satisfaction the progress of this great Province.

It is with renewed pleasure therefore that I find myself again among you on the present occasion.

I thank you for the assurances of your loyalty and attachment to our Gracious Queen.

I am persuaded, that the Farmers and Yeomanry of Canada are strongly imbued with these feelings, and I know well that such sentiments will always find a ready echo in the City of Kingston.

On my own part I thank you sincerely for your reception of me here, and I can assure you that it will always give me the greatest pleasure to contribute to the prosperity of Canadian Agriculture, and to meet those who are engaged in this most important pursuit.

Signed,

EDMUND HEAD.

The Governor of New York State, was then presented with the subjoined address, by the President:—

To His Excellency the Governor of the State of New York:—

We the Officers and Members of the Agricultural Association of Upper Canada beg leave most cordially to welcome your Excellency to our Industrial Exhibition, and to avail ourselves of the opportunity of expressing the pleasure we at all times feel in friendly intercourse with our neighbours; and we trust that the time is far distant when any other than the most friendly feelings shall exist between the United States and the British Empire of which we are proud of forming a part.

And to your Excellency personally we tender our most sincere expressions of good will, and hope that your Excellency may long continue to enjoy the blessings of a kind and beneficent Providence.

At the conclusion of the Address His Excellency replied as follows :—

To the Officers and Members of the Agricultural Association of Upper Canada

GENTLEMEN :

I respond most heartily to your friendly greeting. I have had the pleasure to examine, to some extent, your very interesting Exhibition, and beg leave to say I am surprised at the excellent and highly creditable display you make on this occasion.

We pride ourselves in New York somewhat, on our State and County Agricultural Fairs; but I must confess I am warned by what I see here that we must look well to our laurels. I trust however a generous and beneficial rivalry will be kept up and that the thoroughness which characterizes the Canadian may be combined with the inventive genius of the Yankee, conferring mutual advantages upon both.

Allow me, in conclusion, to thank you for your personal expressions of good will; and to congratulate you upon the signal success of your Exhibition.

Before leaving the stand His Excellency the Governor General announced that he held in his hand a number of medals which had been awarded to Upper Canadian Exhibitors at the recent World's Fair at Paris, and which he would now have great pleasure in distributing to the parties present entitled to receive them. His Excellency made some appropriate remarks upon the occasion, alluding to the important advantages and honor the Province had derived from the recent display of its valuable products at Paris, for which these medals had been awarded, as the verdict of the world upon their merits.

ANNUAL MEETING OF THE ASSOCIATION.

The Annual General Meeting of the Directors of the Association was held on Friday the 26th in the Committee room on the show ground—The President, Baron de Longueuil, occupied the chair, and the several officers of the Association, and members of the Board of Agriculture, were present. The following delegates were present, from the various county societies :—Kent—Alexander Miller, M. Smith. Huron—Charles Girven. Grey—Samuel Proudfoot, A. F. Sherratt. Bruce—William Withers, Wm. Miller. Wellington—F. W. Stone, John Hes. Middlesex—W. Balkwill, S. Peters. Elgin—G. Henry, Alfred Smith. Oxford—Adam Dodge, C. Place. Brant—C. S. Perley, C. Whitlaw. Haldimand—Chas. Bain. Norfolk—Oliver Blake. Welland—John Ratcliffe, John Kerr. Lincoln—Judge Campbell, John Simpson. Wentworth—Thos. Stock, H. O'Rielly. Halton—Samuel Clarke, David Springer. Peel—Wm. Allan, John Vodden. York—Robt. Davis, W. McDougall. Ontario—Ebenezer Birrell. Durham—Richard Allen, Matthew Jones. Northumberland—P. R. Wright, Geo. S. Burrill. Victoria—Jno. Gibb, Samuel Motherell. Peterboro—John Walton. Prince Edward—David Conger, J. P. Roblin. Hastings—B. F. Davy. Lennox—Alex. Campbell, Jno. Hawley. Addington—Jno. Hitchens, Dr. Ashton. Frontenac—Wm. Ferguson, Jno. Flanagan. Leeds and Grenville—Dr. Richmond, J. W. Hough. Lanark—Robert Young

and Wm. Wallace. Prescott—Charles Hervey, S. M. Cushman. Russell—Wm. Edwards, Col. Petrie. Glengarry—Daniel Campbell, E. A. McPherson. Stormont—David Tate. Dundas—Charles Rundell.

It was then moved by Mr. Marks, seconded by Mr. T. C. Street, that Geo. Alexander, Esq., of Woodstock, be President of the Association for the ensuing year—Carried.

Moved by Asa A. Burnham, seconded by Dr. Ashton, that D. B. Stevenson, Esq., of Picton, M. P. P., be first Vice-President—Carried.

Moved by R. L. Denison, seconded by Mr. Street, that W. Ferguson, Esq., of Kingston, be second Vice-President.

Moved in amendment by Mr. Oliver Blake, seconded by Mr. George Harvey, that Charles Whitlaw, Esq., of Paris, be second Vice-President.

The amendment was put from the chair and lost, and the original motion was then put and carried.

Moved by Mr. Blake, seconded by Mr. Marks, That R. L. Denison, Esq., be re-elected Treasurer for the ensuing year—Carried.

Moved by Judge Campbell, seconded by Mr. Street, That the Exhibition for 1858 be held somewhere on the Niagara Frontier.

Moved in amendment by Mr. Gibb, seconded by Mr. Whitlaw, That the next Exhibition be held in the Town of Brantford. The amendment was put from the chair and carried.

Moved by Mr. Gibb, seconded by Mr. O'Reilly, That the next Show be held the last Tuesday in September, and following days—Carried.

Moved by Mr. Marks, seconded by Mr. E. W. Thomson, That the best thanks of the Association be given to Baron de Longueuil for his very efficient services as President of the Association, and for his uniform and liberal support of the same—Carried.

Votes of thanks were also unanimously passed to the Local Committee for their efficient arrangements and services; to the Mayor and Corporation of Kingston for their liberal support; to the County Council of the United Counties for the same; to the Rev. Dr. Ryerson, for the Educational Department in the Exhibition; to the Judges for their valuable services; and to the ladies for their interesting and attractive department of the Exhibition, and also for the very efficient manner in which the committee of ladies had managed and conducted the same.

The meeting then adjourned.

THE ANNUAL ADDRESS.

At two o'clock p.m. of Friday the 26th, the President of the Association, Baron de Longueuil, delivered the following address:—

FARMERS OF CANADA—

Each succeeding year the duty which devolves on the President of this Association in delivering his annual address becomes more difficult, and in my case it is rendered peculiarly so, as all can testify, who either heard or have since read the very eloquent and practical lecture of our past President at Cobourg. Under these circumstances I must crave your indulgence for the few remarks I am about to make on a subject which has already been so ably handled by my predecessors in office.

Since we last met Canada has achieved an almost national triumph at the great exhibition held in Paris; and although we could not vie with older civilizations in manufactures and the arts, we have come out of the struggle with honour in the practically useful, particularly as connected with agriculture and the productions of the soil. Our grain attracted attention by its superior excellence; our woods were inferior to none in variety, and in their adaptability to all useful purposes; and amongst the implements of husbandry, a Canadian plough was pronounced second to one only, and that was exhibited by England, the greatest and most scientific mechanical and agricultural country in the world.

To maintain the place we have now taken, and to keep pace with the rest of the world in the advances made in agriculture, and in those manufactures in which, from our climate and geographical position, we are capable of competing with other countries; our main reliance must be upon the education of the rising generation, a fact, to the importance of which, I am sure all who now hear me are fully alive, but as applied to agriculture, sufficient prominence is not generally given to education. At our excellent common schools an arrangement might easily be made whereby such children as are intended by their parents to follow agriculture as a pursuit, could receive an elementary training in the theory, which would in after life be of the greatest benefit in practice. For the purpose of facilitating this, each school in the rural districts should be supplied by the board of education with a careful selection of the most approved works upon agriculture for the use of the older pupils, and with easy manuals, say in the form of catechisms, for the younger ones.

But theory without practice will not make a farmer, and where the parents can allow it, the English system might be followed with advantage. It is the custom there for young men who have learned what they can from books, to reside as pupils for a year or two with some Agriculturist of eminence, and to complete their education, thus acquiring a knowledge of the mechanical and field operations necessary on a farm, and putting into practice what they have acquired theoretically.

I must now take leave of this subject, but not without pointing out the bad effects likely to follow from a want of attention to a matter so all-important as this.

In some statistic returns of the neighboring State of New York, I see mentioned that "between the years 1845 and 1850, 671,692 acres were added to those previously under improvement, and of course there ought to have been

“at least a corresponding increase in the agricultural products of the State. “But what was the fact? Of peas and beans there was a decrease of 1,132,- “054 bushels.

“Of wheat the decrease was 270,724 bushels, and there was also a great “decrease in the following articles, viz. :—potatoes, buckwheat, and cattle.

“There was an increase in the amount of corn, rye, oats, barley, hay, butter, “and cheese, produced in that State, but not greater than would be expected “from the increase of the population, which was 494,123 during those five “years.” Now, whence does this state of things arise? From a want of proper education amongst the agricultural classes, and a consequent defective system of culture. And can it be denied that the same influences are at work in Canada? I fear it cannot; true, a statistical return might probably exhibit no such falling off in the crops here, but that would be delusive. Hundreds of acres of virgin soil, are annually sown in wheat, and thus more than keep up the average, but are old lands as productive as they formerly were? Has not the cultivation of winter wheat been abandoned in many places where it grew abundantly? Has the climate in those localities altered? No, but the soil has become impoverished by bad management. And how is this to be avoided? By educating the Farmers, and thus leading them to adopt an improved system of culture, which would restore the land to its former fertility.

One of the greatest discoveries of modern farming, one which in its effects, assists greatly in bringing land into a high state of cultivation, and keeping it productive, is thorough draining.

Too much water in the soil prevents the sun's rays, which are intended by nature to warm the land by their heat, from doing so, as they are expended in evaporating the water from its surface, and plants are consequently deprived of that genial warmth at their roots which so strongly favours their rapid growth.

By removing the water from the soil, particularly from clay land, it becomes more mellow, pliable and open, is more easily worked, and admits the air, which is most essential to its fertility and to the healthy growth of crops; as draining not only removes the water, but causes the air by suction to penetrate after it, a process renewed at every successive shower of rain; nature abhorring a vacuum, the air penetrates into the pores of the earth as the water is drawn from it by the drains. Manure also produces greater effect on drained land, as where air is introduced into the soil, vegetable matter decomposes rapidly, producing carbonic acid in large quantities, as well as other compounds beneficial to plants. It is a curious but well known fact, that farms on which the crops are liable to be burned up in seasons of drought, are often much improved by draining; this is caused by the noxious water being washed from the subsoil, and inducing the roots to descend deep into it, so that on a drought recurring, although the surface may again become parched, the plants are not injured as heretofore, being fed and watered by the deep soil into which their roots have penetrated.

But draining is a very expensive operation, and at present beyond the reach of most farmers in this country. Should it remain so? Without assistance doubtless it will; but might not some plan for that purpose be devised by our Minister of Agriculture? Might not a certain sum be set apart by the legislature to be loaned to farmers who are desirous of draining their land? This plan was adopted in Ireland, where hundreds of acres of waste land have by this means been reclaimed and rendered profitable. Although draining on a large scale cannot, as yet, be undertaken by most of our farmers, unless assisted by Government, it is in the power of almost every one to try it in a small way, if done as recommended by the late venerable Judge Buel, and called by him “Brush Draining.” His plan was to dig trenches, lay fascines in the bottom of the drain, and cover them with strips of bark. Drains on this principle costing

little more than the labour, he states, were perfectly effective for upwards of twenty years. Let this be tried on a quarter of an acre, and the result will be that stiff soils will be found to be more easily and cheaply worked; manures will have more effect and will go further; seed time and harvest will be earlier and more sure; larger crops and of better quality will be reaped; wheat will grow on soil formerly unproductive, and acre after acre added, as the farmer finds time and means, to that already drained.

Deep ploughing, where land is well drained, is also of the greatest benefit, this was so thoroughly and admirably explained by our past President in his address last year, that I shall refer you to it, and pass on to the notice of what I consider one of the greatest defects in our present system of farming. Our farms are much too large, or in other words, we attempt to cultivate more land than we have either the force or the means of tilling to advantage. The consequence is, that the soil, from want of manure, and being properly worked, is soon run out, and becomes unproductive. If one-half of the quantity of the land, now merely scratched over, were thoroughly cultivated, farmers would find their crops much greater, and would soon place themselves in a position to handle to advantage the large farms their present system yearly tends to impoverish.

I should, had time permitted, have made some remarks upon stock generally, a branch of farming in which we have made most satisfactory improvements. The enterprise of individuals, and the exertions of local agricultural societies in procuring good stock, are now beginning to produce a marked influence at our shows. Sheep of all the most improved breeds; fine cattle, both thorough bred and grade, are exhibited, and a growing taste for the improved breeds is becoming each year more manifest. Pearing, however, I might detain you too long, I shall confine myself to one class only, and proceed to the consideration of the most noble, and I may add, the most useful animal on a farm, viz. the Horse. He is, however, sadly mismanaged by our farmers in general, both as to breeding and the care and treatment bestowed upon him. Horse breeding is usually considered both unsatisfactory, and as attended with more trouble, and less profit than any other description of stock raising. This, I am inclined to think, arises in a great degree, either from a want of knowledge on the breeders' part, or from the neglect of certain rules which should be particularly attended to by them. Most men think when a mare is fit for nothing else, she is fit to breed from; this is a great mistake; to raise good colts she must have a good constitution as well as form, and should be free from certain diseases, which long experience has proved to be hereditary, such as blindness, roaring, thick wind, (commonly called heaves in this country), spavins, curbs, ringbones, and founder; all of which are often bequeathed to their progeny, both by sire and dam; and even when they do not appear in the first generation, frequently do in the next. Many veterinarians of eminence go so far as to maintain that the consequences of hard work, or ill-usage will descend. Peculiarities of form and constitution will also be inherited, and unskilful or careless breeders often pair animals so badly that the good points of both are lost, and the defects increased, the produce being inferior both to sire and dam; if, therefore, a man has a diseased or broken-down mare, it would be cheaper for him to buy horses than to breed from her. I may, however, be asked, what is a poor farmer to do when he has an unsound mare, and not sufficient cash to purchase, having at the same time a large run for young animals, should he not breed from her? He had better not; let him purchase foals from some more fortunate neighbour, and when they are four years old he will have useful beasts at little more cost than wretched brutes bred from his unsound mare would come to at the same age, and which would probably be quite valueless.

Form being hereditary, to avoid disappointment a breeder must consider for

what market he intends a horse, as what is a defect in an animal intended for light draught and the saddle, is a highly desirable point in a farm horse, or one intended for heavy draught; I refer particularly to the inclination of the shoulder: in the first case it should be oblique, this form lessening the shock on the forelegs when the horse is put to fast work, in the latter it is desirable, if not absolutely necessary that it should be upright, which enables an animal to throw more weight into the collar when called upon in a dead pull. In choosing a stallion some attention should be paid to his temper. It would not, perhaps, be advisable to reject a horse, perfect in other respects, because he is vicious, but breeders may lay their accounts to having in many cases great trouble in breaking colts got by such a sire.

A notable instance that temper is hereditary, is familiar to most of the farmers and breeders of horses in this neighborhood, in the case of Somonochodron, whose get were notoriously vicious and hard to break.

From the nature of the work done by the horse, and as I have already said, in many instances from hereditary predisposition, he is liable to a vast number of diseases. It would be impossible to treat of all these, but I shall mention a few of the most prevalent, and the best manner of curing them, where they are curable. I say where they are curable, for many diseases to which this animal is subject, have by even the most scientific been found beyond the reach of either surgery or medicine: quacks, however, are always to be found who profess to cure everything, and many farmers falling into the hands of such persons, waste both time and money, in the end probably losing the services of a horse which, had it been left alone, might have been worked for several years.

The first I shall mention is an affection to which farm horses are all subject and on which there is generally more misconception than any other they are liable to, viz., Botts. In the latter part of the summer the gadfly may be observed very active about the horse, darting with great rapidity towards him and depositing its eggs on all parts that can easily be reached by the animal with his mouth. These eggs when licked by the horse burst, and a small worm escapes which adheres to the tongue, and is conveyed to the stomach with the food; by means of a small hook, it there clings with a very firm hold to the cuticular coat of that organ, and remains feeding on the mucus during the winter and the spring, when having attained considerable size it becomes detached, and is evacuated by the horse.

This being the true history of the bott, you may perceive they can give the animal no pain, as they are fastened to the insensible coat of the stomach. They cannot be injurious, as a horse in the highest health may have his stomach filled with them, and their presence not even suspected till they are evacuated. They cannot be moved by medicine which would be safe to give a horse, because they are not in a part where ordinary medicine could reach them, and if they were, have their mouths too deeply buried in the mucus for it to affect them. And lastly, of the many hundreds of horses dissected at the Veterinary Colleges of London and Paris, no horse has ever been found injured by botts. The wisest thing, therefore, in this case is to let the horse alone, and allow the botts to pass off of themselves. Horses, and young horses particularly, are much subject to a swelling of the lower bars of the palate, known as Lampas. To cure this they are often brutally treated by having the bars burned down with a hot iron; this is torturing the animal to no purpose. A few slight cuts across the bars with a sharp penknife, a few bran mashes, and in some cases, a gentle dose of cooling medicine is all that is necessary. Another disease of the mouth is what is called wolf's teeth. It is occasioned by the second teeth not rising immediately under the milk teeth, when they are found to cause swelling of the gums, soreness, and frequent wounding of the cheek. Have them punched out. This is more pro-

perly an irregular growth of the teeth; wolves teeth being really two small, supplementary ones, seldom injurious, and therefore better let alone.

Farmers' horses in all countries, from the nature of their work, and of the food on which they are fed, are peculiarly liable to broken wind, called The Heaves in this country and in the United States, from the heaving motion of the sides in breathing. By great care and judicious feeding it may, in some degree, be mitigated, but is totally incurable. A broken winded horse, in breathing, performs the inspiration at one effort, the expiration at two, which causes the heaving motion of the flanks. This is easily explained: some of the cells have been ruptured, or have run together, and when they are expanded the air rushes in easily with one effort of the muscles, but when the cavities are irregular and full of corners and blind pouches, it is very difficult to force it out again, and two efforts can scarcely suffice.

This disease is most frequently the consequence of the horse being fed on bulky food, and at irregular times, after many hours fasting, and then being put to work again, and sometimes to work requiring great exertion. The stomach being full, presses upon the lungs, almost impeding ordinary inspiration. This is too often the case in most farm stables, and therefore the disease is more prevalent amongst farm horses than almost any others. To avoid it, horses when hard worked should have plenty of oats, and less hay, straw, and other bulky food; they should also, if possible, be regularly fed.

Heaves can be mitigated, and the horse rendered capable of great exertion by judicious feeding; condense his food into the smallest compass, giving plenty of oats and little hay. Keep his bowels relaxed by frequent bran mashs, water sparingly through the day, but satisfy his thirst fully at night. Never, if possible to avoid it, work him on a full stomach. Give carrots when procurable, as they contain considerable moisture, are very nutritious, and generally have a beneficial effect in chest complaints. As medical treatment is of no avail, I hope none of my hearers will suffer themselves to be imposed upon by such trash as "Heaves Powders," and other nostrums advertised by impudent quacks; they might as well try to set a broken leg by salving their boots with Holloway's ointment, as to cure broken wind with any powders whatsoever.

From the form of the shoulder, lameness very rarely occurs there, but when it does happen, from a slip or side fall, it may be known by the horse dragging his toe along the ground. It is in lifting the foot that the shoulder is principally used, and let a horse be ever so lame, if he lifts his foot the shoulder is not at all affected. In the stable, also, when a lame horse puts his foot flat to the ground, when pointing to ease a lame leg, he is not shoulder lame, were he so the toe only would rest upon the ground.

Fomentations, entire rest, and a dose of physic in cases of real strain of the shoulder are the best modes of treatment. Swimming the horse is most inhuman, as it tortures the animal and only increases the inflammation. If the lameness continues a blister will be of service.

Bog spavin and bone spavin are both so difficult to cure, that, so far as farmers are concerned, it is not worth their while to meddle with them at all, particularly as spavined horses can be put to all slow work, and if not driven too fast are rather improved by it. I consider both these diseases incurable; repeated blistering is said, however, sometimes to have proved effectual.

Splint is a bony excrescence mostly found on the inside of the leg, it seldom either lames a horse or in any way interferes with his action, except at the time of its formation. If, from being close to the tendon, it causes lameness, shave the hair off the tumor, rub in a little mercurial ointment for a day or two, and blister actively. If of recent formation they readily yield to this treatment.

Curbs are an enlargement three or four inches below the point of the hock,

and are usually accompanied by considerable lameness. Absolute rest, cold fomentations, and repeated blistering when the inflammation is subdued, will prove useful.

Ringbone is incurable.

Corns are more frequently produced by bad shoeing than by any other cause. They are very difficult to cure. Paring the corn well out and painting with butyr of antimony will prove serviceable.

Disease of the navicular joint, situated inside the foot, is frequently taken for shoulder-strain, but they can easily be distinguished by observing whether the toe be dragged along the ground, as it always is in the latter case. Navicular lameness is incurable.

Young horses all have strangles, and epidemic catarrh or distemper is often very prevalent. Strangles begins with a cough and a discharge from the nostrils of a yellowish color mixed with matter, a considerable discharge of ropy fluid from the mouth, and swelling under the lower jaw, which increases with more or less rapidity, accompanied by some fever. The horse, also, has great difficulty in swallowing. The tumor is about the centre of the channel under the jaw,—it soon fills the whole space, is one uniform body, and may thus be distinguished from enlarged glands in distemper. Its treatment is very simple. Blister the tumor well, as soon as it appears, to ripen it sooner; when it is soft at the top and evidently contains matter, lance it freely and deeply. Suffering the tumor to burst forth of itself, is apt to form a ragged ulcer, which is very difficult to heal. Bleeding is not necessary unless the horse be very feverish. A little nitre and a few bran mashes, with green food, if in season, will complete the cure. A mild dose of physic may be given to prevent the swellings and eruptions which sometimes follow strangles. This disease is not contagious.

Distemper is a more serious complaint and is very infectious. It usually commences with fever and a shivering fit, followed by a hot mouth, greater heat of the skin than is natural, heaving of the flanks, and cough. The eyes are red and heavy, the membrane of the nose red, and there is a discharge from it at the very commencement of the disease. This at first is watery, but soon thickens, and becomes mattery and offensive. The glands under the jaw become enlarged, the membranes of the nostrils and throat are inflamed and tender, causing great difficulty in swallowing either food or water. The horse rapidly becomes weak. The legs generally swell, and enlargements appear on the chest and belly; this is, however, rather favorable. On first discovering the disease, the horse should be bled, and the bleeding repeated, if the pulse be frequent and strong. Apply a blister to the swollen glands, and physic till the bowels are freely evacuated. Warm clothing, particularly about the head, is useful. Warm mashes promote the discharge from the nostrils, and bring the inflammation soon to a close, and should be frequently put in the manger.

From the great diversity in form of the horse's foot, it would be impossible to lay down directions for shoeing horses with any degree of precision; but taking as an example a foot in its normal state, that is to say, one which has neither been injured by bad shoeing or is naturally deformed, a few plain rules may be given which would tend to keep it sound and well shaped. The external parts of the foot are the frog, the bars, the sole and the crust. In preparing the foot for shoeing, the clenches should be raised and filed off, to prevent the enlarging of the nail holes and consequent weakening of their hold; it also prevents stubs being left in the crust, as is too often done when the shoe is violently wrenched off. The edges of the crust must then be well rasped, to detect whether any stubs remain in the nail holes. The sole ought to be pared out with the drawing-knife until it yields, in the slightest degree possible, to a very strong pressure of the thumb. The crust should then be reduced to a perfect level all round, but

left a little higher than the sole. The heels are then to be carefully pared out and left perfectly level, but that portion of the heels between the inflection of the bars and the frog should scarcely be touched, nothing but the ragged and detached parts being removed. Smiths are too fond of what is called opening the heels, which is one of the main causes of contraction. The bars should be left fully prominent, and, if weak, ought scarcely to be touched.

The paring of the frog must depend on its prominence for the quantity it may be necessary to remove, but no more should be in any case taken off than will leave it so far projecting that it shall be just within and above the lower surface of the shoe; this will admit of its performing the functions for which nature intended it. The shoe should be fitted to the foot, not the foot to the shoe; and in nailing it on, special care must be taken that no nail be driven into the foot further back than its broadest part. This a matter of the greatest importance, for if the nails are too far back, the natural action of the foot is entirely destroyed, and lameness is sure sooner or later to be caused by neglect of this point.

In many of the diseases above mentioned a blister is a most useful remedial agent. The best blister is composed of one part Spanish fly, one part rosin, and four parts of lard. Melt the lard and rosin together, and then mix the flies well in. The best mode of applying a blister is to clip or shave off the hair as close as possible, and then rub the ointment well in. The head of the horse must be tied up for the first two days. At the expiration of twenty-four hours, dress with olive oil, night and morning, till the scabs peel off. When they begin to loosen, wash them with a lather of soap and water. A cradle or wooden neck-lace, consisting of round strips of wood strung together, reaching from the lower jaw to the chest, will prevent the horse blemishing himself.

As much time and money is often wasted in lawsuits about horses, I shall conclude with a slight notice of the law of warranty, and a summary of what constitutes unsoundness.

The warranty must be given at the actual time of sale; if given either before or after, it is invalid. The warranty of a servant is binding on the master.

A horse is unsound if lame at the time of sale, no matter whether the cause be removable or not. Corns, cough, any disease interfering with perfect freedom of breathing, crib-biting, curbs, enlarged hocks, ossification of the lateral cartilages, pumiced feet, quittor, ringbone, sanderack, spavin, blood-spavin, and cutting, splint, and contracted feet, when they occasion lameness, all constitute unsoundness.

I cannot, Gentlemen, conclude without calling your attention to the splendid building which, with a noble determination to keep pace with the spirit of the times, has been erected by the inhabitants of this district for your accommodation; and to the very marked and satisfactory improvement shown in every department of the exhibition; let us hope that when the Society again holds our great national jubilee in this City, your then President may have equal cause to congratulate you on the advancement which has been made, as I now have, when I compare this with the last show held in this place.

THE PRIZE LIST.

When the President had concluded the delivery of the foregoing Address, the Secretary, Professor Buckland, read the list of Prizes awarded, as follows:—

HORSES.

CLASS I.—BLOOD HORSES.

8 Entries.

Judges—Oliver Blake, Norfolk; George Stanton, Brant; John Tuthill, Toronto.

Best thorough-bred Stallion, Dew & Nightingale, York Township, £8 5s.; 2d do C. E. Jones, Brockville, £5 10s.; 3d do E. Howard, Fredericksburg, £2 15s.

Best thorough-bred 2 year old stallion, Joseph Stewart, Elizabethtown, Leeds, £3 10s.

Best thorough-bred 3 year old filly, Peter Davy, Bath, Addington, £4 10s.

CLASS II.—AGRICULTURAL HORSES.

226 Entries.

Judges—R. McD. Huffman, Ernesttown; Joseph Walton, Peterboro; W. H. Fox, Murray, Northumberland.

Best stallion for agricultural purposes, John Sanderson, Markham, £8 5s.; 2d do John Clark, Nepean, £5 10s.; 3d do E. H. Lewis, Shannonville, Hastings, £2 15s.

Best heavy draught stallion, John Torrance, Scarboro, imported from Great Britain since last Provincial Exhibition, £24 15s.; 2d do Robert Armstrong, Markham, £5 10s.; 3d do W. Cosbrane, Pickering, £2 15s.

Best 3 year old stallion, N. Davis, York Township, £5 10s.; 2d do J. B. Spence, Bowmanville, £3 10s.; 3d do James P. Lake, Ernesttown, £1 15s.

Best 2 year old stallion, James Addison, Etobicoke, £3 10s.; 2d do James P. Lake, Ernesttown, £2 10s.; 3d do Joseph Hunter, Toronto Township, £1 5s.

Best yearling colt, John Gill, Toronto Township, £2; 2d do Joshua Sisley, Scarboro, £1 10s.; 3d do Edward Darcy, Kingston, £1.

Best 3 year old filly, Samuel Lake, Newburgh, £4 10s.; 2d do Sam. D. Purdy, Ernesttown, £2 15s.; 3d do Zachariah Kellar, Ernesttown, £1 15s.

Best 2 year old filly, Andrew Smith, Clarke, £3 10s.; 2d do Caleb Hughson, Kingston, £2 5s.; 3d do J. Ferguson, Storrington, Frontenac, £1.

Best yearling filly, William Church, Fredericksburg, Lennox, £2; 2d do Sam. Scott, Clarke, £1 10s.; 3d do Reuben Spooner, Kingston Township, £1.

Best blood mare and foal, or evidence that the foal has been lost, R. O. Scott, Fredericksburgh, £5 10s.; 2d do Dennis Lake, Portland, £3 10s.; 3d do Samuel D. Purdy, Ernesttown, £1 10s.

Best span matched carriage horses, George Henderson, Port Hope, £5; 2d do W. Weller, Cobourg, £3 15s.; 3d do Miles Shorey, (Third,) Fredericksburg, £2 10s.

NOTE BY JUDGES.—The Judges regret that No. 29, the horses of O. S. Gildersleeve, Kingston, were not on the ground at the time of competition.

Best span of draught horses, D. McKay, Darlington, £5; 2d do J. B. Spence, Bowmanville, £3 15s.; 3d do James Morton, Kingston, £2 10s.

Best saddle horse, Robert Carson, Kingston, £2 10s.; 2d do S. P. Tilton, Montreal, £2; 3d do W. A. Geddes, Kingston, £1 10s.

Best single carriage horse in harness, E. H. Lewis, Shannonville, £2 10s.; 2d do O. T. Pruyn, Fredericksburg, £2; 3d do James Walsh, Lindsay, Victoria, £1 10s.

Extra Prizes to James Nimmo, Kingston, for a pony, £1; and Thomas Brownlee, Richmond, for span of farm mares, £1 5s.

CATTLE.

CLASS III.—DURHAMS.

88 Entries.

Judges—Robert Kirkwood, Wentworth; Thomas Stock, do; Thomas Betts, New York; Archibald F. Sherratt, Grey; John Gibb, Ops, Victoria; Matthew Jones, Darlington, — Place, Oxford.

Best aged bull, 5 years old and upwards; Daniel O'Neill, Paris, Brant, £10; 2d do George Evans, Oakville, £6.

Best 4 year old bull, Nelson Dollar, Fredericksburg, £9; 2d do W. Ferguson, Pittsburg, £6.

Best 3 year old bull, W. Davis, Etobicoke, £8; 2d do F. W. Stone, Guelph, £5; 3d do J. P. Wheler, Scarboro, £3; 4th do Baron de Longueuil, Simcoe Island, £1 10s.

Best 2 year old bull, J. Simpson, Darlington, £6; 2d do George Robson, London, £4; 3d do Ralph Wade, jun. Cobourg, £2 5s.; 4th do Reuben Spooner, Kingston Township, £1 5s.

Best 1 year old bull, W. & R. Armstrong, Markham, imported June, 1856, from Great Britain, £15; 2d do W. Miller, Pickering, £3; 3d do George Robson, London, £2; 4th do George Miller, Markham, £1.

Best bull calf (under 1 year,) F. W. Stone, £4; 2d do W. Ferguson, Pittsburg, £2 10s.; 3d do Ralph Wade, jun. Cobourg, £1 10s.; 4th do George Roddick, Cobourg, 15s.

Best cow, Ralph Wade, jun. Cobourg, £5; 2d do F. W. Stone, Guelph, £3; 3rd do W. Blanchard, Seneca, £2; 4th do F. W. Stone, Guelph, £1.

Best 3 year old cow, George Miller, Markham, £4; 2d do, do do, £2; 3rd do R. Wade, jun. Cobourg, £1 10s.; 4th do F. W. Stone, Guelph, £1.

Best 2 year old heifer, Wm. Miller, Pickering, £3; 2d do Richard Allen, Darlington, £2; 3d do W. Miller, Pickering, £1 5s.; 4th do do, do, 15s.

Best 1 year old heifer, F. W. Stone, Guelph, imported from England, July, 1856, £5; 2d do do, do, £1 10s.; 3d do George Miller, Markham, £1; 4th do do, do, 10s.

Best heifer calf (under 1 year,) F. W. Stone, Guelph, £1 10s.; 2d do do, do, £1; 3d do R. Wade, jun. Cobourg, 10s.; 4th do F. W. Stone, Guelph, 5s.

CLASS IV.—DEVONS.

16 Entries.

Judges—J. P. Wheler, Scarboro; W. Balkwill, London; John Wade, Cobourg.

Best aged bull, 5 years old and over, Edmund Longley, Shefford, Lower Canada, £10; 2d do Nathan Choat, Hope, £6.

Best 4 year old bull, Robert Ferrie & Co, Doon, Waterloo, £9; 2d do G. S. Burrill, Cramahe, Northumberland, £6.

Best 3 year old bull, (Duke of Devonshire) Richard Coates, Oakville, £8.

Best 2 year old heifer, R. Allen, Darlington, imported 1856, £6; 2d do G. S. Burrill, Cramahe, Northumberland, £2.

Best Devon heifer calf, G. S. Burrill, Cramahe, £1 10s.

CLASS V.—HEREFORDS.

4 Entries.

Judges—Thomas Thompson, Dundas; George Robson, London; John Hawley, Lennox Co.

Best 3 year old bull, Thomas Kirkpatrick, Jr. Kingston, £8.

Best 2 year old heifer, Baron de Longueuil, Kingston, £3; 2d do Baron de Longueuil, Kingston, £2.

Best 1 year old heifer Baron de Longueuil, Kingston, £2 10s.

CLASS VI.—AYRESHIRE.

41 Entries.

Judges—Robert Young, Ramsay; Wm. Beattie, Leeds; Henry Freeland, Grenville.

Best bull, 5 years old and over, T. Irving, Montreal, £10; 2d do John Boyes, Amherst Island, £6; 3d do Arch'd Glendinning, Scarborough, £4.

Best 4 year old bull, Thomas Irving, Montreal—for County Hochelaga Society, £9.

Best 3 year old bull, Thomas Irving, Montreal, £8; 2d do J. Durnford, Kingston, £5.

Best 2 year old bull, County Hochelaga Society, C. E.—(very superior) £6; 2d do J. Boyes, Amherst Island, Addington, £4.

Best 1 year old bull, Thomas Irving, Montreal, £5; 2d do J. Boyes, Amherst Island, Addington, £3.

Best bull calf (under one year) James Logan, Montreal, (3½ months old) £4; 2d do do, do, £2 10s.; 3d do J. Boyes Amherst Island, Addington, £1 10s.; 4th do do, do, 15s.

Best cow, James Logan, Montreal, £5; 2d do do, do, £3; 3d do J. Boyes, Amherst Island, Addington, £2; 4th do do, do, £1.

Best 3 year old cow, J. Boyes, Amherst Island, Addington, £4; 2d do do, do, £2 10s.

Best 2 year old heifer, James Logan, Montreal, £3; 2d do J. Boyes, Amherst Island, Addington, £2.

Best 1 year old heifer, James Logan, Montreal, £2 10s.; 2d do do, do, £1 10s.; 3d do Baron de Longueuil, Simcoe Island, Kingston, 10s.; 4th do J. Boyes, Amherst Island, Addington, 10s.

Best heifer calf (under one year) James Logan, Montreal, £1 10s.; 2d do J. Boyes, Amherst Island, Addington, £1; 3d do, do, do, do, 10s.

CLASS VII.—GALLOWAY CATTLE.

29 Entries.

Judges—Thomas Thompson, Dundas; Geo. Robson, London; John Hawley, Lennox.

[The Judges, in giving their report on Galloways, would take this opportunity of stating that they consider this breed of cattle very valuable and suited to this country and climate.]

Best 4 year old bull, W. R. Grahame, Vaughan, £9; 2d do W. Roddick, Hamilton Tp., £6.

Best 2 year old bull, John Fleming, Vaughan, £6.

Best 1 year old bull, William Roddick, Hamilton Township, £5; 2d do do do, £3.

Best bull calf (under one year,) William Roddick, Hamilton Township, £4
2d do John Fleming, Vaughan, £2 10s.; 3d do W. R. Grahame, do £1 10s.

Best cow, John Fleming, Vaughan, £5; 2d do John Torrance, Vaughan, £3
3d do W. Roddick, Hamilton Tp. £2; 4th do do, do, £1 5s.

Best 3 year old cow, Wm. Miller, Pickering, £4.

Best 2 year old heifer, George Roddick, Cobourg, imported from Britain in 1856, (Dandy,) £6; 2d do W. R. Grahame, Vaughan, (imported in September 1856,) £2; 3d do do, do, (also imported Sept., 1856,) £1 5s; 4th do do, do, (also imported Sept., 1856,) 15s.

Best 1 year old heifer, J. Fleming, Vaughan, £2; 2d do Geo. Miller, Markham, £1 10s.

Best heifer calf (under one year,) John Torrance Vaughan, £1 10s. 2d do William Miller, Pickering, £1; 3d do Wm. Roddick, Hamilton Tp, 10s.; 4th do W. R. Grahame, Vaughan, 5s.

CLASS VIII.—GRADE CATTLE.

60 Entries.

Judges—James Wightman, Hastings; William McMicking, Welland; Joseph Smith, Kent; John Gill, Peel; Charles Rundell, Dundas Co.

Best cow, Geo. Miller, Markham, York, £5; 2d do J. Pearson Whitby, £3; 3d do Wm. Ferguson, Pittsburg, £2; 4th do Jos. D. Purdy, Ernesttown, Addington, £1 5s.

Best 3 year old cow, J. Pearson, Whitby, £4; 2d do R. M. Huffman, Ernesttown, Addington, £2 10s.

NOTES BY JUDGES.—Numbers 8 and 9, (property of Mr. J Pearson Whitby,) are superior animals, but in consequence of their never having had calves, the Judges are of opinion that they do not come in the class of cows. Only four animals in this class found.

Best 2 year old heifer, Wm. Spence, Kingston, £3; 2d do R. McD. Huffman, Ernesttown, Addington, £2; 3d Wm. Spence, Kingston, Frontenac, £1 5s.; 4th do Henry Robinson, do, do, 15s.

Best 1 year old heifer, R. McD. Huffman, Ernesttown, Addington, £2 10s.; 2d do H. McCaugherty, Pittsburgh, Frontenac, £1 10s.; 3d do do, do, do, £1; 4th do Henry Robinson, Kingston, do, 10s.

Best heifer calf (under one year,) J. Pearson, Whitby £1 10s.

Extra Entries—Recommended, Robert Carson, Kingston, £1 10s. for a pair of year old calves, twins.

CLASS IX—FAT AND WORKING CATTLE, ANY BREED.

34 Entries.

Judges—James Wightman, Hastings; Wm. McMicking, Welland; Joseph Smith, Kent; John Gill, Peel; Charles Rundell, Dundas Co.

Best fat cow or heifer, W. Robinson, Reach, £7 10s.; 2d do R. Wade, jun., Cobourg, £5.

Best yoke working oxen, John Sutherland, Kingston, Frontenac, £5; 2d do Colin McLutye, Pittsburg, Frontenac, £3; 3d do Coleman Bristol, Ernesttown, Addington, £2

Best yoke of 3 year old steers, Hugh Rankin, Kingston Township, Frontenac,

£4; 2d do Reuben Spooner, Kingston Township, Frontenac, £2 10s.; 3d do James Gibson, do, do, £1 10s.

Best team of oxen, not less than ten yoke, from one township, the property of any number of persons, Hugh Rankin, Kingston Township, £10.

SHEEP.

CLASS X.—LEICESTERS.

128 Entries.

Judges—William Allan, Peel Co.; Wm. L. Ewing; John Iles, Puslinch; S. Clarke, Halton; Joseph Coulson; John Gilbert.

Best ram, two shears and over, James Petty, Hay, imported 1856, £12; 2d do Chris. Walker, London, £2 10s.; 3d do James Dickson, Clarke, £1.

Best shearling ram, Wm. Miller, Pickering, £4; 2d do James Carruthers, Haldimand Township, £2 10s.; 3d do James Petty, Hay, £1.

Best ram lamb, James Dickson, Clarke, Durham, imported June, 1856, £6; 2d Christopher Walker, London, £1; 3d do do, do, 10s.

Best two ewes, two shears and over, James Dickson, Clarke, Durham, £4; 2d do George Miller, Markham, York, £3; 3d do Wm. Miller, Pickering, Ontario, £1 10s.

Best two shearling ewes, Chris. Walker, London, £3; 2d do Geo. Miller, Markham, York, (imported June, 1856,) £2; 3d do do, do, £1.

Best two ewe lambs, Wm. Miller, Pickering, Ontario, £1 10s.; 2d do do, do, do, £1; 3d do Geo. Miller, Markham, York, 10s.

CLASS XI.—SOUTH DOWNS.

43 Entries.

Judges—John Kerr, Welland Co.; Alex. Alcorn, Cobourg; Lewis Davies, Peterboro'.

Best ram, two shears and over, J. Spencer, Whitby, £4; 2d do do, do, £2 10s.; 3d do do, do, £1.

Best shearling ram, J. Spencer, Whitby, (imported June, 1856,) £12; 2d do Peter Davy, Bath, £2 10s.

Best ram lamb, Thomas A. Milne, Markham, £2; 2d do John Spencer, Whitby, £1; 3d do do, do, 10s.

Best two ewes, two shears and over, Nathan Choate, Hope, £4; 2d do Thos. A. Milne, Markham, £3; 3d do John Spencer, Whitby, Ontario, £1 10s.

Best two shearling ewes, John Spencer, Whitby, Ontario, (imported June, 1856,) £6.

Best two ewe lambs, Peter Davy, Bath, Addington, £1 10s.

CLASS XII.—MERINOS AND SAXONS.

20 Entries.

Judges—John Kerr, Stamford; Lewis Davis, Peterboro'; Alexander Alcorn, Cobourg.

Best ram, two shears and over, Nathan Choate, Hope, £4; 2d do Jacob Rymal, Barton, Wentworth, £2 10s.; 3d do Nathan Choate, Hope, £1.

Best shearling ram, Nathan Choate, Hope, £4; 2d do Jacob Rymal, Barton, Wentworth, £2 10s.; 3d do do, do, do, £1.

Best ram lamb, Nathan Choate, Hope, Durham, £2; 2d do do, do, do, £1.

Best two ewes, two shears and over, Nathan Choate, Hope, Durham, £2; 2d

do Jacob Rymal, Barton, Wentworth, £3; 3d do Nathan Choat, Hope, Durham, £1 10s.

Best two shearling ewes, Jacob Rymal, Barton, Wentworth, £3; 2d do Nathan Choat, Hope, Durham, £2; 3d do do, do, do, £1.

Best two ewe lambs, Nathan Choat, Hope, £1 10s.; 2d do Jacob Rymal, Barton, £1; 3d do Nathan Choat, Hope, 10s.

CLASS XIII.—COTSWOLDS.

28 Entries.

Judges—Wm. Allan, W. L. Ewing, S. Clark, Joseph Coulson, John Gilbert, John Hes.

Best ram, two shears and over, Fred. W. Stone, Guelph, £4; 2d do W. J. Sloane, Fredericksburgh, £2 10s.; 3d do Geo. Miller, Markham, £1.

Best shearling ram, Geo. Miller, Markham, (imported June, 1856,) £12; 2d do Wm. Miller, Pickering, Ontario, £2 10s.

Best ram lamb, Fred. W. Stone, Guelph, £2; 2d do do, do, £1; 3d W. Miller, Pickering, Ontario, 10s.

Best two ewes, two shears and over, Fred. W. Stone, Guelph, £4; 2d do do, do, £3; 3d do Geo. Miller, Markham, £1.

Best two shearling ewes, Fred. W. Stone, Guelph, (imported July, 1856,) £6; 2d do do, do, do, £2; 3d do Wm. Miller, Pickering, do, £1.

Best two ewe lambs, Fred. W. Stone, Guelph, £1 10s.; 2d do do, do, £1; 3d do do, do, 10s.

CLASS XIV.—CHEVIOTS.

16 Entries.

Judges—Wm. Allan, W. L. Ewing, S. Clarke, Jos. Coulson, John Gilbert, John Hes.

Best ram, two shears and over, Jas. Dickson, Clarke, Durham, (imported June, 1856,) £12; 2d do Wm. Roddick, Hamilton Tp., £2 10s.; 3d do do, do, £1.

Best shearling ram, Wm. Roddick, Hamilton Tp., £4.

Best ram lamb, Jas. Dickson, Clarke, (imported June, 1856,) £6; 2d do Wm. Roddick, Hamilton Tp., £1.

Best two ewes, two shears and over, Wm. Roddick, Hamilton Tp., £4; 2d do James Dickson, Clarke, £3.

Best two shearling ewes, Wm. Roddick, Hamilton Tp., £3.

Best two ewe lambs, Jas. Dickson, Clarke, Durham, (imported June, 1856,) £3; 2d do Wm. Roddick, Hamilton Tp., £1.

CLASS XV.—FAT SHEEP.

15 Entries.

Judges—John Kerr, Stamford; Lewis Davies, Peterboro'; Alexander Alcorn, Cobourg.

Best two fat wethers, J. Pearson, Whitby, £3; 2d do Chas. Scott, do, £2; 3d do Ralph Wade, Jr. Cobourg, £1.

Best two fat ewes, Chas. Scott, Whitby, £3; 2d do Geo. Miller, Markham, £2; 3d do John Hawkins, Wolfe Island, £1.

PIGS.

CLASS XVI.—LARGE BREED PIGS.

21 Entries.

Judges—W. Wallace, Geo. Coldwell, John Atkinson.

Best boar, one year and over, Jas. Durand, Kingston, £5; 2d do John Scott, Montreal, £3; 3d do James McCammon, Kingston, £2; 4th do Geo. Calvert, Ops, recommended.

Best breeding sow, one year and over, Wm. Gibbard, Richmond, £3; 2d do Jas. McCammon, Kingston, £2.

Best boar, under one year, Richard Coates, Oakville, £3; 3d do County Hochelaga Society, C. E., £2; 3d do Richard Coates, Oakville, £1.

Best sow, under one year, C. A. Jordison, Hope, £2; 2d James McCammon, Kingston, £1 10s.; 3d do Richard Coates, Oakville, £1.

CLASS XVII.—SMAL BREED PIGS.

21 Entries.

Judges—P. Davy, C. B. Perry, David Tait.

Best boar, one year and over, Thos. Briggs, Jr., Kingston, (imported from United States since last show,) £10; 2d do do, do, do, £3; 3d do Henry Sadleir, Catarqui Bawn, Frontenac, £2.

Best breeding sow, one year and over, Thos. Briggs, Jr., Kingston, (imported from England since last exhibition,) £6; 2d do do, imported from U. S. do, £2; 3d do John Hitchins, Amherst Island, Addington, £1.

Best boar, under one year, Thos. Briggs, Jr., Kingston, £3; 2d do Henry Sadleir, do, £2; 3d do Fred. W. Stone, Guelph, £1.

Best sow, under one year, Jas. Durand, Kingston, £2; 2d do Henry Sadleir, do, £1 10s.; 3d do T. A. Corbett, do, £1.

POULTRY.

CLASS XVIII.—POULTRY, &c.

246 Entries.

Judges—Alfred Perry, Montreal; D. G. Forbes, Whitly; E. C. Campbell, Niagara.

Best pair of white Dorkings, Hy. M. Briggs, Kingston, £1; 2d do Geo. S. Burrill, Ormahe, Northumberland, 10s.

Best pair of spangled Dorkings, Chas. Skene, Simcoe Island, £1; 2d do Ed. Hawkins, Port Hope, 10s.

Best pair of black Polands, Wm. O'Reilly, Kingston, £1; 2d do Hy. Briggs, do, 10s.

Best pair of white Polands, Wm. O'Reilly, Kingston, £1; 2d do Hy. Briggs, do, 10s.

Best pair of golden Polands, J. C. Arnsley, Port Hope, £1; 2d do Jas. John Whitehead, Kingston, 10s.

Best pair of game fowls, Geo. S. Burrill, Ormahe, £1.

Best pair of buff Cochin China, Shanghai, Canton, or Bramah Pootra fowls, Jas Durand, Kingston, £1; 2d do James Lamb, London, 10s.

Best pair of black Cochin China, &c., Robert Hardinge, Kingston, £1; 2d do Edwin Hawkins, Port Hope, 10s.

Best pair of white Cochin China, &c., James Lamb, London, £1; 2d do Samuel Peters, London, 10s.

Best pair of grey Cochín China, Robert Hardinge, Kingston, £1; 2d do Henry Briggs, Kingston, 10s.

Best pair of black Spanish fowls, Charles Elliot, Cobourg, £1; 2d do Jos. Lamb, London, 10s.

Best pair of Bolton Greys, Henry Briggs, Kingston, £1.

Best pair of Hamburg fowls, Henry Briggs, Kingston, 2d prize 10s.

Best pair of Dominique, Edwin Hawkins, Port Hope, £1; 2d do do, do, 10s.

Best pair of feathered bantams, Sam. Peters, London, 10s.; 2d do T. Mulhall, Kingston, 5s.

Best pair of smooth Bantams, Sam. Peters, London, 10s.; 2d do Jos. Lamb, London, 5s.

Best pair of turkeys, white or coloured, Sam. Peters, London, 2d prize, 10s.

Best pair of wild turkeys, Baron de Longueuil, Kingston, 2d prize, 10s.

Best pair of large geese, Jas. Durand, Kingston, £1; 2d do Jos. Lamb, London, 10s.

Best pair Eremen geese, Jos. Lamb, London, 10s.

Best pair Chinese geese, Jos. Lamb, London, £1; 2d do Augustus Keefer, Chambly, C. E., 10s.

Best pair of muscovy ducks, Jos. Lamb, London, £1; 2d do do, do, 10s.

Best pair common ducks, Jos. Lamb, London, £1; 2d do Baron de Longueuil, Kingston, 10s.

Best pair of Aylesbury ducks, Charles Elliot, Cobourg, £1; 2d do Samuel Peters, London, 10s.

Best pair of Poland ducks, Jas. Lamb, London, £1; 2d do., Henry M. Briggs, Kingston, 10s.

Best pair of Guinea fowls, Henry Briggs, Kingston, £1.

Best collection of pigeons, Duncan G. Forbes, Whitby, £1; 2d do., Charles Skene, Simcoe Island, Frontenac, 10s.

Best lot of poultry in one pen owned by the exhibitor, James John Whitehead, Kingston, £2.

Best collection of poultry entered in the various classes by one exhibitor, Henry Briggs, Kingston, £2.

Best pair of rabbits—1st, Henry M. Briggs, Kingston, 10s.; 2d, H. M. Rogers, Kingston, 5s.

Best lot of rabbits—1st, Henry M. Briggs, Kingston, £1; 2d, Henry M. Rogers, Kingston, 10s.

Extra prizes of 10s. each to J. J. Whitehead, Kingston, cage of chickens; J. C. Ansley, Port Hope, golden Polands; Kenneth McKenzie, Kingston, peacock and hen; A. Keefer, Chambly, brood of Chinese geese.

Extra prizes of 5s. each, to H. M. Briggs, Kingston, pair Japan fowls; J. J. Whitehead, Kingston, pair black Labrador ducks; do. do. pair white Leghorns; Wm. Byram, private, 9th regiment, Kingston, Crimean fowls, cock and four hens; do. do. hen and thirteen chickens; Joseph Lamb, London, Rouen ducks; H. M. Briggs, Kingston, pair wild geese; Samuel Peters, London, Rouen ducks.

NOTE BY JUDGES.—The Judges upon Poultry are very much pleased with the large and varied collection, and with the zeal of breeders in introducing foreign varieties with a view to improve the stock. The collection is superior to those exhibited during preceding years; but the Judges would suggest to local committees acting hereafter, that a means of access to all the coops, by a convenient door to each, should be provided, so that the birds may be more thoroughly examined.

AGRICULTURAL PRODUCTIONS.

CLASS XIX.—GRAINS, SEEDS, &C.

447 Entries.

Judges.—P. F. Caniff, Belleville; E. C. Fisher, Etobicoke; Wm. Applegarth, Wentworth; Alexander Ferguson, Glengary; Charles Whitlaw, Paris.

The Canada Company's Prize for Wheat.

For the best 25 bushels of fall wheat, the produce of Canada West, being the growth of the year 1856. The prize awarded to the actual grower only of the wheat, which is given up to and becomes the property of the Association, for distribution to the County Societies for seed. Russell Smith, Burford, Brant, (weight 66 lbs.) £25.

2d do., by the Association, S Scott, Clarke, Durham, (weight 64½ lbs.) £10; 3d do., P. R. Palmer, Thurlow, Hastings, (weight 62½ lbs.) £5.

[The winners of the 2d and 3d prizes to retain their wheat.]

Best 2 bushels of winter wheat, C. Dollar, Fredericksburg, Lennox, (weight 64 lbs.) £2 10s.; 2d do., Russell Smith, Burford, Brant, (weight 63 lbs.) £1 15s.; 3d do., P. R. Palmer, Thurlow, Hastings, (weight 62 lbs.) £1 5s.

Best two bushels spring wheat, Christopher Anderson, Cobourg, £2 10s.; 2d do., John Hawkins, Wolte Island, £1 15s.; 3d do., Joshua Sisley, Scarborough, £1 5s.

Best two bushels of barley [two rowed], Christopher Anderson, Cobourg, £1 10s.; 2d do., James Logan, Montreal, £1; 3d do., W. C. Fretz, Ernesttown, 10s.

Best two bushels barley [six rowed], Daniel Campbell, Charlottenburg, Glengarry, £1 10s.; 2d do. Hiram Tubbs, Hallowell, £1; 3d do., Richard Williams, Ernesttown, 10s.

Best two bushels rye, Wm. Beattie, Yonge, Leeds, £1 10s.; 2d do., George Patterson, Kingston Tp., £1; 3d do., Joseph Davidson, Kingston, Tp., 10s.

Best two bushels of oats, white, Russell Smith, Burford, Brant, £1 10s.; 2d do., Daniel Campbell, Charlottenburg, Glengarry, £1; 3d do. James Patton, Scarborough, 10s.

Best two bushels of oats, black, W. C. Fretz, Ernesttown, £1 10s.

Best two bushels of field peas, Henry Platt, Hallowell, P. E., £1 10s.; 2d do., D. Campbell, Charlottenburg, Glengarry, £1; 3d do., Sam. D. Purdy, Ernesttown, 10s.

Best two bushels of marrowfat peas, John Gilbert, Belleville, £1 10s.; 2d do., James Durand, Kingston, £1; 3d do., John Gilbert, Belleville, 10s.

Best two bushels tares, Joseph Davidson, Kingston Tp., £1 10s.

Best bushel of white field beans, John Eagleson, Hamilton Tp., £1; 2d do., James Durand, Kingston, 15s.; 3d do., Thomas Briggs, junior, Kingston, 10s.

Best two bushels yellow Indian corn, H. Platt, Hallowell, P. E., £1 10s.; 2d do., R. Warren, Niagara, £1.

Best bushel of timothy seed, P. R. Palmer, Thurlow, £2; 2d do. do., £1 10s.; 3d do., Wm. Magee, Lunark, £1.

Best bushel of clover seed, P. R. Palmer, Thurlow, £2; 2d do., S. T. Casey, Thurlow, £1 10s.; 3d do., N. A. Briscoe, Ernesttown, £1.

Best bushel flax seed, D. Campbell, Charlottenburg, Glengarry, £1 10s.; 2d do, Wm. Beattie, Yonge, Leeds, £1; 3d do, W. C. Fretz, Ernesttown, Ad-dington, 10s.

Best Swedish turnip seed, from transplanted bulbs, not less than 20 lbs., Geo. Roddick, Cobourg, £1 10s.; 2d do do, do, £1; 3d do, H. Girouard, Hamilton City, 10s.

Best 12 lbs field carrot seed, James Fleming, Toronto City, £1 10s.

Best 12 lbs yellow mangel wurzel seed, James Fleming, Toronto City, £1 10s.

Best bale of hops, not less than 112 lbs, Platt Williams, Bloomfield, P. E., £5; 2d do Joseph Mills, Bloomfield, P. E., £3; 3d do Thomas Bisscett, Prescott, £2.

EXTRA ENTRIES.—RECOMMENDED.—William Plewes, Marysburg, P. E., samples of 14 different kinds of peas, viz:—Early Kent, Prince Albert, early white, Irish marrowfat, early Emperor, dimple blossom, Bishop's early dwarf, Champion of England, early France, early Washington, fall white sugar peas, Ruelle Michaux, early Dutch Michaux, late Missouri marrowfats.

The following samples of wheat, presented by the Canadian Commissioners at the Paris Exhibition to the Board of Agriculture, are noticed as of superior quality, viz:—30 varieties English, 15 do Algerian, 12 do Spanish, 8 do Australian, 1 do Egyptian, 4 do Scotch.

CLASS XX.—ROOTS AND OTHER FIELD CROPS.

164 Entries.

Judges.—D. Campbell, Glengarry; P. R. Palmer, Thurlow; Samuel Matherall, Victoria Co.; Wm. Millar, Bruce Co.

Best bushel pink eye potatoes, M. Kerr, Hungerford, Hastings, 15s.; 2d do, Reuben Spooner, Kingston Tp., 10s.; 3d do Baron de Longueuil, Simcoe Island, 5s.

Best bushel of any other sort, John Duff, Kingston, 15s.; 2d do Wm Church, Fredericksburgh, 10s.; 3d do Calvin W. Miller, Ernesttown, 5s.

Best bushel of Swede turnips, F. W. Stone, Guelph, 15s.; 2d do Fred. W. Stone, Guelph, 10s.; 3d do Baron de Longueuil, Kingston, 5s.

Best bushel of white globe turnips, Fred. W. Stone, Guelph, 15s.; 3d do John Duff, Kingston, 5s.

Best bushel of Aberdeen yellow turnips, Fred. W. Stone, Guelph, 15s.; 2d do do, do, 10s.

Best 20 roots red carrots, John Duff, Kingston, 15s.; 2d do John Gordanier, Ernesttown, 10s.; 3d do Baron de Longueuil, Simcoe Island, 5s.

Best 20 roots white or Belgian carrots, Joshua Sisley, Scarboro', 15s.; 2d do Glover Bennett, Cobourg, 10s.; 3d do Baron de Longueuil, Simcoe Island, 5s.

Best 12 roots Mangel Wurzel (long red), Joshua Sisley, Scarboro', 15s.; 2d do Thomas Thompson, Williamsburg, Dundas, 10s.; 3d do James Logan, Montreal, 5s.

Best 12 roots yellow globe mangel wurzel, Glover Bennett, Cobourg, 15s.; 2d do James Logan, Montreal, 10s.; 3d do John Gilmour, Quebec, 5s.

Best 12 roots long yellow mangel wurzel, James Fleming, Toronto, 15s.

Best 12 roots of khol rabi, John Duff, Kingston, 10s.

Best 12 roots of sugar beet, J. Gilbert, Belleville, 15s.; 2d do Joshua Sisley, Scarboro, 10s.; 3d do James Logan, Montreal, 5s.

Best 20 roots of parsnips, J. Duff, Kingston, 15s.; 2d do James Logan, Montreal, 10s.

Best 2 large squashes for cattle, Baron de Longueuil, Kingston, 15s.; 2d do John Duff, Kingston, 10s.; 3d Richard Williams, Ernesttown, 5s.

Best 2 mammoth field pumpkins, John Gilmour, Quebec, 15s.; 2d do Charles Skene, Simcoe Island, 10s.; 3d do John Duff, Kingston, 5s.

Best 4 common yellow field pumpkins, J. Durand, Kingston, 15s.; 2d do Reuben Spooner, Kingston, 10s.

Best 28 lbs broom corn brush, James W. Cull, Storrington, £1.

The Canada Company's Prize for Flax.

Best 112 lbs flax, Daniel Campbell, Charlottenburg, Glengarry, £6.

The Canada Company's Prize for Hemp.

Best 112lbs hemp—no entries.

Extra prizes to Fred. W. Stone, Guelph, for red round turnips, 10s., for red globe mangel wurzel, 10s., and for green round turnips, 10s.; to J. D. Purdy, Ernesttown, for a large squash, 10s.; and to H. Girouard, Hamilton, for 20 lbs Aberdeen turnip seed, £1; Richard Williams, Ernesttown, 10 samples early potatoes, 10s.

HORTICULTURAL PRODUCTIONS.

CLASS XXI.—FRUIT.

275 Entries.

Judges.—Dr. Reynolds, Brockville; W. B. Crew, Toronto; S. J. Brown, Niagara; S. J. Lyman, Montreal.

Best 20 varieties of apples, named (six of each,) Wm. Beattie, Yonge, Leeds, 15s.; 2d do James Cameron, Brockville, 10s.; 3d do Wm. Ferguson, Pittsburg, 5s.

Best 12 table apples, named (fall sort,) Baron de Longueuil, Kingston, 10s.; 2d do E. C. Campbell, Niagara, 7s. 6d.; 3d do George Gardiner, Lynn, Leeds, 5s.

Best 12 table apples named (winter sort,) James Wadsworth, Kingston, 10s.; 2d do Reuben Spooner, Kingston, 7s. 6d.; 3d do James Wadsworth, Kingston, 5s.

Best 12 baking apples, named, James Morton, Kingston, 10s.; 2d do J. D. Humphreys, Toronto City, 7s. 6d.; 3d do James Cameron, Brockville, 5s.

Best 12 table pears, named (fall sort) E. C. Campbell, Niagara, 10s.; 2d do do, do, 7s. 6d.; 3d do Rev. Vicar General McDonnell, Kingston, 5s.

Best twelve table pears, named (winter sort,) E. C. Campbell, Niagara, 10s.; 2d do A. Harris, Rice Lake, 7s. 6d.; 3d do J. P. Lovekin, Newcastle, 5s.

Best 12 plums, named (desert,) Baron de Longueuil, Kingston, 10s.; 2d do do, do, 7s. 6d.; 3d do James Cameron, Brockville, 5s.

Best 12 baking plums, named, Baron de Longueuil, Kingston, 10s.; 2d do James Cameron, Brockville, 7s. 6d.; 3d do James Wadsworth, Kingston, 5s.

Best quart of damsons (English,) Thomas Wilson, Kingston, 10s.

Best 6 peaches, grown in hot-house, James Cameron, Brockville, 10s.

Best 12 peaches, grown in open air, named, James Cameron, Brockville, 10s. 2d do E. C. Campbell, Niagara, 7s. 6d.; 3d do H. Girouard, Hamilton, 5s.

Best 20 varieties of peaches, grown in open air (3 of each.) E. C. Campbell, Niagara, 15s.; 2d do H. Girouard, Hamilton, 10s.; 3d do E. C. Campbell, Niagara, 5s.

Best 3 clusters of grapes, (hot house) Mr. Lunn, Montreal, 10s.

Best 3 clusters black Hamburg, (hot-house) Mr Lunn, Montreal, 10s.; 2d do James Fleming, Toronto, 7s. 6d.

Best 4 clusters black grapes, grown in open air, Rev. J. Brenner, Hamilton, 10s.; 2d do W. Beattie, Yonge, Leeds, 7s. 6d.; 3d do E. C. Campbell, Niagara, 5s.

Best 4 clusters white grapes, grown in open air, Baron de Longueuil, Kingston, 10s.; 2d do T. S. Wood, Belleville, 7s. 6d.; 3d do Henry Sadleir, Kingston, 5s.

Best 4 clusters grapes, of any other sort, T. S. Wood, Belleville, 10s.; 2d do Baron de Longueuil, Kingston, 7s. 6d.

Best and heaviest 2 bunches of grapes, Mr. Lunn, Montreal, 10s.; 2d do James Fleming, Toronto City, 7s. 6d.; 3d do Charles Arnold, Paris, 5s.

Best collection of grapes, grown in open air, 2 clusters of each sort, Charles Arnold, Paris, 15s.; 2d do James P. Lovekin, Clarke, 10s.; 3d do do, do, 5s.

Best water-melon, Edwin Hawkins, Port Hope, 10s.; 2d do do, do, 7s. 6d.

Best musk-melon, of any sort, James Fleming, Toronto, 10s.; 2d do Charles Skene, Simcoe Island, 7s. 6d.; 3d do H. Girouard, Hamilton, 5s.

The following are extra prizes awarded in this department:—J. D. Humphreys, Toronto, for basket white grapes, open air, 10s.—for red currants, 5s.; Charles Arnold, Paris, for 12 nectarines, 10s.; T. Wilson, Kingston, sample currants, 5s.; George Parish, Ogdensburgh, N. Y. collection of vegetables and fruits, containing several new varieties, diploma and 15s.; C. Bristol, Bath, basket of grapes, 10s.; Alfred Harris, Rice Lake, citron, 5s.; H. Girouard, Hamilton, 5s.; John Smith, Montreal, basket of grapes, 20s.; Montreal Horticultural Society, grapes, 20s.; varieties of peaches, 5s.; nectarines, 15s.; 16 varieties of apples, 10s.; pears, 10s.; 16 sorts of pears, 10s.; 23 sorts of apples, 20s., 4 sorts of peaches, 10s.; Mr. Lunn, for apples, 5s., specimens of peaches from Henry Jones, Brockville, particularly fine, 10s.; L. Grant, Kingston, vase of wild flowers, recommended, 10s.

CLASS XXII.—GARDEN VEGETABLES.

288 Entries.

Judges—Thomas S. Wood, Sidney; William Mundie, Hamilton; William Gordon, Toronto.

Best 12 roots of salsify, Baron de Longueuil, Kingston, 10s.; 2d do do, do, 7s. 6d.; 3d do John Duff, Kingston, 5s.

Best 4 heads Broccoli, J. D. Humphreys, Toronto, 10s.; 2d do John Duff, Kingston, 7s. 6d.; 3d do James Wadsworth, Kingston, 5s.

Best 4 heads cauliflower, J. D. Humphreys, Toronto, 10s.; 2d do Charles Skene, Simcoe Island, 7s. 6d.; 3d do Edwin Hawkins, Port Hope, 5s.

Best 4 heads cabbage, (summer) John Gilbert, Belleville, 10s.; 2d do John Duff, Kingston, 7s. 6d.

Best 4 heads cabbage, (winter) J. D. Humphreys, Toronto, 10s.; 2d do T. S. Wood, Belleville, 7s. 6d.; 3d do Rev. Vic. Gen. McDonnell, Kingston, 5s.

Best 4 sorts winter cabbage, including savoys, 2 of each sort, J. D. Humphreys, Toronto, 15s.; 2d do John Duff, Kingston, 10s.; 3d do Baron de Longueuil, 5s.

Best 4 heads red cabbage, Rev. Vic. Gen. McDonnell, Kingston, 15s.; 2d do John Gilmour, Quebec, 10s.; 3d do E. C. Campbell, Niagara, 5s.

Best 12 carrots for table, long red, Charles Skene, Simcoe Island, 10s.; 2d do James Morton, Kingston, 7s. 6d.; 3d do John Duff, Kingston, 5s.

Best 12 early horn carrots, Charles Skene, Simcoe Island, 10s.; 2d do John Duff, Kingston, 7s. 6d.; 3d do Baron de Longueuil, Kingston, 5s.

Best 12 table parsnips, John Duff, Kingston, 10s.; 2d do Baron de Longueuil, Kingston, 7s. 6d.; 3d do James Durand, Kingston, 5s.

Best 6 roots white celery, James Morton, Kingston, 10s.; 2d do John Duff, Kingston, 7s. 6d.; 3d do Charles George, Portsmouth, 5s.

Best 6 roots of red celery, J. Morton, Kingston, 10s.; 2d do John Duff, Kingston, 7s. 6d.; 3d do Baron de Longueuil, Kingston, 5s.

Best 12 capsicums, James Morton, Kingston, 10s.; 2d do Baron de Longueuil, Kingston, 7s. 6d.; 3d do Charles Skene, Simcoe Island, 5s.

Best collection capsicums, J. D. Humphreys, Toronto, 10s.; 2d do James Fleming, Toronto, 7s. 6d.; 3d do Baron de Longueuil, Kingston, 5s.

Best 6 egg plants, purple, James Morton, Kingston, 10s.; 2d do Baron de Longueuil, do, 7s. 6d.; 3d do John Duff, do, 5s.

Best 12 tomatoes, Baron de Longueuil, Kingston, 10s., 2d do James Morton, do, 7s. 6d.; 3d do Baron de Longueuil, do, 5s.

Best assorted collection of tomatoes, 6 of each sort, James Morton, Kingston, 15s.; 2d do H. Girouard, Hamilton, 10s.; 3d do J. D. Humphreys, Toronto, 5s.

Best 12 blood beets, Baron de Longueuil, Kingston, 10s.; 2d do J. D. Humphreys, Toronto, 7s. 6d.; 3d do M. Kerr, Hungerford, 5s.

Best peck of white onions, Baron de Longueuil, Kingston, 10s.; 2d do James Morton, do, 7s. 6d.; 3d do Baron de Longueuil, do, 5s.

Best peck yellow onions, Baron de Longueuil, Kingston, 10s.; 2d do James Morton, do, 7s. 6d.; 3d do Baron de Longueuil, do, 5s.

Best peck of red onions, Charles Skene, Simcoe Island, 10s.; 2d do Baron de Longueuil, Kingston, 7s. 6d.; 3d do James Morton, do, 5s.

Best 12 white turnips, table, (a sample not numbered) marked first prize, 10s.; 2d do John Duff, Kingston, 7s. 6d.; 3d do R. J. Cartwright, do, 5s.

Best twelve yellow turnips, table, F. W. Stone, Guelph, 10s.; 2d do Charles Skene, Simcoe Island, 7s. 6d.

Best 12 ears sweet corn, Charles George, Portsmouth, 10s.; 2d do John Duff, Kingston, 5s.

Best and greatest variety of early potatoes, half peck of each sort, named, James Durand, Kingston, 15s.; 2d do Charles Skene, Simcoe Island, 10s.; 3d do Reuben Spooner, Kingston, 5s.

Best 4 squashes, table, John Duff, Kingston, 10s.; 2d do Baron de Longueuil, do, 7s. 6d.; 3d do R. J. Cartwright, do, 5s.

Best and greatest variety of vegetables, each kind named, John Duff, Kingston, 10s.; 2d do Baron de Longueuil, do, 7s. 6d.; 3d do Charles Skene, Simcoe Island, 5s.

The following were extras recommended in this department:—J. D. Humphreys, Toronto, brace of cucumbers, 5s.; H. Girouard, Hamilton, pickling onions, Canada coffee, 5s.; Alfred Harris, Rice Lake, vegetable marrow; Chas. Skene, Simcoe Island, 4 Savoy cabbages, 100 pods green peas, 1 peck Lima beans; A. Harris, Rice Lake, leeks, (highly); Baron de Longueuil, Kingston, curled kail, Brussels sprouts, large case knife beans; E. C. Campbell, Niagara, white egg plants. Worthy of notice, a select variety of roots and vegetables, from Normal School, Toronto.

Montreal Horticultural Society, collection vegetables, recommended, £1 10s.

NOTE BY JUDGES.—We would beg leave to state, that in the vegetable department of Horticulture, allotted to us to judge, we find the roots and vegetables very good, generally, considering the dryness of the past season.

CLASS XXIII.—PLANTS AND FLOWERS.

61 Entries.

Judges—Dr. Reynolds, Brockville; W. B. Crew, Toronto; S. J. Brown, Niagara; S. J. Lyman, Montreal.

Best 12 dahlias, named, J. Young, Montreal, 10s.

Best and largest collection of dahlias, James Morton, Kingston, £1; 2d do J. Young, Montreal, 10s.; 3d do Montreal Horticultural Society, 7s. 6d.

Best bouquet of cut flowers—none worthy of a prize.

Best collection of green-house plants, not less than 12 specimens, James Morton, Kingston, 2d prize, £1 10s.

Best 12 pansies, Montreal Horticultural Society, 10s.

Best 6 fuchsias, in flower, James Morton, Kingston, 10s.

Best collection of annuals in bloom, E. C. Campbell, Niagara, 10s.; 2d do James Fleming, Toronto, 7s. 6d.

Best 6 cockscombs, Montreal Horticultural Society, 10s.; 2d do E. C. Campbell, Niagara, 7s. 6d.; 3d do do, do, 5s.

Best collection China asters, Montreal Horticultural Society, 10s.; 2d do Baron de Longueuil, Kingston, 7s. 6d.; 3d do J. Fleming, Toronto, 5s.

Best collection of 10 weeks' stock, H. Girouard, Hamilton, 2d prize, 7s. 6d.

Best floral ornament or design, James Morton, Kingston, £1.

Best collection of verbenas, not less than 12 varieties, James Fleming, Toronto, 15s.; 2d do James P. Lovekin, Clarke, 10s.; 3d do John Duff, Kingston, 5s.

Best collection of native plants, dried and named, Mrs. C. P. Trail, Rice Lake, £2 10s.; 2d do Miss Barker, Kingston, £1.

Best specimen of ornamental rustic work for the garden, James Morton, Kingston, £1.

The following are the entries awarded extra prizes in this department;—James Wadsworth, Kingston, for plant in flower, 5s.; H. Girouard, Hamilton, for hybrid roses, 5s.; collection of roses, 70 kinds, 10s.; 12 carnations, 5s.; Dr. Reynolds, Brockville, collection of flower seeds, diploma and 10s.; Baron de Longueuil, Kingston, seedling pansy, 5s.; Horticultural Society, Montreal, garland, 10s.; phlox, collection, 10s. Worthy of mention, collection of annuals, from Normal School, Toronto;—collection of Canadian grown vegetable seeds; also, a very extensive and new collection of garden, field, and flower seeds, imported, with a most complete assortment of garden tools, exhibited by Mr. James Fleming, of Toronto.

CLASS XXIV.—DAIRY PRODUCTS, SUGAR, PROVISIONS, &c.

206 Entries.

Judges—Charles Girvin, Huron County; Arthur Smith, Brant County; Adam Dodge, Oxford.

Best firkin of butter, not less than 56 lbs, George Gardiner, Lyon, £2 10s.; 2d do James Nimmo, Kingston, £1 10s.; 3d do Charles Gardiner, Yonge, £1.

Best cheese, not less than 30 lbs, Simcon Cass, Hawkesbury, £2 10s.; 2d do Hiram Walker, Union Square, £1 10s.; 3d do P. R. Palmer, Thurlow, £1; 4th do discretionary, Daniel Gilbert, Sophiasburg, 10s.

Best 2 Stilton cheeses, not less than 14 lbs. each, R. Wade, jun. Cobourg, £2 10s.; 2d do do, do, £1 10s.; 3d do Samuel T. Casey, Thurlow, £1.

Best butter, not less than 20 lbs. in firkins, crocks, or tubs, Nelson Lapum, Ernesttown, £1 10s.; 2d do Isaac Minaker, Marysburg, Prince Edward, £1; 3d do Richard Williams, Ernesttown, Addington, 10s.

Discretionary prize for butter done up in rolls, Thomas Clyde, Kingston, £1.

Best 30 lbs maple sugar, M. Kerr, Hungerford, £1; 2d do Hiram Tubbs, Hallowell, 10s.

Best starch, Hiram Tubbs, Hallowell, 15s.

Best soaps, (collection assorted,) G. Carey, Toronto, 15s.

Best candles (collection,) Wm. Tubbs, Hallowell, 15s.

Best 6 kinds of preserves, John Gilbert, Belleville, 15s.

Best confectionery, Henry Dumble, Kingston, £1.

Best barrel of flour, Andrew McNaughton, Newcastle, £1 10s.; 2d do H. Daniels, Brooklin, £1.

Best honey, in the comb, not less than 10 lbs, P. R. Palmer, Thurlow, 15s.; 2d do do, John Asselstine, Jr., Ernesttown, Addington, 10s.; 3d do do, Wm. Beattie, Yonge, Leeds, 5s.

Best jar of clear honey, G. Gardiner, Lynn, £1; 2d do G. Miller, Markham, 10s; 3d do, C Gardiner, Yonge, 5s.

Essential oils, Friend O. Payne, Hillier, 15s.

EXTRA PRIZES AWARDED.—John Nasmith, Toronto, for Abernethy biscuit, wine biscuit, Elgin biscuit, cabin biscuit, crackers, soda biscuit, diploma and £1 10s; A. W. Craig, Kingston, biscuits, 10s; Lyman & Savage, Montreal, oil cake, highly recommended; Matthew Rourke, Kingston, barrel of potash, recommended, prize of 10s.

DOMESTIC MANUFACTURES.

CLASS XXV.—AGRICULTURAL IMPLEMENTS.

175 Entries.

Judges—J. W. Hough, Brockville; Jas. Breakenridge, Wm. McDougall, Toronto; Thomas Briggs, Kingston; Samuel Peters, London; Samuel Clarke, Halton.

Best wooden plough, Isaac Modeland, Brampton, Peel, £2 10s; 2d do J. Bingham, Norwich, £1 10s; 3d do Jas. McSherry, of St. David's, £1.

Best iron plough, James Jeffry, Petite Cote, Montreal, £2 10s; 2d do James Paterson, Montreal, £1 10s; 3d do John Gartshore, Dundas, £1.

[The ploughs were tested in a field, on the Tuesday, by a Committee appointed for the purpose, at the Exhibition; ease of draught and efficiency of work being considered.]

Best pair of harrows, E. Wilmot, Kingston, £1 10s; 2d do Charles Skene, Simcoe Island, £1; 3d do James Jeffry, Petite Cote, Montreal, 10s.

Best fanning mill, J. Telfer & Sons, C. E. £1 10s; 2d do D. Coon, Prescott, £1; 3d do J. Telfer & Sons, C. E. 10s.

Best horse power thrasher and separator, H. A. Massey, Newcastle, £5.

NOTE BY JUDGES.—The Judges wish to express their admiration of the style in which this machine is got up.

Second best horse-power thrasher and separator, W. Johnston & Co, Montreal, £3; 3d do Chas. Joyner, Loughboro', £2.

NOTE BY JUDGES.—The Judges would recommend, that hereafter the two horse-power machines should be in a separate class.

Best grain drill, James Atkinson, Vaughan, £3.

Best straw-cutter, D. McVickers, London, £1; 2d do G. Millar & Co, Perth, Lanark, 15s.

Best smut machine, John Gartshore, Dundas, Wentworth, £1 10s.

Best corn and cob crusher, A. Millar, Chatham, Kent, £1.

NOTE BY JUDGES.—We consider this an excellent machine, deserving the attention of all farmers who raise stock extensively.

Best clover cleaning machine, R. McD. Huffman, Ernesttown, 2d prize, £2.

Best cider mill and press, Levi Howell, Ancaster, £3.

Best cheese press, J. Telfer & Sons, C. E., £2; 2d do John Gilbert, Belleville, £1 10s.

Best two-horse waggon, Nelson Lapum, Ernesttown, £3; 2d do Samuel D. Purdy, Ernesttown, £2.

Best one-horse light market waggon, Kempshall & Shuttleworth, Weston, York, £2 10s; 2d do Samuel Lake, Newburgh, £2; 3d do Reuben Spooner, Kingston Tp., £1.

Best horse cart, James Jeffry, Petite Cote, Montreal, £1 10s; 2d do James Nimmo, Kingston, £1.

Best horse rake, J. Niblock, Brockville, Leeds, £1; 2d do Salem Eckhardt, Markham, 15s.; 3d do J. Telfer & Sons, C. E. 10s.

Best metal roller, H. A. Massey, Newcastle, £2 15s; 2d do John Helm, Jr. Port Hope, £2.

Best stump extractor, James Gibson, Kingston, 2d prize, 15s.

Best reaping machine, H C & H D Johnston, Toronto Township, £5; 2d do John Helm, Jr., Port Hope, £3; 3d do H. A. Massey, Newcastle, £2.

Best mowing machine, H. A. Massey, Newcastle, £5; 2d do John Helm, Jr. Port Hope, £1; 3d do Henry Going, Wolfe Island, £2.

Best combined mower and reaper, R. & R. S. Patterson, Belleville, £5; 2d do J. Walton & Co., Holland Landing, £3; 3d do H. A. Massey, Newcastle, £2.

Best potato digger, Salem Eckhardt, Markham, 15s.

NOTE BY JUDGES.—Entry No. 2, (by John Lent, Cobourg,) an expensive and complicated machine, and in our opinion not worthy of a prize, until its practicability has been tested, and its machinery simplified.

Best thistle-extractor, R. Lownsbury, Grimsby, 10s.

Best field or two-horse cultivator, A. C. Bruce, Glenmorris, Brant, £3; 2d do do £1; 3d do Salem Eckhardt, Markham, £1. Worthy of notice, Henry Going, Wolfe Island.

Best horse hoe, or single horse cultivator, H. A. Massey, Newcastle, £1; 2d do R. Lownsbury, Grimsby, 15s.

Best brick making machine, Daniel Gould, Napanee, Lennox, £2 10s.

Best 6 hay rakes, Thomas Drummond & Co., Kingston, 10s.; 2d do Jacob Huffman, Camden East, Lennox, 7s 6d.

Best 6 manure forks, D. F. Jones & Co., Gananoque, 15s; 2d do Thomas Drummond & Co, Kingston, 10s.

Best 6 hay forks, Thomas Drummond & Co, Kingston, 15s; 2d do. D. F. Jones & Co. Gananoque, 10s.

Best 6 scythe smiths, Thos. Drummond & Co, Kingston, 15s; 2d do Hiram Alford, Bastard, Leeds, 10s.

Best ox-yoke and bows, Edwin Chown, Kingston, 10s; 2d do Jacob Huffman, Camden East, 5s.

Best grain cradle, Thomas Drummond & Co, Kingston, 10s; 2d do Hiram Alford, Bastard, Leeds, 5s.

Best 6 iron shovels, D. F. Jones & Co, Gananoque, 15s.

Best 6 spades, D. F. Jones & Co, Gananoque, 15s.

Best 6 steel hoes, D. F. Jones & Co, Gananoque, 15s.

The President, Baron de Longueuil's prize of £15 for the best labor-saving agricultural implement or machine, awarded to R. & R. S. Patterson, of Belleville, for a combined mower and reaper, being the same to which the first prize was awarded in section 29, £15.

Extra prizes in this department:—£3 to D. Conklin, Storrington, Frontenac, for horse-power thrashing machine; £1 10s to Salem Eckhardt, Markham, for potato and corn planter; 10s to Calvin Miller, Ernesttown, for corn sheller; £1 to Joseph Couddy, Kingston, for two horse thrashing machine; £2 to James Jeffrey, Petite Cote, Montreal, for double mould board plough; £1 to D. F. Jones & Co, Gananoque, for case of implements; 15s to do, for 6 steel grain scoops, 10s. to Jacob Huffman, Camden East, for thistle fork; £1 to R. Lownsbury, Grimsby, for corn planter; £1 to James Patterson, Montreal, for double mould plough.

CLASS XXVI.—LEATHER AND FURS.

67 Entries.

Judges—David Wilson, Chatham; John L. Dolson, Chatham; Geo. Fanning, Hastings.

Best saddle and bridle, John Wilton, Kingston, £1; 2d do do do 15s.

Best set of farm harness, John Wilton, Kingston, £1 10s.

Best set of pleasure harness, John Wilton, £1 10s; 2d do ——— Irwin, Montreal, £1.

Best side of sole leather, M W Strange, Kingston, 15s.

Best side of upper leather, John Macdonald, Baltimore, Northumberland, 15s; 2d do do do 10s; 3d do do do 5s.

Best kip skin, R. J. Minnes, Kingston, 15s; 2d do J. Miller, Picton Tannery Company, 10s; 3d do do do 5s.

Best stirrup leather, R. J. Minnes, Kingston, 15s.

Best skin cordovan, J. McDonald, Baltimore, Northumberland, 15s; 2d do do do, 10s; 3d do do do do, 5s.

Best specimen of belt leather, R. J. Minnes.

Best skirting leather, R. J. Minnes, Kingston, 15s.

Best side of harness leather, J. McDonald, Baltimore Township, 15s; 2d do do, 10s.; 3d do do, do, 5s.

Best calf skin, dressed, J. Miller, Picton Tannery Co. 15s; 2d do do do, 10s; 3d do do do, 5s.

Best skin of leather for carriage covers, R. J. Minnes, Kingston, £1.

Best fur hat, Clark Wright, Kingston, 15s; 2d do Domenico Chisachi, Kingston, 10s; 3d do Clark Wright, Kingston, 5s.

Best fur cap, Clark Wright, Kingston, 15s; 2d do Domenico Chisachi, Kingston, 10s; 3d do do do, 5s.

Best fur sleigh robe, Greene & Sons, Montreal, 15s; 2d do Clark Wright, Kingston, 10s.

Best specimen of bootmaker's work, Thomas Thompson, Kingston, 15s; 2d do do do, 10s; 3d do Samuel Chown, Kingston, 5s.

EXTRA PRIZES—To R. J. Minnes, for leather for ornamental work, 10s; to Domenico Chisachi, for silk hat, 5s—Paris style, 10s—do American style, 10s—do London style, 10s, and for lot of hats, diploma; Clark Wright, Kingston, for furs and hats, diploma; Greene & Sons, Montreal, for two sets of ladies' mink furs, 1 set gentlemen's do, and 1 hat, bought by Mr. Perry for the Sydenham Palace Exhibition, diploma.

CLASS XXVII.—MANUFACTURES IN METALS, &c.

133 Entries.

Judges—E. Birrell, Pickering; A. Bertram, Montreal; John Scholfield, Wexford; Morris C. Lutz, Galt; William Rudston, Kingston.

Best model in metal of engine, general mill-wright's work or machinery, Jas. Thompson, Toronto City, diploma and £2.

Best specimen of silversmith's work, W. C. Morrison, Toronto City, diploma and £2.

Best specimen of cast ornamental iron work, Wm. Rodden, Montreal, diploma and £1 10s.

Best specimen of pumpmaker's work, F. A. Whitney & Co. Toronto City, (rotary pumps,) diploma and £1.

Best lot of plumber's work, Neil McNeil, Kingston, £2 10s.

Best hall stove, W. Rodden, Montreal, £1; 2d do Hamilton & Chown, Kingston, 10s.

Best parlor stove, Hamilton & Chown, Kingston, £1; 2d do W. Rodden, Montreal, 10s.

Best cooking stove, with furniture, Hamilton & Chown, Kingston, £1 10s; 2d do do do, £1; 3d do W. Rodden, Montreal, 10s.

Best specimen of iron casting for stoves or general machinery, John R. Wood, Dickinson's Landing, (cast iron water wheel,) diploma.

Best balance scales, W. Rodden, Montreal, £1; 2d do do, do, 15s.

Best set of cooper's tools, H. H. Date, Galt, 15s.

Best set of bench planes, J. P. Millener & Co., Kingston, 15s.

Best earth augur, Antoine St. Jacques, Machiche, C. E. 10s.

Best specimen 20 cut nails, Walker & Berry, Kingston, 10s.

Best rifle, James H. Rowan, Kingston, diploma and 15s.

Best 6 narrow axes, H. H. Date, Galt, 15s; 2d do J. P. Millener & Co., Kingston, 10s.

Best set of horse shoes, Francis Tracy, Kingston, 15s.; 2d do James Hobbs, Toronto City, 10s.; 3d do do do, do, 5s.

Best assortment of edge tools, H. H. Date, Galt, diploma and £5.

EXTRAS.—Daniel S. Abbott, Kingston, carriage bolts, £1; J. A. Corbett, Kingston, Russian gun, 10s.; A. C. Chewitt & Co., iron axles for carriages, 10s.; do, bar iron manufactured from scrap, diploma and £1; U. Hawkins, Oshawa, self-acting wood-turning machine, 10s.; W. Marks, Toronto, fire engine, diploma and £2 10s.; Mason, Cook & Blakeney, Toronto, saw gummer, 10s.; do, lever jacks, 7s. 6d.; S. S. Blodgett, Brockville, improved baking oven, 15s.; R. M. Horsey, Kingston, stove trimmings, 5s.; John Condell, Kemptonville, for artificial leg, diploma; Pierson & Benedict, Niagara, for 2 locomotive truck wheels, and 2 passenger car do, diploma; Walker & Berry, Kingston, manufactured iron articles and samples iron, £1; Francis Tracy, Kingston, buggy draught irons, diploma; H. Ruttan, Cobourg, ventilating stove, diploma and £1 5s.; J. H. Headley, Walpole, marbleized granite, diploma; W. Rodden, Montreal, garden cultivator, 5s.; John Dawson, Montreal, planes, bought by Mr. Perry for Sydenham exhibition, diploma; J. J. Higgins, Montreal, edge tools, bought by Mr. Perry & Co., diploma; Wm. Meikleham, Montreal, morticing machine, bought by Mr. Perry & Co., diploma; Richard Tuck, Montreal, candle moulds and lettering plates for bags, 5s.; Wm. Berry, Montreal, sewing machine, 10s.; Wm. Evans, Kingston, Munnora pig iron and iron ore, diploma.

CLASS XXVIII.—CABINETWARE, CARRIAGES, &C.

133 Entries.

Juigs.—Isaac Modeland, Brampton; D. Coleman, Port Robinson; Thomas McLroy, Brampton; T. D. Hood, Montreal.

Best side board, James Morton, Kingston, diploma and £3, 2d do do do, £2

Best piano, Canadian manufacture, T. D. Hood, Montreal, diploma and £5; 2d do Seibold, Manby & Co., Montreal, £3; 3d do T. D. Hood, Montreal, £2.

Best veneers from Canadian wood, Adam Main, Kingston, diploma and £1.

EXTRAS.—Collection Canadian woods, Andrew Dickson, Kingston, diploma.

Best specimen of graining wood, Robert McLean, Perth, Lanark, diploma and £1 10s.; 2d do James White, Brockville, £1.

Best centre table, William Bevis, Hamilton, diploma and £1; 2d do George Kemp, Kingston, 15s.

Second best easy arm chair, T. Fuller & Co., Oshawa, 10s.; 3d do James Morton, Kingston, 5s.

- Best sofa, T. Fuller & Co., Oshawa, diploma and £3; 3d do James Morton, Kingston, £1.
- Best six dining room chairs, James Morton, Kingston, 2d prize, £1.
- Best Ottoman, Adam Main, Kingston, £1.
- Best writing desk, H. Pellatt, Kingston, 10s.
- Best 1 horse pleasure carriage, Joseph Tees, Montreal, diploma and £2; 2d do D. Tice, Caistorville, £1 10s.; 3d do Linter & Lintou, Kingston, 15s.
- Best 2 horse pleasure carriage, Samuel Lake, Newburg, diploma and £2; 2d do George Mink, £1 10s.; 3d do M. Hutchison, Yorkville, £1.
- Best one horse sleigh, John Webster & Co, Bath, Addington, £1 10s.; 2d do do, do, £1; 3d do Samuel Lake, Newburg, 10s.
- Best half-dozen corn brooms, R. A. Holmes, Kingston, 10s.; 2d do Charles Clarke, Kingston, 5s.
- Best wooden pail, D. B. Booth, Odessa, Addington, 7s. 6d.; 2d do Aaron Dame, Belleville, 5s.
- Best wash tub, Aaron Dame, Belleville, 7s. 6d.; 2d do do, do, 5s.
- Best washing machine, Salem Eckhardt, Markham, 10s.; 2d do James & Dennis, Newmarket, 5s.
- Best 4 or 6 pannelled door, Robertson & Shaw, Whitby, 15s.; 2d do James Shearer, Montreal, 10s.; 3d do do, do, 5s.
- Best window sash, 12 lights, hung in frame, Robertson & Shaw, Whitby, 15s.; 2d do James Shearer, Montreal, 10s.; 3d do John Ostell, do, 5s.
- Best model beehive, W. Phelps, Brighton, Northumberland, 10s.

Extra prizes in this department—to F. M. Andrews, Picton, for melodeon, £1; do do do for melodeon, 15s.; to A. B. Kent, Newcastle, three melodeons, 10s. highly recommended; to McLeod & Co. Port Hope, blinds for windows, 5s.; do do, mouldings in wood, 5s. Peter Lenea, Kingston, child's carriage, 5s.; G. A. Sargent, Bloomfield, P. E., weaving loom, highly recommended, £1 10s.; Aaron Dame, Belleville, half-bushel measure, 5s.; do do, half-bushel measure, 5s.; Henry Pellatt, Kingston, gentleman's dressing case, 5s.; Oliver Mowat, Kingston, 1 puncheon, 10s.; do do, 1 barrel, 7s. 6d.; do do, half-barrel, 5s.; Wm. Cunningham, Jr. Kingston, parlour organ, £1 5s.; James Morton, Kingston, fire screens, 10s.; W. Murdock, Kingston, imported melodeons and pianos, recommended; John Ostell, Montreal, window blinds, 5s.; do do, mouldings, 5s.; Francis Tracy, Kingston, child's carriage, 5s.; S. S. Hiekok, clothes horse, recommended; D. O. Gorman, Kingston, pleasure boat, £2 10s., McKean & Co. Toronto, for articles bought by Mr. Perry, for Sydenham Exhibition, viz:—sideboard, sofa, centre-table, chairs, sewing chair, card tables, fire screens, prie dieu chair, diploma; James Shearer, Montreal, window blind, 10s.; do do sample mouldings, 5s.; T. J. Fuller & Co. Oshawa, lady's easy chair, 10s.; L. J. Gauthier, Montreal, 2 sleighs, 2 trotting sleighs, 1 sulky, bought by Mr. Perry for Sydenham Palace, diploma.

CLASS XXIX.—POTTERY.

13 Entries.

Judges—Alexander Bertram, Montreal; Ebenezer Birrell, Pickering; John Schofield, Welland; Morris C. Lutz, Galt; William Rudston, Kingston.

Best specimen of Pottery, John Mooney, Prescott, £1.

Best specimen of draining tiles and pipes of different sizes, W. Lea, Toronto £2 10s.; 2d do Joshua Sisley, Scarboro, £1 5s.; 3d do W. Lea, Toronto, 10s.

Best 12 bricks, Daniel Gould, Napanee, 10s.; 2d do Joshua Sisley, Scarborough, 5s.

Best water filter, D. Raymond, Galt, 15s.

Best assortment of pottery, John Mooney, Prescott, £1 10s.

Diploma to Thomas Bramley, for Toronto Brick Company, for two cases of pressed bricks, and prize of £1.

CLASS XXX.—WOOLLEN AND FLAX GOODS.

122 Entries.

Judges—Wm. Mann, Barrie; Robert Warren, Niagara; Thomas D. Farley, Hastings.

Best piece of not less than 12 yards of woollen carpet, P. R. Palmer, Thurlow, Hastings, £2; 2d do Mrs. Mark, Burnham, Port Hope, £1; 3d do, Coleman Bristol, Ernesttown, Addington, 10s.

Best pair woollen blankets, G. M. Barton, Dundas, Wentworth, £2; 2d do, do, do, £1; 3d do do, do, 10s.

Best counterpane, Daniel Campbell, Charlottenburg, Glengarry, £1; 2d do James J. Farley, Thurlow, Hastings, 15s.; 3d do Ebenezer Perry, Ernesttown, Addington, 10s.

Best piece 12 yards flannel, G. M. Barton, Dundas, Wentworth, £1; 2d do R. Spooner, Kingston, 15s.; 3d do G. M. Barton, Dundas, Wentworth, 10s.

Best piece satinett, 12 yards, P. R. Palmer, Thurlow, £1; 2d do R. Spooner, Kingston, 15s.; 3d do A. McMillan, Kingston Tp. 10s.

Best piece broad cloth, Canadian wool, G. M. Barton, Dundas, 2d prize, £1; 3d G. C. Hineman, Ancaster, 10s.

Best piece flannel, 10 yards, not factory made, R. McD. Huffman, Ernesttown, 15s.; 2d do do, do, 10s.; 3d do Daniel Campbell, Charlottenburg, Glengarry, 5s.

Best piece fulled cloth, 10 yards, not factory made, Nathan A. Briscoe, Ernesttown, £1 10s.; 2d do John Asselstein, Ernesttown, £1; 3d do James J. Farley, Thurlow, 10s.

Best shawls, not factory made, Joseph D. Purdy, Ernesttown, £1 10s.; 2d do do, do, £1; 3d do do, do, 10s.

Best piece linen goods, Daniel Campbell, Glengarry, 15s.; 2d do do, do, 10s.; 3d do R. Davison, Bastard Tp. 5s.

Best samples of flax or hemp cordage, not less than 28 lbs. James Cooper, Kingston, 15s.; 2d do do, do, 10s.; 3d do do, do, 5s.

Best 12 linen bags, manufactured from flax, growth of Canada, D. Campbell, Charlottenburg, £1; 2d do Thomas Thompson, Williamsburg, Dundas, 15s.

Extra prizes in this department—to Geo. Barton, Dundas, for fine Canada grey cloth, £1 10s.; to Miss Harriet Hinds, Bowmanville, for a sofa pillow, 5s.; to Daniel Campbell, Glengarry, for linen sheets, linen table cloths, and pillow cases, £1; and to Mrs. Charles Grass, Kingston Tp. for a wool and cotton carpet, 15s.

LADIES' DEPARTMENT.

CLASS XXXI.

375 Entries.

Judges—Mrs. Geddes, Baroness de Longueuil, Mrs. Bouchier, Mrs. Flanagan, Mrs. Briggs, Mrs. Saddleir.

Best specimen of crochet work, Miss Harriet Bidwell, Northumberland, £1; 2d do Miss Douglass, Kingston, 15s.; 3d do Mrs Joseph Ferris, Kingston, 10s.

Best specimen of Guipure work, Mrs D. Bentley, Kingston, £1; 2d do Miss M. J. Tisdale, St. Catherines, 15s; 3d do Miss H. Bidwell, Northumberland, 10s.

Best specimen of lace work, Mrs. John Cox, Toronto City, £1; 2d do do, do, 15s; 3d do Mrs Wicksteed, Kingston, 10s.

Best specimen of fancy knitting, Miss Lightburne, Trenton, 15s; 2d do do, do, 10s; 3d do Mrs Agar, Toronto, 7s. 6d.

Best specimen of fancy netting, Miss Dupuy, Kingston, 15s; 2d do Miss Birrell, Pickering, 10s; 3d do Miss Dupuy, Kingston, 7s. 6d.

Best embroidery, in muslin, Miss Stevenson, Kingston, 15s; 2d do Miss M. J. Tisdale, St Catherines, 10s; 3d do do, do, 7s. 6d.

Best embroidery, in silk, Mrs. Pollard, Hamilton, 15s; 2d do do, do, 10s; 3d do do, do, 7s. 6d.

Best embroidery in worsted, Mrs Joseph Ferris, Kingston, 15s.

Best specimen of worsted work, Mrs Unwin, Toronto, 15s; 2d do Miss Jane Cumine, Wellington, 10s; 3d do Miss J. E. Wilson, Kingston, 7s. 6d.

EXTRA PRIZES.—Mrs. Matthew Rourke, Kingston, 5s; Mrs. Weller, Cobourg, 5s; Miss Cosens, Toronto, 5s; Mrs Finden, Belleville, 5s.

Best specimen raised worsted work, Miss M. Rourke, Kingston, 15s.; 2d do Miss Ferguson, Pittsburg, 10s.; 3d do Miss E. Jackson Kingston, 7s. 6d.

Best specimen of ornamental needle work, Mrs. Unwin, Toronto, 15s.; 2d do do, do, 10s.; 3d do do, do, 7s. 6s.

EXTRA PRIZES.—Miss Tisdale, St. Catherines, 7s. 6d.; Miss Dority, Niagara, 7s. 6d.

Best specimen of quilts, in crochet, Mrs. Heald, Toronto, £1.

Best specimen of quilts in knitting, Margaret Rice, Kingston, £1; 2d do Elizabeth Makins, Kingston, 15s.; 3d do Miss M. Patterson, Amherst Island 10s; 4th do Miss White, Kingston, 7s. 6d.; 5th do Mrs. Orr, Kingston, 5s.

Best specimen of quilts, in silk, Mrs. Joseph Ferris, Kingston, £1; 2d do Mrs. Shaver, Fredericksburg, 15s.; 3d do Mrs. Joseph Ferris, Kingston, 10s.

Best piece-work quilt, Mrs. John Savage, Kingston, £1; 2d do Mrs. John Chatterton, Richmond, 15s.; 3d do Maria Card, Wolfe Island, 10s.; 4th do Mrs. Shaver, Waterloo, 5s.; 5th do Mrs. John Bush, Wolfe Island, 5s.; 6th do Mrs. Fox, Waterloo, 5s.

Best specimen of tatting, Mrs. W. Boulton, Toronto City, 15s.; 2d do do, do, 10s.

Best specimen of braiding, Margaret Hacker, Niagara, 15s.; 2d do Mrs. Thos. Briggs, Kingston, 10s.; 3d do Miss H. Bidwell, Northumberland, 7s. 6d.; 4th do Miss L. Barker, Kingston, 5s.

Best specimen of wax fruit, Miss J. A. Todd, Oswego, N. Y., 15s.; 2d do Mrs. Bajus, Kingston, 10s.

Best specimen of wax flowers, Miss Annie Price, Belleville, 15s.; do discretionary prize, (equal) Mrs. Bajus, Kingston, 15s.; 2d do Miss Jenks, Rochester, 10s.; 3d do Miss Annie Price, Belleville, 5s.

Best pair woollen socks, Mrs. E. D. Moore, York Tp., 10s.; 2d do Mrs. Nelson Dollar, Fredericksburgh, 7s. 6d.; 3d do Mrs. Chas. Dollar, do, 5s.

Best pair woollen stockings, Mrs. E. D. Moore, York Tp., 10s.; 2d do Mrs. Nelson Dollar, Fredericksburg, 7s. 6d.; 3d do Mrs. Coleman Bristol, Newburg, 5s.

Best specimen of gentlemen's shirts, Mrs. Mark Burnham, Port Hope, 15s.; 2d do do, do, 10s.; 3d do Mrs. E. Jackson, Kingston Tp., 5s.

Best pair of woollen mittens, Miss J. Ferguson, Charlottenburg, 10s.; 2d do Miss E. Jackson, Kingston Tp., 7s. 6d.; 3d do Mrs. William Tubbs, Hallowell, Prince Edward, 5s.; 4th do Mrs. Palmer, Thurlow, 5s.

Best 12 bricks, Daniel Gould, Napanee, 10s.; 2d do Joshua Sisley, Scarborough, 5s.

Best water filter, D. Raymond, Galt, 15s.

Best assortment of pottery, John Mooney, Prescott, £1 10s.

Diploma to Thomas Bramley, for Toronto Brick Company, for two cases of pressed bricks, and prize of £1.

CLASS XXX.—WOOLLEN AND FLAX GOODS.

122 Entries.

Judges—Wm. Mann, Barrie; Robert Warren, Niagara; Thomas D. Farley, Hastings.

Best piece of not less than 12 yards of woollen carpet, P. R. Palmer, Thurlow, Hastings, £2; 2d do Mrs. Mark, Burnham, Port Hope, £1; 3d do, Coleman Bristol, Ernesttown, Addington, 10s.

Best pair woollen blankets, G. M. Barton, Dundas, Wentworth, £2; 2d do, do, do, £1; 3d do do, do, 10s.

Best counterpane, Daniel Campbell, Charlottenburg, Glengarry, £1; 2d do James J. Farley, Thurlow, Hastings, 15s.; 3d do Ebenezer Perry, Ernesttown, Addington, 10s.

Best piece 12 yards flannel, G. M. Barton, Dundas, Wentworth, £1; 2d do R. Spooner, Kingston, 15s.; 3d do G. M. Barton, Dundas, Wentworth, 10s.

Best piece satinett, 12 yards, P. R. Palmer, Thurlow, £1; 2d do R. Spooner, Kingston, 15s.; 3d do A. McMillan, Kingston Tp. 10s.

Best piece broad cloth, Canadian wool, G. M. Barton, Dundas, 2d prize, £1; 3d G. C. Hineman, Ancaster, 10s.

Best piece flannel, 10 yards, not factory made, R. McD. Huffinan, Ernesttown, 15s.; 2d do do, do, 10s.; 3d do Daniel Campbell, Charlottenburg, Glengarry, 5s.

Best piece fulled cloth, 10 yards, not factory made, Nathan A. Briscoe, Ernesttown, £1 10s.; 2d do John Asselstein, Ernesttown, £1; 3d do James J. Farley, Thurlow, 10s.

Best shawls, not factory made, Joseph D. Purdy, Ernesttown, £1 10s.; 2d do do, do, £1; 3d do do, do, 10s.

Best piece linen goods, Daniel Campbell, Glengarry, 15s.; 2d do do, do, 10s.; 3d do R. Davison, Bastard Tp. 5s.

Best samples of flax or hemp cordage, not less than 28 lbs. James Cooper, Kingston, 15s.; 2d do do, do, 10s.; 3d do do, do, 5s.

Best 12 linen bags, manufactured from flax, growth of Canada, D. Campbell, Charlottenburg, £1; 2d do Thomas Thompson, Williamsburg, Dundas, 15s.

Extra prizes in this department—to Geo. Barton, Dundas, for fine Canada grey cloth, £1 10s.; to Miss Harriet Hinds, Bowmanville, for a sofa pillow, 5s.; to Daniel Campbell, Glengarry, for linen sheets, linen table cloths, and pillow cases, £1; and to Mrs. Charles Grass, Kingston Tp. for a wool and cotton carpet, 15s.

LADIES' DEPARTMENT.

CLASS XXXI.

375 Entries.

Judges—Mrs. Geddes, Baroness de Longueuil, Mrs. Bouchier, Mrs. Flanagan, Mrs. Briggs, Mrs. Sadleir.

Best specimen of crochet work, Miss Harriet Bidwell, Northumberland, £1; 2d do Miss Douglass, Kingston, 15s.; 3d do Mrs Joseph Ferris, Kingston, 10s.

Best specimen of Guipure work, Mrs D. Bentley, Kingston, £1; 2d do Miss M. J. Tisdale, St. Catherines, 15s; 3d do Miss H. Bidwell, Northumberland, 10s.

Best specimen of lace work, Mrs. John Cox, Toronto City, £1; 2d do do, do, 15s; 3d do Mrs Wicksteed, Kingston, 10s.

Best specimen of fancy knitting, Miss Lightburne, Trenton, 15s; 2d do do, do, 10s; 3d do Mrs Agar, Toronto, 7s. 6d.

Best specimen of fancy netting, Miss Dupuy, Kingston, 15s; 2d do Miss Birrell, Pickering, 10s; 3d do Miss Dupuy, Kingston, 7s. 6d.

Best embroidery, in muslin, Miss Stevenson, Kingston, 15s; 2d do Miss M. J. Tisdale, St Catherines, 10s; 3d do do, do, 7s. 6d.

Best embroidery, in silk, Mrs. Pollard, Hamilton, 15s; 2d do do, do, 10s; 3d do do, do, 7s. 6d.

Best embroidery in worsted, Mrs Joseph Ferris, Kingston, 15s.

Best specimen of worsted work, Mrs Unwin, Toronto, 15s; 2d do Miss Jane Cumine, Wellington, 10s; 3d do Miss J. E. Wilson, Kingston, 7s. 6d.

EXTRA PRIZES.—Mrs. Matthew Rourke, Kingston, 5s; Mrs. Weller, Cobourg, 5s; Miss Cosens, Toronto, 5s; Mrs Finden, Belleville, 5s.

Best specimen raised worsted work, Miss M. Rourke, Kingston, 15s; 2d do Miss Ferguson, Pittsburg, 10s.; 3d do Miss E. Jackson Kingston, 7s. 6d.

Best specimen of ornamental needle work, Mrs. Unwin, Toronto, 15s.; 2d do do, do, 10s.; 3d do do, do, 7s. 6s.

EXTRA PRIZES.—Miss Tisdale, St. Catherines, 7s. 6d.; Miss Dority, Niagara, 7s. 6d.

Best specimen of quilts, in crochet, Mrs. Hodder, Toronto, £1.

Best specimen of quilts in knitting, Margaret Rice, Kingston, £1; 2d do Elizabeth Makins, Kingston, 15s.; 3d do Miss M. Patterson, Amherst Island 10s; 4th do Miss White, Kingston, 7s. 6d.; 5th do Mrs. Orr, Kingston, 5s.

Best specimen of quilts, in silk, Mrs. Joseph Ferris, Kingston, £1; 2d do Mrs. Shaver, Fredericksburg, 15s.; 3d do Mrs. Joseph Ferris, Kingston, 10s.

Best piece-work quilt, Mrs. John Savage, Kingston, £1; 2d do Mrs. John Chatterton, Richmond, 15s.; 3d do Maria Carl, Wolfe Island, 10s.; 4th do Mrs. Shaver, Waterloo, 5s.; 5th do Mrs. John Bush, Wolfe Island, 5s.; 6th do Mrs. Fox, Waterloo, 5s.

Best specimen of tatting, Mrs. W. Boulton, Toronto City, 15s.; 2d do do, do, 10s.

Best specimen of braiding, Margaret Hacker, Niagara, 15s.; 2d do Mrs. Thos. Briggs, Kingston, 10s.; 3d do Miss H. Bidwell, Northumberland, 7s. 6d.; 4th do Miss L. Barker, Kingston, 5s.

Best specimen of wax fruit, Miss J. A. Todd, Oswego, N. Y., 15s.; 2d do Mrs. Bajus, Kingston, 10s.

Best specimen of wax flowers, Miss Annie Price, Belleville, 15s.; do discretionary prize, (equal) Mrs. Bajus, Kingston, 15s.; 2d do Miss Jenks, Rochester, 10s.; 3d do Miss Annie Price, Belleville, 5s.

Best pair woollen socks, Mrs. E. D. Moore, York Tp., 10s.; 2d do Mrs. Nelson Dollar, Fredericksburgh, 7s. 6d.; 3d do Mrs. Chas. Dollar, do, 5s.

Best pair woollen stockings, Mrs. E. D. Moore, York Tp., 10s.; 2d do Mrs. Nelson Dollar, Fredericksburg, 7s. 6d.; 3d do Mrs. Coleman Bristol, Newburg, 5s.

Best specimen of gentlemen's shirts, Mrs. Mark Burnham, Port Hope, 15s.; 2d do do, do, 10s.; 3d do Mrs. E. Jackson, Kingston Tp., 5s.

Best pair of woollen mittens, Miss J. Ferguson, Charlottenburg, 10s.; 2d do Miss E. Jackson, Kingston Tp., 7s. 6d.; 3d do Mrs. William Tubbs, Hallowell, Prince Edward, 5s.; 4th do Mrs. Palmer, Thurlow, 5s.

Best pair of woollen gloves, Mrs. Joseph D. Purdy, Ernesttown, Addington, 10s.; 2d do Mrs. E. Jackson, Kingston, 7s. 6d.; 3d do do, do, 5s.

Best hat of Canadian straw, Mrs. John Hopkins, Ernesttown, Addington, 10s.; 2d do do, do, 7s. 6d.; 3d do Mrs. R. E. Grass, Sydney, Hastings, 5s.

The following were awarded extra prizes for ladies' work:—Mary P. G. Cole, Kingston, specimens hair braiding, 15s.; do Miss Tisdale, St. Catharines, embroidery in cambrie, 10s.; discretionary, Miss Tisdale, leather work frames, 10s.; do do, vase in potichomania, 10s.; do do, German bead mat, 5s.; do Mrs. Daniel Campbell, Charlottenburg, linen goods, 10s.; do Mrs. Archibald McMillan, Kingston, China coverlet, 5s.; do Ann McLaehlan, Kingston, fancy work, 15s.; do Mrs. Joseph Ferris, do, window curtains, 5s.; do do, tree of worsted flowers, 5s.; 1st do piece velvet painting, 15s.; discretionary, Miss J. Howard, Toronto, specimens hair braiding, 10s.; do Mrs. Fox, Waterloo, fancy basket, 5s.; do Miss Barker, Kingston, leather picture frames, with Canadian mosses, &c., £1 5s.; do Miss Birrell, Pickering, down muff and boa, 10s.; N. A. Brisbane, linen stockings, 7s. 6d.; Miss Hawley, muslin work, 10s.

FINE ARTS, &c.

CLASS XXXII.—FINE ARTS, &c.

147 Entries.

Judges—J. D. Humphreys, Toronto; E. J. Baker, Kingston; C. W. Cooper, Kingston.

PROFESSIONAL LIST.

Oil.

Historical painting, Canadian subject, Paul Kane, Toronto, diploma and £3
Landscape, Canadian subject, Paul Kane, Toronto, diploma and £3; 2d do do, do, £2.
Animals, grouped or single, Paul Kane, Toronto, diploma and £3.
Best portrait, Paul Kane, Toronto, £2 10s.

Pencil and Crayon.

Coloured crayon, Wm. Armstrong, Toronto, diploma and £1 10s.

AMATEUR LIST.

Oil.

Landscape, Canadian subject, Miss Imogene Jones, Brockville, diploma and £1 10s.
Portrait, Miss Ida C. Jones, Brockville, diploma and £2.

Water Colours.

Flowers, Hon. Mrs. Rollo, Kingston, diploma and £1; 2d do Miss M. Thompson, Toronto, 15s.; 3d do Miss Eccles, Toronto, 10s.

Pencil and Crayon.

Crayon portrait, Miss Imogene Jones, Brockville, diploma and £1.
Pencil drawing, Miss Tisdale, St. Catharines, diploma and £1; 2d do Miss Nagel, Kingston, 15s.
Crayon drawing, Miss Imogene Jones, Brockville, diploma and £1; 2d do Miss Jane Benton, Kingston, 15s.
Coloured crayon, Miss Martha Thompson, Toronto, diploma and £1; 2d do Miss Ann Benson, Kingston, 15s.; 3d Miss Ida C. Jones, Brockville, 10s.

MISCELLANEOUS.

- Best specimen architectural drawing, Henry Horsey, Kingston, £1 10s.
 Daguerreotype, best collection, the exhibitor to have operated in Canada for the last twelve months, Hiram Lajier, Picton, Prince Edward, diploma and £1 10s.; 2d do do, do, £1.
 Wood engraving, Thomas Wheeler, Toronto, diploma and £1 10s.
 Engraving on Copper, Thomas Wheeler, Toronto, diploma and £1 10s.
 Engraving on Steel, Thomas Wheeler, Toronto, diploma and £1 10s.
 Best specimen of seal engraving, Thomas Wheeler, Toronto, diploma and £2.
 Best specimen carving in wood, David Fleming, Toronto, diploma and £2.
 Best specimen carving in stone, Edwin R. Welsh, Kingston, diploma and £2; 2d do Smith & Anderson, London £1.
 Ornamental penmanship, H. Gilbert, Belleville, diploma and £1; 2d do Miss Julia A. Todd, Oswego, N. Y., 10s.
 Stuffed birds, Samuel W. Passmore, Toronto, £1; 2d do Edwin Abrahams, Kingston, 10s.
 Picture frame, gilt, John Roberts, Hamilton, £1; 2d do do, do, 10s.
 Picture frame, veneered, Alex. Calder, Kingston, £1.
 Stained glass, J. C. Spence, Montreal, £1.
 Dentistry, Miles B. Stennett, Hamilton, diploma and £1; 2d do Br. W. Davy, Kingston, 10s.

EXTRA PRIZES IN FINE ARTS.—Miss Tisdale, St. Catharines, landscape in water colours, £1 10s.; do do, do, £1; Stewart Westmacott, Toronto, oil painting, £1 5s.; do do, do, £1 15s.; Messrs. Pellatt, London, England, superior specimens of English ground and cut glass, diploma; Wm. Armstrong, Toronto colored and uncolored photographs, diploma and £2; Miss Anne Benson, Kingston, oil painting, £1; Alex. Calder, Kingston, money box, 5s.; Miss Barker, Kingston, 3 leather work picture frames, £1 5s.; Blodgett & Leggo, Brockville, dental instruments, £1 10s.; Mrs. John Bush, Wolfe Island, leather picture frame, 5s.; Edwin Abrahams, Kingston, gun and fishing tackle, 10s.; Thomas Robinson, Kingston, oil painting, banner, £1 10s.; Archibald M. Barr, Toronto, lithography and engraving, £1 10s.; John Roberts, Hamilton, piece mirror frame, £1 5s.; George Arnheim, Kingston, rustic work, 10s.; William Simpson, Hamilton, pen and ink sketch, £1; Miss C. Harper, Kingston, pen and ink etchings, £1; Mrs. Smith, Kingston, for miniature steamboat, 10s.; Adam Main, Kingston, for leather work picture frame, 10s.; Wm. Martin, Kingston, for model vessel, 10s.; Miss Julia Todd, Oswego, for painting on glass—vase of flowers, 15s.; Molecar & Co., Toronto, 5 prizes for five specimens of lithography, £2 10s.; S. W. Chubbuck, Utica, N. Y., for telegraphic instruments, diploma and £1; E. Birrell, Pickering, for 7 landscapes, Scottish scenery, £2 10s.; Miss Eccles, Toronto, for 2 water colour landscapes, 2 prizes, £2 10s.; W. R. Ellmore, Belleville, for lithographed map—County Hasting, 15s.; S. P. May, Toronto, for ornamental design—Arms, Education Department, diploma and £1; Nathan Samuels, Paris, France, 3 boxes platina steel pens, diploma.

CLASS XXXIII.—INDIAN PRIZES.

17 Entries.

Judges—J. D. Humphreys, Toronto; E. J. Barker, Kingston; C. W. Cooper, Kingston.

Pair moccasins, worked with beads, Mary Ann Louis, St. Regis, 5s; do Mary Louis, do, 5s; do Mary Dodds, do 5s.

EXTRAS.—Mary Ann Louis, various specimens Indian work, 15s; Mary Louis, do, 15s; Mary Dodds, do, 10s.

CLASS XXXIV.—BOOKBINDING, PAPER, &c.

25 Entries.

Judges—J. D. Humphreys, E. J. Barker, C. W. Cooper.

Best specimen bookbinding, Gentry & Brown, Hamilton, £1; 2nd do John Duff, Kingston, 15s; 3rd do Gentry & Brown, 10s.

Charles Hobrough, Kingston, extra prize, equal to 1st, £1.

Best ream of writing paper, James Chalmers, Montreal, £1; 2d do do, do, 15s; 3d do do, do, 10s.

Best ream of printing paper, James Chalmers, Montreal, £1; 2d do do, do, 15s.

Best and cheapest ream wrapping paper, made from any material, James Chalmers, Montreal, £1; 2d do Geo. Babcock, Brantford, 15s; 3d do James Chalmers, Montreal, 10s.

Best specimen letter-press printing, executed since last exhibition. John Blackburn, Toronto, £2 10s; 2d do do, do, £1 10s; 3d do Thompson & Co., Toronto, £1.

EXTRA ENTRIES.—J. Blackburn, Toronto, map printing in typography dis. £1 5s; John H. Stephens, Kingston, Illustrated Bible, (foreign publication,) recommended.

FOREIGN STOCK AND IMPLEMENTS.

CLASS XXXV.—FOREIGN STOCK.

3 Entries.

Judges—Baron de Longueuil, Kingston; E. W. Thomson, Toronto; George Alexander, Woodstock.

Best stallion for agricultural purposes, R. McNeill, Cayuga Co., New York State, diploma and £3; 2d do do, do, £3.

EXTRA.—William Runyan, Watertown, New York, single carriage horse, £2.

CLASS XXXVI.—FOREIGN AGRICULTURAL IMPLEMENTS.

41 Entries.

Best plough, Rapalje & Co. Rochester, New York, £1.

Best subsoil plough, Rapalje & Co. Rochester New York, diploma and £1.

Best pair harrows, Rapalje & Co. Rochester New York, diploma and £1.

Best fanning mill, Rapalje & Co. Rochester, New York, diploma and £1.

Best horse power thrasher and separator, Rapalje & Co, Rochester, N. Y., diploma and £2 10s.

Best seed drill or barrow, Rapalje & Co, Rochester, N. Y., diploma and £1.

Best straw cutter, Rapalje & Co., Rochester, N. Y., diploma and £1.

Best smut machine, Rapalje & Co., Rochester, N. Y., diploma and £1.

Best portable grist mill, Rapalje & Co, Rochester, N. Y., diploma and £2 10s.

Best grain cracker, Rapalje & Co, Rochester, N. Y., diploma and £1 10s.

Best machine for cutting roots for stock, Rapalje & Co, Rochester, N. Y., diploma and £1.

Best corn and cob crusher, Rapalje & Co., Rochester, N. Y., diploma and £1.

Best clover machine, Rapalje & Co, Rochester, N. Y., diploma and £2.

Best reaping machine, Rapalje & Co, Rochester, N. Y., diploma and £2 10s.

Best cultivator, Rapalje & Co, Rochester, N. Y., diploma and £1 5s.

Best assortment of agricultural implements and edge tools, Rapalje & Co., Rochester, N. Y., diploma and £5.

EXTRA FOREIGN IMPLEMENTS, &C.

- Cowing & Co., Seneca Falls, N. Y., fire engine, diploma and £2.
 Fairbanks, Vermont, No. 7 scales, £1 5s.
 do do No. 11 scales, £1.
 do do Union scales, 15s.
 do do Counter scales, 10s.
 do do 4 ton scales, 10s.
 Cowing & Co, Seneca Falls, N. Y., discharge pipe for engine, 10s.
 Rapalje & Co, Rochester, horse hoes, 1st prize, 10s.
 do do drill plough, do, 15s.
 do do corn plough, do, 10s.
 do do clod crusher, do, £1.
 John Bowly, Baldwinsville, N. Y., grain cradle, 10s.

COUNTY AGRICULTURAL REPORTS.

- Best Agricultural Report on the County of Addington, Dr. E. J. Barker, Kingston, £15.
 Best Report on the County of Huron, Thos. McQueen, Esq., Goderich, £15.

MEETING OF THE BOARD.

The Board met, pursuant to adjournment, from Friday, September 27th, on Saturday, 28th, at 9 A. M., the same members being present as on the previous days of the Fair, with the exception of Professor Buckland, who was absent, from indisposition. After arranging various matters of detail connected with the closing of the Exhibition, the Board adjourned till further notice.

PRIZE AGRICULTURAL REPORT, 1856.

REPORT ON THE COUNTY OF ADDINGTON.

BY DR. E. J. BARKER, OF KINGSTON.

(To which the Prize of £15, offered by the Board was awarded.)

“Domine dirige nos.”

The County of Addington is one of the five counties of Upper Canada which once formed its Midland District—comprising Frontenac, Lennox, Addington, Prince Edward and Hastings. The two latter have long been set off as independent counties, while the three former are still joined together for Judicial and Municipal purposes, and now known as the United Counties of Frontenac, Lennox and Addington. Lennox and Addington have still a closer tie, being joined together for the purpose of returning one Representative to the Legislative Assembly of Canada. But singular enough to say, Addington is disjoined from Lennox in the choice of a Legislative Councillor. Of the three United Counties, the City of Kingston is the County Town, the site of the Court House and County Jail, and the place of holding the Courts of Assize and Oyer et Terminer, and the Sitzings of the United Counties Council.

Addington is one of the oldest and earliest settled Counties in the Upper part of the Province. It was originally peopled by the United Empire Loyalists, who on the conclusion of the Revolutionary War of the United States in 1783, took advantage of several Royal Proclamations, came into Upper Canada and obtained grants of land for themselves and their children. These settlers were mostly Dutch and Germans from the valley of the Mohawk, which accounts for the Dutch and German surnames which prevail in all the settled townships of the county. The industry of these people is proverbial—they brought with them to Canada the steady habits, perseverance and sobriety of their forefathers, and speedily converted an utter wilderness into smiling fields of plenty. These remarks are applicable to the inhabitants of the whole country abutting on the shores of the Bay of Quinte, and not solely to those of the County of Addington, of which one township only, Ernestown, (for Amherst Island was not settled till many years later,) abuts on the bay, and can be said to reap the advantages of such early settlement.

The County of Addington contains six townships, viz :—Amherst Island, Ernestown, Camden, Sheffield, Kaladar and Anglesea, all of which save Anglesea and Kaladar are well settled; besides a large tract of land to the northward of Anglesea, and extending as far as the river Ottawa, until lately unsurveyed and unappropriated, and useful only as affording ample space for the labors of the lumberman. The six townships named lie in one range from south to north, of the breadth of ten miles each, but not quite of equal depths, though with the exception of Amherst Island, one hundred square miles may be the average contents of each. The location of the county can be thus described—butting on the eastern extremity of Lake Ontario, about 10 miles west of Kingston, 200 miles west of Montreal, 30 miles east of Belleville, 70 miles east of Cobourg, and 150 miles east of Toronto. The population of the county cannot be estimated at less than 21,000. When the last census was taken in 1851-2, the

population was rated at 15,165 souls, since when the increase cannot be less than at the rate of ten per cent. per annum; for though Ernestown and part of Camden could not admit of a much denser rural population while land is still so cheap and plentiful, yet all the other Townships are capable of having their population quadrupled without inconvenience. An addition of four years' growth must therefore be added to the census of 1851-2, viz; 6068, making the population of Addington in 1856, 21,223 souls. In estimating the statistics of the County, and consequently those of the several Townships, the published Census alluded to, and the Township Assessment Rolls for 1855 are the authorities for the same, making an allowance of four years' increase in the one, and one year's only in the latter, at the rate of ten per cent. per annum. This is not too great a ratio, for the County of Addington is one of the finest Agricultural Counties in the Province, and its back townships are filling up rapidly. Witness Sheffield, which four years ago contained rate-payers scarcely entitling it to send one member to the County Council, in 1855 sent both Reeve and Deputy Reeve to that body, thus proving that its number of rate-payers had increased five fold. And the impetus recently given by the Government to the settlement of the waste lands in the rear of the County, cannot fail greatly to increase the population.

The soil of the county can safely be pronounced excellent for agricultural purposes, and more particularly so in Anherst Island, Ernestown and Camden. In the rear townships the land is much broken by rock and water, but the arable land within them is considered of most superior quality, all of which will be shown more at length, while treating of the several Townships.

The Geological formation of the County of Addington is of the secondary formation of the upper silurian group. The base of the county is Limestone, which too often makes its appearance on the surface. This is more particularly the case in Sheffield and Kaladar, where the Granite rocks are likewise too plentiful to be pleasing. In speaking of these granite formations, and also of the abundant calciferous sandrock, which ordinary Geologists would term primary, Mr. Billings, who is good authority, says—"Although these rocks, the Laurentian, are certainly of secondary formation, that is, were formed at the bottom of some vastly ancient sea, after the creation of the world, yet on account of their wide diffusion, for they without doubt underlie the fossiliferous rocks, they may be assumed for our present purpose, (the classification of rocks) to have been the original surface of the earth. They constructed the floor of the ocean, and we shall consider the Laurentian as the foundation, supporting all the rest." The useful materials found in this county consist of magnetic, and specular ores of iron, galena, and plumbago; of grind stones, scythe stones, whet stones, lithograph stones, marble, large slabs of limestone, brick clay, water lime and soap stone.

The streams which water the County of Addington flow from the north-east and to the south-west, but are not many, nor of great importance. These are Mill Creek, Big Creek, Little Creek, and the Napanee, Salmon, and Moira Rivers. One stream only, Mill Creek, discharges into the Bay of Quinte, within the County; the others simply cross the County, to the westward, and empty into the Bay of Quinte, the Moira for instance, nearly at its head. The several Mills and Factories on these streams are mentioned while describing the Townships.

Passing the Grand Trunk Railroad, which runs east and west of Addington, entering and crossing through Ernestown, in which a Station at Link's Mills, on Mill Creek, is located, the County of Addington being well settled, has abundance of excellent common Statute Labor Roads. It is also well supplied with Macadamized Roads on which tolls are taken. The Kingston and Napanee Road crosses the Township of Ernestown; the Kingston and Bath Road, un-

finished, leads through the front of the same township; the Ernestown, Camden and Sheffield Road, also uncompleted, leads from the Kingston and Napanee Road, through the villages of Clark's Mills and Centreville in Camden, towards the village of Tamworth in Sheffield; and the Kingston and Portland Road, after serving the more legitimate purpose of its construction, extends from Portland towards the village of Simcoe Falls, on the Napanee River in Camden, with a future intention of connecting with the Ernestown, Camden and Sheffield Road, at or near Centreville. But the Road which of all others is to do the greatest amount of good towards settling the rear parts of the County, is the New Government Addington Road, of which it may be as well to quote the official documents:—

“THE ADDINGTON ROAD,

Commencing in the Township of Anglesea, in the northern part of the County of Addington near the village of Flint's Mills, in Kaladar, runs almost due north to the River Madawaska, a distance of 35 miles—and is to be continued thence for the distance of 25 miles till it intersects the Ottawa and Opeongo Road.

“The Agent for the granting of the Land in this district is Mr. E. Perry, who for that purpose is now resident at the village of Flint's Mills. The outline of five townships of very superior land are already surveyed and ready for settlement within the limits of the Agency, lying north of Lake Massanoka, and between it and the River Madawaska. The Townships are called respectively Abinger, Denbigh, Ashley, Ellingham and Barrie.

“The direct route to this section is by way of Kingston, Canada West, thence to Napanee, either by land or steamboat, and thence North to the Township of Kaladar, and the Village of Flint's Mills, where Mr. Perry resides.

“In order to facilitate the settlement of the Country and provide for keeping in repair the road thus opened, the Government has authorized Free Grants of Land along the Road, not to exceed in each case One Hundred Acres, upon application to the Local Agent, and upon the following

CONDITIONS.

“That the Settler be eighteen years of age.

“That he take possession of the Land allotted to him within one month, and put in a state of cultivation, at least twelve acres of the land in the course of four years—build a house (at least 20 by 18 feet) and reside on the lot until the conditions of settlement are duly performed; after which accomplishment only shall the settler have the right of obtaining a title to the property. Families comprising several settlers entitled to lands, preferring to reside on a single lot, will be exempted from the obligation of building and of residence, (except upon the lot on which they live) provided that the required clearing of the land be made on each lot. The non-accomplishment of these conditions will cause the immediate loss of the assigned lot of land, which will be sold or given to another.

“The road having been opened by the Government, the settlers are required to keep it in repair.

“The Local Agent, whose name and place of abode have already been given, will furnish every information to the intending Settler.

“The Log House required by Government to be built, is of such a description as can be put up in four days by five men. The neighbors generally help to build the Log-cabin for newly arrived Settlers, without charge, and when this is done the cost of the erection is small; the roof can be covered with bark, and the spaces between the logs plastered with clay, and white-washed. It then becomes a neat dwelling, and warm as a stone-house.

“The Lands thus opened up and offered for settlement, are in sections of Canada West, capable both as to Soil and Climate, of producing abundant crops of winter wheat, of excellent quality and full weight, and also crops of every other description of farm produce, grown in the best and longest cultivated districts of that portion of the Province, and fully as good.

“There are, of course, in so large an extent of country as that referred to, great varieties in the character and quality of land—some lots being much superior to others; but there is an abundance of the very best land for farming purposes. The Lands in the neighborhood of this road will be found to be very similar in quality and character, and covered with every variety of Timber—some with hard wood, and some with heavy pines.

“Water for domestic use is every where abundant; and there are throughout, numerous streams and falls of water, capable of being used for manufacturing purposes.

“The heavy timbered land is almost always the best, and of it, the ashes of three acres—well taken care of and covered from wet,—will produce a Barrel of Potash, worth from £6 to £7 currency. The capital required to manufacture Potash is very small, and the process is very simple and easily understood.

“The expense of clearing and enclosing heavily Timbered Lands, valuing the labor of the settler at the highest rate, is about Four Pounds Currency per Acre, which the first wheat crop, if an average one, will nearly repay. The best timber for fencing is to be had in abundance.

“A Settler on these lands possessing a capital of from £25 to £50, according to the number of his family, will soon make himself comfortable, and obtain a rapid return for his investment. The single man, able and willing to work, needs little capital, besides his own arm and axe—he can devote a portion of the year to clearing his land, and in the numerous lumbering establishments, he can at other seasons, obtain a liberal remuneration for his labor.

“The climate throughout these Districts is essentially good. The snow does not fall so deep as to obstruct communication; and it affords material for good roads during the winter, enabling the farmer to haul in his Firewood for the ensuing year from the woods, to take his produce to market, and to lay in his supplies for the future—and this covering to the earth not only facilitates communication with the more settled parts of the District, but is highly beneficial and fertilising to the soil.

“According to the ratio of progress which Canada West has made during the last ten years, the value of property on an average doubles within that period irrespective of any improvements which may have been made by the Settlers.

“In many counties the value of Land, once opened for settlement, has increased five fold in the period named, but the average value of such land, according to the statistics of Canada West, doubles every ten years by the mere lapse of time, exclusive of any expenditure thereon—and it is not too much to expect that this ratio will not diminish for generations to come.

“The sections of country opened by these roads lie in and to the Southern part of the Great Ottawa Region, stretching from and beyond them to the shores of Lake Huron, to Lake Nipissing, and to the Ottawa River—an immense extent of country whose resources are now seeking and will rapidly obtain development.

“The Ottawa Country, lying south of Lake Nipissing and of the great River Ottawa, and embracing a large portion of the land offered for settlement, is capable of sustaining a population of eight millions of people, and it is now attracting general attention, as the more western portions of Canada are being rapidly filled up.

“The Parliament of Canada in its last Session, incorporated a Company for

the construction of a Railway to pass through this Ottawa country from the Shores of Lake Huron to the City of the Ottawa, and thence Eastward.

"A survey of the River Ottawa and the neighboring Country has been undertaken, and will be completed in the present year; its principal object being to ascertain by what means the River Ottawa can be rendered navigable and connected with Lake Huron so as to enable vessels to pass by that route from the most Western Waters into the River St. Lawrence and the Ocean. These projected works are alluded to in order to show that the attention of the Government, Parliament and People of Canada has been fixed upon this important portion of the Province."

The Addington Road is but one of three Grand Routes to the northward from this part of Canada West, towards the rich and almost unknown lands which lie between the settled portion of what was once the Midland District and the Ottawa River. The Hastings Road commences in rear of the county of that name; and the Opeongo Road begins at Mount St. Patrick, in the County of Renfrew, two of which pursue a parallel course towards the undiscovered country of the Madawaska and the other great tributaries of the Ottawa; while the other, the Opeongo Road, takes a more westerly course to intersect the Addington Road at some point on the Madawaska River.

The Legislative Government of the County of Addington, together with its local patronage, is in the hands of D. Roblin, Esq., member of the House of Assembly, jointly for Lennox and Addington. The Municipal Government of the County is in the hands of its Reeves and Deputy Reeves, six in number, who meet in County Council at Kingston. Of this body D. Roblin, Esq., is the Warden. The County Registrar is Isaac Fraser, Esq., residing at Mill Haven in Ernestown; the County Clerk is G. H. Detlor, Esq., the Clerk of the Peace is John Waudby, Esq., the County Treasurer is Wm. Ferguson, Esq., the High Sheriff is T. A. Corbett, Esq., the County Judge is K. McKenzie, Esq., and the County Surrogate is G. A. Cumming, Esq.—all which gentlemen reside in Kingston, and are to be there addressed. Each Township has its separate Division Court, Clerk and Bailiff. The County has an Agricultural Society, with its members scattered all over the Townships. Colonel Hitchins, of Amherst Island, is its President; Thomas Green, of Camden, its Vice President; C. Millar, of Newburg, its 2nd Vice President; and Ebenezzer Perry, Esq., of Ernestown, its Secretary. All these gentlemen are well known for their love of agricultural progress. The Annual County Shows are held alternately at the villages of Bath and Mill Creek, now Odessa. The Stock exhibited here has often been praised and remunerated at the Provincial Exhibitions. Mr. Boyce, of Amherst Island, for his breed of Leicester Sheep, Ayrshire Cattle, and small Breed of Hogs has again and again received Premiums. The late Thomas Scott, Esq., of the same Island, was also famed for his breed of Leicester Sheep. P. Davy, Esq., of Bath, has long been known as a true agriculturist in every sense of the word; and Mr. Nimmo, of Camden, bids fair to tread in Mr. Davy's steps. The horses of the County of Addington are celebrated far and wide, not so much for their blood or symmetry of form, but for their size, strength, vigor and sleekness. The partiality of the Dutch for their horses has come down to their descendants in Ernestown and Camden; the farmers delight in having handsome, strong and fat horses, and they also delight in keeping them well, oft times better than their slender circumstances will afford. Many city gentlemen of the United States, as well as of Canada, needing a pair of handsome carriage horses, have found them with ease in the well filled stable of an Addington farmer.

In the Townships of Kaladar and Anglesea, the Lumber Trade is carried on very extensively, but not by Inhabitants of the County. As all the streams in

these townships run from the north-east towards the south-west, so it happens that they empty into the Bay of Quinte, far from the County. Consequently, the Lumber Merchants of Napanee, Shannonville and Belleville are those engaged in lumbering on the Napanee, Salmon and Moira Rivers, whose tributaries flow from Kaladar and Anglesea. It is wholly impossible to form any correct data whereby to estimate the amount of business transacted, or the number of men employed in these operations; because the Lumber Merchants from the places enumerated do not confine their business to these two townships, or to the unsurveyed lands in rear of them, but extend their operations to all the townships in the vicinity, to those in rear of the County of Hastings as well as to those in rear of the County of Frontenac. Any account of the Lumber business done in the County of Addington must be exceedingly vague. A better amount of the Sawed Lumber business transacted on the River Napanee might possibly be afforded, but it is so intimately connected with that done on the same river in the adjoining County of Lennox, that it could not well be separated

THE STATISTICS OF THE COUNTY OF ADDINGTON,

Taken from the Census of 1851-2, and the Assessment Rolls of 1855, with an increase at the rate of ten per cent. per annum.

Population. 21,223		Rate Payers.	Assessed Value of Property Real and Personal.	Occupiers of Land.	Acres Held.	Under Cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Ma- nufactories impel- led by Steam or Water Power.	No. of Churches and places of Public Worship.	No. of Schools.
Males.	Females.																
11,282	9,941	2,806	£894,434	2597	252218	115717	136501	Acres. 12798 Bushs. 109572	Acres 1617 Bushs 11770	Acres. 7796 Bushs 93795	Acres. 10401 Bushs. 146271	Acres. 11425 Bushs. 297192	Acres. 3455 Bushs. 47508	Saw. 46 Grist. 21	45	36	71

TOWNSHIP OF AMHERST ISLAND.

This township is an Island lying on the shore of Lake Ontario, and forming with the peninsula of Marysburgh, the southern side of that capacious sheet of water, the Bay of Quinte. It is about ten miles long, by average breadth of three miles, and is distant from the opposite shore of Ernestown, from which it lies due south, two miles. These two miles being in winter time frozen solidly over, the island is thereby joined to the main land, and loaded teams cross it safely in every direction. During the season of navigation, all the numerous Bay of Quinte steamers regularly touch at the landing places on the north side, and bring its inhabitants within an hour and a quarter's distance from Kingston. The population in round numbers may be estimated at 1800: when the last census was taken, it was 1287. From that census, from the assessment rolls of 1855, and from other sources of information, the following tabular statement has been compiled.

THE STATISTICS OF THE TOWNSHIP OF AMHERST ISLAND,

Taken from the Census of 1851-2, and the Assessment Rolls of 1855, with an increase at the rate of 10 per cent. per annum.

Population, 1803.		Rate Payers.	Assessed Value of Property, Real and Personal.	Occupiers of Land.	Acres held.	Under Cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Man- ufactories impel- led by steam or water power.	No. of Churches and places of Pub- lic Worship.	No. of Schools.
Males.	Females.																
936	867	229	£62,585	21.	15000	9250	5750	Acres. 1451 Bushs. 12604	Acres. 163 Bushs. 3446	Acres. 621 Bushs. 7187	Acres. 1302 Bushs. 15589	Acres. 1211 Bushs. 34229	Acres. 80 Bushs. 1241	none	none.	2	5

Amherst Island has not been settled many years. It was originally the property of the Sir William Johnson family, in whose possession it remained for a long time unsettled and unutilized, with here and there a lot sold off and located. In 1834, it was purchased by the Earl of Mount Cashell from the Johnson family, who forthwith appointed a resident agent, and the island

became almost immediately filled up, but not with freeholders, the Earl preferring to grant long and renewable leases on advantageous terms to the tenant. There are however, between thirty and forty resident freeholders on the island. The class of settlers is of a high order, many of them being educated gentlemen from the British Islands, and some of the old residents belong to the best families in Canada. Society therefore is as pleasant, or even more so, than on the main land, and many a party is made from a distance to pass pleasant days thereon. There is but little shooting on the island, but the fishing is capital, large salmon trout being taken in abundance all along its bays and shores; while on the side facing the lake, immense quantities of whitefish are annually taken. Being strictly an agricultural township, there is neither village, mill, nor factory on the island, the large grist mill at Mill Haven serving all the purposes of the inhabitants, to which they carry their grists in boats in summer time, and in sleighs in winter. A steam mill has long been thought of, but no one has ventured the experiment. The island possesses a good ship yard (Tait's) at which good-sized schooners are built and repaired. A Church of England minister, with a church and a glebe, a Methodist minister, and an occasional Baptist preacher are among the necessaries of the island. It has a post office, with a tri-weekly mail, and is governed by a Town Council, with a Reeve.

There is a Township Branch Agricultural Society on the island, represented in the County Society. The soil of the Island is generally good, but does not differ materially from that of the rest of the County.

TOWNSHIP OF ERNESTOWN.

This township, better known as the "Second Town" of the original Twelve Towns on the Bay of Quinte, may also be called Township No. 2 of the County of Addington. It fronts the Bay, and its more eastern point is about nine miles from Kingston, from which to its western extremity it extends ten miles along the shore. Its mean breadth is also ten miles, being laid out in seven concessions of one mile, one quarter and one eighth of a mile long each, with a gore on its northern extremity tapering to a point westwards. Its population in round numbers may be estimated at 7,000; when the last Census was taken it was 5111. From that Census, from the Assessment Rolls of 1855, and from other sources of information, the following Tabular Statement has been carefully compiled:—

THE STATISTICS OF THE TOWNSHIP OF ERNESTOWN,

Taken from the Census of 1851-2, and the Assessment Rolls of 1855, with an increase at the rate of five per cent.
per annum.

Population.		Rate Payers.	Assessed Value of Property Real and Personal.	Occupiers of Land.	Acres held.	Under Cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Ma- nufactories impel- led by Steam or Water Power.	No. of Churches and places of Worship.	No. of Schools.
Males.	Females.																
3661	3494	787	£319,624	909	86100	25726	32081	Acres. 2798	Acres. 912	Acres. 3196	Acres. 3628	Acres. 41955	Acres. 1208	Saw. 9	21	13	24
								Bushs. 26762	Bushs. 16420	Bushs. 39478	Bushs. 51008	Bushs. 104661	Bushs. 261355	Grist. 7			

This township was originally settled shortly after the year 1783, and was peopled by the Germans and Dutch from the Valley of the Mohawk, whose descendants chiefly possess the right of soil. During the past thirty years a vast number of Old Country men and Americans have come in, the original settlers making way for them by selling out and moving backwards. The soil is admirable, though from imperfect farming, somewhat worn out, and needs renovation. The township is healthy, free from lakes, and almost free of swamps, the latter having been mostly drained and turned into the best of lands. Excellent roads pervade all parts of it already alluded to, and a Daily Mail goes through the centre, and also along the front of the township. Passing thro' the township obliquely, the Kingston and Napanee macadamized road stretches nearly twelve miles in Ernestown; and along this entire distance are to be seen farms, farm houses, and farm buildings that cannot be matched for continued excellence, in the like distance in any part of Canada, East or West: they are a credit to the Ernestown farmers, who, if their land be not quite so fertile as the rich bottoms in the west, know how, by industry and enterprise, to make ample amends for any deficiency. Ernestown contains the following Post Offices, viz: Mill Haven, Bath, Mill Creek, (now Odessa,) Morven, Wilton and Comer's Mills. The villages are the under-mentioned:—

BATH.—This quaint looking Dutch town has long been a standard stopping place on the Bay of Quinte, and is much better known than many villages of four times its size. Its population exceeds 400 souls, it has a good many merchants' stores, twice as many machine shops, several factories, a ship yard, wharves and warehouses, a custom house, good inns, two churches, an academy or grammar school, a Post Office, and a hundred other village adjuncts. Its distance from Kingston is 17 miles, and there is almost hourly communication with that city by steam. Bath does a much larger mercantile business than its size would imply, being a place for storing and shipping grain.

MILL HAVEN.—This is the site on which Bath should have been built, being two miles higher Kingston, and being the mouth of Mill Creek, the only stream that empties itself within the boundaries of the County. Here is sufficient water power to turn many mills, though only one large Grist Mill is erected, and this serves Amherst Island, and a great part of the neighboring country. At Mill Haven resides I. Fraser, Esq., the County Registrar, the only County Officer, except the Warden, who resides out of Kingston. The village has a population of 150 souls, and contains Post Office, Inn, Merchants' stores, and mechanics' shops. The Kingston and Bath Macadamized Road passes through it.

MILL CREEK.—This village, recently named Odessa, is twelve miles from Kingston, on the Kingston and Napanee Macadamized Road. It is a very stirring place, and has a population of about 350 souls. Being situated on Mill Creek, the same that empties itself at Mill Haven, it has long been known by that name, though many fruitless endeavors have been made to change it. The water power here is good, both in the village and immediately below it, and several Mills and Factories are erected here, all doing a good trade. Odessa abounds in good inns, has several merchants' stores, more mechanics' shops, three or four churches, a public hall, and many other matters and things to make up a Canada village; not forgetting a distributing Post Office, from which all the back country mails are dispatched three times a week. Here the Township Courts and the Township Division Courts are held, the Township and County Fairs, and the Municipal and General Elections.

MORVEN.—This straggling village, better known as the Gordonier Settlement, lies on the same road as Mill Creek, at the western extremity of the township,

twenty miles from Kingston, and five miles from Napanee. It has no water power to recommend it, but it lies in the centre of a very fine country, and having a capital Inn, together with a Post Office, a vast number of houses and shops have been built in the vicinity. Its population cannot be estimated, inasmuch as it would be difficult to define its limits.

COMER'S MILLS—Is still a smaller place than Morven; but as it has a Grist Mill, a Saw Mill, one or two Factories, and a Post Office, it has been dignified with the name of village, though that of hamlet would serve it better. It lies one mile in the rear of the Kingston and Napanee Road, making the turn off four miles west of Mill Creek.

WILTON.—This is an old place of business, but is not a large village, its population straggling and scarcely amounting to 150 souls, all told. Big Creek, which empties into Hay Bay, takes its rise a few miles to the eastward and passes through the village, turning a couple of Mills in its progress. But Wilton owes its importance and standing to being the residence of Sidney Warner, Esq., a leading merchant of the County, and who for many years has been the Reeve of Ernestown. Here he does a very extensive business, having large mills at a short distance, and being known far and near as a man of trust and probity. Besides Mr. Warner's, there are several other establishments in Wilton, and one good, well kept clean Inn, that of Mr. Simmons. Wilton is sixteen miles from Kingston and four miles from Mill Creek, turning off to the north at the latter place, with a good road all the way. The country round about the village is truly excellent.

TOWNSHIP OF CAMDEN.

The Township of Camden may be termed Township No. 3, of Addington, being the third in direct progression north from Lake Ontario. It is hilly, and in parts stony, but on the whole contains most excellent land. It is by far the finest township in the county—the largest and most productive. Its settling commenced with the present century, and it was originally peopled by the sons and daughters of the old U. E. Loyalists, together with some American families who came in and bought lands, tempted thereto by their cheapness and excellence. But when Immigration from the Old Country began, vast numbers of Scotch and Irish made their way thither, and they and their descendants fairly divide the land with the children of the U. E's. At the present time almost every lot fit for cultivation is taken up. The population may be estimated at 10,000, in round numbers. When the last census was taken it was 6373. From that census and from the assessment rolls for 1855, and from other sources, the following may be looked upon as a tabular statement of this township and its productions.

THE STATISTICS OF THE TOWNSHIP OF CAMDEN,

Taken from the Census of 1851-2, and the Assessment Rolls of 1855, with an increase at the rate of ten per cent. per annum.

Population, 9,763		Rate Payers.	Assessed Value of Property Real and Personal.	Occupiers of Land.	Acres Held.	Under Cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Man- ufactories impelled by steam or water power.	No. of Churches and places of Public Worship.	No. of Schools.
Males.	Females.																
5128	4685	1107	£256800	1084	105325	43014	62307	Acres. 5888 Bushs. 40846	Acres. 265 Bushs. 5368	Acres, 2583 Bushs. 27764	Acres, 4064 Bushs. 53589	Acres, 4053 Bushs. 102934	Acres, 1716 Bushs. 12630	Saw 12 Grist 27	18	13	41

The Napanee River enters the township from the lakes of Portland and beyond, and runs across the township in the first concession, and in its progress is thickly studded with villages, mills and factories. Of the former there are four within a distance of six miles; and of the latter their number exceeds thirty, large and small.

The most western village is Colebrook, (once Peters' Mills,) and contains a population of about 300 souls—two very large saw mills—(C. Warner's, who has cut during the present year, 750,000 feet of lumber,) one grist mill, three or four stores, sundry mechanics' shops, a post office, a couple of inns or taverns, and some other village adjuncts. This village is in a flourishing condition, and its lots are held at a high rate.

The next village lies one mile to the westward—Simcoe Falls, and has but very recently been located and built upon. Here the Messrs. Shibbley, of Portland have property, and own a fine saw mill and a grist mill. The population is about the same as Colebrook's, and its conveniences the same, with the addition of a cloth factory, tannery, and iron foundry. Here is the present terminus of the Kingston and Portland Road, bringing this rising place of business into quick proximity with that city by means of one of the best made roads in the county—distance to Kingston 22 miles.

Between three and four miles lower down the stream is the old and primary village of Camden, now called Clark's Mills. This is a settlement of Samuel Clark, Esq., son of a U. E. who some thirty years ago, left his father's homestead in Ernestown, and built a grist mill here. It is now quite a village, with every requisite of such. Good roads to Kingston and to the rear of the township, a tri-weekly mail, capital inns, some half dozen merchants' stores, and twice that number of tradesmen's stores. Cloth factory, tannery, distillery, brewery, grist mills and saw mills in abundance. An episcopal church, methodist chapel, good school house and court room. The population is between 500 and 1000 souls. The immense quantities of sawed lumber piled all along the banks of the river, by which the public road runs, show the vast amount of lumber sawed, dried, and prepared for the American Market, to which it mostly finds its way.

Still lower down than Napanee, scarcely two miles, is the town of Newburg; for though not yet by law even an incorporated village, yet Newburg is a town in size, wealth, population, and growing importance. The water power here is very great, the river dividing itself into two branches forming an island, on which the town is built, and coming together again almost immediately. Saw mills and grist mills are numerous, as are also a vast many factories and machine shops worked by water power. Newburg is a place of much business, and has the requisite number of stores, shops, &c., which need no enumeration. The population is about 1000, and the place would long ago have been incorporated, did the people wish it. Here Messrs. C. Miller and Hope, the Messrs. Hooper and other enterprising men have large property, which in the course of a very few years, must largely increase. A newspaper called the "Newburg Index" has been published more than two years, and the town is the site of a Grammar School and Academy, of much local fame in the education of the youth of the surrounding country. Newburg lies in a deep hollow, formed by the river, which gave birth to a nick-name by which the village was long known, viz: Rogues' Hollow. Many years ago some people from the United States came in and settled here, and more from the peculiarity of their politics, than from any personal dishonesty, the place acquired this name which it retained until within the past ten years; since when the obnoxious prefixing epithet has been discontinued if not forgotten, and Newburg is now only called "the Hollow." Should the County of Addington ever be set off as an independent county, or joined only to the County of Lennox, Newburg will be the County Town; but neither

event is likely to happen soon, for the jealousies between the Reeves and Deputies of Lenoix and Addington are great, each junior county desiring the county town, neither being large enough to form an independent county of itself, and so while the Reeves and Deputies of Frontenac are true to themselves, the three counties will remain united municipally for many years to come.

Camden has one other village, termed Centreville, from its location, and several other hamlets, which are simply Post Office stations, such as Croyden, Enterprise, Moscow, &c. Centreville, though not a large village, is a place of good business, about six miles from Clark's Mills, on the Ernestown, Camden and Sheffield Road. It is in the centre of a fine country, with roads diverging to all parts of the township. It has a couple of places of worship, good stores, shops and inns, and in every sense of the word, is a brisk, stirring, lively place of business, with a daily increasing population of over 300 souls. Here stands the Court House for holding the Municipal and other Elections, and the sittings of the Division Court. The Reeve of the township lives here, Wm. Whelan, Esq., and though not so large or so busy a place as Newburg, having no water power, still Centreville may be termed *the* village of Camden.

Two large sheets of water ornament and fertilize a good part of the Township of Camden,—Vardy Lake and Mud Lake, both of which lie about three miles north of the River Napanee, and empty into it. Vardy Lake is about six miles long, by half that breadth, and is a very beautiful clear lake, abounding in the best of fish and surrounded by the best of lands. Mud Lake, by no means so muddy as its name would imply, has partly a clay bottom, but is otherwise a very handsome piece of water of nearly the same size as Vardy Lake, with lands in its vicinity equally rich and fertile.

TOWNSHIP OF SHEFFIELD.

This township lies back of Camden, and is No. 4 of the range forming the county of Addington. Its nearest point is 34 miles distant from Kingston. It is a large Township, rather deeper than it is broad, and is ten miles square. One large stream runs through it, the Salmon river, from the northeast to the southwest, emptying itself into the Bay of Quinte at Shannonville. It is, like all the other rivers and creeks of Canada, full of falls and rapids, and large mills and factories are built on its banks, many of which are in Sheffield, and give trade and employment to most of its inhabitants. Other smaller streams are more to the north, on which other mills are placed. The township is full of lakes, and on the whole is somewhat stony, and is not near so fine a township as Camden or Ernestown, though the quality of the soil, except on the shores of the lakes, is much of the same character, clay and sandy loam. The population in round numbers is 2500, being at the last census in 1851-2, 1792. From that census, and from the assessment rolls of 1855, and from other sources of information, the following statement has been made.

THE STATISTICS OF THE TOWNSHIP OF SHEFFIELD.

Taken from the Census of 1851-2, and the Assessment Rolls of 1855, with an increase at the rate of ten per cent. per annum.

Population. 2508.		Rate Payers.	Assessed Value of Property Real and Personal.	Occupiers of Land.	Acres held.	Under cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Ma- nufactories impel- led by steam or water power.	No. of Churches and places of Public Worship.	No. of Schools.
Males.	Females.																
1346	1162	539	£215,300	305	32399	17900	15499	Acres. 1890	Acres. 122	Acres. 468	Acres. 677	Acres. 681	Acres. 180	Saw. 3	4	6	11
								Bushs. 1621	Bushs. 2869	Bushs. 3977	Bushs. 96768	Bushs. 23115	Bushs. 2840	Grist. 9			

This Township has been but recently settled. About thirty years ago, some lumbermen went up the Salmon River, and with them Calvin Wheeler, Esq., an American, who soon built a grist mill and a saw mill, at some falls, now known as the village of Tamworth. Settlers, chiefly of the poor class, and mostly from the Sister Isle, followed in the steps of the lumbermen, and Sheffield became what it is gradually. Its great water power is its chief attraction, and though it will in time become populous, yet that will take some years. It has three villages, all small—Tamworth, Erinsville and Clareview, at which there are post offices, with a tri-weekly mail, merchants' stores, mechanics' shops, mills and other conveniences. It would be extremely difficult to estimate their population, for the small villages have no limits and are merely straggling clumps of houses. The Ernestown, Camden and Sheffield macadamized road should extend to Tamworth, but it does not, stopping a little north of Centreville before it reaches the township. The intention is to go that length, or even farther, to connect with the new Government road to the Madawaska, (Addington road,) which commences at Clareview, the agent, E. Perry, Esq., residing in the rear township of Kaladar. Sheffield, being joined in municipal government with Kaladar and Anglesea, has within them a sufficient number of rate-payers to entitle them to send both reeve and deputy reeve to the County Council. The courts and election are held at Tamworth.

TOWNSHIPS OF KALADAR AND ANGLESEA.

These two townships, lying in a straight line north of Sheffield are but little settled, and less known except to the lumbermen. There is abundance of good land in both, but it is not looked after. In Kaladar, there are some few regular settlers, with more squatters; but in Anglesea there are no regular settlers at all, though there may be some squatters. To give a description of these townships would be to write an essay on the lumber trade, and that is foreign to the purpose. Now that the pine and oak forests are rapidly disappearing, and the lands along the Addington road are located, Kaladar and Anglesea will become more known and more settled. In these distant townships are many of the lakes from which the rivers that empty into the Bay of Quinte take their rise, and there is abundance of water power now running to waste. The census of 1851-2 took no notice of these townships whatsoever, but from the assessment rolls of 1855 we compile the following tabular statement:

THE STATISTICS OF KALADAR AND ANGLESEA.

Taken from the Assessment Rolls of 1855, with an increase at the rate of ten per cent. per annum.

Population Fluctuating and Uncertain.		Rate Layers.	Assessed Value of Property Real and Personal.	Occupiers of Land.	Acres held.	Under cultivation.	Wood and Bush.	Wheat.	Barley.	Rye.	Peas.	Oats.	Buckwheat.	Mills.	Factories and Ma- nufactories impel- led by steam or water power.	No. of Churches and places of Public Worship.	No. of Schools.
Males.	Females.																
		46	£47,258	68	11800	1360	10440	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.				1

In conclusion, taking into consideration that this should be an agricultural as well as a statistical essay, a concise description of the style of farming practised in the County of Addington, might be here appended. The land throughout the county is good, with mostly a limestone foundation, covered with clay and sandy loams—the virgin lands as a matter of course being rendered prolific by rich alluvial and vegetable deposits. Some lakes and many swamps are interspersed throughout the county, particularly in the more northern portions; but as the land becomes cleared, the latter are gradually turned into the finest of pastures. In Amherst Island, settled mostly by old country farmers, a high style of farming has been introduced with great advantage, and all the modern improvements in the manufacture and use of agricultural implements are in vogue. In Ernestown and part of Canada, this is not so much the case, the Dutch farmers clinging in a great measure to the primitive, slow and sure practices of their forefathers, with, however, too many exceptions to make the rule general. The upper part of Camden, and the Townships of Sheffield and Kaladar being settled chiefly by the poorer class of immigrants, many of whom squatted on the lands they ultimately purchased, a high style of farming cannot be expected and is not to be found; but as they annually get richer, it is pleasing to see by the purchases they make at Kingston and elsewhere, that it has been to their poverty, that the indifferent appearance of their houses, barns, and farms owes its origin. The excellent roads throughout the whole county, permitting the most distant farmer to bring his produce to the cash market of Kingston, will soon enable the farthest off settler to better his condition; and when the census of 1861-2 is taken, the future essayist will have an easy task in making his Statistics by simply doubling the numbers of those of 1851-2. Take it all in all, the County of Addington, from its central position, climate, healthfulness, character of its inhabitants, and productiveness of soil, may be classed with the very finest Counties of Western Canada.

APPENDIX.

The information furnished in the following letter, addressed to the essayist, came to hand too late to be dovetailed into the body of the Essay, but being extremely valuable, has been added as an appendix. It has been furnished by Ebenezer Perry, Esq., Government Land Agent for the settlement of the Public Lands on the new Addington Road.

QUESTIONS.—1st. Are the lands in the back country of Addington and Frontenac, of a quality to reward the agriculturist for his labors?

2nd. Are not the lands so broken by the granite hills as to isolate the settlers, and thus mar the social interchanges of life?

3rd. What chance has the settlement in getting supplies, and which is the best road to the land?

4th. How and where will settlers dispose of their surplus if they have any?

5th. What is the probable future of the settlement?

To question 1st—"Are the lands in the back country of a quality to reward the agriculturist for his labors?"

I would beg leave to say that in my opinion they are. The soil is a sandy loam, more or less colored with a vegetable mould. It is made up of the decomposed granite hills that crop out at stated intervals all over the back regions. The silica of which those rocks partake in abundance, is crumbled to atoms by the agency of the acids contained in rain and snow water, by the dissolvents in atmospheric air, and by the aid of a little unobtrusive plant, called lichen,

which thrives in our driest weather on the bare granite, and without seeming effort, by the action of its roots daily detaches small particles, and deposits them at the base of the rocks in debris. Thus in my opinion, the soil is made up of the silica or sand of the surrounding rocks. There is a feature in the growth of the timber on the lands in question, in connection with the fertility of the soil, that I do not understand. Where hard wood predominates, the soil is a dark loamy sand; where pine takes the lead, a pale yellow sand is found. The whole drift has one common origin. The yellow sand bears by far the most lofty gigantic trees; some having yielded to the lumbermen seven thirteen feet logs, the lumber of which was fit for the American Market; and one stump which I measured I found it to be five feet two inches across, not including the bark; and yet the yellow sand gives a much less yield of grain to the farmer. Where the dark loams have had a fair trial, the yield has been equal to the most favored soils of the frontier townships—wheat, rye, oats, peas, barley, and Indian corn, all flourish; potatoes and other bulbous roots exceed the growth in older townships. I have in no instance seen clover tried, but am of opinion that at no distant day, if attention is turned towards it, that clover seed will be one of the staples of this section of the country.

The next or second question asked—Is not the land so broken by the granite hills as to isolate the settlers, and thus war the social interchanges of life? I think that if I say no to this question, I shall be fully borne out by facts; the granite ranges run nearly east and west, and consequently the valleys and tufts must have a corresponding course. Now the Addington Road ranges to a north course, and consequently crosses the valleys that lie between here and the Madawaska; the first and largest valley is found just beyond the rocky range, or fourteen miles north of the River Clare. This range of rocks, over which the Addington Road runs, by winding through its glitches, is nearly a barren waste; then you come on land that is fit for settlement; it is about five miles from where the rocky range crosses itself, to the rear of Kaladar; and about six miles of the road lots are cut out for settlement, making a distance of eleven miles across the valley, that in all probability will be settled. Nor is this all; many lots beyond those taken, afford a sufficient amount of plough land to ensure their settlement before you come to the next broken range, which occurs at the head of Massena Lake; and even there some redeeming qualities are found. You remember that I said that the valleys run east and west, so a large settlement will find its way in there ere long. I do not wish to be understood to say, that all the area here spoken of is fit for cultivation—there is too much broken land abounding through this district to suit me—but I wish to say that the Township of Kaladar has a fair portion of excellent land; that of Barrie, Denbigh, and Ashley will be, when cleared and tilled, equal in quality of soil and quantity of plough land, in proportion to their area, after deducting the water, to either Camden or Ernestown. Anglesea, Abinger and Effingham are more broken. After you leave the head of the Massena Lake, the road passes over a rough range of rocky ground, covered with fine groves of pine, interspersed with patches of hard-wood land. Those patches of hard-wood land are sufficiently numerous to induce settlers to occupy probably the road line through this range; but as you approach the Madawaska River, a river as large in appearance as the Trent, you pass a rich rolling country, watered with the purest springs, whose tiny brooks are filled with speckled trout, and whose hills are clothed with the red beech, that have innumerable marks of bears' claws, that ascend and descend them annually for the Mast. If you would ascend a high hill that skirts this valley, at whose base the road runs, you would see down on both sides of the river the pale green foliage of the hard-wood in strong contrast with the deeper tints of the evergreens. The hard-wood land on this side occupies seven or eight miles in width, and to all appearance is as wide as the other side of the river.

REPORT ON THE COUNTY OF HURON,

BY MR. THOMAS MCQUEEN OF GODERICH,

To which a Prize of £15 was awarded.

The County of Huron, extending between the 43rd and 44th parallels of northern latitude, and lying between 81 and 82 western longitude, is bounded on the north by the County of Bruce, on the east by the County of Perth, on the south by the County of Middlesex, and on the west by the waters of Lake Huron. Its length from north to south is about sixty miles, and its greatest breadth about thirty, but in general, it is much narrower. Huron is composed of seventeen townships of various shapes and sizes, and which will be noticed separately and in order, as we proceed. Eleven of these townships are part of the celebrated "Huron Tract," sold to the Canada Company in 1826; and through extra exertions and a variety of means, began to be partially settled from that date. The soil, as may be expected in such an extent of territory, is of many qualities, and an inferior farm may occasionally be met with, but taken as a whole, the County of Huron contains, perhaps, the largest block of good agricultural land of any county in Canada. Indeed, the observing traveller who has journeyed through many lands, is astonished and delighted with the extent of rich loamy soil, level surface, luxuriant verdure, the clear, healthful and invigorating climate, the crystal springs and pebbly brooks, that attracts his attention as he passes through Huron. And the abundant harvests, the large quantities of grain and other farm produce annually exported for the last few years, are tangible proofs of the superiority of the soil. The whole county is comparatively level, with an occasional patch of undulating ground or a moderate glen. The timber is chiefly maple, beech, basswood, and elm, with, in some townships, a mixture of hemlock or a few oaks—pine is very scarce, and is not found at all in the principal townships of the county; but in some of the northern townships, and in Hay, Stephen, and Macgillivray, towards the lake, it grows in limited quantity, and rather of inferior quality. Throughout the entire length of the county, the lake is bounded by precipitous banks, ranging from 50 to 150 feet above the water level, and composed principally of hard clay. This elevation, besides being conducive to health, affords excellent and easy drainage, back even to the eastern limits of the county; an advantage which, in such a large tract of flat land, cannot be estimated.

THE CANADA COMPANY.

That portion of the County of Huron belonging to the Canada Company began to be settled in 1828, under the agency of John Galt, the novelist, and the facetious Dr. Dunlop; and though we have no intention of swelling out this essay

* A portion of this Report may, perhaps, appear somewhat out of place—as embodying reflections partly of a political character—in the official transactions of the Board of Agriculture. But as the operations of the Canada Company must necessarily be mentioned in any history of the County of Huron, and the Report was received in public competition for a prize offered, the Board, while they do not hold themselves responsible for the views of the writer of the Report in regard to the Canada Company, or the Government, do not consider it necessary to withhold any portion of the Report from publication.

by entering at much length into a subject which, for many years has been extensively discussed both by the press and the public, and which has, oftener than once, been submitted to the deliberations of the legislature; yet we would not be doing justice to the subject if, in an Essay on the County of Huron, we omitted entirely to notice the Canada Company and its influence. It would be easy to write, not an essay but a volume of strictures and criticisms on the Company's proceedings, and indeed, more than a volume has already been written, but such writing can be of little service to the Canadian public at present. That the sale of 1,100,000 acres of excellent land, in one block, to an incorporated body of moneyed speculators was a sad error, is a proposition not likely to be disputed; and that it was an error whose evil consequences extended far into the future is a fact which is now beginning to be seriously felt and thoroughly comprehended. But the error is long since beyond the reach of remedy. It was the work of the Imperial Government, and however much the people of Canada may feel and deplore it, they can have no redress.

The Company's contract with the British Government terminated in the year 1843, at which time the last instalment of the purchase money was to be paid, and whether it has been paid, or whether or not the whole conditions of the charter have been strictly fulfilled, the fact that thirteen years have since elapsed, and that during this period the prosperity of the Company has been unprecedented and astonishing, is at least presumptive evidence that they are not being harassed for the non-fulfilment of their share of the contract—that they have paid up the *two shillings and tenpence farthing* an acre, and that they are now their own masters. The Company claim some credit for having opened up and settled the Huron Tract much earlier than it otherwise would have been settled, and to this credit they are probably entitled. But when it is known that London, commenced in 1826, had, at the taking of the census in 1852, *seven thousand and thirty-five inhabitants*, while Goderich, commenced in 1828, had only a population of 1329 in 1852, it must be obvious that the permanent influence of the Company is not favourable to progress; for assuredly the geographical position and local circumstances of Goderich are much superior to those of London. Besides, the rapidity with which the Crown Lands of the county have been sold and settled during the past four years, is far beyond anything that has taken place on the lands of the Company, and these new townships are situated under every disadvantage that can arise from the want of roads, mills, markets, and water communication. Still under all these disadvantages people preferred to deal with the Government rather than with the Canada Company. They preferred to *buy* rather than *lease*, and in a few weeks in the autumn of 1854 upwards of *two hundred thousand acres* were sold in these back townships, to actual settlers, who paid the first instalment on their purchases.

It is true, the "No money down" system of the Canada Company was not in operation at the time, it had been withdrawn from the market, or in plain language, sales had been entirely suspended; still, had it even been otherwise, it may safely be assumed that actual settlers, with any means at all at command, would have preferred purchasing to leasing.

The leasing system of the Company was, perhaps, convenient for emigrants or settlers with small families and no money. It offered them at once a place to live on, work and raise food on, without any immediate outlay save their labor; but at the time it was introduced, it involved ultimate consequences of the most serious nature to these poor, industrious men, and which not one in fifty of them could foresee. The lessee was bound to pay an annual rent of *more* than six per cent. on the price of every acre of land which he leased, or in other words, he paid throughout his whole term of ten years, the interest on at least seventy acres of bush land, from which he was not receiving one farthing's worth of

benefit. The paying of this rent paid no part of the price of the land—he had no chance of paying in instalments, and if within the ten years, he failed to pay the purchase money, say twelve shillings and sixpence an acre, in addition to the annual rent, twenty-five per cent. was added to the original price, and if he could not purchase, or otherwise find some one to buy his right, he lost his improvements and the land reverted to the Company. Now, considering the very low rate at which farm produce sold in Canada, ten years ago and later, it is not easy to conceive how a working man entering upon a hundred acres of bush land, could support a family, pay an annual rent for the hundred acres, and in the lapse of ten years, save as much as would purchase the land at, perhaps, three or four dollars per acre. In fact, it could not be done in one case out of twenty. The great majority of the lessees instead of saving money to pay for the land, were utterly unable to pay the annual rent. They got in arrears with the Company, and were entirely at their mercy, while at the same time interest was being added to the arrears, and the prospect of “selling out” was becoming hopeless.

In short had things continued as they were a few years ago, in this section of the country, not one in every twenty of the lessees would ever have been able either to pay or sell out, and hundreds would consequently have lost the fruits of ten years of hard labor, and been reduced to homeless destitution. But the sudden and surprising rise in the price of produce, and more particularly in the price of land, which took place in Upper Canada four years since, has completely changed for the better the whole aspect of things, in so far as the lessees of Huron are concerned. Land in this county which, five years ago could have been bought for perhaps six dollars an acre, will now sell readily at thirty-six; and there is not a lessee of a hundred acres in Huron, with say twenty to thirty acres cleared, but may easily obtain from three to four hundred pounds for his right and improvements, even though he may be deep in arrears to the Company; that is, providing the term of his lease be not expired. Many have sold out, and many, through the high price of produce, have been enabled to pay up and secure their deeds; and in travelling through the Company's townships at present, it is cheering to observe the number of substantial barns and dwellings, and of good fences and other extensive and valuable improvements that already beautify those very localities which, only a short time since, were considered hopeless, and which, only for the change referred to, would in all probability have been comparatively desolate to-day. Thus, the advance in the price of land has saved the poor lessees. The very poorest is now a *wealthy* man instead of a beggar; and it has saved the County of Huron from expected desertion and partial ruin.

This view, however, is founded on probability, and the generally selfish tendencies of human nature, rather than on any harshness or oppression which the Canada Company, or their Commissioners and Agents, have actually perpetrated. It is only justice to mention that whatever evils may result directly or indirectly from the Company's power and influence, the reports of tyranny and positive oppression are mostly slanderous or one-sided. Their leases may be complicated, and the conditions may be severe and unfair to the settlers, but in their actual treatment of their tenantry, there have certainly been but few cases of real hardship. The number of defaulters on the part of the lessees has been *hundreds*, while the number of distraints has not been *tens*. Indeed, it might with safety be affirmed, that the lenity and forbearance of the Canada Company to their Huron Territory, will bear a very fair comparison with the lenity of the majority of individual landlords, or even with that of the Provincial Government. The tales of their austerities are for the most part founded on what *might be*, rather than on what *has been*.

The real evils are only beginning. The error of suffering a corporate body to obtain the position occupied by the Canada Company, is only becoming visible. So long as they were willing to sell their lands, there was little to complain of—men could either purchase or leave it alone as they felt disposed, and an additional half-dollar or dollar on the acre was a matter of small moment. The selling of the land at a high rate was an evil of very small dimensions; but the *not selling* it is an evil, the extent and ruinous consequences of which cannot be calculated. This is the true evil—the blighting curse of Canada Companyism, that is now beginning to be felt on the best interests of the County, and which must continue to be felt and deplored, and denounced for many years—yea, for generations to come. The Company have yet some unsold lands in every township of their original "Tract;" in some instances the quantity is very considerable, and in a few cases, the quality and position of these unsold lands are of the first class. The very important change that took place in the price of property in Canada four years ago, changed entirely the policy of the Canada Company. Instead of coaxing and *wheedling* and duping the great gaping public, to come forward and take hold of their land, on the *jull-bait* that "*No money is required down,*" they withdrew their lands from sale entirely! The principle of "*cash down,*" on which the Crown lands in this county had for many years been sold, was entirely beyond the reach of the great mass of new settlers who annually rushed into Huron. They had no choice but either to lease from the Canada Company, or turn back with their families, and thus the leasing system was rendered successful, and in many instances advantageous. But, so soon as the Government adopted the instalment system, poor men could purchase, and at once preferred the purchase to the lease. The Company had already sold enough to render the remainder valuable, and knowing that the settlement of the Crown lands would necessarily enhance that value, and also seeing the daily increasing demand for lands at an increasing price, they suspended both the sale and the leasing. The town of Goderich, notwithstanding its present encouraging prospects of a railroad and an extensive lake traffic, is almost at a standstill: Building lots cannot be had at any price, and no intimation of sales being resumed will be afforded.

In addition to this serious evil, there is another equally serious. A large portion of the townships of Hullett and McKillop is still in the hands of the Company, and these two townships lie between the public roads and the new Government townships. The thousands of poor settlers who have recently gone into Grey, Morris, Howick and Turnbery, and from the county town, must pass through seven or eight miles of the Canada Company's unsettled wilderness. It lies as a barrier between them and civilization, and there is not the slightest prospect of getting it removed. This is certainly a sore evil, and though the Company, in thus endeavouring to make the most out of their property, are only doing what every other property-holder in the Province does, every day, that does not lessen the injury done to the poor industrious settlers, and to the country generally.

Whether the Provincial Government, as has often been alleged, was wilfully playing into the hands of the Canada Company, by keeping the public lands out of the market, or offering them on the "*cash down*" principle, or whether the policy was simply the result of ignorance, one thing at least is obvious, namely, that the Company always succeeded in having a fair sprinkling of friends or *tools* in the House of Assembly. The powers and interests of the Company, even down to the question of the wild land tax, were sure to be protected in the legislature, and there can be no doubt that their anxiety to return "*fit and proper*" persons, and the dishonorable and violent means

resorted to by the commissioners and agents, to secure the election of these *tools*, contributed much to the growth of that jealous animosity and hostile spirit that for many years inspired the settlers against the Company.

The following bitter accusations, extracted from an address to the electors of Huron, by Dr. Dunlop, in 1841, exhibits faithfully the general feeling of the County towards the Company—a feeling existing not at election times alone, but at *all* times, throughout a number of years; and it cannot be wondered that the prevalence of such a spirit should have retarded seriously the progress and prosperity of the district. The Doctor's address winds up as follows:

“But that remains to be proved when my scrutiny before the House comes on, and where I am prepared to prove that the Canada Company, whose province it ought to be to protect their settlers from sin and crime, have flagitiously used every mean trick and stratagem to plunge them into open and corrupt perjury; basely manufacturing votes to defeat the law and the people, exposing their ignorant and innocent settlers to the scorn of the one, and the pains and penalties of the other, in their infamous attempt to rob the constituency of their franchise, and to leave them virtually unrepresented, by thrusting upon them by such base acts their own nominee. They have brought forward on this occasion the unfledged stripling of nineteen, side by side with the hoary ruffian of fifty, openly, knowingly and impiously, to kiss the sacred volume with a lie upon their lips. This contest is a struggle, not between James McGill Strachan and William Dunlop, *but between the Canada Company and the people of Huron*, and if it shall be decided against me in the court of final resort, that the Canada Company can place their nominee in parliament by their fiat, it will be a warning to every honest Englishman, to every cautious and calculating Scotchman, and to every warm-hearted and blundering, though educated Irishman, *to shew the Huron Tract as they would the pestilence*, where their rights will be held from them by a corporation and its minions, whose apparent interests are different and often opposed to theirs.”

Dr. Dunlop only uttered the popular sentiments, and we repeat that where such a feeling prevailed in a new district, for a number of years, it must have had an injurious influence on its progress. But in spite of all evil influences, Huron has made considerable headway; chiefly in consequence of a superior soil and climate. Most other inducements are in the future; but with present prospects, were the existing bonds of the Company loosed, could they be induced to sell their lands even at high prices, it might safely be predicted that in a very few years Huron would rank with the first-class counties in the Province.

THE ROADS.

Of the commencement of the first road in Huron, we have the following account in the life of the late John Galt, first manager of the Canada Company's affairs. Mr. Galt says:

Of one thing, at this time, I do not hesitate to say that I was proud, and with good reason, too. I caused a road to be opened through the forest of the Huron Tract, nearly a hundred miles in length, by which an overland communication was established for the first time, between the two great lakes, Huron and Ontario. The scheme of this undertaking was, in my opinion, not ill contrived, and was carried into effect almost literally by Mr. Prior; though the manner in which the Directors now saw everything so fretted me, that I could not suppose there was any good, but only waste in what I did. All the woodmen that could be assembled from the settlers were directed to be employed; an explorer of the line to go at their head, then two surveyors with compasses, after them a

band of blazers or men to mark the trees in the line, then went the woodmen, with hatchets to fell the trees, and the rear was brought up by waggons, with provisions and other necessaries. In this order they proceeded, simultaneously cutting their way through the forest till they reached their spot of destination, on the lonely shores of Lake Huron, where they turned back to clear off the fallen timber from the opening behind."

Such was the beginning of the great "Huron Road," the present direct thoroughfare between Goderich and Hamilton, Toronto, &c., by Stratford and Galt. The distance from the "Wilmot Line," which was the eastern boundary of the Huron Tract, to Goderich, is only about sixty-four miles, but at that time Mr. Galt may be readily excused for supposing it a hundred. The Company, he says, allowed him only three thousand pounds for this undertaking, and it cost five thousand, which may easily be believed, when the state of the country and the scarcity of labor is considered. It would appear, however, that Mr. Galt's road had been only a temporary affair, as we find the Company a short time afterwards, charging the improvement fund with one thousand nine hundred and sixty-eight pounds ten shillings and fivepence, for opening up a sleigh-road between the townships of Wilmot and Goderich. And again, in the year 1836, the fund is charged with seventeen thousand six hundred and ninety-eight pounds seventeen shillings and one penny, for opening up the road from Wilmot to Lake Huron the full width of 66 feet, and for turnpiking and bridging the same. And after all this expenditure of more than twenty thousand pounds, besides some thousands expended by the County Council, the Huron road was just an unmitigated mud road, till within the last four years, when the County Council of Perth borrowed money and gravelled it through the whole length of their own county. The remaining twenty-five miles is in the County of Huron, and is to-day exactly what it used to be. But proposals are on foot to have it gravelled without delay, and we have no doubt that the intention will be carried out next year. It is pretty well graded and turnpiked, and in most places the gravel is quite convenient, so that the cost will be comparatively moderate; and being the principal traffic road of the county, it may be expected to yield a paying revenue.

The London road diverges from the Huron road in a southerly direction, twelve miles from the town of Goderich, and the distance from this point to the southern extremity of the county is thirty-five miles. The whole distance from Goderich to London is about sixty miles, of which the thirteen miles lying in the township of London has been gravelled for some years past, and seven miles on the south end of the portion belonging to Huron, is now under contract, and will be completed this year. In 1833, the Canada Company charge the Improvement Fund with three thousand two hundred and fifteen pounds fifteen shillings, for opening a road from the Goderich line to the township of London, 35 miles, and for crossways and bridges on the same; and three years later, viz., in 1836, the sum of three thousand two hundred and sixty-eight pounds one shilling and sixpence, for turnpiking the London road.

Since that time, many thousands of County money and statute labor have been expended on it, and it is now one of the longest straight level roads to be met with in Canada. It is well turnpiked and graded—an excellent summer and winter road, but in the spring and fall nearly impassable. When the seven miles now under contract is completed, and the Huron road gravelled, not more than twenty-eight miles will be required to complete a good gravel road all the way from Goderich to London; and as the County Council has a by-law now advertised, authorizing them to borrow money for the purpose of gravelling the principal roads of the county, it is expected that the London road will be proceeded with next summer, as we understand Messrs. Haseltine, Powell & Co., of

the Buffalo and Lake Huron railroad, have agreed to negotiate the Count Debentures. The London road runs through a thickly settled and highly cultivated range of country, and the traffic in agricultural productions alone will yield a large toll-bar revenue; besides, the amount of travel and of general business between Goderich and London is very considerable, and is yearly on the increase, so that the graveling of the road is certain to turn out a profitable investment.

The Bayfield road runs between the 1st and 2nd concessions of the township of Goderich, and nearly parallel to the lake, the first concession lying between the road and the beach, and varying in depth from one mile to one furlong according to the curves and juttings of the lake banks. The distance from the town of Goderich to the Bayfield river is something better than twelve miles nearly due south. The road then turns more easterly through a fine rolling and well-cleared tract of land till, ten miles further on, it crosses the London road eighteen miles from Goderich; then pursuing the same direction, but under the name of the "Mill Road," for a distance of seven miles, it intersects the Stratford or Huron Road twenty-one miles from the town of Goderich. In 1837 the Canada Company charge the improvement fund with *nine hundred and eighty one pounds eighteen shillings and tenpence* for opening and otherwise improving this road. This small sum, however, can be only a mere moiety in the cost of the road, as it is at present equal to any other road in the county. The statute labor is annually wrought on it, and the Council, two years ago, built a substantial frame bridge over the Bayfield river, and paid nearly one thousand pounds for making the approaches to it. There are also several other good bridges on it, and it is well turnpiked and is included in the list of roads to be gravelled.

The Goderich and Saugeen road which, many years ago, was to have been a gigantic undertaking of the Government, *has yet to be made*. It was to extend from Port Sarnia to Saugeen, as close as practicable to the lake shore. The road between Goderich and Bayfield is part of it, though not made by Government. It is *traversable* a few miles south of Bayfield, and with some risk, teams can pass over it for a distance of about fourteen miles northward of Goderich. It has been useful to talk about on the hustings at election times, but it has served every other purpose very indifferently. We learn, however, that Mr. Gibson, superintendent of colonization roads, has now got it under his superintendence, that a number of men have been surveying and cutting down the bushes to make way for it, and that a good winter road as far as Kincardine, or Pentangore, may be expected by the ensuing winter.

We have now noticed what may be called the *leading* roads of the county. There are many other roads, some of them of considerable importance, and several of them in a tolerable state of repair, which may be noticed in our remarks on the several townships. The chief road, however, is the Buffalo and Lake Huron Railroad, of which the Province and the world have heard so much and which is now in course of construction. The line crosses the full breadth of the county from east to west, with a considerable inclination to the north, and passes through about twenty-four miles of the richest settlement. From Stratford to Goderich it runs parallel to the Huron road, and within less than half a mile of it, touching closely on the several villages. It is expected to be in operation all the way to Goderich harbor by November, next year, or at the latest, it must be completed by July 1858, under a penalty of £100 a day for every day beyond the stipulated time. A line of first class steamers to ply between Goderich and Chicago, Milwaukee, &c., is spoken of, and the traffic to the Western States, according to calculation, will be immense. It is clear that if there is a trade or traffic in the Western States, and that requires an outlet to the Atlantic seaboard, the Buffalo and Lake Huron railroad will command a fair

share of it, because, it is both the nearest and the clearest route. Besides, the list of roads contemplated to be gravelled, and for which a by-law is at present published, will bring the whole county within three or four hours teaming of some depot on the railroad, and in such an extent of rich agricultural country, the quantity of produce will make a very important item of traffic; and to all this may fairly be added a very large amount of pleasure travel in the summer season, induced by the deservedly renowned salubrity and beauty of the banks of Lake Huron.

In the year 1852, when Mr. Wadsworth, Mayor of Buffalo, and his friends, first proposed to extend their Buffalo and Brantford railroad to Goderich, the United Counties of Huron, Perth and Bruce, took stock, or otherwise became liable for *one hundred and twenty-five thousand pounds*, but through sheer profligate mismanagement and lack of bottom, the Company were unable to complete the work, and in leasing it to the present English Company the stock of the municipalities had to be sacrificed, as the debt on the road was nearly twice as much as the value of the work; but now that there is a prospect of the road being completed, the people of Huron do not grumble over their loss, but look forward in hope to the beneficial results of a railroad.

THE TOWNSHIPS.

Previous to the survey of the Huron Tract, Lord Bathurst, in a dispatch to Sir Peregrine Maitland, the then Lieutenant Governor of Upper Canada, states as one of the preliminary conditions, "the block shall be marked out by the Surveyor General or his deputies, and shall approximate to the form of some regular mathematical figure, as nearly as may be consistent with preserving any well-defined natural land-mark or boundaries," and it did, as a whole, bear some resemblance to an acute angled triangle. But the present County of Huron, in so far as shape is concerned, has no likeness to anything in geometry—no likeness to anything that wears a form. It is jogs and notches, and nooks and corners from one end to the other, and many of the townships are equally shapeless with the county.

Beginning at Goderich Township we have a pretty large figure without a name. It is bounded on the north and north-east by the Maitland River, with all its bends and circles, on the south by the Bayfield River, and on the west by the lake. In 1845, 5156 acres were under cultivation; but according to the census of 1851, 11,760 acres were cultivated, and of this, 2,850 acres were under wheat, which yielded 43,620, or about 15½ bushels to the acre. 1,486 acres of oats yielded 40,215 bushels or about 27 bushels per acre. There were also 72 acres of barley, 111 of rye, 556 of peas, 13 of buckwheat, 76 of Indian Corn, 310 acres of potatoes, 58 acres of turnips, 1,740 tons of hay, 8,289 pounds of wool, 49,060 pounds of butter, and 3,810 pounds of cheese, with large quantities of pork, beef, roots, vegetables, maple sugar, and 1,300 barrels of fish. The township embraces all kinds of soil, from bare sand to hard clay. Along the lake shore the land is flat, level, dry and fertile, but further back it is rolling, in some places approaching to hilly, a sort of gravelly clay, but excellent for raising wheat. It is finely watered, for besides its proximity to the great lake, and its full share of the Maitland and Bayfield rivers, no fewer than fourteen clear spring creeks cross the Bayfield road in a distance of twelve miles. These are fresh and running all the year through, and some of them are sufficiently large for saw mills and other machinery. The township is divided into 80 acre lots and is thickly settled. It has a few good practical farmers and several well ordered farms, and raises large quantities of grain and stock, but generally speaking, it is almost the worst agricultural township in the county, and one of the least progressive in matters of taste and management. In 1844 the popula-

tion, excluding the town, was 1,673, and in 1852 it was 2,715, of which fully one-half are natives of Ireland and their offspring. In the census report the schools of the township are put down at *two*, but there are at least eight common schools. The township has seven or eight little saw mills, one extensive grist mill, and two carding and fulling mills.

South of Goderich, on the lake shore, is the township of Stanley, extending from the lake eastward to the London Road. On the east side the land is flat, rich and well cultivated, and nearly the whole township, though uneven and in some places marshy, is excellent wheat soil. It is watered by the Bayfield River and several small tributaries, and is noted both for its grain and its oxen. The ten miles of road leading from the lake to the London Road runs through a beautiful tract of land, and at present is marked by proofs of agricultural progress not surpassed by any locality in the county. Every lot is settled and a large clearing on it, and nearly every lot presents its frame barn or improved mansion, many of them just in course of erection. In 1845, only 1,197 acres were under cultivation. But in 1851, 6,637 acres were cultivated. In 1849 the crop was—wheat 19,000 bushels, oats 9,000, potatoes 12,000, wool 3,800 lbs., and butter 3,400 lbs.; but two years later, viz: 1851, the produce was—wheat 31,726 bushels, oats 22,926, potatoes 16,244, wool 5,503 lbs., and butter 21,140 lbs. This is surely a handsome increase in two years? It is nearly a hundred per cent., and there are good reasons for thinking that the produce of the township of Stanley, last year, was at least one-third over the figures here given. Although the wood and wild lands are set down in the census report at 25,440 acres, only a small portion of the township is in the possession of the Canada Company, and most of that small portion is swampy. The population of Stanley in 1844 was 737, and in 1852 it was 2,064, chiefly Scotch and Irish, with their descendants, and an inferior number of English and a few French. The township has several churches, a few small saw mills, two grist mills; and a large steam saw mill, the property of Dr. Wanless of London, is now in course of construction, on a stream which he calls Bannockburn, two miles from the London Road.

The township of Hay is south of Stanley, and also extends from the lake to the London Road. It is in the form of an oblong square, about seven miles broad and from ten to twelve in length. It is well settled on the front, that is, on the London Road, and to the depth of three or four concessions back; but it contains a large proportion of marsh, which crosses nearly the whole width of the township about its centre. The soil is of the first quality on the concessions that are settled, being a fine yellow loam. Some of it that has been twenty years under cultivation and without ever receiving a shovelful of manure is, this year, bearing a crop of superior wheat. Indeed some of the best and heaviest crops that have been raised in Huron have been raised in Hay. Still it is but thinly settled, the greater portion of it is still in bush, and much of it remains in the hands of the Canada Company. It has the benefit of the London Road on the front, of the intended Port Sarnia Road on the lake shore, and of about three miles of the line between it and Stanley; but there are no roads through the township and no water power. A small stream called "Warren's Creek" runs through part of the front of it, on which is a small saw mill. Springs and wells however, are plenty. Hay has only 1,943 acres under cultivation. In 1849 it raised 4,000 bushels of wheat, 2,000 bushels of oats, 2,500 bushels of potatoes, and 2,000 bushels of turnips; and, in 1851, the produce of the same articles was—wheat 9,861 bushels, oats 6,904 bushels, potatoes 5194, and turnips 13,250 bushels. In 1844 it had 113 inhabitants, and in 1851 the population had risen to 985, chiefly Scotch and Irish with their offspring, and a small French settlement on the lake shore. It has no church, no village, and no grist mill.

South of Hay is the township of Stephen, a small township lying in the same range. It is only six miles in width by twelve or thirteen in length. It is watered by the Sable River, which enters it at the south-east corner, on the London Road, runs across its whole breadth two or three miles from the front, and after a long circuitous digression into the County of Middlesex, returns to Stephen, near the lake, where it divides it from the township of Bosanquet in the County of Lambton. There is some swamp and some sand in Stephen, but generally the land is equal to any in the county, and along the third, fourth and fifth concessions, may be called superior, owing to the extra depth of rich vegetable mould. It is too loose, or too rich, to ensure good crops of fall wheat, which frequently gets winter-killed, but the crops of spring wheat and other spring grains and roots are most abundant. The township is thinly settled, and a large portion of it is still in the hands of the Canada Company. The front of Stephen was settled at an early date in the history of the county, chiefly with natives of Devonshire, in England. But it made no progress for many years, either in population, in improvements, or in intelligence, and in 1844 the population was only 213. But in 1846-7 an influx of settlers and an infusion of new blood, produced quite a change for the better. In 1845 only 520 acres were under cultivation. In 1850, this had risen to 1,495, and in 1851 to 2,180 acres. The crop of 1851 produced—wheat 6,388 bushels, barley 207 bushels, peas 1,158 bushels, oats 6,798 bushels, potatoes 2,424 bush., and turnips 6,056 bush. The population, according to the census of 1852 was 742, but it must now be at least twice that number, as the first five concessions are well settled. Besides "Brewster's Mill," on the lake shore, which has long been known as an extensive saw mill, the township has four other saw mills and at least two grist mills. And in addition to the benefit of the London Road, several passable roads are now met with in the township.

McGillivray is south of Stephen, and is the southern extremity of the county—it is bounded by the township of Williams in Middlesex, and a point of Bosanquet, in Lambton, runs in between it and lake Huron at its western extremity. The London Road is its eastern boundary for more than half the breadth of the township, where at "Flanagan's Corners" it turns a mile eastward into the township of Biddulph. McGillivray is a large and excellent township of land, and there is comparatively little swamp or sand. The soil in general is a heavy clay loam, and almost flat, with some few *gullies* and glens of considerable depth, running through it. It is watered by the Sable (which crosses the whole width of the township *twice*, with several windings and twistings,) and some small tributaries. It has also a number of good roads intersecting each other throughout the township, and a grist mill and two saw mills are in operation. In 1845, only 808 acres were under cultivation. Five years later 3,913 acres were cultivated, and 13,000 bushels of wheat and 12,000 bushels of oats were raised in 1849. But in 1851 there were 5,396 acres cultivated, and 23,667 bushels of wheat, 19,902 bushels of oats, 4,677 bushels of barley, 5,582 bushels of peas, 2,088 bushels of rye, 8,210 bushels of potatoes, and 24,061 bushels of turnips were produced. Some of the best farms and best farmers of Huron are in McGillivray, and in the last two years many settlers have gone into it, and most of the land is now taken up, either by purchase, by lease, or by squatting; indeed the greater part of the lands still held by the Company in this township have been squatted on. In 1844 McGillivray had only 448 inhabitants, and in 1852, the population was 1,718, about one-half being Irish.

Biddulph is situated on the east side of the London Road, which divides it from McGillivray. It was among the first settlements of the county, and its immediate proximity to London, only thirteen miles distant, gave it great facilities for obtaining a population. On the east it borders the Township of Blan-

shard in the County of Perth, and on the south the Township of London. It is in general a flat clay soil, of good quality, and in some places is beginning to be pretty well cultivated. It is watered by a branch of the Sable, which forms a fine glen of several miles in length, and makes the most difficult spot on the whole road between Goderich and London, where a mile to the south-east of "Flanagan's Corners" it crosses the London road. In 1849 the produce of wheat and oats was 6090 bushels of the former and over 5000 of the latter. And in 1851 it produced 20,849 bushels of wheat, 20,821 of oats, 1,650 of barley, 2,118 of peas, and 19,388 lbs. of butter. In 1844 the population was 1,009 or fully twice as large as that of any other township in the county save Goderich, and in 1852 it was 2,081, chiefly Irish, with a small settlement of coloured folks. There are three neat little churches, two catholic, and one English Episcopal, in the township, but otherwise it has barely kept pace with its neighbors, in improvements.

Usborne lies to the north of Biddulph. It is a curious kind of a *seven-cornered* figure, extending about ten miles along the London road, which is its only straight side. But it is excellent land, and of late years, has become well settled and much of it well cultivated. The front of it, facing Stephen, was settled at the same time, and with the same people, (Devonshire), and the two fronts were known for many years as the "Devonshire settlement," and noted for its non-progressiveness. In 1844 Usborne contained 283 inhabitants, and though it was nearly stationary for some years, a revival did come, and in the census of 1852 the population is put down at 1,484, nearly one-half English, the other Scotch and Irish in about equal proportions. It had in 1845, 728 acres under cultivation. In 1849 the produce was, wheat 4,900 bushels, oats 4,000, potatoes 4,000, turnips 5,500 and 2,000 pounds of wool and 1,100 lbs. butter. In 1851 there were 3,467 acres cultivated, and 12,949 bushels of wheat, 9,939 of oats, 2,650 peas, 229 barley, and 12,588lbs. of butter, and 2,924 lbs. of wool produced. The soil is of various qualities, in some places light, inclining to a sandy or gravelly loam, and in others a good substantial clay. It is, for the most part level, with here and there a moderate valley or a miniature hill. The Sable runs along the third and fourth concessions for some miles, and besides it has several small spring creeks. There is a number of passable roads opened throughout the township, which are every year being improved, and some good farm houses, both frame and brick, have been built within the last four years. It has also one or two saw mills, and a grist mill of many years standing.

North of Usborne is the Township of Tuckersmith, if not the best, *one* of the best and wealthiest in the county. It occupies the acute angle formed by the junction of the London and Huron roads, and extends about 14 miles along the former and 12 along the latter. It thus at least presents twenty-six miles of frontage to the two leading roads of the county. The "Mill road," seven miles in length also passes across it at the most populous place; and, indeed, many of the concessions and side lines are as good roads as most of the leading ones. The land in general is rolling, but not knolly, in some places inclining to gravel with a good covering of vegetable earth; but in most parts it is a fine mellow clay loam. The most of the township is out of the hands of the company, a large portion of it is now freehold property, and is in a high state of cultivation. For good farms good farming, wealth and intelligence, Tuckersmith stands at the head of the list in Huron. There is in some of the townships, a good farmer here and there equal to any in Tuckersmith, but as a whole township, it certainly takes the lead. It is well watered with the Bayfield river, which winds through it in various directions on the north side, and towards the south it is watered by "Warren's creek," the little Bayfield, and other small streams. It has two good grist-mills, one on each side of the township, but as both hemlock and pine are rare, c

entirely wanting, sawmills are scarce. Tuckersmith was not so early settled as some of the other townships, but in 1844 it had 599 inhabitants, with 2,233 acres under cultivation. In 1849 the produce was: wheat 18,000 bushels, oats 14,000, peas 4,000, maple-sugar 20,000 lbs., cheese 3,200, and butter 5,000 lbs. And in 1851 the yield was, wheat 25,951, oats 28,865, peas 5,954, barley 618 bushels, with 19,056 lbs. of butter, and 7,653 lbs. of cheese. The maple sugar had declined nearly one-half, being only 11,869 lbs. In 1852 the population was 1,727, chiefly Scots, with a slight sprinkling of English and Irish.

Opposite the northeast portion of Tuckersmith, and on the north side of the Huron road, is the township of McKillop. It is an oblong square of about nine miles wide and eleven long, bounded on the east by Logan in the county of Perth. On the front the land is flat and comparatively light, and farther back it is rolling, hilly, and in some places affords an excellent supply of gravel of the first quality. Still the township has a large quantity of first-rate land, and one of the best agricultural settlements that can be met with in any part of the province. But as a whole, it is but thinly settled, and beyond the fourth or fifth concession, not settled at all, save by a few squatters. A wilderness of at least six miles in depth on the whole width of the township, is yet in the hands of the Canada Company, and cannot be purchased, and in this large tract there are thousands of acres of fine land. The principal road to the new townships of Grey, Morris, Howick, and Turnbery, passes through this wilderness, and is in the list of *roads to be gravelled* by the County Council, consequently the lands would sell at large prices, but the company are immovable. McKillop is well watered; a branch of the Maitland runs through it in an angling direction, from north-west to south-west, and on which a grist mill has been in operation for many years, and a saw-mill with an extensive business is also on this stream. Silver creek and Carron brook, with other little streams, likewise run through McKillop. In 1844 the township had 321 inhabitants, and in 1852, according to the census report, the population had increased to 884, mostly Scots and Irish, in about equal proportions. In 1845 789 acres were under cultivation, and in 1849, 7,000 bushels of wheat and 5,900 bushels of oats were raised, and in 1851 the produce was, wheat, 11,147; oats, 12,734; peas, 4,428; barley, 240 bushels; and 2,697 acres were under cultivation.

The Township of Hullett is situated on the north-west side of McKillop, and on the same side of the Huron road. It is a kind of triangle with two corners broken off. It has the same tributary of the Maitland that waters McKillop, and the north corner is bounded by the main body of that river. It has also several other small streams, and is well supplied with mills, both steam and water power. In 1844, Hullett had only 195 inhabitants, and these were mostly on the south-east corner of the township, and it was not till within the last five years that any considerable increase took place. The population, however, is now greater than that of McKillop, and is put down in the last Census at 955; but the larger portion of them are lessees of a comparatively recent date, accordingly we find that, though the population is greater than that of McKillop, the number of cleared acres and the quantity of produce are much less. The crop of 1851 produced, wheat, 8,513 bush.; oats, 9,195 bushels; peas, 1,633 bushels; and 1,978 acres were under cultivation. But Hullett has, nevertheless, a large proportion of good land, and in the early settled part of it, a number of good farms well cultivated. Several of the lines are cleared out, and have become quite passable roads, and the line that separates it from Goderich on the north-west, about twelve miles in length, is included in the list of roads to be gravelled. But the great draw-back to the progress of Hullett is the unsold lands; a large share of the township still belongs to the company, and is likely to remain so for

many years, as it occupies a position that is every day adding to its value. A preponderance of the population is English, the rest a fair admixture of Scots and Irish.

To the north of Goderich, and on the opposite side of the Maitland, is the township of Colborne, an unshapely figure, bounded on the south and east by the zigzag course of the river, and on the west by the lake. It is a small township, but well settled in proportion. The land is uneven, and the soil is generally light. It grows excellent hemlock, but it grows good wheat too. Besides the Maitland, it has a number of small streams with mill privileges, and mills on them, and an extensive steam saw-mill has lately been erected about three miles north of Goderich, on the leading road. It was among the early settlements of Huron, and in 1844 had a population of 505, and in the following year 1,558 acres were under cultivation. In 1849 the quantity of wheat raised was only 8,000 bushels, and of oats, 5,600 bushels, but the produce of 1851 was, wheat, 11,032 bushels; oats, 12,419; peas, 2,460; rye, 249; barley, 890 bushels; and 12,170 lbs. of butter; 1,430 lbs. of cheese, and 2,340 lbs. of wool. Colborne has a number of tolerable roads, but the principal one is the "Eighth Line," which strikes off the Goderich and Saugeen road, eastward, three miles from the town of Goderich. This eighth line crosses the breadth of the township into its north-east corner, where it is separated from Hullett by a bend of the river Maitland, and where it intersects the line that divides Wawanosh from Colborne and Hullett. In this corner, at the junction of the three townships, a strong truss-work bridge of about two hundred feet in length, and supported by stone piers thirty feet in height, is now nearly completed, and when finished, this road extending along the north end of Hullett and McKillop, will become the leading road to the new townships. The river Maitland, at this point, is a beautiful, broad, swift stream, and its banks, bends and scenery, forms one of the prettiest sylvan pictures to be met with in Huron. A village called Manchester has been surveyed, and the beauty of the locality, and extensive water privilege will no doubt induce an extensive demand for building lots; the distance from Goderich is ten miles, the road is to be gravelled, and will be one of the best travelled roads in the county. The population of Colborne in 1852 was 921, consisting of nearly equal proportions of Scots, Irish, and English. The number of acres under cultivation was 3,629.

We have now noticed the eleven Townships belonging to the Canada Company. The remaining six are Government Townships, and being but recently settled afford only meagre statistics, and small matter for observation.

Ashfield, a kind of triangular figure, lies on the lake shore, north of Colborne, and extends to the boundary of the county of Bruce. It is the poorest township in the county, both in soil and in settlement. The land is rough and swampy, and much broken up with glens and gullies. A stream called the Ashfield River runs through it and affords considerable mill privilege, which, to some extent, has been taken advantage of by the erection of small mills. It has several other streams and abundant water power, but little use for it. In 1844 it contained 266 inhabitants and 228 acres, or less than one acre a piece, were under cultivation. In 1850 the population had risen to 682 and 1,094 acres were cultivated, and according to the last census the population was 907, and the cultivated acres 989 or a little over an acre a piece. The produce of 1851 was 3,171 bushels of wheat, 2,459 bushels of oats, 551 bushels of peas, and potatoes, turnips and maple sugar in proportion. The Goderich and Saugeen road passes through the length of the township, and was, till lately, all but impassable, but through the labor of the settlers it is improving, and being one of the leading roads of the county, is likely to come in for a share of the gravel. The other roads of Ashfield are not good, and as a large tract of the north end of the town-

ship fell into the hands of speculators, and is still a wilderness, local improvements are not likely to make much progress. The population is almost entirely Irish Catholics and Scotch Highlanders.

Wawanosh, on the east side of Ashfield, is a large square township, containing much excellent land and some of inferior quality. It is considerably broken by the Maitland River, which, with many a twist and bend, crosses the whole breadth of the township, and in a great measure, has rendered the eastern division inaccessible. This barrier is now being removed by the construction of the bridge at Manchester, and as the land is good in quality and all sold, or "taken up," actual settlement and actual improvements, on a large scale, may be expected. Indeed the filling up of Wawanosh, during the last four years, has been astonishing; and though at the time of taking the census in 1852 the population was put down at 722, it must now be more than twice that number. Among the older settlers there are some good farmers, whose fields, homesteads, and stocks, are creditable to the county; and of those who have lately gone in, we know several experienced practical agriculturalists. In addition to the boundary lines between it and Ashfield and between it and Colborne, which are good passable thoroughfares, Wawanosh has already a number of roads through the interior, and a grist mill and two or three saw mills are now in operation. In 1850, only 460 acres were cultivated, and in 1851, 1,249 acres were under cultivation, and 5,864 bushels of wheat and 6,014 bushels of oats were produced. This was fully double the quantity raised in Ashfield, although the population was considerably less. But it is unfair to judge Wawanosh by the statistics given in the census report; because, as we have already observed, the principal settlement of the township has taken place since that time. But from present appearances it may be presumed that in a few years more, Wawanosh, in regard to population and cultivated acres, will barely be second to any township in the county of Huron. The inhabitants are, for the most part, natives of the north of Ireland and of Scotland.

East of Wawanosh, and on the north of Hullett, is the township of Morris. It was surveyed in 1849, but was sold only in 1852-3. It is a pretty large township, and has less swamp than any other of the new townships belonging to the Crown in this county. It is all sold but not very thickly settled. The soil, in general, is good, and quite a number of experienced farmers have taken up their abode in it, and large clearings and large barns already proclaim the destruction of the forest. Two branches of the Maitland run through the north-east corner of it for a few miles, and it is well supplied with smaller creeks and fine springs. The line between it and Grey on the east, and the one between it and Wawanosh on the west, have both been cut out to the full width of sixty-six feet, and bridged and cross-wayed, by contract from the Government, and are already good roads, at least in winter. And, on the south-east corner, at its junction with Grey and McKillop, Mr. Knox has erected a spacious frame building, two stories high, for an hotel, and another frame for stables and driving house, both sufficiently large to accommodate the travelling public of the best town in the county. This however, being on the leading road, not only to Morris and Grey, but also to the more northern townships, it is quite probable that the large hotel may have plenty of "call."

Grey is situated on the east of Morris and north of McKillop. It is something wider than Morris and contains a little over 65,000 acres. It was only sold in September 1854; but having been pretty well squatted on previous to the sale, it is now well settled. On the east side, towards the township of Elma, there is considerable swamp, but as a whole, the land is of good quality, generally a clay soil with an occasional knoll of gravel. The timber, as in Morris, is remarkably tall and heavy, and consists of rock elm, beech, maple, hemlock, and

in some places, a sprinkling of pine and cedar. A number of saw mills are in operation and some excellent pine lumber has been produced. It is watered by two branches of the Maitland and several other creeks, besides an abundance of clear, cold springs. Near the centre of the township, and on one of the larger streams, a town plot has been reserved and has not yet been offered for sale, but it is squatted on, and a Post Office, store, and one or two taverns are kept on it; and on the same stream, at the place where it crosses the town line into Morris, an attempt has been made to raise a village; and two or three stores, a tavern and a Post Office have been established. The majority of the settlers in Grey are experienced bushmen, and have moved in from old settlements in other parts of the Province; consequently, they know their work, and as many of them were possessed of some means, they are making great headway, and clearings of thirty and forty acres may already in many instances be met with; while a nice clear bush and a rich abundance of herbage enables them to keep a fair portion of very creditable stock.

North of Grey is Howick, a large square township, with a large population. It contains much good land and much swamp, is well watered by the main branch and some other branches of the Maitland, has plenty of pine and several mills already in operation. It was sold at the same time as Grey, and was well peopled beforehand. But it is making considerable progress, and a good portion of it having got into the hands of men who have both capital and intelligence to take advantage of its superior water power, it cannot fail to move onward in improvements.

Turnberry is a small spoiled triangle, on the west side of Howick, and stretching along a portion of the north of Grey, the whole width of Morris and part of Wawanosh. These two townships, Turnberry and Howick, spoil the shape of the County of Huron, and in so far as form is concerned, should belong to the County of Bruce. Turnberry has a quantity of excellent land and a larger quantity of swamp and beaver meadow; it has an abundance of good pine and a still greater abundance of water power. Several mills, grist and saw, are now in course of construction, and there can be no doubt that in a few years the principal supply of lumber for the whole County of Huron, will be obtained from this source. All that is wanting is a good gravel road from Goderich to the town plot of Turnberry; and when the bridge at Manchester is completed and the road gravelled to that place, not more than sixteen or seventeen miles will remain for the enterprise of the town of Goderich, and throughout this distance, the road is already cut out and crosswayed. There are comparatively few settlers in Turnberry, but they have energy, perseverance, enterprise and some means.

The Woolwich and Lake Huron Road, part of which has been opened up, and the other part is now in the jurisdiction of Mr. Gibson, Superintendent of colonization roads, will be of vast service to these new townships, in affording facilities for egress and ingress. It stretches from the township of Woolwich, in the County of Waterloo, in a stright line between Maryborough and Mornington, Wallace and Elma, Howick and Grey, Turnberry and Morris, Kinloss and Wawanosh, and Huron and Ashfield, to Point Clark, on Lake Huron, and in time, is likely to become a thoroughfare of considerable importance, especially in the lumber trade. It was opened up on the east end, as far as the township of Grey, in the summer of 1854, and the remainder of it will be let out to contractors so soon as there are funds in the treasury.

THE RIVERS.

Considering the great length of lake coast occupied by the County of Huron, it has but few rivers, and of these few, the only ones worthy of notice are the

Maitland, the Bayfield and the Sable. The principal stream of the Maitland is collected in the township of Howick, in the north-east corner of the county; thence it passes into Turnberry, where, in the limits of the town plot, it receives the joint waters of two smaller branches that rise in a more easterly direction, and water parts of Grey and Morris. Leaving Turnberry it passes into Wawanosh, which, with many tortuous windings, it cuts in two halves, then gliding through the corner junction of Hullett and Colborne, it produces a zig-zag semi-circular boundary between the latter township and Goderich, till in its union with Lake Huron it forms the harbour of Goderich. The Maitland is very circuitous in its course, swift in its movements, and in most parts, steep, rugged and irregular in its banks. In some places, however, it has fine broad margins of flat land, covered with strong, rank herbage, which, at a distance, appear like fertile straths or vales. The channel is rocky or pebbly all the way up to its source, and yet the water is a moorland brown color. But in its lengthened course it receives many tributaries, which may perhaps, be the cause of its darkish hue. Owing to the width of the channel towards its mouth, and the rough, loose gravel through which it flows, the body of moving water seems inconsiderable, but below Manchester, and in several places in Wawanosh, were it is hemmed into a bed of perhaps a hundred feet in width, it rolls on majestically, at a depth of about two feet, and very much resembles a first class Scottish river. When a little more of the forest shall be removed, the scenery of the Maitland will, in many places, be of a superior character. At Mr. Piper's Mills, which occupy the bosom of the glen, two miles above the harbor, and at several spots in the townships of Colborne and Wawanosh, the combination of rock, and wood and water, presents some beautiful specimens both of the picturesque and romantic. From the mills down to the harbour, the banks are very high, but not altogether inaccessible, as the channel spreads out wide and forms a number of small flat islands, which, with the broad margins, afford a large extent of excellent pasture land for the town cattle. During the spring thaws the Maitland rises to a great height, and comes down with formidable power, carrying all before it, even the schooners in the harbour, at times; and in the winter of 1851-2 it carried away the large frame bridge that crossed over to Colborne, about a mile up from the harbour, and which had cost, according to the estimate of the Canada Company, over seven thousand pounds; but a very superior structure, with cut stone piers and abutments, has lately been built by the County Council for a much smaller sum.

The Bayfield River has its chief source in the Township of Logan, in the County of Perth; it crosses the Huron Road into Hibbert, twenty-seven miles from Goderich, and is there called "Carron Brook"; then turning to the west runs parallel with the road nearly the whole length of Tuckersmith; then winding a little to the south, it crosses the London Road thirteen miles from Goderich, and thence forms the crooked boundary between the Townships of Stanley and Goderich, to the lake, where it forms the channel of the Bayfield Harbour. The river of Bayfield is small compared with the Maitland—its course is much shorter, and its tributaries are few; it is less rapid in its motions, and excepting a few miles near its mouth, the banks are low, tame and uninteresting. Towards the lake however, the banks and margins have some resemblance to those of the Maitland, but the stream is very inferior in size, and more sluggish.

The Sable rises in the Township of Hibbert, in the County of Perth, passes into Usborne, and crosses the London Road thirty miles from Goderich and the same distance from London, where it enters the Township of Stephen at its north-east corner; it then turns in a more southerly direction, and running

nearly parallel to the road, crosses Stephen and McGillivray, then turns into Williams, in the County of Middlesex, winds round the southern portion of that township, and then turns back and runs due north. In its northerly career it forms the boundary line between Williams, McGillivray and Stephen on the one side, and Bosanquet on the other. It crosses Stephen almost back to the same line on which it entered it, and then wheeling to the south again, runs parallel to the lake, and within less than half a mile of it, for a distance of more than twelve miles, where, a little to the north of Kettle Point in the County of Lambton, it enters the lake. The Sable is not the largest, but perhaps the *longest* river in Huron, and to give an idea of its length, we may just mention that, from where it crosses the London Road at the north-east corner of Stephen, the distance to the lake is only thirteen miles by the road, while the course of the river is *ninety-six* miles. The Sable drains a large extent of country, but it is only an indifferent, unattractive stream, in so far as size and scenery are concerned. There are a few spots where the current is pretty rapid, and where tolerable mill privileges are secured. But, in general, it is a dull, dirty, sluggish stream, crawling with a motion scarcely visible, between low mud banks, which, in many places, give it more the appearance of a stagnant frogpond than of a woodland river. As it approaches the lake, however, it becomes deep and presents rather a favorable aspect. It is navigable at its mouth and affords safety and tolerable shelter for large vessels, and large quantities of sawn lumber are shipped from "Brewster's Mill," situated fourteen miles up from the mouth.

THE VILLAGES.

The land and railroad fever produced in Huron, as in most other counties of the Province, a serious mania for village building. Surveying and map-making, and handbill-printing, and auctioneering, became profitable occupations, and the multitude of paper towns and villages exhibited on the walls of every country bar-room, suggest the idea of a gallery of amateur landscape painters, or the more alarming idea that Canada is just about to resolve herself into one enormous city! The large placard announcing "Great Auction Sale of Village Lots" was, for some time, a thing of daily occurrence, and some thousands of pounds, in the shape of "first instalments" have, by this stratagem, found their way into the pockets of men who could not have got on well without them. In fact, the mere names of the *paper* villages of Huron would cover the paper of an ordinary essay. We will, therefore, notice only such as have made a beginning with a reasonable prospect of permanency, and will leave the Goosevales, Hogvilles, Dogvilles, Almas and Balaklavas, till such times as they, at least, become visible on the earth.

Beginning then, seven miles from the southern extremity of the county, we have the village of Ireland, long, and still known as "Flanagan's Corners." It is situated on either side of the London Road and in the townships of McGillivray and Biddulph, and the leading roads to the interior of McGillivray and to the township of Williams, diverge from this point. It is surrounded by a thickly settled and a comparatively wealthy country, and consequently, holds out a fair prospect for a few merchants and tradesmen. Ireland, at present, has a post office, two taverns, four stores, four blacksmiths, three waggon shops, two tailors, three shoemakers and a saddler. Distant from London *nineteen*, and from Goderich forty-one miles.

Ten miles north of Ireland on the London Road, and in the townships of Stephen and Usborne, is the village of Exeter, formerly the well-known "Devonshire Settlement." It is the centre of a good neighborhood, but has

few other advantages. It contains at present a steam saw mill, a tannery, three stores, two taverns, four blacksmiths, two wagonmakers, three shoemakers, three tailors, two painters, two cabinetmakers, one cooper, one neat little church, (Bible Christian) and a post office.

A mile north of Exeter and in the same townships, a village named Francetown has recently been laid out, and already offers a formidable rivalry to its neighbor of much older date. It occupies a more favorable position and enjoys very superior advantages. The Thames Road leading eastward into the County of Perth and through the well-settled portion of Usborne, intersects the London road at this point, and to the west, the town line between Stephen and Hay extends to the place called "Port Franks" on lake Huron, and thus furnish to Francetown the benefit of four leading lines of communication. But a still further advantage is the river Sable, which here crosses the London Road and affords considerable water power, and the nucleus of the future village is a large grist mill propelled by both steam and water, another grist mill propelled by water alone, a saw mill propelled by water, and a steam saw mill in course of construction. There are also two stores, a large brick hotel nearly completed, and one blacksmith and two carpenter shops. The distance to "Port Franks" on the lake shore, is only thirteen miles, and the two townships are partially settled for the most part of the way. But though the road was cut out by the Canada Company many years ago, it is now grown up with brush wood in some places—the bridges and crossways have decayed and fallen down, and a few miles are at present impassable. But we learn that an effort is being made to have it put in good condition, and the advantage, not to Francetown alone, but to the whole of the neighbouring townships, will be great. There is of course, *no house and no harbour at Port Franks*, but the shore is clear and will admit of shipping, or at least of schooners being loaded, within a very short distance of the beach. Owing to the fine agricultural country along the London Road, Mr. A. McDonald, storekeeper in Francetown, purchased about 13,000 bushels of wheat at his store last winter, and had the road to Port Franks been in a passable condition, this wheat could have been shipped there, at a cost of sevenpence half-penny a bushel less than it cost to team it to Bayfield or London, and at least a part of this difference would have gone into the pockets of the farmers. The Thames road on the east side is good and well-travelled, extending back into the County of Perth and through a populous tract of fine land. A movement is now on foot to have it gravelled all the distance from Francetown to St. Mary's, in the township of Blanshard, and thus, a short and easy line of communication will be established with the Grand Trunk Railroad. An attempt to raise a village on this Thames road is now being made, and a store and tavern have been built. It is situated in a good, prosperous locality, in the township of Usborne, six miles east of the London road, and is named Fairquhar. Francetown, however, from the favourable circumstances here noticed, is likely to become the *commercial depot*, as well as the *manufacturing emporium* of the whole of these southern townships, and even now presents an excellent opening for tradesmen and mechanics of every description. It is midway between Goderich and London.

Three miles farther on towards Goderich, is the large and very excellent Inn called "The Western Hotel." It is the property of the present occupant, Mr. Mathew Rodgers, and a few houses that have been built around it, principally through his own enterprise, are, *of course*, called "Rodgersville," which may, a thousand years hence, be an important suburb of Francetown.

The Village of Brucefield is situated at the spot where the "Mill Road" crosses the London road, eighteen miles from Goderich and forty-two from

London. It is in the townships of Tuckersmith and Stanley, and occupies the best position in the county for doing a good profitable country business, as the farmers are numerous, intelligent and wealthy. Brucefield was commenced six years since, and though its progress has not been rapid, it has been healthy and safe, and has not gone beyond the actual demand. It has the benefit of good roads and a fine agricultural population on all sides, and though destitute of water privilege, and not likely to rise into a large town, it will always be a prosperous country village, and will command sufficient business for a moderate number of tradesmen and merchants. Its present population is about 200, and it has two decent hotels, five stores, a post office, and two churches, Free Kirk and U. P.

About six miles east of Brucefield, on the mill road, is "The Mill." It is now called Egmondsville, from the proprietor, C. L. Van Egmond, Esq., and has become a neat little village. It is in the township of Tuckersmith, in an excellent locality of enterprising farmers, and only half a mile from the Buffalo and Lake Huron Railroad. It has the advantage of good water power, as the river Bayfield runs through it, and besides "the mill," propels machinery of other kinds. A number of tradesmen, two stores and a tavern are already located in Egmondsville.

Two miles further to the northwest, in the same township, and on the Huron Road, is the village of Harpurhey, the oldest in the county. Its progress is *slow but sure*, and as the railroad passes close to it and is likely to give it the benefit of a depot or station, a revival may shortly be expected. It has the benefit of good roads in every direction, and the prospect of having them gravelled at no distant date, and having its full share of support from Tuckersmith, McKillop and the best part of Hullett, as well as from the new townships, the principal thoroughfare to which branches off from the Huron Road at this place, it can scarcely fail to prosper. Harpurhey is twenty miles from Goderich and twenty-five from Stratford. It has two large hotels, seven stores, a post office, a telegraph office, a United Presbyterian Church and a number of tradesmen and mechanics of all kinds. The present population is about 300.

One mile north of Harpurhey and in the township of McKillop, is the village of Roxburgh. It is situated on the road to Grey and Morris, and in rather a pretty spot, on the south branch of the Maitland. It has been but recently laid out and is, of course, only beginning. But it is in one of the oldest and most intelligent settlements of the county, and possesses good water power. The proprietors and a number of the neighboring farmers are natives of Roxburghshire in the south of Scotland, and hence the name of the village. It has a good grist mill of several years standing, a tavern, two stores and a few tradesmen of different kinds, and a good number of building lots have recently been sold.

Eight miles west of Harpurhey is the village of Clinton. It is situated at the junction of the Huron and London Roads, and in the townships of Goderich, Hullett and Tuckersmith. It was long known as "Rattenbury's Corners," and Mr. Rattenbury's tavern was, for several years, the only house Clinton owes its first impetus and much of its rapid progress to the late James Gordon, Esq., who, with his lady, was destroyed by the fearful collision on the Poughkeepsie Railroad last winter. Six years ago Mr. Gordon bought a farm at this place, established a store and a post office, surveyed a portion of his lot and had a sale of village lots; and from that time the village has continued to make headway. Four years ago it received a fresh impetus from a strenuous effort of Mr. Gordon and a few others to have the county offices and county town privileges transferred from Goderich to Clinton, and the effort had almost succeeded, in so far as the vote of the County Council was concerned. It, a

all events, gave a fresh start to the village, and from that time its progress has been astonishing. It occupies an excellent position, and has the benefit of the principal traffic roads of the county. And in addition to these roads and to the Buffalo and Lake Huron Railroad, it has also a road, the line between the Townships of Goderich and Hullett, stretching northward to the new bridge on the Maitland, at Manchester, and thence back into the new townships. This road has been cut out and crosswayed, and a great part of it is in a tolerable state of repair; it will shortly be gravelled a considerable distance into the country; and there can be no doubt that Clinton will command a fair share of the business of the northern townships. Clinton has a large steam grist and saw mill, tannery, distillery, post office, telegraph office, fanning mill factory, five cabinet shops, chair factory, three carriage shops, tinsmith shop, watchmaker, five blacksmith shops, four shoemaker shops, two merchant tailors, three lawyers, two medical men, one druggist, eight stores, four taverns, Methodist Church, Bible Christian Church, and Free Kirk, besides several "men of business" who do nothing but *loaf*. The population at present is about 800. Distance from Goderich, twelve miles.

From the Village of Brucefield, on the London Road, to Lake Huron, is a distance of ten miles, which we have already described as part of the Bayfield road, and the Village of Bayfield is situated on this road, at the mouth of the Bayfield river. The site of the village is beautiful, occupying an elevated promontory, formed by the river and the lake, at a height of perhaps seventy feet above the water level, and sloping gradually to the beach. The village at present is small, and does not extend much towards the lake, but is confined to the level summit, which is of considerable extent. The soil is sandy, and the streets clean, dry, and smooth. It became the property of the Hon. Malcolm Cameron about four years ago, and though it had been declining and in a great measure deserted, for many years previously, it has rallied and is now in a thriving condition. It is in the township of Stanley, and must prosper if a good country can make it do so. There has never been any harbor at Bayfield, though the river contains about twelve feet water towards its mouth; but in its confluence with the waters of the lake, a large bar of sand and gravel is thrown up, so that in summer it could be crossed by travellers without getting their feet wet. Two years ago the township Council, with the concurrence of the farmers of Stanley, raised a loan of £2,500 which was expended in making at least the beginning of a harbor at Bayfield. A pier composed of wooden cribs, filled with stone, has been extended out on the north side, till a depth of twelve feet water is reached. This swallowed up the whole sum, but another £1,000 has been raised this year, and though only two or three cribs of the south pier have yet been sunk, the cheering result is, seven feet water on the bar, which, at the same season last year, was a dry foot-path. Mr. Murray, the Assistant Provincial Geologist, in his Report of the Lake Huron coast, says,—“With the exception of Goderich harbor at the mouth of the river Maitland, and the basin at the exit of the Riviere au Sable (south) there is not a single place of security for any description of vessel between the river Saugenee and the St. Clair.” And this was true at the time Mr. Murray wrote. But Mr. Hall, architect and contractor for the Bayfield harbour, says, that one half the money spent by the Canada Company on the Goderich harbour, would make Bayfield the best harbour on the east shore of Lake Huron. And indeed, there is now no doubt, that an outlay of perhaps five thousand pounds, in addition to what has been already spent, would secure twelve feet water in a spot that for shelter and safety is second to none on this side of the lake. And when it is known that in the spring of this present year, (1856) the schooners lay at anchor a short distance from the beach, till with boats and scows, *one*

hundred thousand bushels of wheat, besides large quantities of peas and oats were shipped from the little village of Bayfield, it will be acknowledged that a harbour is badly wanted. Bayfield is now a port of entry, and though the Customs officer has not been oppressed with labor, up to this time, it may nevertheless be presumed, that a good harbour would alter the case. The village cannot boast of a large population, but it has six taverns, seven stores, a tannery, a distillery, a post-office, an Episcopalian and a Methodist Church and a United Presbyterian, three miles out. It has also a number of tradesmen and mechanics. Distant from Goderich twelve miles.

The town of Goderich occupies a site very much resembling that of Bayfield. It has the same relative position to the river and the lake, and a similar high ridge of woodland on the north side of the river. But the Maitland is much larger and altogether a prettier stream; the ground is higher above the water level, being at least one hundred and thirty feet, and even rising considerably above that towards the centre of the town. The lake banks are steep, almost perpendicular, and of a loose gravelly clay. A good sloping road however, was made down to the harbour some four years ago, and loaded teams have no difficulty in getting up or down. The town of Goderich was commenced by Dr. Dunlop in 1827, but it is only within the last six or seven years that it has made much progress. It has a large market square of an awkward octagon form, and from which eight streets diverge in straight lines and, of course, produce a multitude of sharp angles and points of useless ground, at the various junctions and intersections throughout the town. But in defiance of any awkwardness arising from a fanciful design, it is a pretty place. The beauty of the situation makes up for all deficiencies otherwise.

The town limits are extensive and, as has been remarked, *it would be a large city if it were built*; but, as it is, it is a handsome little town, and notwithstanding the peculiar and discouraging impediments that stand in the way of its progress, it has advanced wonderfully during the last four years. Many large and excellent houses, both brick and stone, have been erected, and a better taste and spirit are manifested both in the buildings, and in the improvement of the streets and sidewalks. There has been a very considerable influx of both merchants and tradesmen, and business, business habits and business aspects, are quite changed from what they were four years ago. The "public buildings" of Goderich are of course few, and consist of the county jail, situated on the northern limits of the town on the banks of the Maitland. It is a substantial stone building two stories high and of considerable dimensions. A stone wall of some fourteen feet in height, with an iron railing on top, surrounds it; and for safety, good accommodation and healthiness, it is considered one of the best county jails in the Upper Province. The Court House, a new building, is erected on the centre of the market square. It is built of brick with cutstone jambs, pillasters and corners; and besides a very spacious hall for a court room, it contains suitable apartments for the various county officers. It is two stories in height, the upper one twenty-seven feet between floor and ceiling. It is covered with slate and topped with a tin-roofed cupola and has rather an imposing appearance on entering the town. The cost was about £4,500. The *light-house*, erected on a point of the high bank above the harbour, is a neat little stone building, surmounted with a tin-clad cupola, and is seen from a great distance. The Temperance Hall is a good brick house of considerable size, and is used for meetings of various kinds, and especially those of the Mechanics' Institute. And a brick building ornamented with cutstone, is now being erected for a common school, and is calculated for the accommodation of the whole school population of both sexes. There are also five churches, viz: English Episcopal, Kirk of Scotland, United Presbyterian

Methodist, and Roman Catholic—two branch banks, or bank agencies, the Montreal and Upper Canada—a number of insurance agencies and a telegraph office. There are two extensive foundries, three tanneries, a planing and sash factory, a good steam saw mill, and the Goderich mills and woollen factory a short distance up the river. The *Huron Signal*, the first newspaper published in the Huron Tract, was started in January 1848, and, with a large circulation, still keeps the field.

The site of the town is a peninsula, formed by lake Huron on the west, and the Maitland river on the north and east, and the scenery is of the most pleasing description. The harbour might be one of the best on the lakes, as the basin of the river is expansive and deep, and thoroughly sheltered on the north and north-west by a high ridge of wood land, and on the south and east by the high table land on which the town is built. The coast is clear of rocks, scaurs and shoals, for many miles in every direction, as is testified in the following extract from a report published in 1845, by a number of the most competent practical navigators of Lake Huron. They say, "The distance from Point Clark to Goderich is twenty miles, and from Goderich to Sable Bay (Bosanquet) is thirty miles; in all, an extent of fifty miles of straight coast, without promontory, rock, shoal, or reef, to prevent any vessel that can cross St. Clair, approaching within one mile of the shore at any place. The Goderich harbour is thus situated on an open seaboard, with neither rock, shoal, or reef, to hinder the entrance of vessels in any wind. The space between the piers, (which lay about west south-west), is 164 feet. The depth of water on the bar has not been less than nine-and-a-half feet, although the piers have not yet been carried out within one hundred feet of the extent contemplated in the plan to be completed by the Canada Company. Vessels can leave this harbour with any leading wind, to go up or down the lake. It is easily taken in a storm; we have entered it in safety in the roughest possible weather. The basin inside is at present sufficient to accommodate a large number of traders; but if it were found necessary to enlarge it, the island in the centre, which is merely composed of the sludge and debris of the river, accumulating for ages, could be dug or dredged out, and an area of nearly fifteen acres of water would be thereby opened up, sheltered from every wind that can blow, by banks 150 feet high on the north and south."

With such advantages, and an outlay of £17,000, which the Canada Company claim credit for having expended on it, one would reasonably expect to find an excellent harbour at Goderich; but such is not the case. On the contrary, it is the only discreditable spectacle in the whole neighbourhood. The piers, and especially the one on the town side of the river, have decayed into rottenness—the planking of the wharf has all fallen down, and though the posts are still standing, a vessel could lay on either side of them, almost with equal depth of water. Indeed, it is nothing uncommon to see fishing boat moored on the spot where teams should be loading or disloading the schooners. It is, indeed, disgusting and dangerous; the wonder is that the accidents at the wharf are so few. The Canada Company have hitherto acted like the dog in the manger, in this matter; but there is now a prospect of the harbour becoming the property of the Buffalo and Lake Huron Railroad Company, and a better condition of things may be expected.

There is a pretty large space of flat ground between the foot of the bank and the wharf, and a tavern, a number of dwellings, several large storehouses, and the steam saw-mill of Messrs. Parson & McDonald, are erected on it, and it is supposed that most of it will be required for the buildings of the railroad company. In 1845 the town of Goderich contained less than 800 inhabitants, in 1850 the number was increased to 1,070. The census of 1852 gave 1,329,

and a census taken this present year gives a population of nearly 3,000. This though not equal to the gradual increase of other towns in the province, shows a steady and a healthy growth, and to which would have been added at least twenty-five per cent. had building lots been purchaseable at a reasonable rate.

There are no villages in Huron, north of the town of Goderich, which are worthy of notice, or rather, that are *noticeable*. They are all in their infancy and it is to be feared a majority of them will remain so. In a very pretty spot near the mouth of the river Ashfield, with an excellent water power "Port Albert" has, for many years, been attempting to struggle itself into a village, but as the population up to this time, has never reached the "baker dozen," its success is now being regarded as very problematical; and the struggles of the others have been confined to paper, and may be seen in the bar-rooms

THE PRODUCE.

The rapid increase in the value of exports and imports, is, in some measure an evidence of the growing wealth of the county, and in the "tables of the Trade and Navigation," recently published, we find the following return from the port of Goderich:—

	Year 1852.	£	s.	D.
Exports.....	1,070	15	0	
Imports.....	6,972	6	8	
Gross amount of Duties collected.....	671	5	5	

Year 1853.

Exports.....	2,499	4	0	
Imports.....	9,284	6	1	
Gross amount of duties collected.....	977	4	3	

Year 1854.

Exports.....	4,927	15	6	
Imports.....	19,006	13	0	
Gross amount of duties collected.....	1,719	1	6	

Year ending 5th Feb. 1856.

Exports.....	15,946	9	0	
Imports.....	22,952	14	8	
Gross amount of duties collected.....	2,210	18	4	

Thus in three years, the exports have risen from one to fifteen, or on an average, five hundred per cent. yearly, while the increase on the imports has averaged one hundred and fifty per cent. per annum, or in other words, the exports, which, three years ago, amounted to less than *one-sixth* the value of our imports are now more than equal to *two-thirds* of the value of the imports and with equal progress for the next three years, Huron will be an exporting county. The breadth of land which has been under crop this year exceeds by several thousand acres, the quantity of any previous year. A large proportion of this extra space has been under wheat, and the harvest just completed will yield at least 200,000 bushels for exportation from Huron. This of course, means wheat alone; oats is somewhat under an average yield, especially such as were late. The straw is short, and altogether the crop is deficient in quality, though an extra breadth was sown; peas and barley have been near an average crop; potatoes, in many places, very deficient, but where they were planted late there is a prospect of a fair yield; corn is not cultivated, except

small patches, and these have an indifferent appearance; turnips are sown to a considerable extent, but are a total failure, even on new land, and this, together with the deficiency of the oat crop, is likely to make cattle-feed of every kind sell at a high figure; hay, for the last two years, has ranged from sixteen to forty dollars a ton, and though an extra crop has been saved in the county this year, it will keep up at former rates. Fat cattle are scarce, and the price of butchers-meat has for some years past been higher in Goderich than in Toronto.

THE FISHERIES.

An important source of wealth to Huron and the neighbouring county of Bruce, is the produce of the lake. The vast importance of the fishing trade has been, in a great measure, neglected or overlooked, but it is now beginning to attract attention, and the farther it is investigated and prosecuted the more valuable and attractive it becomes in appearance. It was commenced some ten or twelve years ago, on a large scale, nothing less, in fact, than a "Fishing Company," composed of Mr. Cayley, the present member for the county, Mr. Heron and Mr. Elliot of Niagara. But the men lacked experience and practical application, and though they provided schooners, boats, nets, lines, hooks, and good catables and drinkables in abundance, the management and the work had to be done by hired labour. A trial of one or two seasons, and a few tempestuous nights swept nets, lines, hooks, &c., &c., from the face of the waters, and the "Fishing Company" ended in a *smash*. But though these gentlemen lost a few thousand pounds without doing much good for themselves or the country, they are at least entitled to the credit of having pointed out the way to men of larger experience and more practical habits. For several years past the fishing has been carried on by companies of experienced fishermen, and from ten to fifteen hundred barrels of salted fish have been brought into the harbour of Goderich every year. These are herring and trout, and though only some 422 barrels are entered in the "Exports" of last year, from the port of Goderich, three times that quantity were caught and cured; but they were teamed all over the country as far as London and Hamilton during the winter.

Besides this herring fishing, which generally commences in October and ends with November, there is a constant summer and fall fishing of trout and white-fish, carried on daily, a few miles off the Goderich harbour. The number of hands constantly employed in this summer fishing is considerable, and the quantity of fish of the first quality, caught, is astonishing. During the two last summers not less than from one thousand to twelve hundred barrels have been brought into Goderich each season. A considerable proportion of these are sold fresh in the town and neighbouring villages, and the remainder are cured and barrelled up for exportation. This abundant supply of delicious fish is an invaluable benefit to the town, and being generally sold at from *one* to four cents a pound, is an excellent substitute on the working man's table for second-hand beef at ten pence or a shilling per pound. In addition to all this there is a winter fishing, which is carried on so long as the ice on the lake is considered safe, and in which large hauls are occasionally taken, and fine fresh fish are hawked in sleighs all round the country, as far as London and Woodstock, through the course of the winter. The whole of this valuable trade may be said to be in its infancy, but there can be no doubt that a few years hence, the Lake Huron Fishery will be classed among the important sources of provincial wealth.

AGRICULTURAL SOCIETIES.

The first Minute Book of the Huron Agricultural Society opens with the following intimation—"Pursuant to a notice signed by William Dunlop and Wm. B. Rich, Esquires, Justices of the Peace, a meeting was held on Monday, the

14th day of February, 1842, to take into consideration the propriety of forming an agricultural society, to be styled, 'The Huron District Agricultural Society.' The society was then formed, a numerous Board of Directors was chosen, and comprised most of the present leading men of the county, besides a number who have long since gone to their long homes. The first president was the late humorous Dr. Dunlop, but as he was then the M. P. P. for Huron, the duties were discharged by John McDonald, Esq., present sheriff of the county. The third minute of the first meeting is, 'Moved by J. C. W. Daly, seconded by Mr. A. Brown, that as the Canada Company have a great interest in the agricultural welfare of this district, Thomas Mercer Jones Esq., as their representative, be solicited to become patron of this Society.' The solicitation was not in vain. The company were liberal in their donations, and an annual premium of £15 for the best twenty bushels of Fall wheat, still continues to be received, and has undoubtedly been of some service in encouraging the cultivation of wheat. The company have also been attentive and liberal in forwarding gratis, to the society, samples of new and superior seeds, on several occasions, and have, altogether, taken a lively interest in its prosperity.

The number of subscribers to the society in 1842 was considerable, but the subscriptions were hard to collect—they were slow in coming in, funds were low, and as no Government allowance had been obtained, the amount of premiums offered at the first Annual Show was only £25 17s. 6d. The show was held on the 18th October, 1842, and was attended by farmers and stock from a distance of forty miles of miserable roads; but the large half of the premiums was awarded to the very same men who uniformly take them at present, so that fourteen years experience has not been productive of much successful emulation or competition. The society, however, prospered and grew both in numbers and in wealth, and at the second annual show, held Oct., 1843, the premiums amounted to £52 15s., being twice the amount of the former year.

This rate of progress, however, did not continue long. Jealousies and suspicious of *cliqueism*, favoritism, &c., &c., soon sprung up, and whether well-founded or ill-founded, had an injurious effect on the society. That the institution has done some good cannot be disputed, that it might have done a great deal more is the opinion of many of its best friends and supporters. A large proportion of the funds is squandered in little premiums for paltry articles that have no connection with the actual progress of agriculture, or for animals that have really no tendency to improve the stock. And though considerable encouragement has been given to the introduction of bred bulls, boars, &c., the encouragement of ploughing, and every thing belonging to improved practical husbandry, has been in a great measure neglected. This neglect is not peculiar to the county of Huron, but is visible in most counties of the Province, and a very decided improvement in the appearance of cultivated fields, might be effected by a slight amendment in the Act for establishing and encouraging agricultural societies. Were the legislature to state more definitely, that the legislative grant is exclusively intended to encourage improved cultivation of *fields* and improvements in the breed of stock, the little paltry premiums, and premiums given year after year to the same working horses, working oxen, &c., &c., would be done away with, and the whole funds would be applied to the legitimate and really useful purposes contemplated by the legislature. The Huron District Agricultural Society for several years had an annual ploughing match, which received considerable encouragement and some donations, and kept up a spirit of emulation in this *first* branch of agriculture. But for the last few years the ploughing match has been discontinued, and in so far as the society is concerned, no inducement is held out to superior cultivation or well-ordered fields or farms. In this respect the parent society has fallen behind some of the branches, and in

plain language, it might be said that almost the only visible object of the society is, to receive the required amount of subscriptions and the Legislative grant, and to divide the amount, "sum total," amongst themselves, in the name of premiums for animals that are kept from year to year for the special purpose, and which, of course, can have no effect in improving the stock of the country.

The Society, at present, is not in a condition to boast of, either in regard to numbers or the amount of funds, when the growing prosperity of the county is considered. David Clark, Esq., brother of Sir James Clark, physician to Her Majesty the Queen, is the president, and has been so for at least one-half the time it has been in existence. Jacob Seezmilller and Wm. Young, Esq's. are the vice-presidents, and the directors are Messrs. George Brown, Robert Gibbons, Thomas McQueen, David Mellwaine, Patrick Carrol, Joseph Salkeld and Thomas Elliott. Secretary, George M. Trueman. Treasurer, Andrew Donough. The only action of the Board of this year, worthy of notice, was an offer of ten pounds to any member of the society who would bring in a thorough bred Durham bull, to be kept as his own property, within the society's limits, and which was given to the Messrs. Young and Colborne, who brought from the township of Puslinch, a very superior animal, two years old, and which should certainly have some effect in improving stock.

The Society's Annual Show is held in Goderich, on some day in the latter part of September, and is generally well attended. Grain of the various kinds, and butter, are brought forward in abundance, and uniformly of excellent quality. Domestic manufactures are also exhibited on a large scale, and the number of live animals is, on some occasions, very considerable. The sheep are mostly well bred, and in excellent condition. The breed of pigs is, with very few exceptions, inferior, and is but sparsely brought forward. Cattle of all ages, are excellent in quality, but few of them bred, they are mostly *grades*; and though a good Durham cow or heifer may be seen here and there, the Messrs. Young of Colborne, have the only large and really *good* stock within the society's limits. The show of horses is large and, taken as a whole, is by far the best stock exhibited. The show of stallions takes place in April, and the premium horses for several years past, have been superior animals, and the results are now visible throughout the county. Indeed, the horses are more improved than any other kind of stock. The show of Fall wheat is held annually about the first of September, so as to give farmers a chance of changing their seed in time for sowing, and as the premiums are large (from ten to fifteen pounds, *cy.*) and the quantity to be sown, large also, an abundance of first-rate clean seed is thus obtained, at the very time it is needed, and when many farmers could ill afford to thrash for themselves.

There are at present six Branch Societies in the County, viz. Clinton, Harpurhey, Stanley, Hay, Exeter and Brucefield; one in Osborne and one in McGillivray, which last year were in a flourishing condition, have not been reported this year. The oldest of these branches is Harpurhey, which was established in 1845, and includes the north-east side of Tuckersmith, part of Hullet, and the Township of McKillop. It has about 100 members, and is prospering. Clinton branch is comparatively young, but it is much larger than the parent society; it is composed of parts of the townships of Goderich, Hullett, Tuckersmith and Stanley. Brucefield branch, established in 1854, embraces the east side of Stanley and the west side of Tuckersmith, and has about 90 members. Stanley branch, established last January, has 60 members; its meetings are held in the village of Bayfield, and its members are from parts of Goderich and Stanley. Hay branch is three years in existence, and has 112 members; it is composed of the township of Hay and part of Osborne; it has a good annual Show, at which some very superior animals, both horses, sheep and cattle, are

exhibited. Exeter branch, in the townships of Usborne and Stephen, was established in January, 1854, or rather, including Hay, it embraces what was formerly the "London Road Branch," established in 1845, and which for several years, was noted for its prosperity and the number of fine animals annually brought out. In 1846 the parent society made a present of a fine Devon Bull to the London Road Branch, and his stock for some years was a credit to the Devonshire settlement, but it is now worn out. The present Exeter Branch has 87 members, and exhibits at its annual shows, some good sheep and grade cows, and the best hogs in the county. Last year the McGillivray branch had the largest number of members, and seemed prospering, but it has *gone out*.

The strictures which have been made on the squandering of the funds to the comparative neglect of the real object intended by the institution of Agricultural Societies, are not designed for the Huron Society and its branches exclusively, but will be found more or less applicable to the majority of similar institutions throughout the Province. The errors are generally prevalent and cannot be too honestly exposed, or too soon remedied.

CONCLUDING REMARKS.

In the County of Huron, as in most other counties of Canada, there is not much room to boast of improved husbandry. A great deal may be said on the superior quality of the soil, and on the abundant crops raised on it, but the means and methods employed to raise these crops will scarcely admit of eulogium. The great bulk of the farmers were originally brought up to the shuttle, the needle, the pegging-awl or other in-door occupations—in short, brought up to anything but the plough. Their knowledge of farming has been acquired in this country, beginning, of course, with the axe, followed by the *drag* and the hoe. If the seed was only covered, the rich virgin soil brought forth a luxuriant *first crop*,—*second crop*, and *third crop*. Nay, some *bold experimenters* even discovered that a fourth and *fifth crop* could be, *at times*, obtained by merely agitating the surface a little. This *tickling* of the surface and these spontaneous crops, however, have bad tendencies; they create false notions that lead to bad habits. A prejudice in favor of this primitive husbandry is engendered, and the surface work is persevered in, and is visible in the operations of the plough, long after the stumps have all rotted away. Indeed, the prejudice in favor of easy methods, and of *taking out without putting in* seems to be almost unconquerable, and some of the *primitives* begin to complain of a disease in their fields, which might easily have been prevented by a little extra labor and a little timely attention to the products of the stable and the cattle-shed. Manuring, ploughing and fencing, are three chief items in the calculations of the true practical farmer, and wherever these, or either of them, are neglected, there will be, to some extent, a flaw in the success. But there are some good practical farmers in Huron—men who understand their work, and go about it in the right way. Their number is few, but it may be hoped it is increasing. Example is influential, and the results of an improved system of agriculture, embracing drains, manures, rotations of crops, drill husbandry and fencing, must provoke some degree of imitation, in even the most slovenly class of soil-tillers that have an opportunity of witnessing them. New and improved methods of cultivation have found their way into Huron, and there are many fine examples of farms, fields and fences, which are well calculated to awaken emulation. Many of the latest inventions and improvements in agricultural implements have been introduced, and in some localities of the county much of this year's crop has been cut by McCormick's "Mower and Reaper." We have a soil and climate not surpassed, and rarely equalled, by any county in Canada, and nothing but good husbandry is wanted to make Huron the foremost of the agricultural districts.

When it is considered that till within the last ten years the largest quantity of wheat exported from Huron, in any one year, was under 3,000 bushels, and that this present year (1856) there was shipped at the little village of Bayfield alone, not less than 100,000 bushels, principally the growth of Stanley and Tucker-smith, the progress of the county, in raising grain, requires no further illustration. It is also an excellent county for grazing, though that branch has hitherto been, in a good measure, neglected. The rich pasture and the ample supply of wholesome water with which most of the townships are favored, afford great facilities for raising fat cattle, and some of the finest and fullest animals that have been killed in the London and Hamilton markets were reared in Huron. Where proper conveniences exist this branch is as profitable to the farmer as the raising of grain, and it would be profitable in this county. The dairy, if rightly managed, is also profitable, and is beginning to be better attended to, and in 1851, not less than *two hundred thousand pounds of butter and twenty-two thousand pounds of cheese* were produced.

For some years past a serious inconvenience has been felt in Huron from a scarcity of sawed lumber, and many buildings of various kinds were either partially stopped, or not begun, in consequence. There were a goodly number of a certain class of saw-mills, but many of them were small, and many of them were placed on streams which, for several months in the year, were either dried up or frozen up. Hemlock boards rose from five to ten dollars per thousand feet, at the mill, when they could be got at all, and the improvements of the country were much retarded. The evil, however, has remedied itself. The high price led to enterprise, and a number of excellent steam mills have been erected in those localities where hemlock is abundant, and in two instances at least, where pine is convenient. Sawed lumber is now plenty—auction sales of large quantities of it are weekly taking place, and the probability is that in a short time the price will be considerably lower. But besides the great increase in quantity, there is a corresponding improvement in the quality. The new mills are, in most instances, of a superior class, managed by superior workmen, and placed in the midst of superior timber. In fact, the change for the better, in this respect, is already visible, and more farm buildings, especially frame barns, have gone up in Huron during this present summer, than did in the three previous years. Nearly all the pine lumber formerly used in the county came either from "Brewster's Mill" or from the Georgian Bay, by schooner, and was, consequently, high in price; but a tolerable supply is now being obtained at a more moderate rate, from the mills lately put up in the township of Wawanosh—and were the roads once made passable into the new townships, an abundance of excellent pine lumber will be obtained.

Huron is also deficient in good building stone, or indeed, in stone of any kind. There is a tolerably fair working limestone in the bed and banks of the river Maitland, a little above Goderich, and further up again, in the township of Hullett. It also appears in the branch streams in some of the back townships; but, in general, the county may almost be said to be destitute of stone for any useful purpose. The cut-stone of the jail, though coarse and unworkable as need be, was brought across the lake from a quarry in the wilds of Michigan, in 1840. Stone buildings are therefore few in Huron. Some thrifty farmer, here and there, gathers the boulders from his fields and, with the aid of gunpowder and the heavy hammer, succeeds in raising for himself a stone home; but these instances are rare. There is plenty of good clay, however, and respectable brick homesteads are becoming quite numerous throughout the county.

Seven years ago, a steamboat in Goderich harbour was a thing to be gazed at once or twice a year. Five years since, the Messrs. Ward of Detroit ran a little steamer to Goderich once a fortnight; and these two last years Canada boats

have been put on the route, and the trips have been extended to three times a week. A steam communication, twice a week, has also been established this season between Goderich and Saugeen and the intermediate ports. The schooner tonnage belonging to Goderich must, likewise, have increased three hundred per cent. during the last seven years, and yet, all find sufficient employment.

The writer of these remarks came to Huron in the beginning of 1848, and the amount of rateable property entered on the assessment rolls of the thirteen townships that were then settled, was considerably less than the rateable property of the town and township of Goderich this present year. The following figures show the increase in the assessed value of the county during the past seven years :

ASSESSED VALUE IN 1848 AND IN 1855.

	£	s.	d.	£	s.	d.
Ashfield.....	3755	16	4	64668	0	0
Biddulph.....	12487	1	0	75447	0	0
Colborne.....	8064	4	0	63624	0	0
Goderich Town.....	10141	5	0	142095	0	0
Goderich Township.....	22088	1	0	119468	0	0
Hullett.....	3165	8	0	72951	15	0
Hay.....	2671	4	0	72667	5	0
McKillop.....	5322	16	0	61789	0	0
McGillivray.....	9662	4	0	121692	10	0
Stanley.....	12679	18	0	84974	10	0
Stephen.....	7301	16	0	74289	15	0
Tuckersmith.....	12413	3	0	77729	0	0
Usborne.....	4943	4	0	78526	0	0
Wawanosh.....	2547	4	0	85529	5	0
Total.....	117203	4	4	1195451	10	0

Showing an increase in seven years of one million, seventy-eight thousand, two hundred and forty-eight pounds, five shillings and eight pence. The assessed value of the four new townships is—

Grey.....	38938	10	0
Howick.....	38794	0	0
Morris.....	34043	15	0
Turnberry.....	21974	0	0
Total.....	133750	5	0

Thus making the present assessed value of the county £1,329,201 15s.

In 1839 the number of schools in Huron was only thirty-five—there are now seventy-seven, exclusive of the town of Goderich schools, whose pupils number about 300, independently of the grammar schools. The annexed communication from one of the most industrious and most efficient local superintendents in Canada, will give an idea of the educational progress of the county. Mr. Nairn, an educated man, and for many years a successful practical teacher, labors incessantly throughout the length and breadth of this county, for the paltry remuneration of six dollars a year for each school, and through his valuable assistance the improved methods of teaching and the state of education in the county, are keeping pace with its social, industrial, and commercial progress.

APPENDIX.

GODERICH, 22nd August, 1856.

DEAR SIR,—In compliance with your wish, I beg leave to annex a list of the schools in the different townships of the County, with the average attendance of each for the first six months of this year, namely, from 1st January to 1st July. At the close of the half year, the Trustees of each school make a return to me of the names of each pupil admitted to the school during the half year, and of the number of days the children have attended. The amount of such attendance is divided by the aggregate number of teaching days for the half year, and the quotient is the *average attendance* for any particular school. The same course is followed at the close of the second half year, namely 31st December, and a new average attendance determined. The first half year's average forms the basis for my dividing the Legislative school money, and the second for apportioning the county school money, which cannot be less in amount than the Government allowance.

The School Act requires the Local Superintendent to make two visits to each School during the year, and deliver a lecture at one of the examinations. But with every wish to perform the duty, I have found that it was not practicable, from the state of the roads in the county, and the expense of travelling. Last year, I visited every school *once*, and about one half of them *twice*; but after the middle of October the roads became impassable, and continued so for many weeks—and again in the spring the roads were unfit for visiting schools. These are now to be found in every corner of the county, and it requires a very fine day to get access to several; they extend from the remotest point of Ashfield and Wawanosh, to Fish Creek on the borders of Biddulph. It is quite possible, however, that a Superintendent, by superficial visiting might increase the number of examinations; but to be productive of benefit, the visit must be careful, and a sufficient time devoted to it. My plan is to keep a register of each school—to examine every class and scholar within it—write down the names at each visit—and then to address the children. The advantage of this plan is, that at the next visit we are not strangers, and by examining my note book I can see if there has been any improvement, any progressive move in the different classes.

I know well that the intervals between such visits should not be great, as they keep both teachers and scholars alive to their duties; but it is unreasonable to expect a local Superintendent to make repeated visits of this kind to about eighty schools, at a salary—after deducting his travelling expenses—less than some of the teachers he overlooks. The other duties of the office should also be kept in view. He divides the school money twice a year, which requires much care and attention,—intimates the amount to the Trustees, and grants cheques on the Treasurers of the Townships. He has to report to the Chief Superintendent at the close of each year on a great variety of topics connected with each township—conduct a large amount of correspondence as to school matters, and assist at the examination of teachers four times a year. This is an important duty, and when it is mentioned that since January seventy teachers have been examined before the Board, it is obvious that something more than time is requisite on the part of the examiners.

In your views upon school matters, it might also be proper to notice the advantage of having a Local Superintendent for each *county*, instead of *Township* Superintendents. One for a whole county can take a comprehensive view of the state of education within it—enforce a uniform system of teaching, and contrast the efforts of one township with another. Whereas a Township Superintendent is quite circumscribed in the practical doings of education—may be

dhering to some antiquated form, while the adjoining township of the same county may be following out the views of the best educationists. This plan may be compared to the Italian States, where you see one, a noble example of freedom and improvement, and the others sunk in the grossest darkness.

With respect, I remain,

Yours truly,

JOHN NAIRN.

Abstract List of Schools in the County of Huron, with the average attendance of each for the half year ending 30th June, 1856 :

TOWNSHIPS.	No. OF SCHOOLS.	AVERAGE ATTENDANCE.
Ashfield	6	159
Wawanosh	4	89
Colborne.....	4	109
Goderich.....	9	328
Hullett.....	6	839
McKillop.....	4	139
Tuckersmith.....	6	210
Stanley.....	8	259
Usborne.....	6	141
Stephen.....	3	74
Hay.....	4	70
McGillivray.....	8	153
Biddulph.....	7	218
Grey.....	2	11½

Total average attendance from 1st January to 30th June, 1856—2114½.
Seventy-seven Schools open under qualified Teachers.

APPORTIONMENT OF THE LEGISLATIVE SCHOOL GRANT FOR 1856.

COUNTY OF HURON.

TOWNSHIPS.	SCHOOL POPU.	£.	s.	d.
Ashfield	448	41	8	3
Biddulph.....	709	65	11	3
Colborne.....	420	38	17	0
Goderich.....	927	85	15	0
Grey.....	96	8	17	6
Hay.....	289	25	18	0
Hullett.....	465	43	0	3
McGillivray.....	656	60	13	6
McKillop.....	768	71	0	9
Morris.....	70	6	10	0
Stanley.....	813	75	4	1
Stephen.....	425	49	6	3
Tuckersmith.....	639	59	2	½
Usborne.....	504	46	12	5
Wawanosh.....	425	39	0	3
	7,645	700	3	6

RESULTS OF THE EXHIBITION OF 1856.

The following statement shows the amount of Premiums offered, the number of entries, and the amount awarded in each class, at the Eleventh Annual Exhibition of the Association, at Kingston, 1856. Where the amount of prizes awarded exceeds that offered, it is owing to the giving of discretionary premiums, or to the double and treble premiums for imported animals.

CLASSES.	Amount offered.			No. of Entries.	Am't awarded.		
	£	s.	d.		£	s.	d.
Blood Horses.....	70	10	0	8	24	10	0
Agricultural Horses.....	120	15	0	226	139	10	0
Durham Cattle.....	129	15	0	88	129	10	0
Devon Cattle.....	129	15	0	16	48	10	0
Hereford Cattle.....	129	15	0	4	15	10	0
Ayrshire Cattle.....	129	15	0	41	98	5	0
Galloway Cattle.....	129	15	0	29	70	0	0
Grade Cattle.....	36	0	0	60	34	5	0
Fat and Working Cattle.....	59	0	0	34	40	10	0
Leicester Sheep.....	36	0	0	128	48	0	0
Cotswold Sheep.....	36	0	0	28	45	10	0
Cheviots.....	36	0	0	18	40	10	0
Southdown Sheep.....	36	0	0	43	41	10	0
Merino and Saxon Sheep.....	36	0	0	20	35	10	0
Fat Sheep.....	12	0	0	15	12	0	0
Large Breed Pigs.....	26	10	0	21	26	0	0
Small Breed Pigs.....	26	10	0	71	34	10	0
Poultry.....	50	10	0	246	44	5	0
Grain and Seeds.....	120	5	0	447	104	15	0
Roots, &c.....	49	10	0	164	31	10	0
Fruit.....	27	7	6	275	32	12	6
Vegetables.....	31	10	0	288	33	0	0
Plants and Flowers.....	26	0	0	61	18	7	6
Dairy Produce.....	52	10	0	206	33	0	0
Agricultural Implements.....	186	7	0	175	138	12	6
Manufactures of Leather, Furs, &c.....	41	5	0	67	24	10	0
Manufactures of Metals, &c.....	80	15	0	133	33	17	6
Cabinet Ware, Carriages, &c.....	72	14	0	133	58	2	6
Pottery.....	11	10	0	13	9	5	0
Woolen and Flax Goods.....	38	10	0	122	31	0	0
Ladies' Work.....	43	10	0	375	50	15	0
Fine Arts.....	120	10	0	147	83	5	0
Indian Work.....	14	14	0	17	2	15	0
Printing, Book-binding, &c.....	14	0	0	25	15	15	0
Foreign Stock.....	68	0	0	3	8	0	0
Foreign Implements.....	26	5	0	41	32	19	0
Reports.....	45	0	0	3	30	0	0
	£2309	12	6	3791	£1639	17	6

MEETING OF THE BOARD OF AGRICULTURE.

TORONTO, January 20th, 1857.

The Board met this day, pursuant to notice from the Secretary, at the office in Toronto, at 11 a. m. Present:—Messrs. E. W. Thomson, President, J. B. Marks, Vice-President, Sheriff Ruttan, Geo. Alexander, President of Agricultural Association, David Christie, Hon. Adam Fergusson, Asa A. Burnham, R. L. Denison, and Professor Buckland.

The President in the chair.

The minutes of last meeting were read and approved.

REPORTS, COMMUNICATIONS, &c.

The Treasurer read his report and Financial Statement for the year ending September 20th, 1856; the accounts, which had been duly audited, showing that including a balance of £998 0s. 2d. from the previous year, the whole amount received had been £11,866 4s. 3d.; and the whole amount expended had been £11,950 14s. 8d., leaving a balance, at the time to which the accounts were made up, of £84 19s. 5d. due the Treasurer. On motion the report was received and adopted, and ordered to be recorded in the Transactions.

Professor Buckland read a report of the deputation, consisting of himself and the President, to the Lower Canada Exhibition at Three Rivers in 1856, which was adopted and ordered to be recorded in the Transactions.

The Treasurer read a Report of the delegation to the New York State Fair at Watertown in 1856, the delegation consisting of himself and the Recording Secretary, and which Report was also adopted and ordered to be recorded in the Transactions.

A communication was received from Mr. W. C. Cooper, of Kingston, with a copy of an essay on the Counties of Frontenac, Lenox and Addington, for which he had received a prize from a committee organized at Kingston for the purpose of awarding a prize to the best essay on the said counties, and requesting some mark of the approval of the Board of the same. On motion of Mr. Denison, seconded by Mr. Ruttan, it was Resolved—That in consequence of the valuable information contained in Mr. Cooper's Essay on the Counties of Frontenac, Lenox and Addington, the thanks of the Board be given to the author, and that the Treasurer be authorised to purchase 100 copies for general distribution.

A communication was received from the Bureau of Agriculture, stating that measures had been taken with a view to obtaining new or valuable varieties of seeds or plants from foreign countries, through the agency of the British Consuls in those countries, and offering to place a portion of such seeds as might be obtained at the disposal of the Board.

The Secretary was instructed to thank the Minister of the Bureau for the

communication, and inform him that the Board will not fail to avail themselves of his kind offer, whenever they deem that it will be for the interests of Agriculture to do so.

A communication having been read from the Township of Mariposa Agricultural Society, in reference to transactions with the County Society, it was resolved that the Board could take no action in the matter referred to.

A communication was received from Mr. McNaught, Secretary of the County of Brant Agricultural Society, stating that at a meeting of Agriculturists and others at Brantford on the 22nd October 1856, certain gentlemen had been nominated to act as the Local Committee of the Provincial Exhibition for the year 1857. The Secretary reported that this communication had been received some time previously, being dated 29th October 1856, and that he had by correspondence obtained the concurrence of the members of the Board in the nominations, and had authorised them provisionally to proceed with preparations for the exhibition, till a meeting of the Board should take place. On motion the action of the Secretary was concurred in, and the list for the Local Committee formally adopted.

A communication was read from Dr. Litchfield, Secretary of the Local Committee of the late Provincial Exhibition at Kingston, with accounts and statements connected with the local expenses of the Exhibition, the building of the Crystal Palace, &c., from which it appeared that the whole amount which had been received by the Committee for purposes of the Exhibition from all sources, was £2783 3s. 3d., which had been all expended, and unpaid accounts existed amounting to £1134 19s. 10d. To meet these unpaid claims the committee had a promise of £200 from the County Council of the United Counties of Frontenac, Lenox and Addington, leaving a final deficiency of £934 19s. 10d., which deficiency they sought the assistance of the Board in devising some means to pay off. A rough inventory of the effects on the Exhibition ground was added, showing the estimated value to be about £3,000. Dr. Litchfield's communication further stated that a deputation from Kingston would wait upon the Board, at their convenience, to explain the statements.

The Board adjourned at half-past 1, p.m. for one hour.

SAME DAY, 2½ P. M.

The Board met pursuant to adjournment, the same members present. The deputation from Kingston were admitted, consisting of Dr. Litchfield, Col. Cameron, Sheriff Corbett, Mr. Briggs.

The Secretary again read communications and statements from the Local Committee, also the minutes of proceedings between the Board and Local Committee at Kingston, in reference and previous to the erection of buildings for the Exhibition.

The gentlemen of the deputation severally addressed the Board on behalf of the Kingston Local Committee, and in explanation of their views, and then withdrew.

The Board adjourned at 5 p. m. till 10 a. m. next day.

WEDNESDAY, January 21st, 10 a. m.

The Board met pursuant to appointment.

Present, the President, the Vice-President, Messrs. Burnham, Alexander, Fergusson, Denison, Christie, Ruttan, Buckland.

Moved by Mr. Alexander, seconded by Mr. Fergusson and

Resolved,—That for the future the judges at the Exhibitions be paid 20s. instead of 10s., and that in the minor classes the number of Judges be reduced.

Moved by Mr. Alexander, seconded by Mr. Burnham, and

Resolved,—That the manner of appointing Judges for the next Exhibition be as follows. That a circular be issued to the County Societies, requiring them to send in a list of names of three competent persons each, nominated at their annual meetings, to serve as Judges in specified classes, and that the Board of Agriculture do afterwards select from those lists the names of the persons the Board may choose to act upon that occasion, and notify them of their appointment by circular.

Resolved, that a committee be appointed to revise the Prize List, and report to the next meeting of the Board, and that Agriculturists generally be invited to send suggestions to the Committee. That it be announced to the County Societies that the President of the Association offers a prize of £15, for the best Stallion for Agricultural purposes, imported from Europe since the last Exhibition, and adjudged to be the best exhibited in his class, and that the Association will give in addition £35, making the first prize for that description of horse imported since last Exhibition £50, and that the President, Secretary and Treasurer, do compose such Committee.

Resolved,—That entries for the Exhibition of 1857 shall close in Toronto on the 12th September, except of Ladies' work and Horticultural Products, which may be taken till the evening of Monday, 28th September, and no longer.

Resolved,—That the President of the Association be requested to meet the Local Committee at Brantford and ascertain from them what amount of funds can be relied upon for the approaching exhibition from the locality and neighborhood, and report the result of his enquiries to the Board at its next meeting.

Resolved,—That the President of the Board, the President of the Association, Mr. Marks, and the Secretary, be a committee to wait upon the Minister of Agriculture, in reference to the matter brought before the Board by the deputation from Kingston, and report the result of the interview to the Board at 2 p.m., and that the Board do now adjourn till that hour.

The board then adjourned at 12½ p. m., till 2, p. m.

SAME DAY, 2, P. M.

The Board again met pursuant to adjournment. The same members present, except Mr. Christie. The President reported the result of the interview of the Committee with the Minister of Agriculture, in reference to the Kingston Exhibition, to the effect that if an application were made by the Board on behalf of the Kingston Committee, that the Government would endeavour to devise some means of relieving the Kingston Local Committee from their liabilities.

It was then moved by Mr. Fergusson, and

Resolved,—That the Board most sincerely condole with the Local Committee of Kingston, in the difficulties which attend the winding up of the local accounts; and while the Board most distinctly adhere to the original resolution adopted, and communicated to the Local Committee at Kingston, that the Board should supply £1,000 and no more, the Board have no hesitation in recommending the case to the favorable consideration of Government, hopeful that some arrangement may be devised between the Local Committee and the Government, by which the money required to wind up the local accounts shall be provided; and, in order to promote such an arrangement, the Board will agree to pay over to Government, when the Association shall again hold its exhibition at Kingston, so much of the moneys then raised at Kingston, for the purpose of the Exhibition, as may be required to liquidate the debt, not exceeding £1,000, which may be incurred by an advance made by the Government for the purpose of paying off the liabilities incurred by the Local Committee in the erection of a Crystal Palace and other buildings for the purpose of the late exhibition at Kingston, and in fencing 20 acres of the rear of the Penitentiary Farm, upon which the buildings are erected.

Moved by Mr. Marks and

Resolved,—That in the event of the application to the Government failing, the President, Secretary, and Treasurer, be authorised to look over the list of debts due on account of the exhibition at Kingston, and allow such claims as they may consider ought to be paid by the Board.

The deputation from the Kingston Local Committee were then again admitted, and reported the result of a further interview with members of the Government, chiefly to the effect that they had been led to expect relief from the Government, if the application were made by the Board. The deputation then withdrew.

Resolved,—That application be made to the Government for a loan to the amount of One Thousand Pounds upon the condition stated in the foregoing resolution.

Moved by Mr. Alexander, seconded by Mr. Burnham, and *Resolved*,—That whereas it is of the utmost importance that the Board of Agriculture should issue annually a report of all their transactions, and make such publication the means of diffusing widely through the Province as much information as possible—Be

it resolved, that a special committee, consisting of the President of the Board, the President of the Association, the Treasurer and the Secretary, be now appointed to draft an application from the Board to the Government for an additional sum of £500, annually, to carry out this object.

The following memorandum was then submitted and adopted, and ordered to be recorded in the minutes, as the basis of the application to be made to the Government, for the means of relief to the Kingston Local Committee, the application to be signed by the President on behalf of the Board, viz :—

The Board of Agriculture respectfully beg leave to state to His Excellency the Governor General in Council, that the Local Committee at Kingston having incurred liabilities to the amount of nearly one thousand pounds beyond the amount of the funds they have been able to collect, in consequence of the erection of a crystal palace upon, and fencing in a permanent manner, twenty acres of the Penitentiary Farm, for Agricultural purposes, the Board of Agriculture pray that the Government will be pleased to make a loan of one thousand pounds to meet the pressing demands of the parties to whom the money is due; the loan to be repaid by the Board when the Annual Exhibition of the Agricultural Association is again held in Kingston. The amount of expenditure in the erection of permanent buildings and fencing, including both what has been paid, and what is still to pay, is upwards of £3,000.

NOTICES OF MOTIONS.

Mr. Denison gave notice that he would move at the next meeting of the Board, that the suggestions contained in the report of the Delegates to the New York State Fair at Watertown, with regard to placing the name of the owner or maker upon the entry ticket of animals or articles, be acted upon.

Mr. Denison also gave notice that he would move at the next meeting, That the selling of tickets for the admission of carriages and horsemen be, for the future, discontinued, except for the conveyance of invalids, and that every check be put upon fast riding or driving within the grounds of animals on exhibition; and that in consequence of the exclusion of horses a less quantity of ground be enclosed, say not exceeding 12 acres.

The Board adjourned at half-past 4 p. m. till 10 a. m. next day.

THURSDAY, January 22, 1857.

The Board met, pursuant to adjournment.

Present :—The President, Messrs. Ruttan, Burnham, Marks, Buckland.

Mr. Buckland called attention to an advertisement of the Society of Arts in England, offering terms of affiliation with that body to Colonial Institutions, and pointed out the advantage that would result to the Agricultural Association from such affiliation. It was then moved by Mr. Buckland, seconded by Mr. Ruttan, and,—*Resolved*,—That the Secretary be instructed to take the necessary steps for admitting the Agricultural Association of Upper Canada into union with the London Society of Arts, agreeably to the regulations of that Society, in reference to Colonial Institutions.

Resolved,—That in the Application to the Bureau of Agriculture for a grant of £500 to defray the expenses of publishing the Transactions, pursuant to resolution of yesterday, that the aid be asked for an account of other accruing expenses in addition to the Transactions.

Resolved,—That the President, Secretary and Treasurer, and any other members of the Board that may be within reach to consult, be authorised to confer with the Minister of Agriculture, as to the mode to be adopted in order to have the Transactions of the Board printed and brought before the public, in accordance with the resolution of the Board passed yesterday, so far as applicable.

The Board then adjourned till further notice.

REPORTS AND COMMUNICATIONS,

READ AT THE MEETING OF THE BOARD, JANUARY 20TH, 1857.

TREASURER'S REPORT, FOR THE YEAR ENDING SEPTEMBER 20TH, 1856.

TORONTO, January 19th, 1857.

E. W. Thomson, Esq., Chairman of the Board of Agriculture of Upper Canada, &c., &c.

SIR,—I beg to lay before you a report of the receipts and expenditure of the Association for the last year, ending 20th September, 1856, which have been this day audited, shewing that including the balance from last audit of nine hundred and ninety-eight pounds and two pence (£998 0s. 2d.), the sum of eleven thousand eight hundred and sixty-six pounds four shillings and three pence (£11,866 4s. 3d.) has been received, and the sum of eleven thousand nine hundred and fifty pounds fourteen shillings and eight pence (£11,950 14s. 8d.) has been paid, as per vouchers produced. Thereby shewing a balance due to the Treasurer of eighty four pounds ten shillings and five pence (£84 10s. 5d). The deficiency is to be attributed to many and various causes. The large outlay on the Experimental Farm House, and out buildings, including the fencing of a large garden, with first class fence, the draining, stumping and levelling of the garden, and a considerable portion of the farm, and the publication of the Transactions and records of the rise and progress of the association.

I had almost forgotten to mention, as another drawback, the very heavy rain which fell at our last show at Cobourg, on Thursday, the best day at all previous shows. Before going further I would wish to do the townspeople of Cobourg justice, and say that every exertion was made on their part to afford accommodation, and to make the visit of all presenting themselves as pleasant as possible. And in regard to the Local Committee a more efficient and self-denying one I do not remember; many of them refusing to use the complimentary tickets given by the society, and neither asking or receiving the smallest privilege for themselves or families, or for the Town or County Councils, who each contributed handsomely.

It is not my province, as Treasurer, to give an account of the number of entries for exhibition or the quantity or quality of the animals, implements, &c. shown. That has received and will receive full justice from the hands of our Secretary, and the press of the Province. I had further forgotten to mention that a portion of our funds had been spent in the purchase and importation of seeds of grain from England and Scotland, which importation, I have no doubt, will have a beneficial effect.

I think, from all the causes I have mentioned, as liable to operate against us, and our funds, we should always be prepared with a balance of from five hundred to a thousand pounds, to meet all contingences.

An abstract from the accounts of the Local Committee at Cobourg may be useful to other Local Committees as well as interesting to the Board.

	£	s.	d.
Building and fencing.....	420	0	0
Hay and straw for stock.....	27	0	0
Cotton, flags, &c., for decorating.....	10	17	0
Watchmen.....	4	5	0
Stationery and printing.....	47	0	0
Repairing wharf at Cobourg.....	14	0	0
Lamps, hardware, &c.....	16	10	0
Constables employed.....	63	5	0
Bennett and Wade, for work to grounds.....	145	0	0
Hire of rooms, amusements, &c.....	157	10	0
Days' work and cartage.....	20	16	5
Balance returned to me.....	1	6	7
	<hr/>		
	927	10	0

Nine hundred and twenty-seven pounds ten shillings; being the amount I advanced to Mr. Burnham, the Local Treasurer. I would here state that the foregoing accounts were made up, duly audited, and the vouchers handed over to me at the time, in a most satisfactory manner.

I have the honor to remain, Sir,
Your obedient servant,

RICHARD L. DENISON,

Treasurer, P. A. A.

To E. W. THOMSON, Esq.,
President Board of Agriculture.

STATEMENT OF RECEIPTS AND EXPENDITURE.

R. L. Denison, Treasurer, in Account with the Provincial Agricultural Association, for the years 1855-'56:

DR.	£	s.	d.
To balance from account of 1854-'55.....	998	0	2
“ Government grant.....	1000	0	0
“ Receipts at gates.....	766	19	3
“ Life members' subscriptions.....	17	10	0
“ Extra entries.....	18	15	0
“ Grants from Municipal Councils and Agricultural Societies.....	773	15	9

" Rent of booths and stables.....	90	2	6
" Government warrant to pay Counties.....	8143	10	0
" Donations, &c.....	56	5	0
" Balance from Local Committee.....	1	6	7
	<hr/>		
	£11,866	4	3
Balance due Treasurer.....	84	10	5
	<hr/>		
	£11,950	14	8
<hr/>			
CR.	£	s.	d.
By paid on account of Association.....	3686	16	3
" " Board of Agriculture.....	249	6	8
" " Experimental Farm and House.....	685	8	9
" " County Agricultural Societies.....	7329	3	0
	<hr/>		
	£11,950	14	8

We, the undersigned, Auditors to examine the accounts of the Treasurer of the Provincial Agricultural Association, certify that we have done so for the period commencing 21st September 1855, and terminating the 18th September, 1856, that we find by the books that including the balance of £998 0s. 2d. at the last audit, the sum of eleven thousand eight hundred and sixty-six pounds four shillings and three pence currency has been received, and the sum of eleven thousand nine hundred and fifty pounds fourteen shillings and eight pence currency has been paid (as per vouchers produced,) thereby shewing a balance due to the Treasurer of eighty-four pounds ten shillings and five pence currency.

(Signed,)

E. W. THOMSON,
GEO. BUCKLAND, } Auditors.
G. P. RIDOUT.

Toronto, C. W., 19th January, 1857.

REPORT OF THE PRESIDENT AND SECRETARY OF THE BOARD OF AGRICULTURE
ON THEIR VISIT TO THE LOWER CANADA EXHIBITION AT THREE
RIVERS, SEPTEMBER, 1856.

We, the undersigned, having visited the Lower Canada Provincial Exhibition as Representatives of this Board beg to report as follows:—

We arrived at Three Rivers on Wednesday night, Sept. 17th, and in consequence of the lateness of the hour found some difficulty in procuring lodgings. Mr. John Wade and Mr. Helm, of Port Hope, and one or two others, were the only persons we observed from the upper section of the Province.

Next morning, (Thursday—being the principal day,) we proceeded to the show grounds, which were pleasantly situated within a convenient distance from the town. Some sixteen acres were substantially enclosed by a strong and unusually high fence, and the live stock were arranged in convenient and partially covered pens adjoining the fence. The pens were consecutively numbered in each department, corresponding with the number of each entry card for every animal; an arrangement to be commended, as the animals had their respective places assigned them previously to their coming on the ground, and on their arrival were immediately and without confusion put into their proper pens. The time

of receiving entries absolutely closes several days previous to the opening of the show, and none are admitted afterwards on any pretence whatever. This, too, is a salutary regulation, and might, we think, be beneficially adopted by our own Association.

We soon found on the ground Mr. Evans, the Secretary, who introduced us to Col. Pomeroy, the President, Major Campbell, Mr. Watts, Mr. Laporte, M.P. and others, by whom we were cordially received, and taken to the principal points of interest in the exhibition.

The number of visitors was much smaller than we expected to find, particularly when the fineness of the weather, and the extensive and convenient preparations which the local committee had made were considered. A large number of pens too, were without occupants; persons having entered, but had failed in sending their stock. This occasioned no confusion, however, in the arrangements, which with the many good specimens in the different departments of the show, ought to have attracted a much larger number of spectators, interested in the promotion of Agriculture, and the general welfare of the country.

In the cattle department there were several very creditable animals, including Durham, Devon, and Ayrshire Bulls. Mr. Ecton's aged Durham Bull, which got the first premium, was, we were informed, formerly owned in Upper Canada, but bred in the States. Mr. Longley's first prize Devon Bull, handled well and is a particularly fine animal. Mr. Logan's Ayrshire Cow was about as fine a specimen of that useful breed as we remember to have seen anywhere in this Province. There were some good cows, and two and one year olds, of the above breeds, among others that were inferior. In the grades and native breeds, nothing struck us as remarkable; that department, either in amount or quality scarcely came up to our expectations.

Of Sheep there were some very good specimens of different breeds; but the South Downs, imported by Mr. Betts, and exhibited by Major Pomeroy, were very fine, and Mr. Miller, of Pickering, had some Leicesters which attracted much attention and were deservedly commended. Fine woolled and fat sheep were inferior.

In Pigs the show was upon the whole both good and instructive, containing a number of excellent specimens of the large and small breeds; a few imported from Britain, but the larger portion bred in Lower Canada from imported stock. These animals were shown in juxtaposition with a number of the native stock, and the contrast was as instructive as it was striking, affording ocular demonstration of the comparative worthlessness of the native Lower Canadian breeds, whether estimated by form or quality, early maturity or aptitude to fatten.

Several good Stud Horses and Brood Mares were exhibited. The first prize animals of heavy and light draught Stallions were much above mediocrity, and the first prize Canadian Stallion was a very superior animal.

The Cheese and Butter, as far as we had the means of ascertaining, were of superior quality, but the quantity of the former was small.

Of Turnips, Carrots, Mangel Wurzel, &c., the collection was not extensive, but it contained several creditable specimens.

The grain indicated the wetness of the weather that had prevailed in Lower Canada during the harvest. It was generally soft and out of condition, and much of it, particularly barley, was affected in color; notwithstanding, there were some very fair samples of most of the staple grains.

The collection of implements was small, but there were several ploughs, harrows, &c., of superior form and workmanship, manufactured in and near Montreal. Mr. Evans, Jr., has recently opened an Agricultural warehouse in that city; he had a number of implements of superior pretensions on the ground, among them two of Ransome's celebrated iron ploughs, made in England.

The amount of articles in the manufacturing department was not large, but it contained several good things. The carriages appeared well made, and considerably lower in price than such articles are in the Upper Province.

The Horticultural department, although not very extensive, was of very excellent quality. Most of the productions,—fruit and flowers, were from Montreal and its neighborhood. The soil and climate of that vicinity appear to be peculiarly adapted to the growth of fruit of the best quality. The apples, pears, grapes, peaches, nectarines, &c., were certainly better than can be usually produced in Upper Canada. The garden vegetables were likewise good. The flowers were magnificent, such China Asters we never saw before.

Although this show could not be considered a fair exposition of the state of cultivation and the industrial arts in Lower Canada, yet it possessed in our judgment, sufficient importance and merit to have attracted a much larger concourse of people as visitors and observers. The want of attendance must have been felt by the comparatively few zealous and enterprising men who usually support and direct this institution as painfully disheartening. This great cause, however, is steadily advancing in that section of the Province, the agricultural and industrial capabilities of which will no doubt be very differently represented next year in Montreal.

E. W. THOMSON.
GEO. BUCKLAND.

REPORT OF DELEGATES TO THE NEW YORK STATE FAIR, 1856.

The undersigned, appointed by the Association at Kingston to visit the New York State Fair, beg to submit their report:—

We left Kingston by the steamer "Charles Napier" for Cape Vincent on Monday, September 29th, thence by rail to Watertown, where we arrived at 9 o'clock p.m. Watertown has about 10,000 inhabitants; it is situated on Black Creek, a stream emptying into Lake Ontario, and affording immense water power; its banks are rocky, perpendicular, and covered with a growth of trees which, with their autumnal tints, gave great beauty to the scene. During Monday night rain set in, and increased in heaviness on Tuesday morning, greatly to the annoyance and injury of the State Society, and causing inconvenience and damage to the owners of stock, farm produce, and manufactures of all kinds. Before the rain commenced, high winds blew down the tent which had been fitted up and decorated by the ladies of Watertown as the Floral Hall. At one o'clock on Tuesday, it was still raining as furiously as ever, yet people came pouring in from all directions, by rail or carriage. The rain continued throughout the afternoon. In the evening there was a meeting of farmers and others in the Fireman's Hall, which was, like the first evening meeting in Kingston, very thinly attended, eighty-five persons only being present. The discussion was on the question whether cooked or uncooked food is the best for animals, and it was decided that for fattening, and fattening only, cooked food should be used, but for the forming of bone and muscle, hay or straw, and raw grain, with an occasional bran mash are best. The rain continued all Tuesday night and in the morning the weather looked as threatening as ever. When we arrived on the ground after breakfast, nothing could look more discouraging. Still, Col. Johnson and the officers kept cheerful, and looked forward to a fine afternoon, and at 12 o'clock, when the judges' names were called over, we began to think

that their wishes would be gratified, but before an hour black clouds again overshadowed us, and the rain came down in torrents, so that even in the buildings, and under the tents umbrellas were in great demand. Several of the Canadian visitors were placed upon the Committees of Judges in the different classes. At twelve o'clock, when the day began to improve, the Floral Committee once more tried to repair the damage done to the floral tent, and were again obliged to desist.

We devoted the morning of Wednesday, till the assembling of the Judges, to the examination of the sheep, cattle and hogs. Many of the sheep had taken cold, and all of them looked uncomfortable and wet to the skin, the only covering of the pens being boards laid over them merely to protect the animals from the sun, which however did not appear during our stay in Watertown. Had it not been for the unfavorable weather the ground for the show would have been delightful, being about three quarters cleared land with a good turf, and the remainder woods, with a tolerable sward. The horse ring was prepared like a race course, and was about half a mile in circumference, and seats or staging that would hold at least two thousand erected at one side. We also visited the poultry pens, which we did not consider equal to the display at our Kingston show. The exhibitors provided themselves with coops or cages, the Committee only providing the stand and roof. This plan we would advise for adoption at our own shows, as it would save the necessity of changing from one cage to another, and would also save the space occupied by the empty cages as we now have them.

In the evening we attended the gathering in the Fireman's Hall, which was this time quite full. The subject of discussion was the manufacture of butter and cheese, and why these articles could be made of good quality in one county and not in another. It was attributed to the presence or absence of lime by some, and by others entirely to the skill or want of it in the people. The discussion became rather tedious and we retired, but were struck with the difference between the people of our respective countries. With us, farmers are diffident, and disinclined to speak before gentlemen of ability and learning, but with them every farmer is prepared to relate his experience, although he may not express his ideas in the most grammatical or elegant language. And in this respect we consider the practice of our neighbors worthy of imitation by ourselves.

Rain continued all Wednesday night, but cleared off by times in the morning; the beginning of the day was favorable, tickets going off freely during the day. The show of horses was very good, except in blood. The grand horse ring, in consequence of the rain, could not be used, though more had been spent upon it than any other part of the ground; indeed the horse ring at the New York shows has some tendency to degenerate into a mere race course for trotting horses. All the spectators crowd round the horse ground, where furious driving and hair-breadth escapes delight both men and women; even the blood horses are shown in harness, and expected to trot their mile within three minutes.

The judges are no better provided for with them than with us, indeed not so well, nor did they make their appearance half so numerously when called by the Secretary. To supply the places of the absent judges, persons had to be selected from those present.

At 5 o'clock on Thursday 3rd, we left by special train for Rome, with about twenty cars and two locomotives, every car being more than full, and we arrived at Rome at half-past ten at night.

Rome is a town of only 8,000 inhabitants, but is very prettily laid out, and planted with trees. At half-past eleven, Friday morning, we took rail for Buffalo, and from thence home on Saturday.

The whole number of entries at the New York State Fair, was about 1,500,

not more than half the number at our fair, but this arose chiefly from the different mode of taking entries, all the minor articles exhibited by one person being enumerated as a single entry. The show of cattle and horses was rather better than at Kingston, though not very different in the number of entries. In long woolled sheep there was but a small show, but in short woolled very large. Poultry inferior to ours. In grain, roots, &c., very inferior. In dairy products and fruit the show was very good. In machinery the show was very extensive and instructive. The whole proceeds of the fair were about \$7,000 and the greatest attendance on any day was about 20,000 persons, the very wet weather keeping visitors away.

Amongst exhibitors from Canada were, Geo. Miller, of Markham, showing Leicester sheep; John Spencer, of Whitby, Southdowns; C. A. Jerdison, of Port Hope, pigs and sheep; Wm. Roddick, of Cobourg, imported Gallows; Mr. Richard Coates, of Oakville, a blood horse, "Young Veto," pigs and Devons; Mr. Williams Davis, of Etobicoke, his three year old Durham Bull, "Honest Tom," (13040) imported last year; Mr. Joselyn, of Brooklyn, Whitby, and Mr. McNaughton, of Newcastle, Darlington, both exhibiting flour.

We did not consider the buildings, or the arrangements generally, so good as our own at Kingston, neither was the amount of prizes offered so large by about \$2,000, but in one respect the show was much in advance of anything that we have had in the same department, and that was in the setting up of steam engines and shafts to drive all sorts of machinery. In the mechanical department there were six steam engines in motion, or ready to be set in motion, and a long shaft with numerous pulleys upon it, running the whole length of the shed, to which straps can be applied to drive all sorts of machines, of which there were present portable saw-mills, thrashing machines, saws for cutting firewood, straw-cutters, printing-presses, &c.

In the tent where the Agricultural and Dairy Products were exhibited, we found pretty good samples of Indian corn, but not better than we have seen produced in Upper Canada. Here we found also a specimen of sweet potato, with tubers of from 4 to 8 inches in length, grown by Mr. J. Vrooman, Lewis Co., N. Y. The vines were attached, fresh and green, and resembled the vine of the climbing convolvulus, or morning glory. Of cheese, in this tent there was a large number of samples, all in circular wooden cases, made for the purpose. The cheese was generally of good quality, Jefferson being a noted cheese and butter producing county. There were also on exhibition about fifty samples of butter in various quantities in cans, crocks, and tubs.

We paid a good deal of attention to the mechanical department, and when this was fully arranged, an inspection of it was really very interesting and instructive. In this branch of industry, we find that we have yet a good deal of progress to make, before we are on a par with our neighbors. Here, Mr. Fairbanks, of Watertown, in New York State, had a most singular little steam engine, applicable to thrashing, sawing, and various other kinds of work, where easy portability is a requisite. The whole engine was not more than three or four feet in length, and not more than four inches in diameter. It was supplied with steam from a portable boiler (which can be drawn anywhere by a span of horses), through gutta percha hose, of from 100 to 200 feet in length. The lower portion of the steam chest was attached by a strong moveable joint to some solid timber, and the piston rod being attached directly to the driving-wheel of the machine to be worked, the whole engine oscillates, and serves itself as the connecting rod usually placed between the piston rod and the crank. In this way we saw a six horse power threshing machine driven, and another little engine of the same kind, attached to a saw, cut several green beach logs of about 18 inches diameter each, into numerous short pieces, the cutting through the

log each time not requiring more than a minute. The engine was also applied to the cutting down of trees in the woods. It has always been thought rather a chimerical idea to effect this operation by machinery, but it is evident that, with this little machine, it could be done with facility, and we were assured that the owner was carrying on actual clearing operations with it. The boiler is drawn to the woods, and by means of the hose the engine and saw can be set to work cutting down, and cutting up, all the trees within a circuit of about 200 feet, the trees being canted over by means of a wedge following the saw. We saw some well-made, portable steam engines, made by Goulding, Bayley, and Sewell, of Watertown, of from 15 to 20 horse power, and which are sold at \$1,350 to \$1,500. Mr. Eaton, of Madison County, had steam engines of six horse power, for farming purposes, with steaming apparatus for steaming food for stock, the price of which, with truck, &c., is \$600. Messrs. Hoard & Sons of Watertown, had six steam engines of different capacities, on exhibition, all of which were in motion and performing various operations. A circular saw driven by one of them, cut an inch board twelve feet in length and one foot in breadth, off the log in a very little over one minute of time. These engines do not stand upon trucks, but can be moved conveniently, or are stationary at pleasure. The scale of prices at which they are sold is as follows: 3 horse power, \$280; 4 horse, \$360; 6 horse, \$540; 8 horse, \$700; 10 horse, \$840; 12 horse, \$1020; 15 horse, \$1250; 20 horse, \$1550; 25 horse, \$1850. The Felton Portable Mill Co., of Troy, N. Y., exhibited a portable grist mill for grinding corn or any other grain by steam or horse power, apparently a useful machine. The price of these is from \$60 to \$125, according to capacity. Another portable mill, of large size, manufactured for the Patentee, at New Haven, Connecticut, was exhibited by Hoard & Sons of Watertown, who act as agents for it. This mill has regular French burr stones, and will, it is said, with sufficient power, grind from 10 to 20 bushels of corn or other grain an hour. We noticed in the machinery department the model of a stump extractor, by means of which, it was said, two men could by turning a winch, extract the largest stumps. By attaching an apparatus to it, it could be readily converted into a powerful hay presser. Messrs. Cowing & Co., of Seneca Falls, N. Y., exhibited a small portable fire engine, which they had also exhibited at Kingston, and which for its cheapness and usefulness we thought worthy of notice. It is of 10 men power, and will throw a $\frac{3}{4}$ inch stream 130 feet. It is well and neatly constructed and the price only \$200. The same firm also exhibited a very neat well pump, which can be in a moment converted into a force pump or engine, and will throw a stream of water over a three story building; price, with hose, only fourteen dollars. A machine for grinding corn, with or without the cob, or other grain, manufactured by C. Leavitt, Mansfield, Ohio, seemed a useful machine, price \$50,—it was something like a bark mill, and worked by a horse. Messrs. Jones and Hitchcock, of Troy, had suspended near the machinery sheds, three handsomely finished Church bells, of fine tone. One weighed 212 lbs., another 507, and one 2080 lbs. Messrs. Menalings, of Troy, had also 3 bells adjoining the others. The weight was—one 478 lbs., one of 1956, and another of about 1800 lbs. The bells were frequently rung to show the tone. Fairbanks of St. Johnsbury, Vermont, exhibited an assortment of platform and other scales of improved kinds. Messrs. Evans & O'Reilly, of New York, exhibited a machine called Evans' Digger or Terraultur. This machine is carried by wheels like cart wheels, and the part which operates upon the ground consists of six double rows of strong spikes, set upon endless chains, and revolving upon two cylinders, one large and one small. It works a breadth of ground of four feet at a time. This machine is not yet made for sale, being professedly a new implement. The maker claims that it is a substitute for the plough, and that it is the first suc-

cessful machine of rotary motion for cultivating or digging the earth, that it could be manufactured and sold for about \$600, with seed sower attached, would require two spans of horses to work it, and would cultivate about eight acres of land in a day. In the machinery department, there were two printing presses at work, driven by steam power, printing off handbill advertisements for people on the grounds, and in one of the other buildings a lithographic press was at work, printing two well executed views of the show ground.

In the Domestic products department there was much worthy of notice, although we did not consider the ladies' work, and the pictures in this department equal in merit to those exhibited at Kingston. Amongst the articles exhibited were some remarkable well-made buckskin gloves and mittens, exhibited by C. J. Mills, of Gloversville, N. Y., made entirely by Singer & Co.'s sewing machines. There was a very good collection of Daguerreotypes, by Watertown artists. Dr. P. O. Williams, of Watertown, exhibited a very fine and well arranged case of minerals, consisting of different formations of quartz, hornblende, spar, agates, ores, &c. The Union Glass Company of Cleveland, Oswego Co., N. Y., exhibited some specimens of their manufacture of superior quality for American glass. The specimens were in plates of 3 x 5 feet, perfectly clear and free from distortion, and although not very thick, almost comparing in appearance to English plate glass. There were also specimens, made apparently for exhibition, in shapes resembling immense jars or vials, about 5 or 6 feet in height, of very clear and transparent glass. J. A. Smith, of New York, had a case of 6, 8, and 10 keyed flutes, one of which was entirely of silver,—clarionets, guitars, &c. We have mentioned the above things merely as being somewhat different from what we ordinarily see produced among ourselves, and with the hope of seeing similar manufactures soon arise among us. There was a great variety of other articles of a more ordinary character, such as manufactures of leather, woollen goods, implements, machines, manufactures in metal &c., which were worthy of attention, but which we cannot note in detail, without extending our report to too great length.

The total number of entries taken, as above stated, was about 1,500, being in the several departments named, as follows:—in Horses, 245; Cattle, 272; Sheep, Swine, and Poultry, 236; Implements, 196; Grain, Seeds, Vegetables, and Dairy Products, 217; Domestic Manufactures and Products, 200; Flowers, Plants, &c., 72; Paintings, Silver Ware, Stoves, &c., 259.

In reference to the management of the exhibition, we would refer to the circumstance of the names of the exhibitors of animals and articles being written upon the entry cards, as deserving of consideration, whether to be adopted by us in future.

We would refer also to the desirableness of having steam power erected at future fairs for the purpose of driving machinery on exhibition, as was largely the case at Watertown.

We have the honor to be, &c.,

R. L. DENISON,
H. C. THOMSON.

COMMUNICATION FROM THE TREASURER OF THE LOCAL COMMITTEE AT KINGSTON.

Office of the Local Committee of the Agricultural Association, }
 Kingston, December 19th, 1856. }

To the President and Members of the Board of Agriculture of Upper Canada :

GENTLEMEN,—Herewith I have the honor of submitting for your consideration, a statement of the affairs of the Local Committee of the Agricultural Association connected with the Provincial Exhibition, held at Kingston, on the 23rd, 24th, 25th and 26th September, 1856, showing the Total amount of receipts and disbursements of said Committee, wherein you will observe that the sums received from all sources are £2783 3s. 3d., and the disbursements actually paid amount to £2783 8s. 3d., making the sum paid over the receipts of 5s., added to which the unpaid accounts, amounting to £1134 14s. 10d., show a total of £1134 19s. 10d.

To meet these unpaid claims, the Committee have a promise of £200 from the County Council of Frontenac, Lenox and Addington, say £200, leaving a final deficiency of £934 19s. 10d. to be made up in some way. From the mixed nature of the expenditure, in erecting the Crystal Palace, and other suitable and necessary buildings for carrying forward the exhibition, although certain sums were allowed for that purpose, many of the payments made, had not the palace been taken in hand by the Local Committee, must have been defrayed by the Agricultural Association; and in looking over the accounts now submitted, the disbursements, such as ornamenting the grounds, the Floral Hall, with sundry other decorations, printing, also covering the cattle pens, hen coops, and other public buildings, would have gone into the general account.

Another circumstance may be mentioned, that the Treasurer of the Association did, in paying over the Government money, apportioned to the three Counties of Frontenac, Lenox and Addington, deduct ten per cent. therefrom, which deduction ought not to have been made from the counties wherein the exhibitions are held; the whole of the Government grant to the said counties should have been devoted towards the exhibition. Besides the matters hereinbefore mentioned, the Treasurer's receipts for tickets at the entrance gates, being double the charge made at any former show, will, we hope, have placed in his hands sufficient money to justify the Board in ordering these just claims against the Association to be paid.

Although the expense of erecting buildings not to be removed, with permanent fences, around the agricultural grounds at Kingston, has been more costly than heretofore, and from the high price of labor far more expensive than was at first expected, yet all of these being left for future agricultural purposes, the Association will, in the end, be gainers by the transaction, because the expense of fitting up the exhibition in future will be less, and the income and resources of the Association, more in proportion to the greater interest that will be taken by the public in such superior arrangements.

It is evident that these permanent buildings have risen the character and fame of the Association throughout the whole country, also in England, and in the neighbouring United States, and the stretch made in doubling the entrance tickets will prove profitable to the Association at the Annual Exhibitions for all time to come.

On behalf of the Local Committee,

I have the honor to be, Gentlemen,

Your most obedient servant,

THOMAS BRIGGS, JR.,

Treasurer, L. C.

REPORTS OF AGRICULTURAL TOURS BY PROFESSOR
BUCKLAND.

COUNTIES OF ESSEX, KENT, LAMBTON, &c.

The Board of Agriculture having expressed to me their opinion of the desirableness of my visiting the country, and giving lectures to Societies, with a view of improving those organizations and of diffusing, as widely as possible, scientific and practical agricultural knowledge, it is my intention for the future to devote what time I can spare to this object, and I propose giving in the *Journal and Transactions*, from time to time, a brief sketch of the more interesting and suggestive matters that may come under my observation. Hitherto my personal attendance has been so constantly required on the grounds of the University and Experimental Farm, that I have found it quite impracticable to visit the more distant parts of the country.

In October last, immediately after the Provincial Exhibition, I attended by appointment the Shows of the Agricultural Societies of the Counties of Kent, Essex, and Lambton, and subsequently reported to the Board thereon. A few words in reference to this journey may not be unacceptable to many readers of the *Journal*.

The annual Exhibition of the Kent Society was held in Chatham, October 20th. The day was delightfully fine for the season, and there was a larger display both of materials and visitors than usual. The Society has a most convenient piece of ground close to the town, granted some years since by the Government. The show of grains, dairy products, fruit, and ladies' work, was highly creditable, as was also the live stock, in each department of which there were several excellent specimens. The dinner took place in the evening, in the Town Hall; about 150 persons attended, and the whole proceedings went off in the best spirit. I had a good opportunity of speaking on matters pertaining to Agricultural Education, and the improvement of Agricultural Societies. The advancement of Chatham and the surrounding country since I was there before, seven or eight years ago, has been very great.

The Exhibition of the County of Essex Society was held in Sandwich, and the weather proved most unfavorable. Notwithstanding, there was not a bad collection of materials, usually composing such exhibitions. Some of the cattle were good specimens, but the pure breeds seemed scarce. The horses in this part of the country are generally too small for effectually working the heavy soils which predominate; they have more or less of French blood, and are bred extensively on the wet plains at a comparatively small cost. In the afternoon I addressed the members of the Society and others in the Court-house.

In consequence of the unusually inclement state of the weather, the Show of the County of Lambton Society, held at Port Sarnia, was expected to prove a failure; it was nevertheless, a good one. In live stock, although there were many specimens above mediocrity, the room for improvement is great, as is also, I was happy to observe, the desire. The grain and roots were mostly of excellent quality, and a more creditable display of butter is seldom to be seen even in older districts. In the evening I addressed the members on some of the more important topics in relation to agricultural improvement, and spent an agreeable hour afterwards in an interchange of views and suggestions relative thereto.

I was struck with the abundance of pasture to be seen almost everywhere throughout these counties; indicating the natural fertility of the soil, and its happy adaptation to grazing purposes. The great thing needed is effective drainage, which in some parts would require conducting on a large scale. With

this purely practicable object accomplished, this section would not be excelled for all the purposes of modern husbandry by any other in the Province.

I may state further, that I felt highly gratified with my visit to these Western Counties, not merely by signs of physical advancement which are everywhere apparent, but likewise by the manifestation of what may be correctly designated as the true British-Canadian spirit and loyalty of the people.

I attended, in February, the annual meeting of the County of Peel Agricultural Society, held in Brampton, and lectured in the Town-hall in the afternoon. This Society is progressing, and the improved breeds of cattle, horses, sheep, and swine are fast finding their way into this fine county. I had much interesting conversation with many of the farmers, and from the very scanty means of making observations in winter, I was led to form a very favourable opinion of the agricultural capabilities of the County of Peel.

I have since attended a soiree of a Literary and Mechanics' Association, recently established at Aurora, a rapidly thriving village on the Northern Railway. The attendance was numerous, and the proceedings very interesting, affording me an opportunity of urging the importance and means of agricultural education and progress. Next evening I addressed a respectable audience, consisting in a great measure of farmers, at Newmarket. This part of the country was early settled; many of the fields are free from stumps, and the farms have often a neat and more finished appearance. The surface is beautifully undulating, making drainage in most cases easy, and the general appearance picturesque. Captain Beresford's residence has quite an English appearance, and I observed in his yards several specimens of well-bred cattle, sheep, and swine; some of the former consisting of pure Durhams. The Captain is a rather extensive grower of Swedish turnips, which he feeds liberally to his stock, with much advantage.

About a fortnight since, I visited Paris for a few days, and lectured before the Mechanics' Institute of that town, to a large and most respectable audience, on the relations of science to practical agriculture. The bad state of the roads prevented many farmers at a distance from attending. I was glad to meet here, as I had on a previous occasion at Aurora, several clergymen of different denominations, who were evidently desirous of promoting the welfare of these valuable institutions. I enjoyed the hospitality of David Buchan and Henry Moyle, Esqrs., and the Messrs. Allchin kindly conducted me to see the characteristic features and improvements of the place. Since my former visit to Paris, some half a dozen years since, great changes and improvements have been effected; and few places, probably, are destined to reap so fully the advantages conferred by railways. Paris has unrivalled water power; what with the Grand River, and its tributaries, now so extensively improved by art, it is surely and steadily progressing in manufactures and commerce. Speculative excitement appears not to have attained to that hazardous degree of intensity here as in some other places; a more healthy and enduring, if somewhat slower prosperity, has in consequence obtained. Surrounded by so pleasant and superior an agricultural country, and with such great natural advantages, Paris holds out many great and substantial advantages, which can be procured on moderate terms by the mechanic, manufacturer, or trader.

From observations during the journeys which I contemplate making during the approaching summer, I shall be happy to cull such facts and information as will be generally interesting and useful to the readers of the Journal.

GEORGE BUCKLAND,

Board of Agriculture, Toronto, April, 1856.

COUNTY OF WELLAND.

To *E. W. Thomson, Esq., President of the Board of Agriculture of Upper Canada.*

SIR,—I have much pleasure in transmitting to you for the information of the Board of Agriculture, some account of my recent visit to the County of Welland, where I spent a very agreeable week. I was the guest of Captain Radcliffe, the respected and indefatigable President of the County Agricultural Society, who kindly conducted me through the county, and introduced me to many of the principal agriculturists and leading professional and commercial men. My notice of many things must necessarily be very brief, and others must be allowed to pass without even an allusion.

On Friday, June 20th, I left Toronto by the Great Western for Thorold, where I was met by my good friend Captain Radcliffe. Thorold is evidently a rising place, and situated on the escarpment of lime and sand stone, which, on the South-western shore of Lake Ontario, forms a very striking physical feature. Its close proximity to that magnificent work, the Welland Canal, affords it many important advantages. Mr. John Morley is doing here a rather extensive business in the manufacture of agricultural implements. His ploughs, constructed on the Scotch swing principle, are much approved of in the county. They are made of iron or wood, the latter being more common, and are getting into general use. I saw some good work done by them in several places.

Next day we drove through the northern portion of the township of Thorold, and called on several farmers. Mr. Wm. Ash, in what is called the Beaver-Dam settlement, has some of the most approved modern implements, and his cultivation seems good, and as a consequence his crops were generally heavy. Grade cows excellent, with a large dash of improved Durham blood, indicating the advantages where a breed of pure-blooded animals are not kept, of crossing our best native cows with that world-renowned breed. Mr. Ash has a flock of Leicester and Down sheep, well bred and in a thriving condition. I observed an English thorn hedge, which appeared to be thriving. Mr. Russell has also a hedge of considerable extent, a portion consisting of American thorn in a very growing state, the rest is made of the locust, which is inferior. These hedges did not appear to have suffered from the depredations of mice, which have proved so disastrous to young fruit trees, particularly during the peculiarly inclement season of last winter. The subject of live hedges is beginning to engage the attention of farmers in this county, as well as in others of early settlement. As yet experience in this matter, which is in many places becoming every year of more pressing importance, has not been sufficiently extended to lead to positive conclusions as to what particular materials are the best for making live fences. Although I have seen a few instances of the ordinary English hawthorn looking healthy and promising, yet I am strongly inclined to the opinion, from all that I have observed and heard, that our own native thorn, when properly treated, will answer better. Hedges, like fruit trees, or the ordinary crops of the farm, require, and will amply repay for all the rational treatment and care that can be bestowed upon them. We afterwards called on the Rev. Dr. Fuller, who, like many clergymen in the mother country, takes a lively interest in rural pursuits, and has labored to extend the knowledge and improve the education of farmers. Mr. Fuller does not now farm extensively. He has some excellently bred carriage horses. Clover very heavy on strong clay soil. In the evening I met and addressed a small number of farmers, and a few others, in the village of Allandburgh, and afterwards spent an agreeable hour in conversation on various matters pertaining to agricultural improvement, in which Messrs. Wright, Colman and McCoppin took the principal part. I learnt both here and elsewhere in the

county, that the practice of sowing timothy seed with wheat in the fall was yearly extending, with satisfactory results; the plant coming to earlier maturity. In a wet harvest—which however we are not often troubled with in this country—the timothy grass must tend to interfere with the harvesting of the grain.

On Monday, June 23, we went over a large portion of the township of Stamford. Inspected the farm of Mr. Edward Jones, who has long been distinguished as an enterprising and successful farmer and breeder. Mr. Jones's farm occupies an elevated portion of the ridge already referred to; it is consequently broken, and consists mainly of a heavy clay soil, which changes to a loam immediately to the east. The grain and root crops, clover and pasture, were good, considering the dryness of the season. The live stock consists of some well bred horses, strong and active, and specially suited to heavy soils. Excellent grade cows, yielding large quantities of milk, several fine Durhams, with a bull above ordinary merit: several of the cows and heifers are excellent specimens of that celebrated breed, which Mr. Jones has been very successful in introducing into that section of country. His South-Down sheep are, many of them, particularly fine, yielding a fleece of 3½ lbs.; none of the best are ever sold to the butcher. From the most casual observation it is evident that Mr. Jones is no friend of weeds. The difference in the state and appearance of the crops at this season between the crops of such as cultivate thoroughly, and those who merely skim over the surface in a hurried and imperfect manner is astonishingly great. Clean and thorough culture is the only kind of farming that in the long run can pay.

Mr. Wm. McMicking, near Queenston Heights, has likewise an excellent herd of Grade Cattle, in fine condition. Such stock probably pays better than any other, not excepting even the pure breeds, as a general thing; and it is within the reach of almost every person to obtain it. Mr. McMicking has also a few good Durhams, and a Hereford Bull and two cows, of promising appearance. There is not perhaps a dozen of the latter breed in Upper Canada, and the few specimens I have seen in the United States, would be considered in that portion of England where this breed is cultivated and appreciated, as second rate animals. Although it would be idle to suppose that this breed can supplant the Short-horn—which are unrivalled for size and early maturity, yet it is highly desirable that it should be better known on this side of the Atlantic. I saw some excellent Pigs—Suffolk and Berkshire breeds, at Mr. John Lemon's, who has likewise some fine Leicester sheep, and a heavy crop of two-rowed barley.

At Mr. Ker's, Drummondville, I found quite a number of people assembled to witness a trial of mowing machines. The clover was heavy, with but little timothy, and in some places it was much lodged, and consequently difficult to cut in any way. The two principal machines were constructed on Manny's principle, a combined reaper and mower, the one made by Fanlett of Niagara, worked better on the whole than Manny's own, particularly in avoiding choking in turning. Manny's machines are fast getting into general request; and mechanical skill has done wonders within the last year or two in surmounting what were thought to be insuperable difficulties in the way of constructing a combined reaper and mower. Mr. Ker's farm, like much of this eastern side of Stamford, is of a light sandy character, yet highly productive in favorable seasons; his cattle and sheep are good.

In the evening I met a large party, chiefly agriculturists of the neighborhood, in the pretty village of Drummondville, and addressed them on the application of scientific facts and principles to the practical management of the farm, and other means of agricultural improvement. The evening was spent very agreeably; and upwards of an hour was devoted to asking questions and giving

replies to subjects suggested by the lecture. Messrs. Lemon, Jones, McMicking, Gardner, and my friend Capt. Radcliffe, were among those who took a part in the discussion. Altogether the meeting went off well. Mr. Isaac Culp of this village, who has been a plough maker for many years, and who obtained diplomas and premiums at our early Provincial Exhibitions, produced a model of an improved plough, which he is about to bring before the public.

On Tuesday we started for Fort Erie, where I had an engagement to lecture in the evening. From the Falls we travelled several miles along the banks of the river; saw but little good farming. The soil is a heavy clay, needing much deeper and cleaner cultivation, and in many places draining, the essential condition of all subsequent improvements, and which appears to have been very little attended to in this section. We called on Mr. Weeks, in Bertie, whose farm principally rests on a limestone gravel, his crops looked promising; he has some excellent grade cattle, and a pure Durham Bull. Mr. Routh, of Split-rock farm, so called from an extensive fissure in the limestone on which it rests, has good stock, and his cultivation and crops appeared above the average. Leaving the limestone we entered again on heavy clay; the land is naturally of good quality, but it much needs draining and better cultivation. Mr. Graham has a splendid farm on the Garrison Road, under superior management.

In the evening I addressed a good audience at Fort Erie, and a lengthened conversation subsequently followed, on several points of improved husbandry, and the management of Agricultural Societies, in which Messrs. Lewis, Graham, Richie, Henderson and Dr. Cronyn took a principal part.

Next morning we proceeded up the Garrison Road to Ridgway; the soil here becomes lighter, and the country more picturesque. Mr. Haun has a good farm here, pleasantly situated, and commanding a view of Lake Erie, and the state of New York. I noticed two very fine fields of grain, barley and wheat; of the latter, appearance would justify the expectation of 40 bushels per acre. We passed through a large portion of Humberstone; some parts of which are not very interesting, and arrived at Stone Bridge and Port Colborne, at the head of the Canal, on Lake Erie. A great amount of business is done here, and the number of vessels, some of them of large tonnage, that pass up and down the Canal is rapidly increasing. Dobie and Henderson, of Stone Bridge, have established a manufactory for making ploughs and other agricultural implements, and their establishment is fast growing into notice. Wilkinson & Roote, of St. Johns, manufacture Gang Ploughs, an article that is preferred by some to the Wheel Cultivator. This form of plough deserves to be better known. I regret that we had but little opportunity of seeing the township of Waifleet, where extensive marshes prevail, and I am informed a stone drainage has been successfully commenced. In the evening I met a small party at Merrittville, the county town. The meeting was held in a room of the new Court House, an extensive and handsome building of stone, not yet completed. After the address, Messrs. Burgar, Rice, C. Park, Dr. Burns, and others, took part in the conversation.

Next morning my worthy guide conducted me to Pelham, making a gradual and in some places rapid ascent from the plains to lighter and drier soils, which require a different mode of management. On our way we called and inspected the nursery and farm of Mr. Samuel Taylor, who has a pretty extensive stock of fruit and ornamental trees; many of which seemed healthy and flourishing, although the mice and severe frost of last winter had done great injury. Great numbers of peach and plum trees were wholly or partially destroyed. Mr. Taylor is trying a considerable length of Osage Orange hedge, which so far appears promising; and Mr. Lewis Wilson is doing the same with similar prospects. There are extensive pine ridges in these elevated parts of Pelham; in many places the soil is poor and light, and agriculture, as a system, can scarcely be

said to have commenced. In other places, however, the soil is highly productive, and this section is celebrated for producing the finest quality of potatoes. Mr. J. Price cultivates liberally, and his crops are consequently heavy. I regretted we did not find Mr. John Schofield, a leading and enterprising farmer, at home. I met a number of agriculturists in the evening, and after my usual address, a very spirited conversation or rather discussion was carried on, in which Messrs. Sheriff, Hobson, Deverardo, Schofield, H. Price, and my kind conductor, Capt. Radcliffe, took part. Here my engagements terminated.

Upon the whole I have been highly gratified with this trip, which has afforded me good opportunities of getting valuable information, and of offering suggestions, and communicating knowledge respecting the science and practice of agriculture and the management of Societies, which I trust, will prove useful. The county has been recently made independent, and fresh energy seems now to animate the people. Everywhere I found an interest expressed in the proceedings of the Board and the Provincial Association, and exertions were being made towards securing the Provincial Exhibition somewhere on the Niagara frontier, at an early date. The stoppage of the Buffalo and Brantford Railway has been a great drawback to the county, but this impediment will be speedily removed. The Canal and the Railway afford efficient means for developing the resources of the county. I observed great improvements going on in several places in road making; a matter which hitherto has not received the attention its importance deserves. The most striking deficiency in the practical husbandry of this county, as well as many others, is the small amount of land devoted to root crops; particularly the mangel wurzel and field carrots, productions so essential to the sustentation of a numerous and improved herd of cattle. Draining too on the flat clay lands has as yet been little attended to. When this is done the various kinds of root crops may be profitably introduced on soils, where, under present circumstances, the attempt would be abortive.

I am under great obligations to Capt. Radcliffe for his attention and hospitality. And here I would mention that I saw some excellent silk, from worms which Mrs. Radcliffe has in her possession, and to which she has devoted much time and attention. It is quite a curiosity, and with the thriving mulberries in the garden, shows what our soil and climate can produce.

Hoping that this brief and hurried sketch will not be totally unacceptable to the Board.

I have the honor to be, Sir,

Your obedient Servant,

GEO. BUCKLAND.

Toronto, Sept., 1856.

COUNTIES OF WENTWORTH, HALTON, WELLINGTON, &c.

To *E. W. Thomson, Esq., President of the Board of Agriculture, U. C.*

SIR,—I have the honor to submit to you the following brief statement of my proceedings since my last report:—

October 9th, I attended by appointment the Exhibition of the Agricultural Society of the County of Wentworth, held at Waterdown. The day was delightfully fine, and the number of visitors very large. Indeed, for miles around, the occasion seemed to be regarded as a general holiday, by the young and old of both sexes. It was evident from the countenances of the people that they were earnest in the great cause of agricultural improvement, and appreciated the important purposes of these annual competitions.

Not intending in these short notes to enter into any minute analysis or comparison of the Exhibitions which I have witnessed, I am quite justified in saying that the show at Waterdown was highly creditable to the County of Wentworth in general, and to the people of East Flamborough and its neighborhood in particular. Horses, cattle, and sheep, were, as a whole, much above mediocrity, and specimens from each might have been readily selected that would have graced any Exhibition, whether of a Provincial or National character. Hon. Adam Fergusson's herd of short-horns was well represented by a bull and several heifers, which elicited general admiration; there was also a number of other good specimens of the Durham class. Mr. Malloch had a young bull and two heifers just imported from Ireland, which promise to be a valuable acquisition; the animals were in extraordinary good condition, considering they had been landed from the vessel only a fortnight; one heifer was indeed fat, quite fit for the butcher; indicating the strong tendency to thrive and fatten, characteristic of this celebrated breed. Sheep were numerous,—all long woolled, with only an exception or two,—many of them indicating pure breeding, and heavy both in carcass and fleece. The show of pigs was small, including some excellent specimens both of large and small breeds. The grain and roots were good, indicating care and an improved state of culture. The ladies' department was quite superior, and their handiwork attracted general attention. A few good implements, chiefly manufactured in the neighborhood, were on exhibition. Nothing indicates more plainly the advancing state of our agriculture than the superior and efficient tools and implements one sees at Shows like this, and produced by country mechanics residing in the surrounding villages. A goodly number of farmers afterwards dined together at the Inn, and several short but spirited addresses were delivered. Mr. O'Reilly, President of the Society, in the chair. The proceedings of the day terminated with an address from myself in the new Grammar School. The prosperous state of this Society is highly creditable to the Directors, and it still continues to enjoy the services of its old and efficient Secretary, Mr. James Wetenhall.

I had the pleasure of spending a couple of days with the Hon. Adam Fergusson, of Woodhill, whose residence commands a much larger portion of the picturesque than ordinarily falls to the lot of Canadian homesteads. Mr. Fergusson's herd of short-horns is small but choice; and I found him as heretofore, animated by the same spirit for the advancement of agriculture, which has distinguished him for a great number of years both in Scotland and Canada.

I subsequently attended the Agricultural Show of the Township of Etobicoke, at the village of Mimico. I had heard much of the flourishing condition of this Society, and was, therefore, prepared to expect something superior, and certainly I found the reality to exceed my anticipation. The large amount of visitors, stock, implements, fruits, and vegetables, much of which was of the best quality, indicated a first-rate County, rather than a Township Show; and the ladies' work, exhibited under a large tent, was both extensive and excellent. The dinner was numerously attended, and the speeches and proceedings were animated. Mr. Fisher, President of the Society, occupied the chair. This Society affords a fine illustration of what may be effected, even within the limits of a Township, by united and zealous co-operation. The spirited competition in the growth of turnips, and the liberal prizes it has given for the same, for the past two years, places the Etobicoke Society among the first and most influential in the Province.

October 24th, I attended, in company with Messrs. R. L. Denison, Hugh Thomson, and others from Toronto, the County of Wellington Show, at Guelph. The amount of live stock was scarcely so large as one might have expected in this celebrated district, but the *quality* was all that could be desired; in no

department scarcely was anything to be seen that could be considered absolutely inferior or second rate. This result has been brought about by the exhibition of the best animals for many years under the auspices of this Society, so that people will not now take anything but what is really good, well knowing that such only have any chance to win a prize. The *quality* and not the mere quantity, should be principally regarded in these Exhibitions. Mr. Stone, who is now so favorably known to the public as an enterprising importer and breeder, had some beautiful specimens of his select and pure bred cattle and sheep; and there were others closely treading upon his heels, and even, in a few instances exceeding him. It would not be too much to say that in cattle and sheep, the Show might vie with any similar one in the mother country, whether we regard the animals imported or bred in the county. The grain was good, but rather small in amount. They have a beneficial practice of holding at Guelph a Seed Wheat Show soon after harvest, and awarding liberal premiums. As no prizes are offered for fall wheat at this general annual Show, little or none is brought forward. The roots were excellent, superior to anything I have seen elsewhere. Turnips of different kinds, particularly Swedes, were not only perfectly pure, but large, well shaped, and sound. The soil of this county must be well adapted to the growth of this root, and the culture skilfully conducted. There being no ladies' department, (except dairy products be considered such, which were excellent), the exhibition did not attract any large amount of visitors who were not directly interested in agricultural pursuits. Wherever ladies are encouraged to bring out their useful and ornamental productions there is always a larger attendance and apparently greater animation. A large party sat down to dinner in the evening, and several interesting and instructive addresses were given. The Society owes much of its present prosperity to the long and efficient services of its Secretary, Mr. John Harland.

The next day I proceeded to Stratford, the County Town of Perth, where I had engaged to give a lecture on the science and practice of modern agriculture. Owing to the extreme cold and wetness of the day the attendance at the Court House was small. After the lecture some conversation of a very interesting nature followed; Mr. Smith, the President of the County Society, suggested the desirableness of the Board of Agriculture procuring a collection of the soils, economic minerals, specimens of agricultural products, &c., from all parts of the province, and to arrange them systematically in a place convenient for inspection. Of the importance of this suggestion there can be no doubt; but nothing of the sort can be accomplished until the Board is provided with suitable and permanent rooms. An agricultural museum is beginning to be felt as a desideratum, which it is hoped will soon be supplied. The weather, during the three days I spent in Perth, was very unfavorable for making extended observations. Notwithstanding, through the kindness of Messrs. Smith, Stewart Campbell, (Secretary of the County Society), and McCulloch, I was enabled to see a considerable portion of the central and southern portion of the County. One cannot travel far here without being struck with the general uniformity of the soil, which, for agricultural purposes, is, with few exceptions, of first quality. A strong clay loam seems to predominate, and near the Thames, as at St. Mary's for instance, limestone, of apparently good quality, may be readily obtained to any extent. Drainage in some places is required, and the general surface of the country, although apparently flat, is in most places sufficiently inclined and broken to admit, without much difficulty, this important means of agricultural improvement. Gravel ridges intersect the County in several directions, and about sixty miles of gravel roads have been made already. The Town of Stratford is favorably situated, being intersected by the Grand Trunk and Buffalo and Huron Railroads, and is rapidly improv-

ing. Property is fast advancing here, as everywhere else, but as Perth is a newly settled county, having an excellent soil, and now unusual facilities for transportation of produce, it appears to offer peculiar advantages to all classes of settlers, more especially such as have limited means.

October 28th, I attended by appointment, the Agricultural Show of the County of Halton, at Milton. The day was fine, and the number of visitors very numerous. In many respects it reminded me of the Wentworth Show. The cause of agriculture appears to be warmly espoused in all the sections of that great tract of country, formerly known as the "Gore District." At all events in Halton the farmers, with their wives, sons, and daughters, take a lively interest, as their Annual Exhibition plainly testified, in whatever tends to foster and promote the interests of our native husbandry. I can only say that every department of the Show contained several specimens of merit, and that upon the whole it must be considered highly creditable to the farmers of Halton. The best of the live stock exhibited, will, if carefully managed, soon effect a general improvement in the horses and cattle of the county. It is extraordinary what extensive benefits a few good pure bred bulls will confer upon a whole district in the course of three or four years. The grain, roots, and vegetables generally, considering the unfavorableness of the season for the latter, were better than might have been anticipated, there being several excellent specimens. In consequence of the great crowd of visitors I could not inspect the ladies' work, which embraced an extensive assortment; much of it was thought by those who had an opportunity of examining it to be of excellent quality.

After dinner in the evening I gave an address to a large audience in the Court House, and was followed by Mr. McDougall of the *Agriculturist*, Mr. Clarke, the Secretary of the Society, Mr. White, and a number of other gentlemen, whose remarks on the state and improvement of agriculture, and upon the insect destroyers of our wheat crops, were both interesting and important. A meeting of this kind was certainly a rational and improving way of closing the proceedings of an Agricultural Show, and I left the County of Halton with a pleasing recollection of what I saw and heard.

In conclusion I would observe that it must be obvious to all who have opportunities of attending and observing our Agricultural Shows in different parts of the country, that their magnitude in many instances is now such as to require a suitable piece of ground, with permanent fence and convenient buildings, and *more time* to arrange and properly exhibit the various articles which make up the staple of such expositions. County Shows, where there is, or ought to be, much belonging to the mechanical, manufacturing, and ladies' departments, require *two full days* to commence and terminate the business in a systematic and instructive manner. A small charge for admission too would not be felt as a burthen by individuals, and would materially improve the pecuniary resources of the Society. I trust these few hints will not be lost sight of by those who are more immediately concerned in the management of these Exhibitions.

Respectfully submitted,

GEO. BUCKLAND.

Toronto, November 24, 1856.

COUNTY AGRICULTURAL SOCIETIES.

STATEMENT showing the amount of Subscription of the County and Township Agricultural Societies in each County for the year 1856, at the time of the Treasurer of each County Society transmitting his affidavit to the Secretary of the Board, as required by the Act Vic. 16, Cap. 11, the amount of public grant received by the Board from Government on account of each County Society, and the amount retained by the Board from each grant, as authorised by the Act, for purposes of the Provincial Agricultural Association.

COUNTY SOCIETIES.	AMOUNT OF SUBSCRIP'NS.			GOVERNMENT GRANT.			RETAINED BY BOARD.		
	£	s	d	£	s	d	£	s	d
Addington.....	74	5	0	150	0	0	15	0	0
Brant.....	191	17	6	250	0	0	25	0	0
Bruce.....	84	2	4½	150	0	0	15	0	0
Carleton.....	139	10	0	250	0	0	25	0	0
Dundas.....	50	0	0	150	0	0	15	0	0
Durham.....	221	5	0	150	0	0	15	0	0
Elgin.....	142	5	0	250	0	0	25	0	0
Essex.....	91	15	0	250	0	0	25	0	0
Frontenac.....	74	17	6	150	0	0	15	0	0
Glengary.....	63	5	0	150	0	0	15	0	0
Grey.....	153	2	6	250	0	0	25	0	0
Haldimand.....	98	15	0	250	0	0	25	0	0
Halton.....	136	5	0	250	0	0	25	0	0
Hastings.....	91	5	0	250	0	0	25	0	0
Huron.....	183	19	9½	150	0	0	15	0	0
Kent.....	175	15	0	250	0	0	25	0	0
Lambton.....	142	0	0	250	0	0	25	0	0
Lanark.....	143	5	6	150	0	0	15	0	0
Leeds and Grenville.....	171	2	6	250	0	0	25	0	0
Lenox.....	34	10	0	103	10	0	10	7	0
Lincoln.....	208	7	6	250	0	0	25	0	0
Middlesex.....	307	1	1½	250	0	0	25	0	0
Norfolk.....	102	15	0	250	0	0	25	0	0
Northumberland.....	167	0	0	150	0	0	15	0	0
Ontario.....	204	12	6	250	0	0	25	0	0
Oxford.....	264	7	6	250	0	0	25	0	0
Peel.....	176	0	0	150	0	0	15	0	0
Perth.....	148	10	0	250	0	0	25	0	0
Peterboro'.....	120	11	10½	150	0	0	15	0	0
Prescott.....	59	5	0	150	0	0	15	0	0
Prince Edward.....	114	5	0	250	0	0	25	0	0
Renfrew.....	50	0	0	150	0	0	15	0	0
Russell.....	53	0	0	150	0	0	15	0	0
Simcoe.....	143	17	6	150	0	0	15	0	0
Stormont.....	55	0	0	250	0	0	25	0	0
Victoria.....	119	15	0	150	0	0	15	0	0
Waterloo.....	154	0	0	250	0	0	25	0	0
Welland.....	130	0	0	250	0	0	25	0	0
Wellington.....	340	15	0	250	0	0	25	0	0
Wentworth.....	212	10	0	250	0	0	25	0	0
York.....	348	12	8½	150	0	0	15	0	0
	£5913	8	4½	8403	10	0	£840	7	0

TRANSACTIONS OF THE AGRICULTURAL ASSOCIATION AND
BOARD OF AGRICULTURE.

 TWELFTH YEAR—1857-'58.

OFFICERS OF AGRICULTURAL ASSOCIATION, 1857.

- President*,—George Alexander, Woodstock.
1st Vice-President,—D. B. Stevenson, M.P.P., Picton.
2nd Vice-President,—Wm. Ferguson, Kingston.
Treasurer,—R. L. Denison, Toronto.
Corresponding Secretary,—Professor Buckland, Toronto.
Recording Secretary,—Hugh C. Thomson, Toronto.
Consulting Chemist,—Professor Croft, University College.
Seedsman,—James Fleming, Toronto.
Bankers,—Bank of Upper Canada.

Ex-Presidents of the Association.

- E. W. Thomson, Toronto.
 Hon. Adam Fergusson, Woodhill.
 Henry Ruttan, Cobourg.
 J. B. Marks, Kingston.
 T. C. Street, Niagara Falls.
 C. P. Treadwell, L'Orignal.
 David Christie, M.P.P., Brantford.
 Baron de Longueuil, Kingston.

 MEMBERS OF THE BOARD OF AGRICULTURE—1857-'58.

- E. W. Thomson, Toronto, *President*.
 J. B. Marks, Kingston, *Vice-President*.
 Hon. P. M. Vankoughnet, Minister of Agriculture.
 George Alexander, Woodstock, President of the Agricultural Association
 R. L. Denison, Toronto.
 Professor Buckland, Toronto, *Secretary*.
 Hon. Adam Fergusson, Woodhill.
 Henry Ruttan, Cobourg.
 David Christie, M.P.P., Brantford.
 John Harland, Guelph.
 Asa A. Burnham, Cobourg.
- By virtue of the Act 20th Victoria, Cap. 32., which came into effect in the autumn of 1857, the following persons are also members ex-officio of the Board of Agriculture :
- W. B. Jarvis, Toronto, President of the Board of Arts and Manufactures,
 C. W.

Dr. Beatty, Cobourg, Vice-President of do.

Rev. Dr. Ryerson, Chief Superintendent of Education, C. W.

The Board of Agriculture constitutes the Council of the Association between the Annual Meetings thereof.

LIFE MEMBERS OF THE ASSOCIATION.

[The payment of \$10 constitutes a person a life member, when given for that special object, and not as a contribution to the local funds.]

W. A. Alexander, Kingston; Geo. Wm. Allan, Toronto; Wm. Applegarth, East Flamboro'; W. H. Boulton, Toronto; Hon. H. J. Boulton, do.; Jas. Boulton, do.; Hon. Robt. Baldwin, do.; W. A. Baldwin, do.; Chancellor Blake, do.; Francis Boyd, Richmond Hill; Joseph Beckett, Toronto; James Buchanan, Ex-consul, Drummondville; Donald Bethune, Toronto; John Boyes, Agent of the Earl Mountcashel, Kingston; Thomas Briggs, do.; John Breden, do.; Dr. Barker, do.; A. K. Boomer, St. Catherines; Wm. W. Baldwin, Oak Ridges; John Bell, Toronto; Jacob Binkley, Ancaster; Isaac Buchanan, Hamilton; C. J. Brydges, do.; H. J. Boulton, Jr., Etobicoke; William H. Beresford, Newmarket; A. A. Burnham, Cobourg; John Counter, Kingston; Lewis Cameron, do.; Angus Cameron, do.; Hon. Malcolm Cameron, Port Sarnia; Major Campbell, Montreal; Charles Clark, Kingston; Skeffington Connor, Toronto; Dr. Campbell, Niagara; H. H. Croft, Ph. D., Toronto; John Cameron, Toronto; Geo. E. Castle, Cobourg; Wm. A. Cooley, Ancaster; David Christie, Brantford; Z. B. Choate, Glanford; Nathaniel Davis, Yonge Street; Thomas Deykes, Kingston; James Dougall, Amherstburgh; R. L. Denison, Toronto; Walter Dickson, Niagara; Geo. T. Denison, Toronto*; Richard Drury, Simcoe; George T. Denison, Toronto; John Dow, Whitby; J. B. Ewart, Dundas*; W. G. Edmundson, Toronto*; Hon. Adam Ferguson, Waterdown; William Ferguson, Kingston; Major Forbes, do.; J. R. Forsyth, do.; William Ford, do.; Peter Fisher, Township of Nelson; Billa Flint, Belleville; Thos. J. Fuller, Toronto, Rev. T. B. Fuller, Thorold; James Fleming, Toronto; W. R. Forster, Toronto Tp.; Clark Gamble, Toronto; J. W. Gamble, Vaughan; William J. Gamble, Etobicoke; R. A. Goodenough, Toronto; Arch. Glendinning, Scarboro'; John Gibb, Lindsay; Hon. John Hamilton, Kingston; Rev. Wm. Herkimer, do.; Francis M. Hill, do.; W. P. Howland, Toronto; Andrew Heron, Niagara; James Hescott, do.; Richard Hescott, do.; John Ogilvy Hatt, Hamilton; George Henry, Elgin; Captain Hancock, Queenston; Hon. F. Hincks, Governor Windward Isles; Jas. Hobbs, Toronto; A. S. Irons, Kingston; Hon. J. E. Irving, Newmarket*; E. Jones, Stamford; Professor Johnston, University of Durham, England*; W. B. Jarvis, Toronto; Robert Jackson, Kingston; Vice-Chancellor Jameson, Toronto*; Thos. Kirkpatrick, Kingston; Jesse Ketchum, Toronto; H. Kordes, London; Joseph Kirby, Guelph; Baron De Longueuil, Kingston; G. J. Lafferty, Hamilton;

James Lewis, Saltfleet; B. Lawrence, Niagara; Henry Laidlaw, Toronto; A. Lemon, Guelph; J. B. Marks, Kingston; Hon. J. A. McDonald, do.; Hon. John Macaulay; Earl of Mount-casbel, (Amherst Island); James Morton, Kingston; John McPherson, do.; Thos. Muckleston, do.; H. A. Mills, do.; W. Mattice, Cornwall; Moffatt, Murray & Co., Toronto; Hon. Joseph C. Morrison, do.; Rev. Dr. McCaul, do.; Hon. Hamilton Merritt, St. Catherines; Arch. McLean, Toronto; O. T. Macklem, Chippawa; John L. Macdonald, Gananoque; Thos. Musson, Etobicoke; John Norton, Kingston; W. M. Paterson, do.; Hon. J. H. Price, Toronto; J. B. Plumb, Albany, N. Y.; Henry Parsons, Guelph; Capt. Spencer Peel, Amherstburgh; Sir Edward Poore, Cobourg; James Paterson, Streetsville; Henry Smith, Jun., Kingston; Maxwell Strange, do.; J. Sanderson, Chinguacousy; Cornelius Stinson, do.; Alex. Shaw, Toronto; D. Smart, do.; Sheriff Smith, Barrie; Thos. C. Street, Niagara Falls; Charles Small, Toronto; Capt. J. M. Strachan, do.; Samuel Shaw, do.; F. W. Stone, Guelph; Sam. Scarlett, Etobicoke; S. Taylor, (Bank B. N. A.,) Kingston; E. W. Thomson, Aikenshaw, Toronto; E. C. Thomas, Hamilton; William Willson, Kingston; W. P. Wilson, do.; John Watkins, do.; William Weller, Cobourg; J. G. Worts, Toronto; Fred. Widder, do.; James Webster, Guelph; James Wetenhall, Hamilton; Wm. Woodruff, St. David's; Thos. Wheeler, Toronto; J. P. Wheeler, Scarboro'; E. A. Walker, Simcoe; Joseph Webster, Flamboro' West; John Wilson, Prof. Edinburgh University, Scotland.

Those marked thus * deceased.

COUNTY AND TOWNSHIP AGRICULTURAL SOCIETIES.

ABSTRACT of reports received by the Board of Agriculture in 1857, from the various County Agricultural Societies in Upper Canada, embodying the proceedings of those Societies and of their Township Branches for the year 1856:

ADDINGTON.

COUNTY SOCIETY.—This Society consisted, in 1856, of one hundred and seventeen members, whose subscriptions amounted to £29 15s.; amount deposited by township branches, £48 5s.; Government grant, £135; total receipts, including small balance from 1855, £219 7s. 6d.; amount contributed to Local Committee at Kingston for purposes of Provincial Exhibition at that city, 1856; £100; amount paid over to township branches, including return of deposits and proportion of Government, £98 10s.; general expenses, £10 9s. 1d.; balance carried to account of 1857, £10 8s. 5d.

TOWNSHIP BRANCHES.

AMHERST ISLAND.—Thirty-six members; amount of subscription, £10;

share of Government grant, £10 10s; total receipts, £20 10s; amount paid in premiums, £15 15s; expenses, £2 19s 6d; balance in Treasurer's hands, £1 15s 6d.

CAMDEN EAST.—Sixty-three members; amount of subscription, £17; apportionment of Government grant received, £10 10s; municipal grant, £4; total receipts, £31 10s; amount paid in premiums, £28; expenses, £1 17s 3d; balance in Treasurer's hands, £1 12s 9d.

ERNESTOWN.—Eighty-five members; subscription, £42 3s 9d; balance from 1855, £5 17s 6d; share of Government grant, £18 15s; total receipts, £46 16s 3d; amount paid in premiums, £37 17s 6d; expenses, £2 17s 4½d; balance in Treasurer's hands, £6 1s 4½.

SHEFFIELD.—Thirty-one members; subscription, £12 15s; Government grant, £10 10s; total receipts, £23 5s; amount paid in premiums, £19; expenses, 18s 7½d; balance in hands of Treasurer, £3 6s 4½.

BRANT.

COUNTY SOCIETY.—Three hundred and sixty members reported; amount of subscriptions, £149 7s 6d; balance from 1855, £37 5s; deposited by Township Branch, £50; receipts at Fair, £54 16s 6d; Government grant, £225; total receipts, £532 9s; amount paid in premiums, £269 7s 7d; amount paid to Onondaga Township Society, £100; pens for Show, printing, Secretary's salary, and other general expenses, £152 6s 1½d; total expenditure, £521 13s 8½d; balance in hand, £10 15s 3½d.

Extract from Report.

"It affords the President and Board of Directors much pleasure in presenting the Fourth Annual Report of this Society. They would congratulate the members of the Society on the encouraging prospects of the condition of its affairs, and the unprecedented success which has attended their efforts during the past year; and, as a proof that the beneficial results of the Society are duly appreciated, your Directors would refer to the increased interest which has been displayed at the last Annual Exhibition. And the large concourse of people who were attracted thither by the day's proceedings, evince that the indifference and apathy with which Agricultural Shows were formerly regarded, have given place to an earnest activity which seems to pervade the whole country; so that the Agricultural Society now ranks foremost amongst our many free institutions. And possessing, as this county does, some of the finest agricultural sections in the Province, the number of gravel roads which now intersect it in all directions, and the easy communication to the seaboard,—together with the many natural advantages for manufacturing purposes—render it one of the most attractive in the Province to the agricultural, commercial, and manufacturing capitalists. Your Board would also draw attention to the immense advantages that would accrue, both in a commercial and in an agricultural view, from a due appreciation and proper working of the Grand River Navigation, destined as it seems by nature to form one connecting link between the heart of this Western country and the European markets. If the Grand River Navigation were made part or a continuation of the Welland Canal, produce shipped at Brantford would be carried in the same bottom direct to the English market,—

and, taking wheat as an example, would effect a saving of at least 6d cy. per bushel,—and, calculating at the rate of 25 bushels on an average per acre, would add 12s 6d cy. to the yearly value of each acre, per annum, under cultivation,—and, from the fact that carriage by water is much cheaper than any other mode of transit, and much more convenient, we doubt not but that it would raise the exports of the County from being the third on the Shipping List in this Province to rank with the first. We have good roads intersecting the County in every direction. The two superior lines of Railway which run through and have their principal depots in this County, and they being at the head of an inland navigation, all contribute in giving a rapid and cheap transport of our products to foreign markets. Thus the farmer is encouraged to prosecute his work with increased assiduity and energy; and we feel assured that the agriculturists of this county will show their determination to raise their standard of farming to that adopted in the best agricultural countries in Europe, and aim at that as far as practicable.

In taking a retrospective view of the past year, it cannot but be a source of extreme gratification to every attentive observer, to see the energy and zeal with which so many public enterprises have been prosecuted. There is no doubt but that the depression in trade recently experienced in this country seriously affected its progress; and now, in the general prosperity which pervades every line of business, the Farmer of course largely participates,—so that agricultural pursuits present an enticing field both for the application of talent and for the investment of capital.

In the Spring of last year the Annual Show of Stallions was held. There were 22 entries, among which were horses which would compete favorably with those shown at the Royal Agricultural Society of England or the Highland Agricultural Society of Scotland; thus affording farmers and others an opportunity of selecting those of the horses shown which might most accord with their views as being desirable for their purposes. The main feature in rearing stock is that the progenitors possess those qualities which are desired to be united in the offspring. "It is a fact," says a writer on the raising of horses, "that whenever large railway enterprises are carried on in a country, the price of horses rises;" so that there is great inducement from the large demand, and prices at present given, for the raising of this species of Farm Stock.

In the month of October the Annual Fall Show was held. There were nearly 1,300 entries of stock and articles, and about £300 offered as premiums. The show of horses was good, both as to variety and quality. The cattle were particularly admired. The classes of Durhams and Devons presented animals of the purest bred stock in the Province. Within the last few years cattle have much improved, and pure breeds are much sought after—the Durhams for their fattening qualities, and the Devons and Ayrshires for dairy purposes; those that yield the greatest returns for the labor and feed expended on them being reckoned the most profitable, not as formerly, when those most desired were those that would undergo the greatest privations.

In the Sheep department the entries were more numerous than in former years, the greater part being stock imported from the old country, chosen for the good qualities of wool and of mutton. The wool was long and of the finest texture, and seemed particularly suited for manufacturing purposes. This class undoubtedly excelled any shown at any previous Show.

Of Agricultural Implements, and indeed in the whole Mechanical Department, the turn-out was very large; and, from the variety of choice, and the good opportunity for comparison, a profitable market resulted to the manufacturers, who seem to take great interest in the Society's Exhibitions.

On the whole, your Board have good grounds for congratulating the members

on the position which the Society has attained, the interest taken by all classes in its exhibitions, and in the steady progress which it has made in the public estimation. The improvement in the breeding and quality of Farm Stock shown this year, proves undeniably, the great benefits arising from the operations of the Society."

TOWNSHIP BRANCHES.

ONONDAGA.—One hundred and fifteen members; amount of subscription, £32; total receipts, £102 19s 3½; total expenditure in premiums at Fair and Ploughing Match, and incidental expenses, £91 19s 9d; balance in hand, £10 19s 6½d.

No other township society reported from in this county.

BRUCE.

COUNTY SOCIETY.—Amount of members' subscription, £45 3s 9½d; balance from 1855, £17 12s 4d; deposited by township branches, £41 15s; Government grant, £135; received for seeds retailed, £2 13s 6d; total receipts £242 4s 7½d; amount paid to township branches, £94 12s; paid for seeds, £10 7s 1d; expenses, £45 18s 0½d; premiums, £57 15s; total expenditure £208 12s 1½d; balance in hand, £33 12s 6d.

The following resolution was adopted at the Annual Meeting:

"*Resolved*—That this Society do recommend the following alteration to be made in the Agricultural Statute, viz: that the Board of Agriculture be composed of one member from each County in Upper Canada."

TOWNSHIP BRANCHES.

Branch Societies exist in Elderslie, Greenock, Culross and Brant; but no reports have been forwarded from them.

CARLETON.

COUNTY SOCIETY.—Forty-six members; amount of subscription, £44; amount deposited by township branches, £96 10s; Government grant, £225; total receipts, £365 10s; paid for *Agriculturist*, £5; crop viewers, £6 15s; paid township branches, £231 10s; paid premiums, expenses, and balance from previous year £123 13s; total expenditure, £366 18s; due Treasurer, £1 8s.

TOWNSHIP BRANCHES.

GLOUCESTER.—Fifty members; subscriptions, £31 5s; Government grant, £43 15s; total receipts, including balance from previous year, £84 11s 9½d. Paid in premiums, £63 1s 11d incidental expenses, £19 15s 1d; balance in hand, £1 14s 9½d.

HUNTLY.—Eleven members; amount of subscription, £13 10; apportionment of public grant, £18 17s 6d; total receipts, £32 7s 6d. Amount paid in premiums, £32 7s 6d.

MARCH.—Twenty-six members; amount of subscriptions, £23 15s; share of public grant, £33 5s; total receipts, £57. Amount paid in premiums, £54; incidental expenses, £3.

NORTH GOWER.—Thirty members; subscription, £15; share of public grant, £21; balance from 1855, £10 0s 2d; total receipts, £46 0s 2d. Amount paid in premiums, £28 3s 9d; expenses, £8; balance in hand, £9 16s 5d.

OSGOODE.—Amount of subscriptions, £20 2s 6d; Government grant, £18 2s 6d; total receipts, £38 5s. Amount paid in prizes, £28 13s 3d; paid judges, £5 5s; other expenses, £3 13s 6d.

RICHMOND & GOULBURN.—This Society was organized in 1857; thirty members; amount of subscription, £10 5s.

DUNDAS.

COUNTY SOCIETY.—One hundred and thirty-six members; amount subscribed, £54 15s 9d; balance from 1855, £20 12s 6d; receipts at show, £17 15s 7½d; Government grant, £135; total receipts, £228 3s 10½d. Paid on account of permanent building and permanently enclosing show ground, £50 5s 7½d. Paid in premiums, £154 13s 10d; general expenses, £26 14s 8d; balance due Treasurer, £3 10s 3d.

TOWNSHIP BRANCHES.

MOUNTAIN.—A Society was organized in this township in January, 1857, thirty-four members signing the declaration and subscribing collectively £13 5s.

WINCHESTER.—This is also a new Society, organized in January, 1857; eighty-two members; subscription £33 7s 6d.

DURHAM.

COUNTY SOCIETY.—Fifty-eight members; subscription, £14 10s; deposited by township branches, £231 15s; Government grant, £135; receipts at Fairs, £35 12s; total receipts, £417 10s 3d; amount paid township branches, £312 15s; premiums at Spring and Fall Fair, £124 6s 6d; expenses £27 10s 3d; total disbursements, £464 11s 9d; due Treasurer, £47 1s 6d.

TOWNSHIP BRANCHES.

CAVAN.—One hundred and seventy-one members; subscription, £42 15s; public grant, £14 15s; total receipts including balance from previous year, £68 19s. Amount paid in premiums, £33 18s 9d; expenses £5 6s 10d; balance in Treasurer's hands, £29 13s 5d.

CLARKE.—One hundred and seventy-four members; subscription, £44 10s; grant from Township Council, £20; share of Government grant, £15; total receipts £81 5s; amount paid in premiums, £38 14s; *Agriculturist* £19 12s 6d; incidental expenses, £11 9s 4d; balance in hand, £11 9s 1½d.

DARLINGTON.—Two hundred and nineteen members; subscription, £75; share of public grant, £26 4s; admission fees at Fall Show, £23 9s 8d; subscriptions for Ploughing Match, £7 11s 3d; total receipts, £132 14s 11d.—Amount paid in premiums, £87 5s; 220 copies *Agriculturist*, £27 10s; total expenditure, including balance due Treasurer from previous year, £136 19s 2d; balance due Treasurer, £4 4s 3d.

HOPE.—One hundred and ninety-two members; subscription, £48 10s; public grant, £13 5s; amount received for seeds retailed, £26 17s 7½d; total receipts, £89 2s 3½d. Amount paid for *Agriculturist*, £27 12s 6d; carrot seed £5 10s 6d; turnip seed, £21 13s 6d; expenses, £4 4s 10d; premiums, £25 8s 3d; balance in Treasurer's hands, £4 12s 8½d.

MANVERS.—Ninety members; subscription, £24 15s; public grant, £7 15s; total receipts, £35 10s 6d. Paid in premiums, £27 10s; expenses, £2 17s; balance in hand, £5 3s 6d.

ELGIN.

COUNTY SOCIETY.—Seventy-five members; subscriptions, £19 15s; balance from previous account, £39 2s 6d; deposited by township branches, £127 15s; received on account of Bull "North Star," £54 15s; grant from County Council, £50; Government grant, £225; received from late Treasurer, £21 18s 6d; total receipts, £538 1s. Amount paid to township branches, £355 4s 5d; premiums and expenses, £85 12s 1½d.

TOWNSHIP BRANCHES.

MALAHIDE.—Ninety-one members; subscription, £23; balance from previous account, £15 0s 1½d; received on account of stock sold, £74 14s 6d; grant from County Council, £9; Government grant, £23; received from County Society, balance due from previous accounts, £74 9s 4½d. Paid on account of purchase and keeping of stock, £93 6s 3½d; premiums and general expenses, £44 17s 4½d; balance in Treasurer's hands, £76 0s 4d.

SOUTHWOLD AND DUNWICH.—One hundred and eighty-seven members; subscription, £54; balance from previous account, £32 12s 10½d; received for use of Stallion owned by Society, £52; apportionment of public grant, £49 5s; total receipts, £187 17s 11½d. Amount paid for stock, and keep and attendance of do., £128 5s 4d; general expenses, £4 9s 7½d; balance in hand, £55 3s.

YARMOUTH.—Fifty-eight members; subscription, £15; Government grant, £13; balance from 1855, £63 3s 1d; receipts from Bull, £4; total receipts, £94 18s 1d. Amount paid for keeping a Bull owned by Society, £9 2s 6d; premiums, £26 16s 3d; general expenses, £2 12s 6d; balance in Treasurer's hands, £56 6s 10d.

There are also branch societies in Aldborough and Bayham, but no reports have been received from them.

ESSEX.

COUNTY SOCIETY.—Seventy-four members; subscription, £19 15s; balance from 1855, £20 18s 5d; deposited by township branches, £79 5s; Government grant, £225; grant from Gosfield and Mersea townships, £12 10s; total receipts, £357 8s 5d. Amount paid township societies, £213 15s 10d; premiums, £96 11s 3d; general expenses, £33 9s 10d; balance in hands of Treasurer, £13 11s 6d.

Extract from Report:

“The Board of Directors have nothing of a novel character to bring before the members at their Annual Meeting. The Society has been prosperous during the past year. The Fair held in the Township of Mersea, as directed at the last general meeting, was remarkably well attended, and a great amount of stock and other productions were exhibited, all tending to show that Agriculture was receiving much greater attention by the County generally, than we had been led to suppose. The only drawback to the Fair was, the difficulty of getting accommodation for those who came from a distance in a country place, and we would recommend the Fairs to be held alternately in villages and townships. We cannot conclude without urging again, as our predecessors have done, the absolute necessity of greater interest being taken in our Annual Meetings.”

TOWNSHIP BRANCHES.

COLCHESTER.—Fifty-nine members; subscription, £15 5s; balance from previous year, £57 14s 6½d; amount received for services of stock, £27 17s 3d; Government grant, £25; total receipts, £125 16s 9½d. Paid for keep and attendance of Bull and Horse owned by Society, £32 10s 7d; balance carried to account of 1857, £93 6s 2½d.

Extract from Report.

The balance now in the hands of Treasurer is to be expended by the Directors of the Society for Agricultural purposes, in any manner that the members of the Society may direct by a vote for that purpose. The only stock now owned by the Society, and kept for the improvement of stock, is one entire Horse and one Durham Bull, both of very superior breed, whose stock, particularly that of the Horse, bids fair to be valuable. The only proceedings of the Directors during the past year, have been the making of arrangements for the care and the keep of the Society's entire Horse, and the Bull. There has been no Fair or Show held by the Society during the past year, consequently no premiums have been paid to any person by the Society, and the Directors are of opinion that the funds of the Township Society can be better applied by the purchase of improved Stock for the use of the Society, than expended in the holding of Township Fairs.

GOSFIELD AND MERSEA.—Sixty-seven members; amount of subscription, £17; balance from 1855, £26 11s 10d; share of Government grant, £23; received for use of Horse and Bull, and on account of Bull and Rams sold, £16 12s 6d; total receipts, £83 4s 4d. Paid for keeping Bull, £2 18s; paid for purchase of eight Leicester Rams, £50; contribution to County Show, £12 10s; expenses, £5 8s 9d; balance in hand, £12 7s 7d.

MAIDEN AND ANDERDON.—One hundred and eleven members; subscription £31 15s; balance from previous account, £31 9s 2d; Government grant, £54; total receipts, £117 4s 2d. Amount paid in premiums, £70 8s 9d; expenses, £15 12s 1d; balance in hand, £31 3s 4d.

ROCHESTER, MAIDSTONE AND TILBURY WEST.—Seventy-seven members; subscription, £19 15s; balance from 1855, £47 3s 5½d; received on account of Stock, £3 18s 9d; public grant, £32 5s 3d; total receipts, £103 2s 5½d.—Amount paid on purchase and keeping of Bulls and Rams, £77 2s 6d; general expenses, £12 5s. 8½d.; Balance in hands of Treasurer, £15 14s. 3d.

FRONTENAC.

COUNTY SOCIETY.—Amount of subscriptions, £57 6s. 3d.; deposited by township societies, £49 10s.; Government grant, £135; total receipts, £241 16s. 3d.; amount paid Treasurer, balance due him from previous account, £38 19s. 10½d.; contribution to Provincial Exhibition held at Kingston 1856, £155; general expenses, £45 18s. 2½d.; balance in hand £1 18s. 2d.

TOWNSHIP BRANCHES.

KINGSTON.—Twenty-two members; amount of subscription £11; this amount deposited with the County Society, was merged in the contribution to the Provincial Exhibition of 1856, and the Society had no further proceedings for the year.

LOUGHBOROUGH.—Amount of subscription, £10; merged in contribution to Provincial Exhibition; no further proceedings.

PITTSBURG.—Forty-three members; subscription £28 10s.; Government grant, £16 4s.; total receipts, £44 14s.; paid County Society for purposes of Provincial Exhibition, £27 4s.; expenses, £5; balance in hand, £12 10s.

STORRINGTON.—Subscription, £10; amount merged in contribution to Provincial Exhibition.

GLENGARY.

COUNTY SOCIETY.—One hundred and six members; subscription, £24 10s.; balance from 1855, £10 2s.; deposited by township branches, £50 12s. 6d.; Government grant, £135; total receipts, £220 4s. 6d.; amount paid township branches, £131 12s. 6d.; premiums, £74 5s.; incidental expenses, £11 10s. 1½d.; balance in Treasurer's hands, £2 16s. 10½d.

TOWNSHIP BRANCHES.

CHARLOTTENBURG AND LANCASTER.—Eighty-one members; amount of subscription, £32 7s. 6d.; balance from 1855, £11 18s. 3½d.; share of public grant, £40 4s.; total receipts, £53 9s. 9½d.; paid for 12 copies *Agriculturist* £1 10s.; premiums at fairs and ploughing match, £81; incidental expenses, £11 5s. 3d.; total expenditure, £93 15s. 3d.; due Treasurer, 5s. 5½d.

LOCHIEL AND KENYON.—Subscriptions, £19 17s. 6d. ; Government grant, £31 16s. No further report.

GREY.

COUNTY SOCIETY.—Amount of subscription, £28 5s. ; balance from 1855, £26 7s. 0½d. ; deposited by township branches, £125 2s. 6d. ; Government grant, £225 ; total receipts, £404 14s. 6½d. ; amount paid township branches, £259 17s. 6d. ; premiums, £99 1s. 3d. ; general expenses, £16 18s. 2d. ; balance in hand, £28 17s. 7½d.

TOWNSHIP BRANCHES.

There are no reports received from the Township Societies in this county, but the following is a list of those in connection, as shown by the balance sheet of the County Society, with the amount deposited by each, and the amount received from the County Society, including return of deposit, and apportionment of public grant :

SOCIETY.	DEPOSITED.	AMOUNT FROM COUNTY SOCIETY.
Artemesia.....	£10 0 0	£20 15 7½
Derby.....	13 0 0	27 1 0
Holland.....	21 15 0	45 4 4½
Mount Forest.....	23 5 0	48 1 3
St. Vincent.....	13 5 0	27 10 9
Sullivan.....	13 0 0	27 1 0
Sydenham.....	30 17 6	64 3 6
	£125 2 6	£259 17 6

HÁLDIMAND.

COUNTY SOCIETY.—Amount of subscription, £10 12s. 6d. ; balance from 1855, £30 18s. 9d. ; Government grant, £225 ; total receipts, exclusive of deposits of Township Societies, £266 11s. 3d. ; amount paid in premiums at Fairs and ploughing match, £129 11s. 3d. ; paid Township Societies, apportionment of public grant, £85 17s. 1d. ; incidental expenses, £42 10s. ; balance in Treasurer's hands, £8 12s. 11d.

TOWNSHIP BRANCHES.

RAINHAM.—This is a new society, formed in January 1857 ; sixty-seven members ; amount of subscriptions, £16 15s.

SENECA, ONEIDA AND NORTH CAYUGA.—One hundred and ninety-nine members ; subscription, £61 5s. ; share of public grant, £46 ; total receipts, £106 5s. ; amount paid in prizes at exhibitions and ploughing match, £97 0s. 6d. ; expenses, £14 3s. 1½d. ; balance due Treasurer, £4 18s. 7½d.

WALPOLE.—One hundred and fifty-seven members ; subscription, £41 ; balance from 1855, £46 5s. 9d. ; share of public grant, £40 ; total receipts, £127

5s. 9d.; amount paid in premiums, £97 10s.; expenses, £17 5s.; balance Treasurer's hands, £12 10s. 9d.

MILTON.

COUNTY SOCIETY.—One hundred and forty-four members; subscription £40 2s. 6d.; deposited by townships, £120; Government grant, £225; gra from County Council, £20; total receipts, £405 2s. 6d; amount paid Treasurer, balance from 1855, £16 2s. 1d.; paid Township branches, £255; premiums, £100 5s; expenses, £57 7s. 1d.; total expenditure, £408 14s. 2d balance due Treasurer, £3 11s. 8s.

Extract from Report.

The directors would recommend that an extra effort be made the coming ye to have the greater part of the subscriptions paid in previous to the Treasurer making his report to the Board of Agriculture on the first day of May. Th this is not usually the case arises in a great measure from the greater interest generally taken by the farmers in the prosperity of the Township Societies, feeling for which every allowance must be made; yet the directors, while they have much pleasure in learning from the reports forwarded to the Secretary from the four townships for the past year, that the Township Societies are well supported and in a very flourishing condition, may sincerely hope that the interests of the County Society will not be forgotten; and of this the directors have no reason to entertain fears, for they can safely say that their Autumn Show, held in Milton on the 28th of October last, equalled, if not surpassed, any previous exhibition ever held in this county. The show of horses of all sorts was indeed superior; the show of horned cattle and sheep, although not so extensive as formerly, was indeed very fine, and the various articles of the mechanical and industrial departments were of that description that good judges who witnessed them, stated that they would cope very favorably with any thing of the kind exhibited at other shows any where in the Province. The directors have much pleasure in stating that this year the deputation and Judges appointed to attend the Provincial Exhibition in Kingston were punctual in their attendance, and lent no feeble assistance in preventing the adoption of a measure introduced at the great meeting in Kingston, having for its object the recommendation to the Legislature to amend, or more correctly speaking, efface the Agriculture Statute by doing away with Township Societies. The Provincial Show for the year being held in the Town of Brantford, from the contiguity of the town to our own county, will afford a greater number of our own people an opportunity of attending. The directors would beg leave to say that they have felt and do feel deeply gratified to Professor Buckland and Wm. McDougall, Esq editor of the *Agriculturist*, for their kindness in favoring us with their presence at our Fall Show, and for the interesting lecture and address and discussion which were favored with in the evening thereof, and the directors are quite of the opinion that in no way could the interests of that honorable occupation in which we as agriculturists and mechanics are all engaged (that of earning our bread by honest industry), be better subserved than by the formation of clubs for the purpose of discussing such subjects as come within the Province of our respective occupations.

TOWNSHIP BRANCHES.

ESQUESING.—One hundred and thirty-six members; amount of subscription £35 10s.; balance from 1855, £13 12s. 11½d.; share of public grant, £29 5s total receipts, £84 8s. 11½d. Amount paid in premiums, £52 17s. 6d.; incidental expenses, £14 1s. 4½d.; balance in hand, £17 10s. 1d.

NASSACAWEYA.—One hundred and sixteen members; amount subscribed, £29 15s. ; share of Government grant, £29 5s. ; balance from 1855, £10 12s. 8d. ; total receipts, £69 12s. 8d. ; amount paid in prizes, £61 13s. 5d. ; balance in Treasurer's hands, £7 19s. 3d.

NELSON.—One hundred and eighteen members; subscription £36 ; balance from previous year, £27 10s. 1d. ; share of public grant, £37 2s. 6d. ; total receipts, £100 12s. 7d. ; amount paid in premiums, £73 8s. 9d. ; expenses, £12 5s. 5d. ; balance in Treasurer's hands, £14 18s. 5d.

Extract from Report.

The Directors of this Society would report that this Township exhibits a great degree of agricultural prosperity and energy. A very marked improvement has taken place of late, not only in the increased products of the soil, but also in the quality of the products and in most kinds of stock, especially in horned cattle and sheep, for which two classes of animals (especially grade cattle) this township, in their opinion, is unequalled in Western Canada. It is the opinion of the directors that the adding of the mechanical and industrial departments to the agricultural, increases the interest of the people generally in the welfare of the Society, and they recommend that the same be adopted the ensuing year.

TRAFALGAR.—One hundred and thirty-six members; amount subscribed, £35 5s. ; share of grant, £39 7s. 6d. ; total receipts, including balance from previous year, £86 2s. 9d. ; amount paid in premiums and general expenses, £70 19s. ; balance in hand, £15 3s. 9d.

HASTINGS.

COUNTY SOCIETY.—Amount of subscription, £29 15s. ; balance from previous year, £17 18s. ; deposited by Township branches, £55 10s. ; Government grant, £225 ; receipts at show, £25 5s. ; total receipts, £356 19s. 10½d. ; amount paid to township branches, £150 10s. ; *Agriculturist*, £12 10s. ; loss on grass seed, £11 12s. 6d. ; premiums, £141 14s. 3d. ; general expenses, £31 17s. 5d. ; total expenditure, £348 4s. 2d. ; balance in hand, £8 15s. 8½d.

Extract from Report.

The directors and officers of this Society feel much encouraged by the visible improvement in the various departments of agriculture throughout the settled part of this county, the exertions that are being made to open up and effect the settlement of the interior or rear parts thereof, and the prospect afforded that its fertile soil, rich beds of iron, marble, &c., are about to receive that attention due to their extent and importance. Each annual exhibition continues to present such tokens of improvement (not only in the character and description of stock, produce, &c., but in every thing in connection with the science of agriculture) as are deemed amply sufficient to sustain the opinion that our Society is keeping pace with the progress of the age in which we live. The gradual increase of members and competitors, as shown by the entries made in the Secretary's book, the large attendance at our Exhibitions, the sobriety and respectability of those meetings of the yeomanry of our county, are regarded as unmistakable evidence demonstrative of the improvement of their moral and social condition, and are truly gratifying. We also observe with delight the co-operation on the part of the ladies of our town and county, not only by their presence at our exhibition,

but also by a spirited and laudable competition in displaying the production of their ingenuity and handiwork, forming a prominent and pleasing feature in the appearance of each exhibition. The prospect of the agriculturist is also brightened by the gradual disappearance of the weevil from our wheat; and the rot in the potato, which for some time past has rendered the cultivation of the plant quite precarious, is also gradually disappearing and the potato is now together with other root crops, more extensively cultivated. In cattle we observe a decided improvement, in consequence of the introduction of some fine specimens of Durham and Ayrshire Bulls a few years since by the Society, which have produced a remarkable change in the appearance of the young stock. Our road and carriage horses will compare favourably with those of any county in the Province. Heavy draught or cart horses are not much esteemed by our farmers. We have some fine specimens of Leicester and Southdown sheep, some of which have been imported direct from England by our spirited farmers. Swine have hitherto received less attention than any other description of stock, hence with very few exceptions, they are generally of an ordinary or inferior character. Nothing can exceed the improvement that has been made in our manufacture of farming implements during the past few years. Domestic manufactures will also compare favourably with those of many older and more favoured counties. We notice with proud satisfaction a marked improvement in the construction and architectural design of the farm buildings erected throughout the county. Our dairy produce our farmers' wives stand unrivalled for their abundant manufacture of excellent butter and cheese. We feel highly pleased with the apparent unanimity that prevails, and the satisfaction evinced by all classes of the community in this county for the aid extended by Government towards the encouragement of agriculture.

TOWNSHIP BRANCHES.

No reports forwarded from township branches. The townships mentioned in the report from the county society, as having societies in connection, with the amount subscribed by each, are the following viz: Huntingdon, £20; Rawdon, £10; Sidney, £15 10s.; Tyendinaga, £10.

HURON.

COUNTY SOCIETY.—One hundred and ten members, amount of subscription £28 17s. 3½d.; amount deposited by township branches, £153 10s.; Government grant, £135; grant from Canada Company for 1855 and '56, £30; proceeds of notes of hand, £77 4s. 3d.; premium wheat sold, £13 19s. 3d.; total receipts, £438 10s. 9½d.; amount paid township branches £227 9s. 1½d.; paid note at bank, £50; paid premiums and general expenses, £192 17s. 9d.; total expenditure, £470 6s. 10½d.; balance due Treasurer, £31 16s. 1d.

TOWNSHIP BRANCHES.

BAYFIELD.—Sixty members; amount of subscription, £15; share of public grant, £7 4s. 6½d.; other receipts, £6; total, £28 4s. 6½d.; amount paid premiums, &c., £21 13s. 9d.

CLINTON.—One hundred and one members; subscription, £31 5s.; balance from 1855, £2; Government grant, £10 17s.; amount received for use of bull £8 12s. 6d.; received for two bulls sold, £51; total receipts, £104 2s.; amount paid for bulls, premiums, and general expenses, £105 6s. 2d.; balance due Treasurer, £1 4s. 2d.

EXETER.—One hundred and two members; subscription, £29; Government grant, £13 19s. 5d.; sundries, 16s. 1d.; total receipts, £43 15s. 6d.; paid in premiums and expenses, £43 4s. 3½d.; balance in hand, 11s. 2½d.

HARPURHEY.—One hundred and forty members; subscription, £35; Government grant, £16 17s.; seed wheat sold, 17s. 6d.; total, £52 14s. 6d.; amount paid in premiums, £37 11s. 3d.; expenses and balance due from previous year, £5 17s. 5d.; balance in Treasurer's hands, £6 10s. 2½d.

HAY.—Seventy-one members; amount of subscription, £19 17s. 6d.; balance from 1855, £7 13s. 2d.; Government grant, £12 1s.; wheat sold, £1 1s. 9d.; total receipts, £40 3s. 5d.; amount paid in premiums, £40 2s. 6d.; expenses, &c., £7 4s. 6d.; balance due Treasurer, £7 3s. 7d.

STANLEY.—Amount of subscription, £29 10s.; Government grant, £13 0s. 2d.; total receipts, £42 10s. 2d.; paid in premiums, £39; expenses, £3 16s. 8d.; balance due Treasurer, 6s. 6d.

KENT.

COUNTY SOCIETY.—Amount of subscription, £18; deposited by township branches, £160 15s.; Government grant, £225; balance received from late Treasurer, £11 4s. 3d.; total receipts, £414 19s. 3d.; paid township branches, £295 14s. 11d.; *Agriculturist*, £10; premiums and expenses, £118 15s. 6d.; total expenditure, £424 10s. 5d.; due Treasurer, £9 11s. 2d. At the annual meeting in February 1857, the following resolutions were adopted in reference to the proposal of alterations in the then existing Agricultural statute:

That the 10 per cent deducted from the County Societies, in support of the Provincial Agricultural Association should be refunded, and a special grant for the Association instead.

That the number of Directors in the County Society should be increased to fifteen, and in the Township Societies to twelve.

That this Society does not desire to see the abolition of the Township Societies, or any further alteration in the present Act.

TOWNSHIP BRANCHES.

HARWICH.—One hundred and sixty members; subscription, £43 5s.; share of public grant, £35 5s.; balance from 1855, £17 10s. 7d.; received for seeds retailed, £16 0s. 5½d.; received for use of horse owned by society, £9 1s. 9d.; total receipts, £121 2s. 9½d.; amount paid for seeds, £15 15s.; paid on account of horse purchased, £37 10s.; paid money borrowed with interest, £39 4s. 9d.; paid in premiums, £22 2s. 6d.; expenses, £5 6s. 3d.; balance in Treasurer's hands, £1 4s.

Extract from Report.

It is the opinion of practical farmers, that an occasional change of grain and seeds from one section of a country to another, is beneficial to their growth and production. To give such grains and seeds, as we generally grow in our township a fair trial on that principle, the directors purchased a quantity of seeds, (some of which were imported) from the Provincial Agricultural Association, such

as Spring Wheat, Oats, Barley, Peas, Vetches, Clover seed, Rape and Turnip seeds. These seeds they sold by auction for cash, confining the sale to subscribers only. The President acted as auctioneer, by permission of the Municipal Council. The grain was sold by the peck, the average price of Oats, Barley, Peas, Wheat, and Vetches, was a dollar each, and almost all the other seeds in the same proportion. This in itself is a strong proof how anxious the farmers are to improve their system of farming. The Directors feel regret in having to admit, that some of the grain did not yield as well as was expected, oats and vetches particularly. None of the oats came up to the weight of the seed that was sown, but it is to be hoped that after it becomes better adapted to the climate, by longer cultivation, it will prove the benefit it was at first anticipated it would; but as for vetches, they consider it is impossible to cultivate them with profit in this section of the Province, as the climate is too dry for their growth. They feel pleased to have it to say that the spring wheat that was grown from the seed they purchased, took the first prize both at our township and county fairs. This variety may yet prove a great benefit to us, as our fall wheat crop was far inferior to any preceding it, being greatly destroyed by the wheat midge, a destroyer to find a remedy against which, they think impossible. They feel pleasure in taking notice of the marked improvement in every thing connected with agriculture in their township. Travel which road you will, you will see the vast improvement in the buildings, and general appearance of the farms. The directors are of opinion that all buildings erected for the protection of stock ought to be exempt from taxation, as it is impossible to improve stock in this rigorous climate without houses to shelter them in; therefore they are of opinion that a great deal of the money expended by the Government, in the improvement of stock, is lost by the present system of taxation. To improve the breed of horses in the township, they deemed it expedient to purchase a superior draught horse for the sum of 500 dollars. He very nearly paid for himself within the last season, and as the purchasing of him was one of the greatest undertakings of the Society since its origin, the directors are highly pleased to be able to say that he has given general satisfaction.

HOWARD.—One hundred and twenty-four members; subscription, £40 5s.; balance from 1855, £75 3s. 9d.; share of public grant, £24 15s. 7½d.; amount borrowed, £62 10s.; donation from Municipality, £10; total receipts, £212 14s. 4½d.; amount paid for horse, £115 12s. 6d.; paid money borrowed, £74 15s.; premiums, £18 5s.; balance in hand, £2 1s. 10½d.

OXFORD.—Forty-five members; amount of subscription, £13 15s.; share of public grant, £10 14s. 1½d.; balance from 1855, £27 15s. 2½d.; total receipts £52 4s. 4d.; amount paid for keeping bull, £3 15s.; paid for purchase of sheep, £37 10s.; premiums, £7 18s. 9d.; balance in hand, £2 13s. 1d.

RALEIGH.—Seventy members; amount of subscription, £25; balance from 1855, £7 9s. 3d.; Government grant, £21; amount received on account of society's horse, £35 9s. 1½d.; received in payment of sundry notes, £39 12s. 4d.; total receipts, £123 10s. 8½d.; amount paid for a Durham bull, £87 10s. various expenses, £21 7s. 1½d.; balance on hand, £19 13s. 7d.

ROMNEY.—Twenty-three members; subscription, £11; balance from 1855 £56 1s. 0½d.; Government grant, £10 3s. 1½d.; total receipts, £77 4s. 2½d. amount paid for *Agriculturist*, £2 15s.; agricultural seeds, £3 15s.; combine

mower and reaper, £34; three horse rakes, £8 18s. 1d.; balance in hand, £27 16s. 1½d. The implements were sold to members by auction, producing £37 12s. 6d.

TILBURY EAST.—Forty-three members; amount subscribed, £15; Government grant, £12 12s.; total receipts, £27 12s.; amount paid Haggart Bros. Brampton, balance due on thrashing machine, £14 15s.; contingencies, £2 17s.; balance in Treasurer's hands, £10.

ZONE.—Amount of subscription, £28 15s.; Government grant, £21; balance from 1855, £15; total receipts, £64 15s.; paid for copies of *Agriculturist*, £3 15s.; premiums, £18 11s. 3d.; balance in hand, £42 8s. 3d.

LAMBTON.

COUNTY SOCIETY.—One hundred and sixty-six members; subscription, £59 5s.; balance from 1855, £191 15s. 0½d.; deposited by township branches, £74 5s.; Government grant, £225; received for seeds sold, £3 17s. 9½d.; grant from Sarnia Township, £100; total receipts, £654 12s. 10d.; amount paid township branches, £160; paid for seeds, £6 17s. 0½d.; Agricultural papers, £25 8s. 7d.; expenditure in purchase of land and building an Agricultural Hall for the permanent use of the Society, £224 7s. 7d.; premiums, £70 2s. 6d.; other incidental expenses, £37 9s. 3½d.; balance in hand, £130 7s. 10d. The Directors report that they had, in accordance with a previous vote of the Society, purchased a piece of land for the sum of £250, and erected fences and an Agricultural Hall upon it at an expense of £196 1s. 4d.; for a portion of which expenditure the Society was still in debt about £200.

Extract from Report.

The past season was in many respects unfavorable to agriculturists. The spring was backward, and the severe frost at the end of August and beginning of September did great injury to corn, potatoes, &c. Besides this, fall wheat in this county almost universally suffered severely from the wheat midge. In some cases the grain was scarcely worth harvesting, in others there was a deficiency of from 30 to 50 per cent. Spring wheat was generally a good crop and but little affected by insects. Oats suffered from drought: but though the show was short the yield was generally pretty good. Early in the season your Board introduced a variety of peas which had not hitherto been cultivated in this vicinity. They have been tried by a great many farmers, but we believe have not given much satisfaction. The common pea however, grown during the past season, is nearly clear of bugs. If in future this should continue to be the case, we can well afford to do without any substitute for it.

TOWNSHIP BRANCHES.

MOORE.—One hundred and seventy members; subscription, £42 15s.; balance from previous year, £11 10s. 4d.; share of public grant, £47 12s. 6d.; total receipts, £101 17s. 10s.; amount paid on bulls and keeping do., £25 5s.; Agricultural papers, £19 14s. 4½d.; premiums, £37 10s.; expenses, £13 15s.; balance in hand, £5 13s. 5½d.

PLYMPTON.—There was a new Society formed in this township in January, 1857; amount of subscription, £10 5s.

SOMBRA.—This is also a new Society, formed in 1857; amount of subscription, £15 5s.

WARWICK.—Amount of subscription, £35 16s. 3d.; Government grant, £38 2s. 6d.; balance from previous year, £7 17s. 3d.; total receipts, £86 16s.; paid for *Agriculturist*, £3 2s. 6d.; premiums, £8 10s.; paid for Bull, Boars and Rams, obtained for use of the Society, £57 17s. 6d.; balance in hand, £3 13s. 8d.

LANARK.

COUNTY SOCIETY.—One hundred and twelve members; amount of subscription £43 15s. 6d.; deposited by townships, £115 3s.; Government grant, £135; total receipts, £293 18s. 6d. Paid balance due Treasurer from 1855, £55 14s. 7d.; agricultural papers, £18 6s. 6d.; premiums, £60 5s.; paid Township Societies, £196 3s.; expenses, £22 1s. 10d.; total expenditure, £318 7s. 11d.; balance due Treasurer, £58 12s. 5d.

Extract from Report.

In an agricultural point of view the past year has not been very prosperous in this County, in consequence of the great deficiency in several of the leading articles of production.

Fall and Spring Wheat were pretty nearly an average crop, and of good quality; but Oats, Peas, Potatoes and Pork, were all very deficient. Oats scarcely yielded half the usual quantity; Peas were almost a total failure; and Potatoes about one-third of an average crop, while in quality they were very inferior indeed.

The deficiency in Oats, Peas and Potatoes, has had a very injurious effect on the quality of the staple article of Pork; these crops being produced largely for the purpose of feeding hogs.

The display of Horses, Sheep, Pigs, and manufactured goods, at the Annual Exhibition in September, was very good; but there was a falling off in the number of horned cattle exhibited.

In the quality of all kinds of live stock, there is a gradual but decided improvement.

The number of Branch Agricultural Societies in the County of Lanark, reduces the Government bounty to each, to a very small sum; and it would be well if the amount could be increased.

The construction of the Brockville and Ottawa Railway through these Counties, has tended very much to increase the price of land, and of all kinds of agricultural produce.

The Directors are still of opinion, that the improvement of the mind will lead to the improvement of the soil, and consequently they have, as usual, expended a considerable sum for agricultural periodicals, to be distributed among the members of the Society.

TOWNSHIP BRANCHES.

LANARK.—Fifty members; subscription, £13 6s. 4d.; deposit and Government grant for 1855, £15 6s. 3d.; grant from County, £2 15s.; proceeds of

clover and garden seeds sold, £18 14s. 7½d.; amount borrowed, £15; received for *Agriculturist* from members, £1 18s. 9d.; received for six Rams sold, £6 4s.; total receipts, £72 18s. 11½d.; amount paid for *Agriculturist*, £4; amount paid for seeds and expenses on do., £22 14s. 5d.; amount deposited with County Society, £14; paid money borrowed, £15; premiums at Ploughing Match, £2 2s. 6d.; paid for two Rams, £5 16s. 6d.; expenses £4 6s. 4½d.; balance in hand, £4 19s. 1d.

PAKENHAM.—Amount of subscription not stated; Government grant, £9 12s. 2½d.; amount paid in premiums for stock, implements and crops, £27 13s. 9½d. No further report.

PERTH.—One hundred and thirty-six members; subscription, £46 15s.; amount received from County Society, deposit and public grant for 1855, £66 17s. 1½d.; total receipts, £113 12s. 1¼d.; paid balance due Treasurer from 1855, £26 12s. 3½d.; paid for 126 copies of the *Agriculturist*, £15 15s.; copies of *Cultivator*, £1 5s.; deposited with County Society, £46 15s.; premiums, £62 5s.; general expenses, £11 19s. 9d.; total expenditure, £154 12s. 0¼d.; balance due Treasurer on 1st January, 1857, £40 19s. 11¼d.

Extract from Report.

The Annual Show took place on the 6th of October last, and your Directors are happy to state the attendance that occasion was good, and the show of animals and produce large, the show of roots especially was more than usually good, showing that the farmers are paying attention to that important branch of culture.

Your Directors would call the attention of the Society to the very meagre show of Labour-saving Machines at the Show; your Directors are of opinion that the introduction of agricultural implements of the most improved kinds, would be of very great benefit to the community, and more especially now that farm labourers have become scarce and extravagant in their demands.

It was decided by your Directors to inspect growing crops, and with this view, a number of prizes were offered, as well as for farms, orchards, fencing and draining. In these classes a large number of persons entered their names as competitors, and the Judges spent nearly a week in visiting the various farms, &c.

This being a new feature in the Society's operations, it was opposed by some members; your Directors believe, however, that on the whole it has worked satisfactorily.

The large number of branch Societies now in the County of Lanark, causes the proportion of Provincial aid to your Society, to be reduced to a very low figure, the amount required for carrying on the operations of the Society being drawn mainly from the members.

SMITH'S FALLS.—Fifty-three members; subscription, £30 15s.; balance from previous year, £8 7s. 8d.; Government grant, £23 14s. 7½d.; total receipts, £62 17s. 3½d.; amount paid for service of Horses and Bulls for Society, £29 3s. 9d.; paid in premiums, £9 12s. 6d.; *Agriculturist*, £3 2s. 6d.; paid money borrowed, £11 0s. 7½d.; expenses, £7 2s.; balance in hand, £2 15s. 11d.

LEEDS AND GRENVILLE.

COUNTY SOCIETY.—One hundred and thirty-eight members; subscription paid, £25 5s.; balance from 1855, £30 0s. 11½d.; deposited by township branches, £145 17s. 6d.; Government grant, £225; total receipts, £426 3s. 5½d.; amount given in aid of the Provincial Exhibition at Kingston, 1856, £75; paid for agricultural papers and books, £6 10s.; paid for live stock purchased for Society, £132 1s. 6d; paid township branches, £235 17s. 6d.; general expenses, £24 19s. 9d.; total expenditure, £474 8s. 9d.; balance due Treasurer, £48 5s. 3½d.

Extract from Report.

In consequence of the contiguity of the Provincial Exhibition held at Kingston in September last, and of the facility of Exhibiting the stock and products of this section of the country there, the Directors deemed it more advisable to contribute the sum of seventy-five pounds to aid the Local Committee at Kingston, and to expend the balance of the money on hand in approved stock, than to appropriate the funds of the Society towards the usual Annual Fair.

A Committee having been appointed with power to purchase such stock as the majority of them should decide upon, bought one yearling (imported) Ram and six Lambs.

The imported Ram and one of the Lambs has been retained by the County Society, and to each of the Township Societies one Lamb has been offered on condition that the party receiving it should give his note for its return, or the payment of eleven pounds currency, in case the Lamb should be lost or injured. The Lambs to be returned on the day of the United Counties' Annual Fair in 1857.

The following Township Societies have availed themselves of the offer, viz.: Gananoque, Elizabethtown and York, Eitley and Edwardsburg.

The remaining Lamb has been left in the care of Mr. John W. Hough, till it shall be otherwise disposed of by the County Society.

The Society has also purchased the Ayrshire Bull which took the first prize at the last Provincial Exhibition.

It is pleasing to know that while the funds of the Society have been thus expended, the attention of private individuals in these Counties has been given to the improvement of stock, and that the first prize at the Provincial Fair for a two year old thorough bred Stallion (one of the highest grades of Stock) was carried off by a member of the County Society.

The Farmers of these Counties made a very creditable display in many classes at the Provincial Exhibition.

The Society's Library is well patronised, and it is hoped will soon be enlarged.

TOWNSHIP BRANCHES.

BASTARD AND CROSBY.—Thirty-eight members; subscription, £53 2s. 6d.; Government grant, £30 17s.; balance from 1855, £1 18s. 9d.; total receipts, £85 18s. 3d.; amount paid in premiums, £81 12s.; expenses, £10 5s.; total £91 17s.; balance due Treasurer, £5 19s. 9d.

EDWARDSBURGH.—Fifty-one members; subscription, £15 2s. 6d.; Government grant, £8 6s. 8d.; total, £23 9s. 2d.; amount paid in prizes, £15; expenses, £4 2s. 6d.; balance in hand, £4 5s. 8d.

ELIZABETHTOWN AND YONGE.—Forty members; subscription, £30 2s. 6d.; Government grant, £18 10s. 7½d.; total, £48 13s. 1½d.; paid balance due from previous year and various expenses, £24 13s. 10½d.; balance remaining in hand, £23 19s. 3d.

GANANOQUE.—Twenty-six members; subscription, £32 10s.; share of public grant, £20 1s. 3d.; balance from 1855, £4 17s. 3d.; total, £57 8s. 6d.; amount paid in premiums, £53 7s. 6d.; incidental expenses, £4 1s.

Extract from Report.

Last year, in consequence of the severe and long continued drought, the crops in this neighbourhood were short. What little Fall Wheat had been sown did well, and it would probably be advisable that our farmers should give more attention to this crop than they have of late years done. For some years past, it has not suffered in this county as in old times from either "weevil" or "rust," and has on the whole been a profitable crop to the few farmers who have raised it. The variety of spring wheat most generally cultivated in this part of the country for the last two years has been what is termed the "Fife" or "Scotch" Wheat. Last year it was rather deficient in *quantity*, but the *quality* of the grain was equal to any of the same kind ever grown. The crop of oats was extremely light, and were it not that we now obtain supplies from Lower Canada by Railway, Oats by this time would have here been almost unobtainable at any price. Barley succeeded well with those who tried it, and as this grain now commands a very high price, it might be well for our farmers to grow it more largely. The Potato crop was very irregular. With some it was excellent; with others it was nearly a total failure.

KITLEY.—Fifty members; subscription, £19 15s.; Government grant, £12 3s. 9d.; total, £31 18s. 9d.; paid in premiums, £30 5s.; expenses, £1 2s. 9d.

LENOX.

COUNTY SOCIETY.—Amount of subscription, £20 5s.; balance from 1855, £3 8s.; deposited by township branch, £15; Government grant, £93 3s.; total receipts, £131 16s.; amount paid to township branch, £56; contributed to funds of the Local Committee for the Provincial Exhibition at Kingston, 1856, £68; expenses, £7 10s. This Society having contributed the funds at its disposal to the Provincial Exhibition, held no Show of its own in the year 1856.

TOWNSHIP BRANCHES.

FREDERICKSBURG.—Seventy-one members; amount of subscription, £17 15s.; balance from 1855, £1 15s. 3d.; share of public grant, £41; total receipts, £60 10s. 3d.; amount paid in premiums, £41 10s.; expenses, £9 0s. 10d.; balance in hand, £9 19s. 5d.

RICHMOND.—This is a new Branch Society, formed in 1857. No further report of proceedings.

LINCOLN.

COUNTY SOCIETY.—One hundred and twenty members; amount of subscription, £33 5s.; deposited by township branches, £183 7s. 6d.; Government

grant, £225; total receipts, £441 12s. 6d.; amount paid township branches, £298 16s. 8d.; paid in premiums, £89 18s. 9d.; expenses, £14 9s.; balance in Treasurer's hands, £28 8s. 1d.

TOWNSHIP BRANCHES.

CAISTOR.—Amount of subscription, £19 5s.; share of public grant, £13 5s. 4d.; total receipts, £32 10s. 4d.; amount paid in premiums, £24 18s. 9d.; expenses, £2 10s. 3d.; balance in hand, £5 1s. 4d.

GAINSBOROUGH.—Fifty-five members; subscription, £14 15s.; share of public grant, £9; amount paid in premiums, £14 3s. 6d. No further report.

GRANTHAM.—Two hundred and twenty-nine members; amount of subscription, £79; balance from 1855, £32 6s. 10½d.; share of Government grant, £46 8s. 6d; total, £157 15s. 4½d.; amount paid in premiums, £104 11s. 3d.; expenses, £9 7s. 9½d.; balance in Treasurer's hands, £43 16s. 4d.

GRIMSBY.—Amount of subscription, £25 3s. 1½d.; balance from 1855, £1 3s.; share of public grant, £15 17s.; total receipts, £42 3s. 1½d.; amount paid in premiums, £33 5s.; expenses, £6 6s. 3d.; balance in hand, £2 11s. 10½d.

LOUTH.—Seventy members; amount of subscription, £22 17s. 6d; balance from 1855, 18s. 1½d.; Government grant, £15 11s. 6d; total receipts, £39 7s. 1½d.; amount paid in premiums, £34 15s.; expenses, £4 5s.; balance in hand, 8s. 1½d.

NIAGARA.—One hundred and two members; subscription, £29 10s; Government grant, £20 5s.; balance from 1855, £10 17s. 4d.; total receipts, £59 12s. 4d.; amount paid in premiums, £53 7s. 6d.; expenses, £8 1s. 8d.; balance due Treasurer, 16s. 10d.

MIDDLESEX.

COUNTY SOCIETY.—Two hundred and ninety-nine members; subscription, £78 5s.; balance from 1855, £39 13s. 5½d.; deposited by township branches, £236 16s. 1½d.; received from the Treasurer of the County of Middlesex in payment of a loan, £433 11s. 3d.; received as rent of property, £50; donation, £3 10s.; Government grant, £225; total receipts, £1066 15s. 10d.; amount paid township branches, £371 16s. 1½d.; paid final accounts connected with the building of the Agricultural Hall, for the use of the Society, £367 1s.; paid in premiums, £169 2s. 6d.; expenses of judges, viewers of field crops, delegates to Provincial Fair, printing and other general expenses, £118 5s. 4½d.; total expenditure, £1027 5s.; balance carried to account of 1857, £39 10s. 10d. This Society owned a valuable piece of land at the town of London, which by an Act of the Legislature was divided between the Counties of Middlesex and Elgin, after the forming of a County Society for each County.

Extract from Report.

The Agricultural Hall is now finished, although not at all to the satisfaction of the Board, either with regard to the want of punctuality in the time when the building ought to have been completed, the extra cost, or the workmanship. It

will still be necessary to supply weights, measures, and a few more trifling articles for the use of the Judges, and means should also be adopted for occasionally heating the upper story of the Hall. In giving over our trust to the new Board we cannot too strongly urge upon them the policy of continuing the prizes offered this last year for the best fields of grain and roots. It would also be desirable that the reports of the Judges should be much more full than those received. We ought to have a statement from every competitor of the expenses attending the working of his field, and the manure used; the Judges ought to comment not only on the particular field competing but on the whole state of the farm, soil, fences, buildings and stock; such a course would soon produce many farms the County might be proud of.

We would also recommend offering to those *who may desire it*, cups, instead of money, for their prizes, many a farmer preferring such a memento of his success, presented by the Society, to ten times its cost in money.

It has been requested by the Board of Agriculture that in anticipation of some alterations being made in the Act by which we are now governed, it would be well for the various County Societies to make any suggestions they might think desirable to be brought under the notice of the Provincial Board.

The experience of our own Society goes to prove that an amendment is required to make the Township Societies work better with the County; and we would recommend that no person can become a member of any Township Society without at the same time joining the County Society. Under our present law every Township Society is represented in the County Board by its President, whether that township has contributed any members to the County Society or not, and many townships are thus represented who do not deserve it. Unless sufficient means are at the command of the County Directors it is impossible to offer premiums worth competing for, but if the Township Societies contributed their share towards the funds we would be placed in a position to do much more good than has been hitherto accomplished.

The tendency of the present system is to estrange the townships from the County Society, but by the alteration proposed our interests would be identical. Ten shillings a year is but a trifling sum for any enterprising farmer to pay in so good a cause, and from which he may derive so large a benefit, one-half to go to his own township, the other half to the County. The subscription to the County Society alone by any one who is not a member of a Township Society should be 10s.; but honorary members might be admitted on paying 5s., which would neither entitle them to compete or vote. We feel convinced that if the above plan were adopted the townships would not suffer in their funds, and the County Society would prosper beyond all precedent, our meetings and shows would be well attended, every member would take an interest in our proceedings, the funds would be ample for liberal premiums, and there would certainly be an unanimity of interests and feelings which we believe is now wanting, not only in Middlesex, but in every other County in the Province.

The Farmer in Canada, is now thoroughly independent; the time is gone by when the want of a market, or the expense of bringing his produce to it kept him poor. Let him turn his attention to any crop, no matter what, he can find a remunerating cash market for it, almost at his door.

The face of the whole country is rapidly changing. He who settled but a few years ago in what he thought was "the back woods" finds himself to-day almost in a village, with every comfort close at hand, and his property worth twenty fold its original cost. It is true, he must labour, be sober, and frugal; but he is certain of his reward, and he may well thank God for placing him in a country having such privileges as we enjoy,—good and cheap schools, good roads, splendid soil, and *freedom* greater than any other nation can boast.

The rapid extension of railroads has led to an over speculation, not only in lands, but in merchandise, and the natural result has been a reaction which has fallen heavily on many classes, but the blow is light to the farmer. It is true the price of wheat is not what it was during the war, but it still brings a capital price, and with the abundant crop of last year there are but a few among you who have not funds for the spring.

We would again earnestly call your attention to the expediency of increasing your "root crops." We find there is no one who has tried the experiment properly, who does not regret that he did not sooner do so.

Every farmer ought also to have enterprise enough to try and obtain new seeds, to improve upon old varieties, and as his wealth increases so ought his enterprise. The raw-boned, long-legged, scraggy stock should give place to Durhams, Leicesters and Yorkshires; comfortable stables and sheds should shelter them, and generous food would soon repay in growth and weight its additional cost. We have such farmers now, but we want more of them before Middlesex can take the lead in the Province.

It is true that each succeeding year has shown an improvement both in the number and quality of stock exhibited, but our success is not at all commensurate with the increasing population and wealth of the neighborhood; this is in a great manner owing to the apathy not only of the farmers themselves, but of the office bearers of the Societies. No one ought to allow himself to be nominated either as a Director, Secretary, or other officer in the Society, unless he intends to devote some attention to it.

TOWNSHIP BRANCHES.

ADELAIDE.—Eighty-four members; subscription, £21 5s.; Government grant, £11 18s. 9d.; sundries, £1 17s. 6d.; total receipts, £35 2s. 5½d.; paid for copies of *Agriculturist* £2 15s.; paid balance for bull, £27; expenses, &c., £5 12s. 5½d.; balance due Treasurer, 6s. 2½d.

DELAWARE.—Sixty-two members; amount of subscription, £14 5s.; balance from 1855, £12 17s. 1½d.; Government grant, £4 14s. 3d.; total receipts, £31 11s. 4½d.; amount paid in premiums, £25 8s. 6d.; expenses, £7 4s. 6d.; balance due Treasurer, £1 1s. 7½d.

NORTH DORCHESTER.—One hundred and four members; subscription, £44 10s.; balance from 1855, £19 1s. 6d.; share of public grant, £24 10s. 5d.; total receipts, £88 1s. 11d.; paid in premiums, £51 10s.; expenses, £8 6s. 10½d.; balance in hand, £18 5s. 0½d.

LOBO.—One hundred and fifteen members; subscription, £29 12s. 6d.; Government grant, £16 7s. 4d.; amount received for a bull sold, £10; total receipts, £55 19s. 10d.; amount paid for keep of bulls and rams owned by Society, £28 11s.; expenses, £2 2s. 2d.; balance in Treasurer's hands, £25 6s. 8d.

LONDON.—One hundred and seventy-two members; subscription, £46 3s. 1½d.; balance in hand from 1855, £8 13s. 11½d.; share of public grant, £26 4s. 9½d.; total receipts, £81 1s. 10½d.; amount paid in premiums, £50 15s.; Agricultural papers, £3; expenses, £9 12s. 6d.; balance in hand, £17 14s. 4½d.

METCALFE.—One hundred and twenty-six members; subscription, £36 12s. 3d.; share of public grant, £15 16s. 4½d.; balance from 1855, £21 17s. 8d.;

received on account of animals sold, £5 1s. 10½d. ; total receipts, £79 15s. 2d. ; amount expended in keep of bulls and other animals owned by Society, and other expenses, £68 13s. 8d. ; balance in hand, £11 1s. 6d.

MOSA.—Fifty-nine members ; amount of subscription, £14 15s. ; balance from 1855, £31 10s. 6½d. ; no portion of the public grant received, the subscription not being deposited till too late ; total receipts, £46 5s. 6½d. ; amount paid in prizes, £17 3s. 9d. ; 25 copies *Agriculturist*, £3 2s. 6d. ; general expenses, £8 9s. ; balance in hand, £17 10s. 3½d.

MISSOURI.—New Society, organized 1857 ; one hundred and five members ; amount of subscription, £26 10s.

WESTMINSTER.—One hundred and thirty members ; amount of subscription, £38 1s. 3d. ; share of public grant, £18 2s. 6d. ; balance from 1855, £4 19s. 7½d. ; total receipts, £61 3s. 4½d. ; amount paid in premiums at shows and ploughing match, £49 18s. ; copies of *Agriculturist*, £3 5s. ; incidental expenses, £7 6s. 10½d. ; balance in hand 13s. 9d.

WILLIAMS.—Amount of subscription, £14 ; share of public grant, £7 14s. 3d. ; total receipts, £21 14s. 3d. ; amount paid in premiums, £15 3s. 8d. ; general expenses, £6 8s. 9d.

NORTHUMBERLAND.

COUNTY SOCIETY.—Eighty-two members ; amount of subscription, £20 10s. ; deposited by township branches, £142 15s. ; Government grant, £135 ; amount of premiums awarded, £62 10s. ; balance remaining in Treasurer's hands in February 1857, £5 17s. 3½d. The report is deficient in statement of receipts and expenditure.

TOWNSHIP BRANCHES.

ALNWICK.—Forty members ; subscription, £10 ; share of grant, £5 10s. 5d. ; fees, receipts from sale of rams, &c , £14 10s. 8½d. ; total receipts £30 1s. 2d. ; paid for Agricultural papers, £4 15s. ; paid in premiums, £13 10s. ; keeping stock and general expenses, £9 10s. 7d. ; balance in hand, £2 5s. 7d.

BRIGHTON.—Ninty-three members ; subscription, £24 5s. ; balance from 1855, £7 15s. 8½d. ; share of grant, £12 2s. 9d. ; received for seeds sold, £21 ; total receipts, £65 3s. 5½d. ; amount paid for seeds, £15 ; premiums, £24 15s. ; expenses, £4 1s. 3d. ; balance in hands of Treasurer, £21 7s. 2½d.

CRAMADE.—Fifty-six members ; subscription, £14 2s. 6d. ; amount paid for seeds, £13 10s. ; paid in premiums, £18 6s. 3d. ; balance remaining in Treasurer's hands, £3 17s. The report is not complete.

HALDIMAND.—Seventy-three members ; subscription, £18 5s. ; share of grant, £3 5s. 7d. ; total receipts, £26 10s. 7d. ; paid in premiums, £28 8s. ; expenses and balance due Treasurer from 1855, £5 16s. 6d. ; total expenditure, £34 4s. 6d. ; balance due Treasurer, £7 13s. 11d.

HAMILTON.—Two hundred and forty-three members. No statement of receipts and expenditure given. The Society holds meetings for the discussion of Agricultural subjects. The Directors think that Societies should be permitted by law to take other Agricultural periodicals besides those published in the Province.

SEYMOUR.—Seventy members; subscription, £19; balance from 1855, 10s. 10d.; share of public grant, £8; total receipts, £27 19s. 10d.; amount paid in premiums, £15 12s. 6d.; copies *Agriculturist*, £8; expenses, £7 5s.; balance in Treasurer's hands, £1 4s. 10d.

NORFOLK.

COUNTY SOCIETY.—One hundred and sixty-nine members; amount of subscription, £44 15s.; balance from 1855, £43 10s. 9d.; deposited by Township Societies, £90 5s.; Government grant, £225; received for licenses on show ground and fees at gates, £40 14s. 3d.; total receipts, £444 5s.; amount paid to township branches, £157 17s. 9d.; premiums at shows and ploughing matches, £170 13s.; Agricultural papers, £2 10s.; general expenses, £29 11s. 11d.; balance in Treasurer's hands, £83 12s. 5d.

Extract from Report of Directors.

It is very gratifying to know that very great improvements have taken place within a few years in agricultural operations within this County; a commendable spirit of enterprise and emulation seems to have taken hold of our Agriculturalists, which shows itself in the introduction of the most approved farm implements, in the neatness and thoroughness of cultivation, in the more careful selection of seeds, and to some extent in the introduction of better farm stock, of horses and sheep especially. These improvements, and this enterprize and emulation, your Board flatter themselves are mainly attributable to the existence of the County and branch Agricultural Societies.

Your Board are of opinion that further improvements must be made before the productive qualities of our soil are fully developed, and they would especially recommend a thorough system of under-drainage, believing that the most gratifying and remunerative results would follow the adoption of that system, upon most if not upon all the farms in this County. The land would be ready for tillage much earlier in the spring, crops would not suffer so much from excess of wet or dry weather (paradoxical as it may seem to some) and especially our winter wheat, the great staple production, would be rendered comparatively secure from winter killing. In view of these and many other advantages, your Board would respectfully urge upon their brother farmers, the immediate adoption of a judicious system of under-drainage.

From the most reliable information within the reach of your Board, they think that they are warranted in stating, that the farm crops for the last season have fallen below the usual average, excepting hay, which was most abundant. Owing to the excessive wet in the early part of the season, and the excessive drought in the latter part, the summer crops, especially Indian corn, have proved an almost entire failure, some localities however have been more favoured than others, instance those farms bordering on Long Point Bay. However, we have no just cause of complaint, since other Counties have suffered infinitely more in these respects than ours; on the contrary, the Agriculturists of Norfolk have many things to encourage them. The greatly augmented prices which

are paid for all farm productions will more than compensate for partial failures; these prices have given an impetus to farm operations, which appears in the great breadth of land devoted to the production of the cereals, especially of wheat, and in the general activity and interest which are apparent among the tillers of the soil.

The natural advantages of this County are very many. The climate is healthy, the water is pure and abundant, the soil is productive, the forests afford the most desirable variety of timber, the numerous creeks afford ample facilities for milling and manufacturing purposes, and Lake Erie affords a natural outlet to our products and manufactures. These advantages are, to a great extent, improved, since in this small County we have 18 flouring mills, and 79 saw mills propelled by water, we have also some 25 steam saw mills. These mills manufacture from 80 to 100,000 barrels of flour, and from 4½ to 5 millions of feet of lumber annually. In addition to these we have iron foundries and woollen factories. The testimony of foreign markets establishes the excellent quality of our productions, and when a sample of wheat grown in this County was put in competition with the whole world, the enterprising grower thereof was awarded the first prize. The plank and gravel roads with which our County is interspersed, afford great facilities for the transport of our productions. Your Board think that they are warranted in saying that the day is not far distant when the great South Western Railway will be in operation, and the inhabitants of Norfolk will be aroused to realize their dreams, by the snorting of the iron horse, the shrill whistle, and the rattle of railway cars. The advantages which will follow the accomplishment of that great enterprize, can hardly be estimated, the facilities which Norfolk will afford for the rapid transportation of all our products and manufactures, will be greatly beneficial to the producers, and place them in a position to fairly compete with those who live nearer the great markets of the country; the value of real estate will be increased from 50 to 100 per cent. and a general impulse will be given to all business transactions.

While your Board would congratulate the Agriculturists of this County upon the auspicious day which has dawned upon them, and the bright future which is in prospect, they would at the same time caution them against being allured by high prices into a system of cultivation which would exhaust the fertility of their soil, and bring upon them disappointment and vexation. A judicious rotation of crops should be kept up, not forgetting that the manure heap is the farmer's sheet anchor.

The officers and directors have great pleasure in acknowledging the grant made to the funds of your Society by the County Council, believing it to be but an earnest of what they may expect from that body for the furtherance of our Agricultural interest, by the establishment of an experimental farm and Agricultural College in this County.

TOWNSHIP BRANCHES.

CHARLOTTEVILLE.—Eighty-eight members; subscription, £23 10s.; balance from 1855, £13 12s. 1d.; share of Government grant, £16 10s.; amount borrowed, £20; total receipts, £73 12s. 1d.; paid for keep of Horse owned by Society, £28 0s. 5d.; paid borrowed money and interest, £20 5s.; premiums and expenses, £17 6s. 3d.; balance in Treasurer's hands, £8 0s. 5d.

WALSINGHAM.—Forty-one members; subscription, £10 5s.; share of Government grant, £8 2s. 6d.; total receipts, £18 7s. 6d.; amount paid on account of horse purchased by Society, £18 5s.; postage, 2s. 6d.

WOODHOUSE.—Balance on hand from 1855, £5 13s. 2d. ; amount of subscription, £16 5s. ; share of grant, £12 3s. 9d ; total receipts, £34 1s. 11d. ; paid for a bull for Society, £12 10s. ; premiums and expenses at Fair and ploughing match, £22 13s. 9d.

Townsend and Windham have also societies in connection, but have forwarded no reports.

ONTARIO.

COUNTY SOCIETY.—One hundred and seventy members ; subscription, £51 5s. ; balance from 1855, £52 16s. 9½d. ; deposited by townships, £206 2s. 6d. ; Government grant, £225 ; receipts at door of Floral Hall, £38 3s. 1½d. ; paid Township Societies, £341 2s. 6d. ; premiums at Fair, £126 11s. 3d. ; ploughing match, £15 7s. 6d. ; expenses, £34 18s. 3d. ; balance in hand, £55 7s. 11d.

At the Annual Meeting of the Society held at Whitby, on February 19th, 1857, the following Resolution was adopted :—

Resolved,—That in the opinion of this meeting it is expedient to amend the existing Agricultural Statute, 16th Vic. Chap. 11, in the following manner, that is to say :

1st—By striking out the words “*published in the Province*” after the word “*periodicals*” in the 26th section.

2nd.—By inserting the words “*having not less than ten members of such Township Society, bona fide members of the County Society,*” after the words “*within the County,*” in the 28th section.

3rd.—By striking out the 36th section and inserting in lieu thereof,—“*That it may be lawful for the Directors of the Society of any Township (or Townships united for the purposes of this Act) to contribute any part of its funds to supplement the funds of the County Society, in the event of the County Exhibition for that year being held in such Township or United Townships.*”

TOWNSHIP BRANCHES.

BROCK.—Seventy-nine members ; amount of subscription, £19 15s. ; share of public grant, £13 15s. 6d. ; total receipts, £33 10s. 6d. ; amount paid in premiums £32 17s. 6d. ; general expenses, £1 18s. 1d. ; due Treasurer, £1 5s. 1d.

PICKERING.—Two hundred and four members ; subscription, £56 2s. 6d. ; balance from 1855, £57 12s. 8d. ; Government grant, £38 15s. 3d. ; receipts at door, Floral Hall, £14 7s. 6d. ; total, £166 17s. 11d. ; amount paid in premiums, £105 17s. 6d. ; expenses, £14 12s. 6d. ; balance on hand, £46 7s. 11d.

REACH AND SCUGOG.—One hundred and seventy-two members ; subscription £43 ; balance from 1855, £11 7s. 11d. ; Government grant, £30 7s. 6d. ; entries, £3 19s. 4½d. ; total receipts, £88 14s. 9½d. ; amount paid in premiums at shows and ploughing match, £33 3s. 9d. ; expenses, &c., £7 1s. ; due Treasurer, £6 9s. 11½d.

UXBRIDGE.—Fifty members; subscription, £14 13s. 9d.; balance from 1855, £7 18s. 4d.; Government grant, £8 16s. 6d.; total receipts, £31 8s. 7d.; amount paid in premiums, &c., £27 11s; balance in hand, £3 17s. 7d.

WHITBY.—Two hundred and forty-six members; subscriptions, £65 10s.; balance from 1855, £14 11s. 6d.; Government grant, £43 5s. 3d.; total receipts, £123 6s. 9d.; amount paid in premiums, £87 7s. 6d.; expenses, £9 5s. 2½d.

OXFORD.

COUNTY SOCIETY.—Two hundred and ninety-six members; subscription, £87; balance from 1855, £34 8s. 6d.; deposited by township branches, £223 15s.; Government grant, £225; received on account of Bulls, £30; grass, £11 15s.; received for service of stallion owned by Society, £13 5s.; total receipts, £747 3s. 6d.; paid for *Agriculturist*, £13 15s.; paid townships, £358 15s.; note of hand, £35 12s. 6d.; keep and attendance of horse, £66 10s. 9d.; premiums, £105 12s. 6d.; expenses and sundries, £48 6s. 5½d.; balance in Treasurer's hands, £118 11s. 3½d.

Extract from Report.

The Directors of this Society are happy to be enabled to congratulate its members upon the complete and signal success of the last Exhibition held at Woodstock on the 9th October. The weather, being unusually favorable, brought a large concourse of visitors from different parts of the County, and never on any previous occasion has the competition in the leading departments of Agricultural and Mechanical enterprise been so extensive and spirited.

The Directors take this opportunity of recording publicly their thanks to the Judges, particularly to those from a distance, for the valuable services rendered by them, and they would respectfully suggest to their successors in office, to continue the excellent principle of obtaining the judges from the adjoining Counties.

The Directors have to report that they have paid off the whole of the debt incurred for the purchase of the "Suffolk Punch."

Each succeeding year the Society's horse has risen more and more in the estimation of the leading Farmers of this District; and that their high opinion of his valuable qualities has been correct, there is the substantial evidence that a gentleman residing in the neighborhood of Guelph (where he was formerly kept, and where his stock have attained maturity) has recently proffered for him £400 cash; but the members of this Society have shown a wise discretion in unanimously agreeing to keep him for another year.

The Directors embrace this opportunity of rendering a public acknowledgment to the Municipal Council of this County for the handsome contribution they have voted to the funds of the Provincial Association, towards the next Exhibition, to be held in September, at Brantford. There is great cause for thankfulness to the Merciful Ruler of the Universe, that whatever anxieties may have prevailed during the past year on account of the severe drought which set in, there is, notwithstanding, abundance for man and for the domesticated animals on the farm, while very high and remunerative prices continue to be obtained for every description of surplus produce. Our Farmers are now becoming wealthy. They possess the means of adopting better systems of husbandry, and

of introducing every kind of valuable stock, and a very few years more will doubtless bring about a wonderful improvement in the Agriculture of our country.

Our Agricultural Societies have already done much to stimulate a spirit of public enterprize, but they have still a vast and important work to accomplish. The idea is gaining ground that those annual Exhibitions, while they give due prominence to all our improvements in Agriculture, should embrace every branch of industry, namely: all new mechanical inventions, every description of manufactures, and it would be advantageous to extend the ladies' department, and thus render the exhibition attractive to our whole population.

Those annual gatherings should be regarded as great festive occasions, upon which all are assembled, young and old, to witness the results of human skill and industry. They should be looked upon as land-marks to record the steady progress of the country; and it is hoped that each succeeding Exhibition will be found to surpass all former ones—not only as regards the excellence of the productions competing, but also as to the concourse of visitors enlivening the scene by their presence.

TOWNSHIP BRANCHES.

BLENHHEIM.—Two hundred and twenty-eight members; amount of subscription, £57 2s. 6d.; apportionment of public grant, £22 1s. 6d.; balance from 1855, £36 1s. 5½d.; total receipts, £115 5s. 5½d.; paid in premiums, £58 6s. 3d.; expenses, £15 11s. 11d.; balance in Treasurer's hands, £41 7s. 3½d.

DEREHAM.—Fifty-two members; subscription, £28 17s. 6d.; balance from 1855, £13 19s. 10½d.; Government grant, £14 9s. 7½d.; received for Ram sold, £2 6s. 3d.; received in payment of money loaned, £13 14s. 3d.; total receipts, £73 7s. 6½d.; amount of money lent, £12 10s.; premiums at shows and ploughing match, £39 3s. 9d.; expenses, &c., £11 14s. 4½d.; balance in hand £9 19s. 6d.

INGERSOLL.—Eighty-eight members; subscription, £36 7s. 6d.; Government grant, £39 8s. 10½d.; received on account of stock sold, £90 16s.; sundries, £29 5s.; total receipts, £225 17s. 4½d.; amount paid in premiums, £35 11s.; keep of stock, £114 0s. 10d.; expenses, £29 5s. 7½d.; balance in Treasurer's hands, £47 0s. 2d.

EAST MISSOURI.—A new Society, formed in February, 1857. Fifty-four members; subscription, £26 10s.

NORWICH.—One hundred and fourteen members; subscription, £54 0s. 10d.; Government grant, £17 15s. 11½d.; balance from 1855, £2 5s. 9½d.; total receipts, £74 2s. 7d.; amount paid in premiums, £36 1s. 3d.; paid for three Rams, with expenses on the same, £24 12s. 6½d.; general expenses and sundries, £12 5s.; balance in hand, £1 3s. 6d.

EAST OXFORD.—Eighty-one members; amount of subscription, £27 12s. 6d.; balance from 1855, £14 17s. 5d.; Government grant, £15 3s. 2d.; total receipts, £57 13s. 1d.; paid for copies *Agriculturist*, £7 5s.; prizes, £23; general expenses, £6 10s.; balance in hand, £20 18s. 1d.

EAST ZORRA.—Seventy-one members; subscription, £23 5s.; Government grant, £12 4s. 4½d.; received on account of rams sold, &c., £12 8s. 9d.; received in payment of a note due Society, £100; total receipts, £147 18s. 1½d.; paid for copies of *Agriculturist*, £6 5s.; paid to Montreal Bank, £100 17s.; premiums, £20 12s. 6d.; expenses, £7 15s. 7½d.; balance in hand, £12 8s. The Directors report this Society in a prosperous condition, and the imp cultivation and farm stock in the township, in consequence of the influence of the Society, very marked.

WEST ZORRA.—One hundred and six members; subscription, £27 19s. 3d.; share of Government grant, £13 11s. 6d.; amount paid in premiums, £39 16s. 3d.

PEEL.

COUNTY SOCIETY.—One hundred and twenty-seven members; subscription, £42 10s.; deposited by townships, £138 7s. 6d.; Legislative grant, £135; sundries, £4 10s.; total receipts, £320 7s. 6d.; amount paid Township Societies, £219 7s. 6d.; paid in premiums, £75 12s. 6d.; copies *Agriculturist*, £5 5s.; general expenses and sundries, £19 15s. 8d.; balance due Treasurer, 13s. 2d.

TOWNSHIP BRANCHES.

ALBION.—Sixty-five members; subscription and entries, £21; Government grant, £12 11s. 8d.; balance from 1855, £4 19s. 2d.; total receipts, £38 10s. 10d.; paid in premiums, £32; expenses, £2 9s. 11d.; balance in hand, £4 0s. 11d.

CALEDON.—Fifty-five members; subscription, £25 10s.; Government grant, £14 18s. 6d.; total receipts, £40 8s. 6d.; amount paid in premiums, £23 10s.; expenses, £8 10s. 7d.; balance in hand, £8 7s. 11d.

CHINGUACOUSY.—One hundred and three members; subscription, £23 17s. 6d.; Government grant, £14 12s. 6d.; total receipts, £43 10s. 6d.; amount paid in premiums, £44 5s.; expenses, £3; due Treasurer, £3 15s. 6d.

TORONTO TOWNSHIP.—One hundred and forty-nine members; amount of subscriptions paid, £54 15s.; Government grant, £12 17s. 7d.; total receipts, £67 12s. 7d.; amount paid in premiums, £56 2s. 6d.; expenses, £6 7s. 7d.; balance in hand, £5 2s. 6d.

TORONTO GORE.—One hundred and thirty-eight members; subscription, £54 5s.; balance from 1855, £7 10s. 3d.; Government grant, £25 19s. 6d.; total receipts, £87 14s. 9d.; amount paid in premiums and expenses, £78 14s. 7d.; balance in Treasurer's hands, £9 0s. 2d.

PERTH.

COUNTY SOCIETY.—One hundred and fifty members; amount of subscription, £52 10s.; deposited by townships, £100; grants from Municipalities, £35; from Canada Company, £10; received for seed wheat sold, £5 12s. 6d.; Government grant, £225; total receipts, £428 2s. 6d.; amount paid Treasurer balance due him from 1855, £61 0s. 8d.; copies of *Agriculturist*, £12 7s. 6d.; paid town-

ship branches, £229; do. portion of County Council grant, £14 8s. 4d.; paid in part for purchase and keep of bull, £5 15s.; premiums, £64 15s. 8d.; expenses and sundries, £41 3s.; balance due Treasurer, 7s.

TOWNSHIP BRANCHES.

BLANCHARD.—One hundred and sixty-six members; subscriptions paid, £41 10s.; grant from Municipalities, £8; Government grant, £64 10s.; received on account of bull sold, £51; total receipts, £165 0s. 7½d.; amount paid in premiums, £63 7s. 9d.; copies *Agriculturist*, £15; keep of bull, £10; expenses and sundries, £31 19s. 4d.; balance in Treasurer's hands, £45 1s. 3½d.

FULLARTON, LOGAN AND HIBBERT.—One hundred and one members; subscription, £50 5s.; balance from 1855, £41 17s. 10d.; Government grant, £64 10s.; total receipts, £156 13s. 10d.; paid money and interest borrowed to purchase wheat, £39 16s. 8d.; paid for keeping Bull, £17 10s.; premiums, £45 5s. 3d.; *Agriculturist*, £10; expenses and sundries, £36 6s. 11d.; balance in Treasurer's hands, £7 4s.

PETERBOROUGH.

COUNTY SOCIETY.—One hundred and ten members; subscription, £30 6s. 3d.; deposited by townships, £95 15s. 7d.; proceeds of note discounted, £163 5s. 3d.; Government grant, £135; received for seeds sold, £163 15s.; for plaster, £17 14s.; total receipts, £605 16s. 1d.; amount paid for Clover seed, £150; *Agriculturist*, £24 10s.; paid note, £165; paid townships, £163 5s. 7d.; premiums, £38 17s. 6d.; expenses and sundries, £16 18s. 4d.; balance on hand in cash and seeds, £47 4s. 8d.

Extract from Report.

The Directors have deviated but little from the course pursued by their predecessors. Whether this was expedient or not is for others to judge. They are aware of modes of procedure which might be adopted to advantage, and tend to increase the prosperity of the Society. The Board have discussed the propriety of making some alterations, and adopting some course that will give a new impetus to the proceedings and add increased and more extended interest in the operations of the Society, and would recommend the further consideration to their successors.

Your Board, as usual, purchased quantities of Clover seed, Turnip seed, Mangel Wurzel and Carrot seed, of which there is some on hand. Considering the trouble and loss attendant upon the purchase and sale of plaster in past years, together with the present facilities of obtaining large or small quantities independent of the Society, it was deemed advisable to deviate from the course formerly pursued, and therefore we procured none this year.

Samples of Golden Drop spring wheat and April spring wheat were obtained and given to parties for trial. The results of these experiments have not been very satisfactory in the case of the April wheat, but the report of the Golden Drop is more favorable, and the experiment of this year gives encouragement to try more fully another season.

It has been frequent matter of regret that this County could not raise sufficient Clover seed to supply itself; in fact in very few instances has Clover seed been raised for sale. The principal reason alleged for this has been the want of a clover machine to clean the seed, and make it fit for market. From this cir-

cumstance your Board thought it advisable to purchase a Clover Mill, and thus obviate this difficulty, so frequently urged. Your Board purchased the mill, to be given to members for use at a certain rate per day, and subject to certain regulations. The main object was to get a machine of this description in the neighborhood, and when the raising of Clover seed becomes more general, some party or parties in the habit of travelling with thrashing machines, may purchase and use them in conjunction with other machinery, and thus the end desired will be gained. Your Board cannot report much Clover seed being raised this year, but this may in a great measure arise from the past season being unfavorable to its growth. They hope that other seasons may be more congenial, and that the introduction of this machine will be of much use.

Your Board thought it wise to have but one Show during the year, and omitted the Spring Show, looking upon the good to be accomplished by it as rather questionable. The principal object in the Spring Show, being the Exhibition of Horses, and for several years no new competition appearing, the propriety of giving the same premiums to the same animals was doubted, particularly as a large number of members were much dissatisfied with the animals, considering them a class of Horses lacking in points necessary to breeders in this County.

The Fall Show was well attended, and the articles for competition very creditable to the county. Your Board may be allowed to suggest the propriety of enlarging the list of premiums, and making it more general by including Ladies' work, mechanics' work, horticulture, &c. By this means it is supposed a large number of subscribers might be obtained, which would add to the funds, and also give a greater interest in the operations of the Society. This addition to the premium list would make a much finer exhibition, and thus in some measure vie with other Counties. By a little exertion your Board feel confident that the County of Peterboro would fall short of but few Counties in the arts, products and manufactures.

The increasing interest taken in the growth of roots is exceedingly gratifying, being an indication of an improving system of farming. From the report of the judges, it appears that with but few exceptions the lots for competition were very fine, and shewed great attention in the management and culture of this crop. In fact it has been stated that the County of Peterboro, for the same extent of land and length of time it has been under cultivation, can compete favourably with any County in the Province in the growth of root crops.

Your Board regret to report the want of interest in the competition for plowing, there being but five plowmen in the field, four men and one boy. The importance of good plowing in agricultural sections renders it desirable that great attention be paid to this department of the Society's operations. If any change could be effected to increase the interest in this department much good might be the result, as all know that successful farming depends upon proper tilth. There is, however, great improvement in the workmanship of the plowmen in this County within these few years past, and this, to a considerable extent, has been the result of the operations of your Society.

Fifty copies of the Canadian *Agriculturist* have been subscribed for by this Society, and given to members upon the payment of 1s. 3d. in addition to their annual subscription. The circulation of this useful Journal must have a very beneficial influence upon the farmers of this County, and every effort should be made to increase its circulation.

TOWNSHIP BRANCHES.

ASPHODEL AND BELMONT.—Sixty members; amount of subscription, £15 11s. 3d.; balance from 1855, £34 10s. 7½d.; Government grant, £8 11s. 3d.; received for clover seed, £9 19s. 3d.; total receipts, £68 12s. 4½d.; amount

paid for clover seed and expenses on same, £20 10s.; premiums, £33 3s. 9d.; balance in hand, £14 18s. 7½d.

DUMMER AND DOURO.—One hundred and forty members; subscription, £42; balance from 1855, £61 12s. 3d.; Government grant, £27 6s. 3d.; received for 109 barrels plaster, £43 12s.; total receipts, £174 10s. 6d.; amount paid for *Agriculturist*, £3 2s. 6d.; 300 barrels plaster, £120; 25 bushels clover seed, £32 10s.; premiums, £22 5s.; expenses, £9 16s. 9d.; total disbursements, £217 14s. 3d.; balance due Treasurer, £43 3s. 9d.

OTONABEE.—Amount of subscription, £21 5s.; received for plaster sold, £48 12s. 9d.; clover seed, £92 10s. 4d.; turnip seed, £5 3s. 2½d.; share of public grant, £14; total receipts, £181 11s. 4½d.; paid for Plaster of Paris, £48 15s.; clover seed, £9 10s. 6d.; turnip seed, £13 17s. 6d.; Chinese Potato, £1; copies of *Agriculturist*, £5; premiums, £20 15s.; expenses, £17 0s. 6d.; total disbursement, £197 16s. 6d.; balance due Treasurer, £16 5s. 2½d.

Extract from Report.

The Society last Summer, imported seeds of the Chinese Potato, and planted them in a dry, rich, sandy loam, in the first week in June, and it is likely they would have done better if planted earlier. They grew much better than was expected, from the shrivelled state of the sets when imported. Part of them were left in the ground this winter, and those which were taken up had penetrated to the subsoil, a sharp sand, about 20 inches from the surface, with the thick end downwards, like an inverted parsnip, which they very much resemble, about 2 inches in thickness at the butt end.

The Secretary planted a few seeds of the Bokhara clover, late in June, 1855, to try if it would bear the winter, and was gratified to find it hardy last Spring, and to see it grow to the height of over 9 feet; he thinks it would answer to cut green for cattle in summer.

SMITH, HARVEY AND ENNISMORE.—One hundred and ten members; subscription, £28 15s.; Government grant, £17 5s. 6d.; received for plaster sold, £115 2s. 2½d.; clover seed, £91 5s. 5d.; turnip seed, £4 13s. 8d.; received on promissory notes, £149 4s. 7d.; total receipts, £406 6s. 4½d.; amount paid for plaster, £109 7s. 6d.; turnip seed, £19 10s.; premiums, £18 7s. 6d.; clover seed, £89 6s. 10½d.; expenses, £7 14s. 0½d.; value of plaster and seeds remaining on hand, £157 6s. 2½d.; cash balance in hands, £4 14s. 3d.

PRESCOTT.

COUNTY SOCIETY.—Fifty members; subscription, £12 10s.; deposited by Branch Societies, £50; Government grant, £135; total receipts, £197 10s.; amount paid in premiums, £59 15s.; branch Societies, £131; expenses, £14 15s.; balance due Treasurer, £8 0s. 10d.

TOWNSHIP BRANCHES.

CALEDONIA.—Fourteen members; subscription, £10 10s.; Government grant, £16 4s.; total receipts, £26 14s.; amount paid in premiums, £24 5s.; expenses, £3; balance due Treasurer, 11s.

EAST AND WEST HARKESBURY.—Thirty members; subscription, £31; Government grant, £32 8s.; balance from 1855, 3s.; total receipts, £63 11s.; amount paid County Society, £6 5s.; paid in premiums, £48; expenses, £9; balance in hand, 6s.

LONGUEUIL.—Fourteen members; subscription, £10 10s.; Government grant, £16 4s.; total receipts, £26 14s.; amount paid in premiums, £21 15s.; expenses, £4 15s.; balance in Treasurer's hands, 4s.

NORTH PLANTAGENET.—Twenty members; subscription, £10; balance from 1855, £1 9s.; Government grant, £16 4s.; total receipts, £27 13s.; amount paid in premiums, £23 6s. 3d.; expenses, £4 5s.; balance in hand, 1s. 9d. The Societies in the County of Prescott all give a considerable portion of their premiums for growing crops, examined in the field.

PRINCE EDWARD.

COUNTY SOCIETY.—Amount of subscriptions and fees, £36; balance from 1855, £1 7s. 3d.; deposited by townships, £92 10s.; Government appropriation, £225; total receipts, £354 17s. 3d.; amount paid township branches, £227 4s. 8d.; premiums, £50 13s. 1½d.; paid on account of Agricultural Hall and other expenses, £48 15s. 6½d.; balance in Treasurer's hands, £28 4s.

TOWNSHIP BRANCHES.

AMELIASBURGH.—One hundred members; subscription, £25; Government grant, £36 17s. 9d.; total receipts £61 17s. 9d.; amount paid in premiums, £57 17s. 4½d.; expenses, £2 16s. 6d.; balance in Treasurer's hands, £1 3s. 10½d.

ATHOL.—Forty-one members; subscription, £10 5s.; share of Government grant, £14 18s. 1½d.; total receipts, £25 3s. 1½d.; amount paid in premiums and expenses, £24 19s. 11½d.

HALLOWELL.—Eighty-eight members; subscription, £22; balance from 1855, £16 18s. 8d.; public grant, £32 0s. 6d.; received for a mowing machine sold, £17 10s.; total receipts, £188 9s. 2d.; paid for copies *Agriculturist*, £2 10s.; mowing machine, £17 10s.; premiums, £41 15s. 7½d.; paid for Clover seed and plaster, £17 15s.; expenses, £3 16s. 3d.; balance in hand, £5 2s. 3½d.

HILLIER.—New Society; organized in March, 1857; subscription, £12 10s.

MARYSBURGH.—Amount of subscription, £20; Government grant, £29 2s. 3d.; total receipts, £49 2s. 3d.; paid for Clover seed, £23 8s.; appropriated for purchase of stock, £24 12s.; expenses, £1 2s. 3d.

SOPHIASBURGH.—Amount of subscriptions, £17 5s.; Government grant, £21 15s. 8d.; total receipts, £39 0s. 8d.; amount paid in premiums, £33 2s. 6d.; expenses, £5 16s. 2d.; balance, 2s.

RENFREW.

COUNTY SOCIETY.—One hundred members; subscription, £43 5s.; balance from 1855, £105 5s. 4½d.; deposited by township branch, £11 15s.; Govern-

ment grant, £135; received on sale of stumping machine, £22 10s.; received for Clover seed and seed wheat sold, £16 9s. 1½d; total receipts, £334 4s. 6d.; amount paid for seed wheat, £6 18s. 3d.; paid Township branches for 1855 and 1856, £72 1s. 2d.; paid in premiums, £144 10s. 3d.; expenses and sundries, £61 16s. 5d.; balance in hand, £48 9s. 5d.

Extract from Report.

In the month of July the crops were inspected by the Judges, who reported favorably. The want of rain was much against spring crops and vegetables. The general average of crops stood as follows: fall wheat over an average crop; spring wheat fully one-third under do.; oats the same; peas, average crop; potatoes half average, and hay four-fifths do. They reported an evident desire among the farmers to excel, and that better systems of agriculture are adopted.

The Annual Exhibition of Live Stock, Implements, and Manufactures was held at the Village of Renfrew, in the month of October, and in all the departments reflected great credit on the farmers and mechanics of the county. The entries made, articles exhibited, and the number of people assembled, doubled those of 1856. Number of entries 620.

McNAB TOWNSHIP BRANCH.—Twenty-eight members; subscription, £11 15s.; balance from 1855, £25 14s. 9d; received from County Society, deposit and apportionment of Government grant for 1855, £41 5s. 6d.; total receipts, £78 15s. 3½d.; amount deposited by County Society for 1856, £11 15s.; paid in premiums, £30 10s.; Agricultural papers and incidental expenses, £8 18s. 6½d.; balance in Treasurer's hands, £27 11s. 9d.

Extract from Report.

The Directors feel, that with regard to the agricultural, manufacturing, and commercial position of the Township of McNab, a glance at the map of the Province will convince the most sceptical of its eligible situation. Bordering on the Ottawa, the most direct line of water communication from the Atlantic to the Georgian Bay, and thence to the far west, the immense water power of the Madawaska, at the rising village of Arnprior, and the iron ore in its vicinity, all indicate a bright future for this part of the country.

There is much perseverance manifested in the first step towards improvement, the removal of those great impediments to thorough tillage—stumps and stones. After these obstacles are removed, the farmer is in a position to adopt the other improvements of the day, such as deep and thorough ploughing, high manuring, draining, judicious rotation of crops, &c.

The Directors believe shallow ploughing, so largely adopted, to be attended with no beneficial results, but the contrary. The farmer often receives a poor return for his labor. To loosen the soil, is the great object of ploughing. The more compact land becomes, the fewer spaces will there be between the particles of soil, consequently the less space allowed to the gaseous food of plants; hence the necessity of thorough ploughing. Another department in tillage to which farmers should give heed, is the frequent stirring of the soil, when practicable, especially in dry weather. This is the best irrigation the farmer can employ to such crops as are suited to this mode of tillage. The loosening of the soil enables it to retain much longer the moisture from dew and rain for the use of plants.

That these operations may be fully successful, the superabundant moisture in the land must be removed. Draining most effectually accomplishes this object;

by draining, land is fit for cultivation much earlier in the spring, the surplus water passing through the drains instead of being carried off by evaporation. Not only so, but evaporation abstracts heat from the soil. We know this from the fact that water in becoming steam requires a great amount of heat. In the evaporation of the water lying on the soil, heat is abstracted from the land on which it lies, and the surrounding atmosphere; the temperature of the soil is thereby lowered, which retards the growth of the plants. Further, the soil is made up of distinct particles, the spaces thus formed in wet land are filled with water instead of those gases which contribute to the nourishment of the plants.

The directors regret to remark, that many of our farmers crop their land successively, until its natural productiveness is comparatively exhausted, and therefore requires the application of fertilizing substances to insure a remunerative crop. Barn-yard dung and litter, containing all the substances found in plants, is the most available and best manure. The necessity of increasing its quantity, must be obvious to every one, therefore every farmer should have as great an amount of stock, as he can profitably keep in good condition.

The Directors respectfully suggest the propriety of sowing a greater breadth of root crops, such as turnips, mangel wurzel, carrots, &c., for the feeding of stock, a branch of husbandry becoming yearly of more importance in this section of the country.

RUSSELL.

COUNTY SOCIETY.—Fifty-two members; subscription, £53; balance from 1855, £14 19s. 6d.; Government grant, £135; total receipts, £202 19s. 6d.; amount paid inspectors of crops, £14 5s.; paid for Agricultural papers, £3; premiums, £156 2s. 6d.; expenses, £10 17s. 6d.; balance in Treasurer's hands, £18 4s. 6d. There are no Township Societies reported.

Extract from Report.

The Directors in bringing before the Society their annual statement of proceedings, are glad on referring to the Inspectors' Report, to find it stated that the progress of improvement in the agriculture of the County is satisfactory, and that further efforts have been made to improve the live stock in different localities.

With the exception of some thrashing mills, little progress has been made in adding to the improved implements of husbandry, the limited extent to which the stumps have been removed from clearances, not admitting of the use of mowing and reaping machines.

The Inspectors report a great deficiency in the Corn crop, partly owing to the unfavorable spring, and in part to the early frost. The oat crop has likewise suffered from these causes in several localities. Other crops will prove an average, and it is hoped that the present high prices in agricultural produce and stock will stimulate the farmers to renewed exertions.

SIMCOE.

COUNTY SOCIETY.—Sixty members; subscription, £30; deposited by townships, £203 5s.; cash from Bank, £59; received for clover seed sold, £58 14s.; Government grant, £225; amount received as interest on money invested, £13 13s. 1d.; sundries, £2 0s. 6d.; total receipts, £591 12s. 7d.; amount paid Treasurer, balance due from 1855, £56 9s. 2d.; paid for clover seed, £29 15s. 10d.; paid Bank, £60; township branches, £238 5s.; *Agriculturist*, £9 7s. 6d.; premiums and incidental expenses, £124 12s. 10d.; total disbursements, £618 10s. 4d.; balance due Treasurer, £26 17s. 9d.

TOWNSHIP BRANCHES.

ESSA.—One hundred and fifteen members; amount of subscription, £40 13s. 1d.; balance from 1855, £31 8s. 6d.; total receipts, £72 1s. 7d. No portion of Government grant received, owing to failure in depositing at proper date. Amount paid in premiums, £38 12s. 6d.; expenses, £10 6s. 5d.; balance in Treasurer's hands, £23 2s. 8d.

WEST GWILLIMBURY.—Amount deposited with County Society, £37 10s. The Society having failed in making this deposit till after the first day of May, did not receive any portion of the public grant, which it had participated in regularly for 12 years, and in consequence it resolved to dissolve and re-organize, which was done at the Annual Meeting in January, 1857. No report of proceedings during the year furnished.

INNISFIL.—One hundred and forty-one members; amount of subscriptions and entries, £46 5s.; Government grant, £40 15s. 6d.; balance from 1855, £19 6s. 6d.; total receipts, £106 7s.; amount paid in premiums, £70 5s.; expenses, £6 15s.; balance in hand, £29 7s.

MULMUR.—Twenty-seven members; subscription, £11; Government grant, £12 1s. 3d.; total receipts, £25 1s. 3d.; amount paid in prizes, £18 11s. 3d.; expenses, 4s. 6d.; balance in Treasurer's hands, £6 15s. 6d.

NOTTAWASAGA.—Established in 1856; amount of subscription, £44 5s.; no portion of Government grant received, in consequence of default in depositing; amount paid in premiums, £28 12s. 6d.; expenses, £16; due Treasurer, 7s. 6d.

ORILLA.—Twenty-six members; subscription, £19 10s.; Government grant, £21 1s. 11d.; promissory note, £15; total receipts, £56 4s. 5d.; paid for keep of bull, 1855, £2; paid for an Ayrshire bull at Kingston Provincial Show, 1856, and expenses, £38 10s.; copies *Agriculturist*, £3 2s. 6d.; general expenses, £6 1s. 11½d.; balance in Treasurer's hands, £26 9s. 11½d.

ORO.—Thirty-seven members; subscription, £20 19s. 8½d; Government grant, £20 7s. 5d.; total receipts, £41 7s. 1½d.; paid in premiums, £27 16s. 3d.; *Agriculturist*, £2 10s.; expenses, £8 4s. 0½d.; balance in Treasurer's hands, £2 16s. 10d.

TECUMSETH.—Amount of subscriptions, £22 7s. 6d.; Government grant, £22 18s. 3d.; total receipts, £45 5s. 9d.; paid in premiums at show and ploughing match, £32 15s. 3d.; expenses, £6 0s. 7d.; balance in hand, £6 9s. 11d.

VESTRA.—Thirty-two members; subscription, £17 15s.; balance from 1855, £22 11s. 1d.; Government grant, £17 0s. 9d.; received for clover seed retailed to members, £11 8s.; total receipts, £68 14s. 10d.; amount paid for clover seed, £12 5s. 3d.; premiums, £45 7s. 6d.; expenses, £3 0s. 9d.; balance in Treasurer's hands, £8 1s. 4d.

Extract from Report.

The Directors have great satisfaction in reporting that the Society exhibits the beneficial influence it has upon the locality within the immediate sphere of its operations, by the improved stock submitted for competition, the increased quantity produced from a given proportion of land, and the superiority of farm produce in general.

The Directors are happy to perceive an improvement in the wintering and keeping of the dairy stock, as evidenced by the condition of the cattle, and the samples of the produce shown at their Fall Show this past year.

The Directors are further pleased to notice a corresponding improvement in the general appearance of their agricultural district in all its branches, which they believe to be mainly attributable to the successful working of their Society.

The Directors have much pleasure in adding that they perceive a large increase in the buildings for the preservation of grain and produce, and for the housing of stock in their locality, and for the general comfort of the farmer; they have also to report the erection of several mills, a foundry and a distillery, within their agricultural limits during the past year, as well as increased accommodation for educational and religious purposes.

The Directors would lastly observe, that though the spirit of enterprise and progression is making rapid strides in this portion of their fine county, that they are not quite commensurate with the great influx of population and wealth; yet they trust that the fostering influences of this and similar Societies, and the improved tone of education and intelligence among the people, are rapidly supplying a remedy for this evil.

STORMONT.

COUNTY SOCIETY.—Amount of subscription, £11 15s.; deposited by townships, £43 10s.; Government grant, £135; total receipts, £190 5s.; amount paid Treasurer, balance due him from 1855, £69 12s. 5d.; paid Township Branches, £124 15s.; paid in premiums on field and garden products, live stock, implements and domestic manufactures, £72 3s. 9d.; expenses, &c., £31 3s. 3d.; total disbursement, £297 14s. 5d.; balance due Treasurer, £107 9s. 5d.

TOWNSHIP BRANCHES.

CORNWALL.—Amount of subscriptions, £21 10s.; balance from 1855, £87; Government grant, £37 8s. 7½d.; received for clover seed, £12 18s. 11d.; sundries, £6 12s. 10½d.; total receipts, £165 10s. 5d.; amount paid in premiums on green and root crops, £20; *Agriculturist*, £2 10s.; expenses, £2 17s. 6d.; balance in Treasurer's hands, January, 1857, £140 2s. 11d.

OSNABRUCK.—Amount of subscription, £24; Government grant, £43 16s. 4½d.; total receipts, £67 16s. 4½d.; amount paid in premiums, £61 6s. 4½d.; expenses, £5 15s.; balance remaining in hand, 15s. 1d.

VICTORIA.

COUNTY SOCIETY.—Seventy-five members; subscription, £18 15s.; balance from 1855, £99 1s. 9½d.; deposited by Township Branches, £100 15s.; clover seed sold, £16 8s. 9d.; Government grant, £135; sundries, £6; total receipts, £376 0s. 6½d.; amount paid to Township Branches, £186 15s.; premiums, £41 3s. 9d.; paid for seeds. &c., £73 10s. 3½d.; balance remaining in hand, £99 11s. 6d.

Extract from Report.

The Directors have to say that, although their county is one of those situated back on the second range, having no communication with the sea board by water or by rail-road, though the marketing has to be chiefly done in the winter season, and although lying north of latitude 44°, still they are pleased to say, the change for the better is apparent every year, and the husbandman and mechanic are rewarded for their toil. A subject that should engage the attention of the agriculturist, is, whether the soil of the county in general will require the common kind of barn manure or not. It is the argument of many that at least in the Townships of Ops and Mariposa, plaster or lime will not be needed for many years; those two things being largely incorporated now with the soil, and no doubt the County to a greater or less degree partakes of the same feature. Although Fenelon, Eldon, Verulam and Emily grow large quantities of pine timber, yet they are found to be underlaid with limestone rock.

TOWNSHIP BRANCHES.

EMILY.—Amount of subscription and apportionment of public grant, £30; amount paid in premiums, £11 2s. 9d.; paid for clover, carrot and turnip seeds, £16 15s.; incidental expenses, £2 2s. 3d.

FENELON, VERULAM, BEXLEY AND SUMMERSVILLE.—Fifty-eight members; amount of subscriptions, £17 15s.; Government grant, £8 5s.; total receipts, £26; amount paid for seeds for distribution, £26 4s. 4½d.; due Treasurer, 4s. 4½d.

MARIPOSA.—One hundred and thirteen members. No statement of receipts given; amount paid for seeds, £31 0s. 9½d.; balance in hand, January 1857, £44 1s. 5d. This Society united with the County Society for the purpose of holding an exhibition.

OPS.—One hundred and fifty-one members; subscription, £37 15s.; received from Treasurer of County Society, £32 15s.; balance from 1855, £64 7s. 6½d.; sundries, £1 10s. 3d.; total receipts, £126 3s. 9½d.; amount paid for clover and other seeds, £52 5s. 5½d.; amount paid for a bull, £30 15s.; paid in premiums, £16 1s. 3d.; expenses, £5 16s. 3d.; balance in Treasurer's hands, £31 10s. 10d.

WATERLOO.

Eighty-nine members; subscriptions, £30 1s. 3d.; deposited by township branches, £126 5s.; Government grant, £225; total receipts, £381 6s. 3d.; amount paid, balance due Treasurer from previous year, £7 11s. 8d.; paid township Societies, £218 10s.; premiums, £98 7s. 6d.; expenses and sundries, £39 4s. 2½d.; balance in Treasurer's hands, £17 12 10½d.

TOWNSHIP BRANCHES.

NORTH DUMFRIES.—Two hundred and ninety-eight members; amount of subscription £76 15s.; Government grant, £52 10s.; exhibition fees, £22; total receipts, £151 5s.; amount paid in premiums, £82 10s.; expenses, £19 9s. balance in hand, £39 6s.

WELLESLEY.—One hundred and three members; subscription, £34 5s.;

balance from 1855, £13 7s. 5d. Government grant, £32; total receipts, £79 £12s. 5d.; amount paid in premiums and expenses, £72 11s. 3d.; balance in hand, £7 1s. 2d.

WILMOT.—Amount deposited with County Society, £20. This Society merged its funds for the year with the County Society, for the purpose of holding a joint exhibition, and consequently makes no report.

WOOLWICH.—One hundred and nine members; subscription, £29 17s. 6d.; balance from 1855, £25 8s. 9d.; Government grant, £27 15s.; total receipts, £60 11s. 3d.; amount paid in premiums, £39 15s.; expenses, £15 19s. 5½d.; balance in hand, £4 16s. 9½d.

WELLAND.

COUNTY SOCIETY.—One hundred and nine members; subscription, £35 5s. 5d.; Government grant, £225; total receipts, exclusive of deposits by townships, £260 5s. 5d.; amount paid in premiums, £76 3s. 11½d.; portion of Government grant paid to townships, exclusive of return of deposits, £135; expenses, £48 4s. 0½d.; balance in hand, 17s. 5d.

TOWNSHIP BRANCHES.

BERTIE.—Fifty-one members; amount subscribed, £15; Government grant, £19 0s. 2½d.; balance from 1855, £2 12s. 8d.; total receipts, £36 12s. 10½d.; amount paid in premiums, £32 1s. 3d.; expenses, £2 4s. 5d.; balance in hand, £36 12s. 10½d.

CROWLAND.—Only eight members reported; subscription, £1 5s. each; no further report.

HUMBERSTONE.—Fifty-four members; subscription, £15; Government grant, £19 0s. 3d.; total receipts, £34 0s. 3d.; amount paid in premiums, £26 7s. 9d.; expenses, £8 12s. 6d.; balance in hand, 7s. 7½d.

PELHAM.—Sixty-two members; subscriptions paid, £15 6s. 3d.; Government grant, £14 10s.; total receipts, £29 16s. 3d.; amount paid for agricultural lectures, premiums, expenses, &c., £29 12s. 4½d.; balance in hand, 3s 10½d.

STAMFORD.—Seventy-six members; subscription, £22 5s.; Government grant, £26 2s. 7d.; balance from 1855, 1s. 7½d.; total receipts, £48 9s. 2½d.; amount paid in prizes, £44 11s. 3d.; expenses, £6 4s. 9d.; total disbursement, £50 16s.; balance due Treasurer, £2 7s. 10½d.

THOROLD.—Amount of subscription, £25 15s.; Government grant, £29 19s. 4½d.; balance from previous year, £3 5s.; total receipts, £58 19s. 4½d.; amount paid in premiums, £35 7s.; expenses, £6 11s. 4d.; balance in hand January 1857, £17 1s. 0½d.

A ploughing match was held by this Society, open to the whole Province, and of which wide notice was given, for the purpose of testing the draught of plows by the dynamometer, and to award a medal to the plough of lightest draught. Only

two competitors however appeared, Mr. Bingham of Norwich, Oxford, and Mr. Morley of Thorold, County Welland. The following figures are given as the result of the trial:—

	DRAUGHT.			FURROW.	SLICE.
	cwt.	qrs.	lbs.	depth, inches.	width, inches.
Morley's plough	3	1	1	6	9½
Bingham's "	4	3	24	6	9½

The prize medal was consequently awarded to Morley's plough, the action of which is spoken favorably of by the committee.

WAINFLEET.—Forty-six members; subscription, £12 10s.; Government grant, £13 8s. 9½d.; total receipts, £25 18s. 9½d.; amount paid in premiums, £14 15s.; expenses, £5 8s. 2½d.; balance in hand, £5 15s. 7d.

WILLOUGHBY.—Forty members; subscription, £10; apportionment of public grant, £12 3s. 6d.; total receipts, £22 3s. 6d.; amount paid in premiums, £18 11s. 3d.; expenses, £1 17s. 6d.; balance remaining in hand, £1 14s. 9d.

WELLINGTON.

COUNTY SOCIETY.—One hundred and forty-seven members; amount of subscription and donations, £76 15s.; grant from Corporation of Guelph, £10; Government grant, £225; total receipts, not including amount deposited by Township Branches, £311 15s.; amount paid in premiums, £100 12s. 6d.; paid townships, apportionment of public grant, exclusive of return of deposits, £135; expenses and balance due Treasurer from previous year, £54 12s. 8d.; balance remaining in hand, £21 9s. 10d.

Extract from Report.

It is highly gratifying to the Directors to bear testimony to the steady progress making in various branches of agricultural improvement throughout the County, to which the Society has greatly contributed by bringing together in friendly rivalry the products of its various sections. The neat cattle, sheep and hogs continue to elicit unbounded praise from Judges and strangers attending our shows, doubtless owing to judicious crossing with animals imported from Europe by enterprising members of the Society, amongst whom stands pre-eminent F. W. Stone Esq., who has during the year added to his former heavy stock some fine specimens of Short Horns, Cotswold Sheep and Berkshire Hogs. Another proof of progress is the disposition to extend the system of green cropping to the growth of roots in greater quantities and of various kinds, thus testing the value of each, and from their consumption on the farm, increasing the quantity, and greatly enriching the quality of the manure, which, it should be remembered, is the farmer's bank.

TOWNSHIP BRANCHES.

ERAMOSA.—One hundred and nine members; amount of subscription and Government grant, £43 7s. 10½d.; balance from 1855, £7 0s. 7d.; total receipts, £52 8s. 5½d.; amount paid in premiums, £42 12s. 6d.; expenses, £4 0s. 5d.; balance in hand, £4 15s. 6½d.

ERIN.—Seventy-seven members ; amount of subscription, £19 12s. ; Government grant, £10 5s. ; total receipts, £29 17s. ; amount paid in premiums, £15 15s. 7½d. ; expenses and balance due Treasurer from 1855, £13 9s. 10d. ; balance remaining in hand, 11s. 6½d.

GUELPH.—One hundred and sixty-two members ; amount of subscriptions and donations, £58 ; grant from Canada Company, £5 ; balance from 1855, £3 0s. 6½d. ; Government grant, £34 12s. 4½d. ; total receipts, £100 12s. 11d. ; amount paid in premiums, £56 17s. 6d. ; expenses and sundries, £21 14s. 5d. ; balance in hand, £22.

NICHOL.—One hundred and fifty-five members ; subscription, £41 2s. 6d. ; balance from 1855, £4 10d. ; Government grant, £20 12s. 4d. ; total receipts, £66 4s. 10d. ; amount paid in premiums, £48 2s. 6d. ; expenses, £11 13s. 10½d. ; balance in hand, £6 8s. 5½d.

PEEL AND MARYBOROUGH.—New Society, formed in January 1857 ; sixty persons signing declaration.

PILKINGTON.—Ninety-six members ; subscription, £29 7s. 6d. ; balance from 1855, £2 11s. 11½d. ; Government grant, £10 19s. 11d. ; total receipts, £42 19s. 4½d. ; amount paid in premiums, £31 12s. 6d. ; expenses, £11 6s. 10½d.

PUSLINCH.—Two hundred and nine members ; subscription, £64 8s. 9d. ; balance from 1855, £3 19s. 6d. ; Government grant, £33 2s. 6½d. ; total receipts, £101 10s. 9½d. ; amount paid in premiums at Show and ploughing match, £83 10s. ; expenses, £11 5s. 7½d. ; balance in Treasurer's hands, £6 15s. 2d.

Extract from Report.

The Directors of the Agricultural Society of Puslinch, in presenting their Annual Report, have much pleasure in stating that the society and the interests of agriculture throughout the township, are in a flourishing and prosperous state. Many of the farmers are adopting improved methods of cultivating their farms, by availing themselves of the advantages to be derived from the use of labour-saving machines, and cultivating an increased quantity of roots, which enables them to keep their stock in a thriving condition, and also to grow a greater quantity, and better *quality* of cereals than they have hitherto done. The improvement in the quality of stock, is also manifest, many superior animals having been introduced into the township, involving considerable expense to the owners, for which they are deserving of the praise and support of their fellow agriculturists. Through the instrumentality of the Seed Fairs, now very generally established, a purer and better quality of seeds is used, which will doubtless tend to establish the character of the township as one of the best wheat-growing districts of Canada West. The encouragement annually rendered by the Society, by giving premiums for superior ploughing, has had a very beneficial effect in improving that most important operation in agriculture. That the Agricultural Society has, to some extent, been instrumental in bringing about this gratifying state of affairs is evident, and it affords us much pleasure to report that much liberality is manifested by the agriculturists in contributing to the funds of the Society.

WENTWORTH.

COUNTY SOCIETY.—Eighty-nine members; subscription, £22 5s.; deposited by townships, £265; balance from 1855, £17 14s.; 2d.; Government grant, £225; total receipts, £529 19s. 2d. Amount paid Township Societies, £270 3s. 10s.; premiums, £186 15s.; expenses, £48 1s. 2d.; balance in hand, £24 19s. 2d. At the Annual Meeting the following Resolutions were passed in reference to proposed amendments in the Agricultural Statute:—

Resolved—That the returns of the subscriptions from the Township Agricultural Societies should include the amount subscribed from the 1st day of May in one year to the same date the following year. That the £25 deducted from the County Societies in support of the Provincial Agricultural Association, should be rescinded, and a special grant made for the Association instead. That the number of directors in the county should be increased to 20, and in the Township Societies to 15. That this Society does not wish to see the abolition of the Township Societies, or any further alteration in the present Act.

TOWNSHIP BRANCHES.

ANCASTER.—One hundred and thirty members; subscriptions and donations, £44; grant from Township Council, £10; Government grant, £16 16s. 3d.; balance from 1855, 7s. 8½d.; entry fees, £2 13s. 1½d.; total receipts, £73 17s. 1d.; amount paid in premiums, £58 3s. 9d.; expenses, £15 8s.; balance in hand, 5s. 4d.

BEVERLEY.—Two hundred and twenty-nine members; subscription, £61 7s. 6d.; Government grant, £19 15s. 9d.; total receipts, £81 3s. 3d.; amount paid balance due Treasurer from 1855, £4 5s. 5d.; premiums, £59; expenses and sundries, £20 11s. 4½d.; balance due Treasurer, £2 13s. 6½d.

BARTON, BINBROOK, GLANFORD, AND SALTFLEET.—One hundred and two members; subscription, £26 5s.; grant from Township Municipalities, £27 10s.; Government grant, £24 9s. 1d.; total receipts, £78 4s. 1d.; amount paid balance due Treasurer from previous account, £3 10s. 4d.; premiums, £48 5s.; expenses, £9 12s. 5d.; balance in hands of Treasurer, £16 16s. 4d.

WEST FLAMBORO'.—One hundred and forty members; subscription, £43 15s.; balance from previous account, £4 7s. 5½d.; grant from Township Council, £10; Government grant, £30 2s. 9d.; total receipts £88 5s. 2½d.; amount paid in premiums, £64 18s. 9d.; expenses and sundries, £23 1s. 7d.; balance in hand, 4s. 10½d.

YORK.

COUNTY SOCIETY.—Two hundred and forty members; balance from 1855, £4 7s. 10½d.; subscriptions and donations, £70 17s. 3d.; deposited by Township Societies, £333 13s. 11½d.; Government grant, £135; grant from County Council, £50; total receipts, £593 13s. 1d.; amount paid in premiums, £99 15s.; paid Township Societies, £414 13s. 11½d.; expenses, £28 13s. 4½d. balance in Treasurer's hands, Feb. 21st, 1857, £50 10s. 9d.

At the annual meeting a committee was appointed to consult with the City and County Councils, with the view of being prepared at the succeeding Annual meeting of the Agricultural Association to make a proposal to have the Provincial Exhibition for 1858 held at Toronto.

Extract from Report.

The value of Agricultural Societies is undisputed, and your Board of Directors conceive that in this, the metropolitan, and at the same time the most wealthy and populous county in the Province, the County Society ought to occupy a position second to none, and to set an example in progressive and useful measures to the whole Province. Your Board conceive that something further might be done by Agricultural Societies than merely holding Fairs and awarding premiums; although the value of these as an incentive to emulation, and a means of instruction, is fully admitted. In the Township and County Agricultural Societies, as subsidiary to and in communication with the Board of Agriculture, we have a centralized system capable of being made available for the collection of highly useful and interesting information, and thereby effecting very important results, if properly improved upon. Indeed, this was one of the chief objects in view, when the different grades of Agricultural Associations and Societies were organized upon the present basis, although the idea has not been fully carried out. In England the importance of annually obtaining Agricultural statistics has lately been much dwelt upon, and their value is generally admitted. The only question has been as to the means of obtaining them. In this Province we have in our Agricultural Societies a machinery, which could at once be made available for this purpose, with a little extra labour. Complete and reliable returns could, of course, only be obtained by a thorough canvas, or census of every farm, and this would have to be undertaken by the Municipal Councils or the Government. Your Board would suggest whether a few columns might not be added to the Assessment rolls, annually used throughout the country, to show the existing population, the actual value of land, the amount under cultivation, the amount under wheat at the time the assessment was taken, the produce per acre, and the acreage under each kind of crop during the past year, &c. But if such means cannot be adopted, much might still be accomplished by means of the Agricultural Societies. If this County Society should be in any degree instrumental in putting in effectual motion such a system of collecting information throughout the Province, through suitable representations to the Government or the Board of Agriculture, urging them to carry out the design of the act in this respect, or by other means, it would earn for itself an honorable distinction in the country. The Board of Agriculture might be requested to issue annually to the County Societies a large number of printed forms, containing a series of suitable questions, requiring answers. These forms might be distributed by the County Societies to the Township Branches, and by them to each of their members. The forms might contain such questions as the following :—

What is the average value of land in your neighbourhood? What is the most important production? What is the average produce of wheat per acre? Of oats? barley? turnips? potatoes? Of cheese or butter per cow? What is the mode of cultivating the different crops? What is the average annual profit, and increase of value on farms? What do you estimate the average produce per acre of the different kinds of crops at this year?

If forms containing such and numerous other questions that would of course be devised, should be filled up annually by the members of Township and County Agricultural Societies, returned to the Secretaries, and by them condensed and collated, rejecting the useless matter, and then forwarded to the Board of Agri-

culture for collation and prompt publication in the Transactions, which publication it is hoped will soon be resumed, a mass of information, of great value and interest would annually be collected and disseminated. Answers to the last questions above, particularly, if obtained early in autumn, would be of great commercial value, as showing the probable amount of crop, and governing both the merchant and the farmer in his estimate of prices. Accurate statistics could not of course by this means be obtained, because the breadth under crop could only be ascertained by a complete census, but a system of averages would be arrived at, which, with the aid of the last periodical census, and the trade and navigation tables, would afford a close approximation to the truth. Information which might through this means be obtained, would not only be of great value to the localities, as pointing out their agricultural capabilities to the intending settler, in addition to its importance in the respect above mentioned, but would convey to the public, by a record of systems adopted and results obtained, information which would lead them to adopt beneficial and reject injurious practices. A barometer of the prosperity arising from the agriculturist's thrift and skill, or of his depression from the reverse causes, would be held up for the instruction of the country. We are told that the State of Ohio, which once boasted of producing an average of thirty bushels of wheat or more per acre, now only produces twelve or fifteen bushels per acre. This is the result of ignorance, or of a disregard of the capabilities of the soil. It is feared that the average crop in the older portions of Upper Canada, is not what it used to be. In portions of Lower Canada, where Fall Wheat could once be cultivated with certain success and large returns, it now cannot be cultivated at all. This is not a necessary consequence of the soil having been long under culture; for in England, where the land was cultivated centuries before the places we allude to were cleared from the primeval forest, it is not less productive than formerly, rather the contrary. And the soil of this country is eminently rich in the elements of permanent fertility. Such facts as these strongly impressed upon the public by such means as we have above alluded to, would be of an importance which can hardly be estimated, to the well-being of the country. We do not lose sight of the fact that the collection of such information would entail some additional labor upon the officers of Agricultural Societies; but in view of the considerable amount of public money granted for the encouragement of such Societies, we think the country has a right to look for something at our hands; and we would further express a hope that the patriotism and interest in the progress of their country, of the members of Agricultural Societies, would prevent a little additional labor from being considered a very serious obstacle. This subject is one of wide importance and might be treated much more fully, did the occasion permit. These suggestions are, however, thrown out for consideration.

Extract from Address of the President, R. L. Denison, Esq., at the Annual Meeting.

After having made choice of farming as my calling, I determined to assist in the promotion of Agricultural Societies, convinced that they were adapted, by the united efforts of farmers, to improve the stock and manner of farming, as well as the intelligence of the farmers themselves. What farmer can attend one of our shows, either township, county, or provincial, without picking up many hints that will be of service at some future day, first to himself, and then to his neighbours? Besides, the interchange of stock and seeds that could scarcely otherwise be effected, is a great advantage; and our shows also furnish an opportunity to implement makers to exhibit their skill and industry, before the farmers there assembled in large numbers, greatly to the advantage of both parties. I

will now give expression to an opinion I have long held respecting the most advantageous time for holding our autumn shows, and my reasons. First, the Township shows should be held during the first and second weeks in September, the weather then being generally favorable, and the roots and fruit sufficiently advanced to exhibit. I know it will be objected by some that the fall wheat will not be sown, and that it is a busy season with the farmers. I know these objections are good, but not serious. Should the shows be deferred till all farmers are ready, we should hold them in the winter, I fear. At the time I name for the Township Shows much of the wheat would be in the ground, and a day, or half a day, would suffice for the show, being in the township and easily reached by all the members. Then the County Show should follow the week after, or as nearly so as may be, when all the choice or prize animals, &c. &c., should be put in competition with the like from all the Township Societies of the County. I do not of course mean that nothing else should be exhibited but the prize animals, grain, &c., because sometimes judgement is reversed, and the second at one show becomes the first at the next, and yet no blame attach to the judges; and besides, at the County Show there should be more classes than at the Township. Then from the County Shows all should be sent in like manner to the Provincial, which should be held during the last week of September or first of October. By observing this plan much good stock would be sent to the Provincial Exhibition that otherwise, through the modesty of their owners, would be left at home; and also would much be left to ruminate in their pastures and save expense to the ambitious owners. I feel certain, that should these suggestions be acted upon the result would be favorable; they are at least worthy a trial in our own county. In a county like this—one of the oldest and certainly the richest in the Province—and having within its limits a county town like the city of Toronto, we should be possessed of a Society, second to none in Canada; but from some unaccountable reason the citizens seem to think that they have no interest whatever in the matter. There they show their short-sightedness; for what more than the riches of this Agricultural District gives prosperity to the city. Even holding the shows alone, within its limits, is beneficial to it, for every farmer and farmer's wife is both able and willing to spend money on a fair day; and not the less so, for the farmer having dined with his friends and neighbors at the show dinner. But if our County Society has not been prospering quite to our satisfaction, it is the less to be regretted when we remember that we have so many township societies flourishing within the county, each doing all they can for the furtherance and encouragement of agriculture. In conclusion, gentlemen, I beg to congratulate you upon the unprecedented prosperity of our country. Almost the only drawback is the scarceness of servants, both for the farm and kitchen. This, I believe, is felt both far and near; however, I believe this will be, to a certain extent, relieved by emigrants expected the coming season, partly brought here through means used by the Bureau of Agriculture, and partly through lectures given in England by Judge Haliburton, or better known amongst us as "Sam Slick of Slickville." To that gentleman we owe a double debt, first, for affording us many a hearty laugh; and secondly, for bringing this county so truthfully before the English people.

TOWNSHIP BRANCHES.

ETOBICOKE.—Two hundred and sixty three members; amount of subscription, £110 10s.; balance from 1855, £30 12s. 9½d.; value of plough presented by Mr. Rice Lewis, to be competed for at ploughing match, £10; do. of plough presented by Mr. Wm. Armstrong, also to be competed for, £7 10s.; entry fees at fairs and ploughing match, £27; donations, £5 10s.; Government grant,

£49 0s. 4d.; total receipts, £240 3s. 1½d.; amount paid in premiums, £164 17s. 6d.; incidental expenses, £46 10s. 9d.; balance in hand, £28 14s. 10½d. The Directors report the Society in a very prosperous condition, and that the fairs and ploughing match were successful and well attended. A turnip match was again instituted under the auspices of this society, a report of which is here-with given:—

REPORT OF THE JUDGES ON THE ETOBICOKE TURNIP MATCH, 1856.

We, the undersigned, having been appointed Judges on Turnips, by the Directors of the Agricultural Society of the Township of Etobicoke, beg to report as follows:—

On Wednesday, November 5th, we proceeded to examine the crops of the several competitors. Our rule was in each case carefully to measure one-fortieth part of an acre in such portion of the field as presented a fair average of the whole, and to measure the produce exactly. No competitor had less than an acre, and the prizes we were called upon to award consisted of £12 10s. for the first: £10 for the second: and £7 10s. for the third. Quality as well as quantity was an element in the consideration of the question.

We inspected first a field of three acres belonging to Mr. Chas. Giles. The soil is a sandy loam, the preceding crop wheat, which was after meadow; neither the wheat nor turnips received any manure; wheat stubble ploughed in the fall, followed by three ploughings in the spring, and sown with the purple top Swede, June 21st, in drills two feet apart. There were no blanks worth noticing, and although the bulbs were rather small, they were pure and well grown, and denoted clean culture. A little manure would doubtless have improved them. The fortieth of an acre yielded 17¾ bushels.

We next visited Mr. William Duck, on the lake shore, near Port Credit. Soil a good black loam, resting on a clay subsoil. Previous crop barley; ploughed in the fall and well worked in the spring; manured with 33 waggon loads of well rotted dung per acre; purple top, sown in drills, two feet apart, June 10th; some blanks in the rows, occasioned by drought and fly, but the bulbs were generally of a good size, where manured with pigs' dung the largest, and pure and well grown. Yield of the portion measured, (one-fortieth of an acre) nineteen bushels.

Mr. William Wilson, on Dundas Street, had, for the year, an excellent field of turnips; one portion consisted of "Taing's Improved," a very fine variety, well adapted for the table, although not yielding, in all cases, so heavy a crop as some other kinds—soil, a good loam, resting on clay; two preceding crops, oats and potatoes, from old sod. Ploughed in the fall and well worked, and manured with farm yard dung in the spring; sown with turnips (purple top) June 10th in drills, 28 inches apart; bulbs large, with few blanks. In some of the roots there was a tendency to too much shank, indicating impurity of seed; a matter not sufficiently attended to by cultivators of turnips—yield 21 bushels.

Mr. Benjamin Johnston, Dundas Street—soil, a good strong loam, resting on clay; new land; had been previously cropped by oats and potatoes; ploughed in the fall and spring, but apparently not deep enough; no manure applied to any of the crops; sown with purple top Swedes, June 10th, in drills 20 inches apart; bulbs small, but pretty pure; their growth was stopped by the severe drought and insects, and the want of manure. Yield 15 bushels; drills, 20 inches asunder, although quite sufficient for small bulbs, as in this instance,

would not have been so in case of more rapid growth and a heavier crop. Space should be determined by the nature of the soil and the habits of the plants to be raised.

We next examined a splendid field of turnips consisting of about two acres, belonging to Mr. Edward Musson of Mimico, situated on the margin of a small creek; a portion of the site having formerly been a mill pond, the soil therefore partakes of the character of an alluvium. It was broken up from pasture in 1855 and sown with oats. No manure applied to either crop. Ploughed in the fall, and three times in the spring; sown with purple top, June 11th, in drills two feet apart; plant very true and uniform; bulbs large and sound, and every thing indicated careful and thorough culture. The crop in this, as in other instances, had been partially attacked by lice, but the strength of the soil, accompanied with liberal cultivation, enabled the plant to pull through, and the result was a crop that would be creditable to the turnip grower of any country after so unfavourable a season. The yield was 25 bushels.

We went next to Mr. John Clayton's, but as his turnips had suffered so severely from the effects of drought and lice, it was deemed unnecessary to do any thing more than take a general glance over the field. Mr. Clayton sows broadcast; a practice not to be recommended except under peculiar circumstances. His manure was not well incorporated with the soil.

We reached Mr. E. C. Scarlett's, near Weston, just in time, ere the light of day closed, to examine his turnips, but as Mr. Scarlett was from home we could learn but few particulars relative to his system of cultivation. The soil was of medium quality, much elevated above the river, and in some places inclined to gravel. Purple top, sown in drills about 26 inches apart; manured with farm yard dung. Bulbs well grown but somewhat small. The fly had done much injury. Yield 16 bushels.

Next day we looked over the turnips of Mr. Lewis Bates, near the Lunatic Asylum, but as in the case of Mr. Clayton, the drought and vermin had effected so much mischief in preventing the growth of the tubers, that we made no further examination.

Situated in the immediate vicinity of the above we found Captain Shaw's turnips, occupying something over two acres, on a sandy loam. The previous crop was oats; ploughed in the fall and well worked in the spring. Purple top, sown in rows two feet apart, with a moderate dressing of farm yard manure. A portion had been top-dressed with plaster and ashes during the period of growth, to counteract the ravages of the fly and lice; but the object was only partially gained. Bulbs pure and of moderate size, but the hoeing and setting out in the drills had not been effected, owing to the negligence of workmen, in Captain Shaw's usual style, there being too many blanks in the rows. However, the crop was a very fair one for the year. Yield 20 bushels, or at the rate of 800 bushels per imperial acre.

With the above ascertained facts before us, we award the first premium to Mr. Edward Musson; the second premium to Mr. William Wilson; and the third premium to Captain Shaw.

In conclusion, we have much pleasure in stating, that although the turnips which we have examined this year are inferior to those of last, both in point of quality as well as quantity, arising from the peculiar ungeniality of the late season, still the spirit evinced by the competitors and their general style of cultivation exhibit no deterioration. The management on the whole was highly creditable. The intimacy and the importance of the connection between the

raising of the root crops and the sustaining of our improved breeds of cattle, which are now so rapidly spreading in this section of the Province, require only a bare allusion in order to be understood and appreciated by practical men.

All which is respectfully submitted.

(Signed,)

GEO. BUCKLAND,
JAMES FLEMING,
GEORGE LESLIE.

To E. C. FISHER, Esq.,

President Etobicoke Agricultural Society.

EAST GWILLIMBURY.—Two hundred and eighteen members; subscription, £58; a plough presented to the Society to be competed for at ploughing match, value £5; total receipts, £63. The Society, having failed to deposit the amount of subscription with the County Society till after the 1st day of May, received no portion of the Government grant. Amount paid in premiums at fairs and ploughing match, £48; expenses, £8 2s.; balance in hand, £6 18s.

Extract from Report.

On the agriculture of the Township we have but few remarks to make. The four concessions in front of the Township, together with one concession formerly part of West Gwillimbury, on the west side of Yonge Street, are splendid lands, producing the finest description of fall wheat, and highly favorable for the growth of spring grain, hay, and oats, and generally speaking, under good cultivation; but very little attention has been paid to raising improved breeds of sheep and cattle, in which respect the Township is far behind the surrounding country. The lands in the centre of the Township are but little settled, and until lately, have been chiefly valuable for timber; they are, however, now fast filling up. The rear concessions are but new settlements, but rapidly improving, and in a few years will give a large increase to the amount of grain, &c., exported from the Township.

KING.—One hundred and sixty-four members; subscription, £46; balance from 1855, £7 0s. 9½d.; Government grant, £17 5s. 6½d.; total receipts, £70 6s. 4d.; amount paid in premiums, £47; expenses, £3 5s.; balance in hand, £20 1s. 4d.

Extract from Report.

We consider there has been a great improvement in certain kinds of stock, such as horses and sheep, but with regard to horned cattle and swine, we are yet much deficient. Our agricultural productions we consider compare well with any in the County. The vegetable department is also attracting considerable attention. The Township of King stands only as a third class Township in the County, yet we believe there is no Township in the County of York which is making more rapid improvement. It is strictly speaking an agricultural Township, the staple product being fall wheat, the soil appearing well adapted for that kind of grain. We regret that we have no statistics at hand that would furnish the average per acre of fall wheat grown last year, yet we think we could safely put it down at 25 bushels per acre, and of the best quality. Barley, oats, peas, and potatoes last year were a partial failure, owing chiefly to the extreme drought.

MARKHAM.—One hundred and nineteen members; subscription, £66 15s.; special subscription at annual meeting in 1856, to pay off debt, £24; total receipts, £90 15s. No portion of Government grant received, the deposit not being made at the time required by law. Amount paid, due for premiums, &c., from 1855, £26 2s. 9d.; premiums for the year, £11 5s.; expenses, £3 9s.; balance in hand, £49 18s. 3d. The amount of prizes awarded was £64 5s., leaving £53 to be paid. The Report states that “there is rapid improvement in the mode of cultivating the soil. There are great numbers of improved implements introduced, some of them manufactured in the Township, which enable the farmer to cultivate his land with greater ease and to more advantage than heretofore. Under draining is getting to be largely practised, and is found to be of great benefit in raising crops.”

SCARBORO'.—One hundred and forty-three members; subscription, £40; balance from 1855, 19s. 8d.; Government grant, £14 14s. 1d.; total receipts, £55 13s. 9d.; amount paid in premiums, £35 5s.; expenses, £4 3s. 9d.; balance in hand, £16 5s.

GEORGINA AND NORTH GWILLIMBURY.—One hundred and sixty-seven members; subscription, £41 16s. 3d.; balance from 1855, £5 7s. 8½d.; sundries, 17s. 6d.; no portion of Government grant received, having failed to deposit at time required by law; total receipts, £48 11s. 5½d.; amount paid in premiums, £48 17s. 6d.; expenses, £3 13s. 9d.; balance due Treasurer, £3 19s. 9½d. The Directors report a rapid improvement in the agriculture and live stock of the Township within the past two or three years.

VAUGHAN.—Re-organized in autumn of 1856; one hundred and eighty-eight members; subscription, £65 7s. 6d.; amount paid in premiums, £46; expenses, £14 15s.; balance in hand, £4 12s. 6d.

WHITCHURCH OR NORTH YORK.—Two hundred and forty-one members; subscription, £67 19s. 4d.; balance from 1855, £6 14s. 2d.; no Government grant, not having reported at time required; total receipts, £74 13s. 6d.; paid in premiums, £50 5s.; expenses, £4 17s. 6d.; balance in hand, £19 11s. The Directors report that Professor Buckland had delivered a lecture to the Society, which was well attended, and gave much satisfaction, and they consider that the giving of agricultural lectures in country places, by qualified persons, would be productive of much benefit.

YORK TOWNSHIP.—One hundred and thirty-eight members; subscription, £51 10s.; balance from previous year, £7 11s. 6d.; total receipts, (no portion of the public grant having been received, the Society not having reported as required by law,) £59 1s. 6d.; paid in premiums, £29 5s.; expenses, £5 8s. 1d.; balance on hand, January, 1857, £2 8s. 5d.

COUNTY AGRICULTURAL SOCIETIES.

STATEMENT shewing the amount of subscription of the County and Township Agricultural Societies in each County, for the year 1857, at the time of the Treasurer of each County Society transmitting his affidavit to the Secretary of the Board of Agriculture, as required by the Act 16 Vic. cap. 11; the amount of public grant received by the Board from Government on account of each County Society, and the amount retained by the Board from each grant, as authorised by the Act, for purposes of the Provincial Agricultural Association.

SOCIETIES.	Amount of Subscriptions.			Government Grant.			Retained by Board.		
	£	s.	d.	£	s.	d.	£	s.	d.
Addington.....	80	15	0	150	0	0	15	0	0
Brant.....	125	0	0	250	0	0	25	0	0
Bruce.....	136	0	0	150	0	0	15	0	0
Carleton.....	135	15	0	250	0	0	25	0	0
Durham.....	214	5	0	150	0	0	15	0	0
Dundas.....	54	15	0	150	0	0	15	0	0
Elgin.....	122	5	0	250	0	0	25	0	0
Essex.....	107	15	0	250	0	0	25	0	0
Frontenac.....	65	7	6	150	0	0	15	0	0
Glengary.....	72	10	0	150	0	0	15	0	0
Grey.....	96	0	0	250	0	0	25	0	0
Grenville.....	39	12	6	118	17	6	11	17	9
Haldimand.....	118	10	0	250	0	0	25	0	0
Halton.....	129	0	0	250	0	0	25	0	0
Hastings.....	88	0	0	250	0	0	25	0	0
Huron.....	168	4	0	150	0	0	15	0	0
Kent.....	120	0	0	250	0	0	25	0	0
Lambton.....	168	5	0	250	0	0	25	0	0
Lanark.....	160	9	1½	150	0	0	15	0	0
Leeds.....	151	17	6	200	0	0	20	0	0
Lenox.....	68	15	0	150	0	0	15	0	0
Lincoln.....	172	0	0	250	0	0	25	0	0
Middlesex.....	263	18	9	250	0	0	25	0	0
Northumberland.....	158	0	0	150	0	0	15	0	0
Norfolk.....	98	5	0	250	0	0	25	0	0
Ontario.....	295	10	0	250	0	0	25	0	0
Oxford.....	257	12	6	250	0	0	25	0	0
Peel.....	164	15	0	150	0	0	15	0	0
Perth.....	131	5	0	250	0	0	25	0	0
Peterboro.....	121	0	0	150	0	0	15	0	0
Prescott.....	58	0	0	150	0	0	15	0	0
Prince Edward.....	102	0	0	250	0	0	25	0	0
Renfrew.....	50	0	0	150	0	0	15	0	0
Russell.....	52	0	0	150	0	0	15	0	0
Simcoe.....	228	9	5½	250	0	0	25	0	0
Stormont.....	72	15	0	150	0	0	15	0	0
Victoria.....	151	15	0	150	0	0	15	0	0
Waterloo.....	149	0	0	250	0	0	25	0	0
Welland.....	125	5	0	250	0	0	25	0	0
Wellington.....	416	12	6	250	0	0	25	0	0
Wentworth.....	312	17	6	250	0	0	25	0	0
York.....	525	5	0	150	0	0	15	0	0
	£6239	6	4	£8518	17	6	£851	17	9

MEETINGS OF THE BOARD OF AGRICULTURE.

BRANTFORD, April 7th, 1857.

A Meeting of the Board was held, by order of the President, in the Kerby House, Brantford, at 2 p. m., this day.

Present—E. W. Thomson, President; J. B. Marks, Vice-President; George Alexander, President of the Provincial Association; R. L. Denison, and Prof. Buckland.

The Secretary stated that Messrs. Ruttan and Burnham were detained at home by business at the Assizes; Mr. Fergusson was unavoidably absent, and Mr. Harland could not attend owing to indisposition.

The Minutes of last Meeting were read and confirmed.

Subjects connected with the Prize List, and Regulations for the Show the Autumn following, were introduced and discussed.

Resolved—That for the future the names of the owners and exhibitors of stock and articles for exhibition be inserted on the cards attached to them, for the information and satisfaction of the public.

Resolved—That a catalogue of the articles entered for Exhibition, be prepared as soon as possible after the entries are closed, to be sold and distributed as the Board may determine. Such catalogue not necessarily to include any other departments than those of live stock and implements.

Resolved—That for the best stallion, carriage, or roadster, a premium of £8 5s. be introduced into the Prize List; for second, £5 10s.; and third, £2 10s.; Mares the same; also that Draught Horses be henceforth divided into two classes; those not less than sixteen hands high, and those under sixteen but not less than fifteen hands.

The Secretary was instructed to procure the best illustrated treatise on poultry.

Resolved—That the Lady Judges at the last Exhibition at Kingston, be invited to revise the Ladies' Department of the Prize List.

Resolved—That Members' Cards be discontinued, and that Members' Badges of red ribbon be prepared for next Exhibition.

Mr. McNaught having suggested to the Board the desirableness of getting up sweepstakes for animals in addition to the Prize List, it was resolved to open books for the entry of certain classes of horses, cattle, and sheep, for sweepstakes prizes; the entrance fee for horses to be \$10 for each animal, and \$20 added by the Association to each class; the entrance for cattle and sheep to be \$5 each animal, and \$10 added to each class.

The Board then adjourned till next day.

WEDNESDAY, April 8th, 1857.

Mr. Alexander having been obliged to leave Brantford, to meet engagements to address Agricultural Societies, there was not a quorum this day. The Members present, however, consulted with the Local Committee in reference to arrangements for the Show. Mr. John Wade, of Cobourg, attended the Meeting by request, and submitted his plans for fencing, building, &c., which were substantially approved, and Mr. Wade was authorized to make such arrangements with the Local Committee as might seem necessary for carrying them out.

BRANTFORD, August 26th, 1857.

A Meeting was convened this day, at the Kerby House, Brantford, by order of the President, at three o'clock, p.m.

Present—E. W. Thomson, President; J. B. Marks, Vice-President; Geo. Alexander, President Provincial Association; Hon. A. Fergusson, R. L. Denison, D. Christie, H. Ruttan, Asa A. Burnham, Geo. Buckland.

Minutes of previous Meeting were read and approved.

On motion of the Hon. Adam Fergusson, it was

Resolved—That the Board of Agriculture for Canada West desire to express their deep regret for the loss sustained by the lamented death of John Harland, Esq., a Member of this Board. Mr. Harland proved himself a valuable and efficient Member of the Board, and by his excellent report upon the farming of the County in which he resided, has bestowed a valuable boon upon all connected with that District, and has furnished a useful and interesting guide to the great body of Canadian farmers.

Resolved—That a copy of this resolution, signed by the President, be transmitted to Mrs. Harland, Guelph.

The Secretary then read letters from J. B. Marks, Esq., Kingston, stating that the Royal Mail Line of Steamers would take passengers and freight for the Exhibition at Brantford for half the usual rates; from Mr. Brydges, stating that stock and articles on the Great Western Railway would be carried at half rates, but that the company had not yet determined the exact rate for carrying passengers; from Mr. Alger, chairman of the Local Committee, respecting Bands, and the invitation of distinguished persons from the United States and elsewhere to the show.

The subject of testing the Reapers and Mowers, Ploughs, &c., was then fully considered, with the difficulties incidental thereto, with reference to the former, on the lateness of the season.

It was agreed to recommend the Local Committee to take up the matter, and make arrangements for doing all that was practicable under the circumstances, on this important object.

The Secretary was instructed to use his best means for procuring a Dynamometer for testing draught, and to write to Col. Mason of Albany on the subject.

After consideration of some matters of detail, the Board adjourned at 10 p.m. to meet at 9 o'clock next morning.

THURSDAY, August 27th.

The Board met pursuant to adjournment, at 9 a.m. The same members present as preceding day.

This being the first meeting of the Board since the re-appointment of the four retiring members, viz. Messrs. J. B. Marks, D. Christie, A. A. Burnham, and Hon. A. Fergusson, and the matter having been inadvertently omitted at yesterday's sitting, it was moved by Hon. A. Fergusson, seconded by Mr. Alexander, and *Resolved*—That Col. Thomson continue President of the Board during the ensuing year.

Moved by Mr. Burnham, seconded by Mr. Alexander, and resolved That Mr. Marks continue Vice-President the ensuing year.

Resolved,—That complimentary tickets be sent to the Wardens and Reeves of all the Counties that have contributed to the funds of the Association this year.

The Secretary was instructed to enclose complimentary tickets to Col. Johnson, of Albany, for the Delegates, &c. from the New York State Society.

Resolved,—That Col. Thomson, Mr. Marks, and Mr. Burnham, be appointed Delegates to the approaching Exhibition of the Lower Canada Association, to be held in Montreal.

Resolved,—That all the members of this Board attend as Delegates to the New York State Exhibition at Buffalo, and that the Secretary communicate their intention to that Society.

The Board adjourned at 11 o'clock to 4 p.m. to meet the Local Committee, in the interim, on the grounds.

After inspecting the grounds, buildings and arrangements, and conferring with the Local Committee on several matters of detail, the Board again met at 4 o'clock.

The contractors not appearing to be proceeding with the completion of the work as speedily as seemed desirable, it was ordered that the Secretary address a letter to the Chairman of the Local Committee, requesting him at once to see the contractors, and inform them that unless they proceed with the work with more expedition the Board will be obliged, at the expiration of ten days from this date, to employ a sufficient number of hands to complete the work agreeably to the terms of the contract.

It was also agreed that the Secretary write immediately to Mr. Good, President of the County of Brant Agricultural Society, directing his immediate atten-

tion to the difficulties that have arisen respecting the funds voted to the Association by the County Society, urging a prompt payment of the same.

Resolved,—That the sum of £35 be devoted as premiums to bands playing during the Exhibition, and that the Local Committee be authorized to make the arrangements.

In consequence of much difficulty having been experienced year by year, in procuring the attendance of competent judges, it was resolved—That the Secretary shall for the future prepare a printed form, to be sent to each County Society in time for their Annual Meetings, requesting each Society to insert the name of one or more well qualified judges for the Provincial Exhibition, the departments for which they are to act being definitely specified, such returns to be sent to the Board of Agriculture with the annual reports.

The Board adjourned at 7 o'clock, to Monday September 28, at 3 p. m. on the show ground, Brantford.

BRANTFORD, September 28th, 1857.

The Board met, pursuant to adjournment, at 3 p.m. in the office on the show ground.

Present—E. W. Thomson, President, J. B. Marks, Vice-President, Hon. Adam Fergusson, D. Christie, R. L. Denison, Dr. Beatty, Vice-President of the Board of Arts and Manufactures; and Professor Buckland.

Minutes of last meeting were read and confirmed.

After some preliminary consultation on the state of the arrangements for the show, the Secretary stated that some inconvenience might be experienced unless the keys of the gates and offices were immediately delivered to the Treasurer.

Whereupon it was *Resolved*,—That the Chairman of the Local Committee be requested to obtain from the contractors the keys of the gates and offices and hand the same to the Treasurer of the Association that evening.

It having been stated by several respectable individuals intending to become competitors, that they had been subjected to exorbitant charges on the Buffalo and Lake Huron Railway, from Paris to Brantford, for freight on cattle and articles—after a careful consideration of the matter it was *Resolved*,—That the Secretary immediately communicate with Captain Barlow, the Managing Director, on the subject.

Resolved,—That during the Exhibition the Board meet daily in the office on the ground at 10 o'clock a.m., and that two members, at least, remain with the President during each day, taking this duty in rotation.

After considering and disposing of various matters of routine, the Board adjourned till next morning at 10 o'clock.

TUESDAY, September 29th.

The Board met, pursuant to adjournment at 10 a.m. The same members present as previous day, together with Mr. Alexander, President of the Asso-

ciation, Asa A. Burnham, H. Ruttan, and W. B. Jarvis, President of the Board of Arts and Manufactures.

Minutes of previous day were read and approved.

The Secretary submitted the case of Mr. Baker, of Norfolk, who had recently imported some Durham cattle from England, but had not received a sufficient pedigree with them.

Resolved—That in the absence of a regular and well authenticated pedigree, Mr. Baker's stock can not be allowed to compete in the regular classes, but that he may exhibit the animals, which the judges will examine, and report upon their merits, and that they shall be considered eligible, if worthy, of a discretionary premium.

A communication was read by the Secretary from the Local Committee, requesting that the families of the members of that committee be admitted to the exhibition free—whereupon it was

Resolved—That the request be complied with by the Treasurer being authorised to give to each member of the Local Committee as many tickets of admission as will admit the members of his family, and that Mr. Alger, the Chairman of such Committee, be requested to furnish the Treasurer with the requisite list.

The Secretary read a letter from Captain Barlow, in reply to the letter of remonstrance which he was instructed to send yesterday in reference to the exorbitant charges for freight between Paris and Brantford :—

(COPY.)

BRANTFORD, September 28th, 1857.

SIR,—I have to acknowledge the receipt of your note of this date, conveying a resolution passed this afternoon at a meeting of the Board of Agriculture, authorising you to remonstrate with me, "As it has come to the knowledge of the Board of Agriculture that exorbitant charges have been made for the carriage of stock and articles for Exhibition" over this Railway.

The rate authorised to be charged for the carriage of stock and articles to the Exhibition has been reduced below the regular tariff at all stations over a certain distance from Brantford. If the Resolution forwarded to me has reference to any particular cases, where an exorbitant or unreasonable charge has been made, and you will acquaint me with such cases. I will remedy them at once; but if it refers generally to the rates adopted, I must request the Board of Agriculture to consider that this company has had to make extensive preparations for a traffic, the bulk of which will pass over some eight miles of this Railway, while the expenses at their terminus require a mileage of ten times that distance to yield a legitimate profit.

I am, Sir,

Your obedient servant,

B. H. BARLOW,
Managing Director.

GEO. BUCKLAND, Esq.,
Secretary Board of Agriculture.

Some conversation arose out of this communication, and it seemed a matter of doubt whether or not the charge from Paris to Brantford imposed by the Railway Directors included return tickets free. After disposing of several matters of detail relating to the exhibition the Board adjourned to next day.

WEDNESDAY, September 30th.

The Board met this morning at 9 o'clock and appointed judges to classes which had not been supplied the preceding day. The members of the Board were engaged during the day in carrying out the exhibition, and no formal resolutions were passed. In the evening a public meeting was held in the Town Hall, as reported in another place.

THURSDAY, October 1st.

The Board met again early this morning on the Show ground, and this being the principal day of the Exhibition, and the weather unpropitious, no formal business was done; each member being engaged, along with members of the Local Committee, in conducting the Show. A public dinner took place in the afternoon, and another public meeting was held in the evening, both of which are reported below.

TWELFTH PROVINCIAL EXHIBITION.

The twelfth annual Exhibition of the Agricultural Association was held at Brantford on September 29th and 30th, October 1st and 2nd, 1857. The ground chosen was an elevated piece of dry, sandy land, immediately adjoining the Brantford Station of the Buffalo and Brantford Railway, overlooking the town, and commanding an extensive and pleasant view of the surrounding country. Temporary buildings, pens and fences were erected by the Local Committee. The ground, about twenty acres in extent, was planted with trees. Nearly opposite the entry gate, in the shape of a Greek cross, stood a large building, one hundred and fifty feet long by forty feet broad, with an octagon tower rising in the centre. This was the Floral Hall, devoted to Floriculture, Horticulture, the Educational Department, Ladies' work, and the Fine Arts. Behind it, hidden from view on entering, was another building of the same shape, for the Agricultural, Dairy and other products. Between the fence and these buildings, the space on the right hand was devoted to the exhibition of the horses. To the left, on entering, were placed the ploughs, and other implements and machines, and the refreshment booths. All around the inside of the fence were pens for cattle, sheep and pigs. For the convenience of people having animals or heavy articles for exhibition, the Railway Company made a temporary switch to the lower corner of the grounds. The

contributions from Municipalities and Societies, to defray the local expenses, were as follows:—The Town of Brantford, £1000; the County of Brant £500; the County of Waterloo £50; the County of Oxford £100; the County of Wentworth £50; the County of Norfolk £50; the County of Norfolk Agricultural Society £50; and the whole of the funds of the County of Brant Agricultural Society. The amount of prizes offered in the list, published in June, was about £2,500, being nearly £200 more than offered the preceding year. Some new prizes were offered in various classes. The Canada Company continued their liberal prizes for wheat, hemp and flax. The President offered a prize of £15 to be given to the horse which should receive the first prize as a stallion for Agricultural purposes, if imported from Europe since the exhibition of 1856, and the treble prize for such imported animal, as in accordance with the list, to be increased to £35, making the whole prize the sum of £50. There were also a number of sweepstake prizes offered for horses, cattle and sheep, as noticed at another page. The number of entries of animals and articles for exhibition was over 4,400 being about 600 in advance of any previous year. However, owing to the difficulty of getting forward by the Railway, a large number of articles and animals entered in the books, did not appear upon the ground, and many of the things that did appear did not arrive till a late period of the Fair. Still, upon the whole, the entire number of animals and articles exhibited probably exceeded any previous year. The weather, during a great part of the time of the Exhibition, was extremely unfavorable, and of course affected injuriously the desired results. Tuesday, the first day of the exhibition, on which day the judges were to commence their inspection, and members to be admitted after 12 o'clock, the weather was all that could be desired, but the articles had not nearly all arrived, and the arrangements were incomplete. Wednesday, the first day of admitting the public, was generally wet and cold, with occasional sunshine. Owing to detention by the railway, articles which should all have been upon the grounds the previous day, before noon, were arriving all day, and the Judges consequently could not get through with their duties so promptly as was desired. On Thursday, the principal day, rain fell heavily all day, the air was cold and disagreeable, and the ground, although a sandy porous soil, became, from the trampling of the crowd of visitors, deep in mud. Notwithstanding, visitors arrived in large numbers from all quarters, and these, added to those already in the town, made the number of persons on the grounds very large; and in spite of the rain and cold, the animals and articles exhibited were industriously examined. In the afternoon, Sir William Eyre, Administrator of the Government, and other distinguished persons arrived, as reported in another place. On Friday, the closing day, the weather was more propitious, and visitors were numerous. After the holding of the Annual Meeting of the Directors of the Association, the delivery of the President's Address, and the reading of the

Prize List, the payment of the prizes and the removal of articles from the grounds commenced.

A brief notice of the several departments of the show is herewith subjoined:

HORSES.—The show of Blood Horses was small, about equal to previous years, some very good animals. Of Agricultural, Draught, Carriage and Saddle Horses, the show was very large, considerably in excess of previous years. Some very superior animals.

CATTLE.—The show of Durham cattle, was rather larger than at any previous show, and the animals of as good quality; of Devons, also, larger; of Herefords about the same as at previous shows, a very meagre display; of Ayrshires, a smaller display than formerly; of Galloways, nearly the same number as in 1856, and larger than at any other previous exhibition; of grade cattle, the number entered and exhibited was about the same as at either of the two previous exhibitions; and of fat and working cattle, the number was a little greater. The names of the exhibitors of the best animals in these classes, as of course of the successful exhibitors in the other departments, will be found in the prize list.

SHEEP.—The number of Leicester Sheep was greater than at previous shows; of Cotswolds greater; of Cheviots about equal to show of 1856; of Southdowns greater than previously; of Merinos and Saxons greater than in 1856, but less than in 1855; of Long-wooled Sheep, a new class introduced in the list, not being any of the above mentioned pure breeds, sixty-two entries and a good show; and of fat sheep a larger show than formerly.

SWINE.—Of Pigs the entry was less than in 1856, but larger than 1855; the entry of the small breeds was the most numerous, and of these some specimens of the Essex breed appeared to be the favorites.

POULTRY.—The number entered was not quite so large as at Kingston, and of those entered not much more than half came forward; still the show in this class was large and interesting. "In the whole department of live stock," a Toronto newspaper remarked, "the entries are much more numerous than formerly, and the quality of them very superior—a feature in the Exhibition especially desirable, as a proof of the progress of the Canadian farmer, and the growing interest taken in the improvement of farming stock."

GRAINS AND SEEDS.—In this class the entries were not so numerous as in 1856, but more so than in 1855; the season having been a very unfavorable one for the production and harvesting of grain, the exhibition in this department could hardly be expected to be very superior; there were, however, some very good samples, and in wheat the display was better than was anticipated.

ROOTS, &c.—The entries were more numerous than at either of the two preceding shows; and the specimens of good average quality.

FRUITS, PLANTS AND FLOWERS.—In this class also, the entries were more numerous than formerly, and the specimens good. A considerable part of the display in this department came from Montreal, and from Rochester, N. Y. The display of open-air peaches, principally from Niagara and the neighborhood of Hamilton, was very fine.

GARDEN VEGETABLES.—The entry in this class was considerably larger than formerly; and the specimens of very creditable quality.

DAIRY PRODUCTS, DOMESTIC GROCERIES, &c.—In this department the number of entries was not so large as at Kingston in 1856, but more than double that at Cobourg in 1855.

AGRICULTURAL IMPLEMENTS.—In this class the number of entries was nearly double that at either of the exhibitions of the two previous years, there being 50 entries of ploughs alone. Some of the celebrated Howard ploughs, from England, were exhibited by Rice Lewis & Son, of Toronto. The entire department exhibited an improvement in a proportion equal to the improvement of the whole Exhibition. There were not many cultivators, or implements of that description; but of straw-cutters and fanning-mills, there was a great abundance. The competition in reaping machines was very close; and in the straw-cutters, the judges found it expedient to separate those in which horse-power was employed, from the rest of the class.

The following notice of the trial of the Implements is taken from a Toronto daily newspaper:—

“This (Wednesday) morning a trial of ploughs, mowing machines, and combined mowers and reapers took place upon Mr. Good’s farm, about two miles from the town. A very nice piece of sod was selected for the ploughs, which were set to work, and the judges then went on to test the reapers in an oatfield adjoining. Some 28 or 30 ploughs were taken out for trial; many of them were remarkable specimens of nice workmanship, both in iron and wood, and there was presented every variety of shape and pattern, some new and others of old and approved make. Among the best was Mr. Modeland’s of Brampton, which has taken the first prize on two or three occasions. Its performance to-day was excellent. A plough made on Bingham’s patent, for general work, was also much admired. Another of Bingham’s ploughs, made by the patentee, and shown for the first time, attracted a great deal of attention. The mould-board is long and very wide and flat at the point, curving outwards gradually. It is intended for ploughing sod, and appears to turn it very effectually, though perhaps not quite so neatly as some others. John Watson, of Ayr, showed a plough of very cheap and simple construction. An iron plough, by David Duncan, of Ancaster, was very nicely finished, and did excellent work. Another made by J. & I. W. McLaren, of Lowville, was very neatly finished, with a beautifully turned mould-board for general purposes. Two wooden ploughs, one by Land & Buck, of Trafalgar, and the other by Elliott & Burgess, of London, were very nicely made and finished. An iron plough, by John McDonald, of Caledonia, was also well made. The single reapers were not tested. The following combined machines, only, were brought to the ground.

A mower and reaper, by R. Bell & Co., of St. George, on Sharpe’s patent.

Manning's patent, with Wood's improvement, made by Massey, of Newcastle. This machine has also a new and improved mode of raising the knives.

The same patent, improved by J. Watson, of Ayr, Dumfries, with the same mode of raising the knives.

The same patent, by R. & R. S. Patterson, Belleville, with the addition of a small wheel under the pole, which is intended to diminish the side draught and relieve the horses and also steady the motion.

In all these machines the grain is turned outwards, and is delivered to the right hand.

The fifth machine was made by Atchison & Darling, of Thornhill, and was somewhat different, the graining being on the outside, and the delivery to the left. The pole also was supported by an axle resting on two wheels, an arrangement which very materially diminishes the side pressure. This machine was lighter in appearance and better finished than any of the others.

In the work done by these machines, there was no very great difference. Massey's, Patterson's, and Atchison and Darling's appeared to be the most generally approved of. Scarcely any difference could be detected in the working of the two last mentioned."

There are, in addition to the reaping and mowing machines, some valuable implements and machinery of a superior character. Messrs. Ganson, Waterous & Co., of Brantford, have erected a small steam circular saw mill of very simple construction and neat workmanship. The chief advantage of this mill is that it costs but little, and can be removed from place to place at a cost of not more than fifty pounds. In an extensive pinery a mill of this description is very useful, as it is much easier to move it to the pine, when the supply near it is exhausted, than to bring the pine to it. The same manufacturers have a thrasher and separator, the horse-power of which is all made of iron, and instead of the usual large driving wheel, there is a smaller one with three spur wheels inside upon a spindle in the centre, by which there is an equal strain from all parts of the horse wheel, instead of the whole being thrown upon one small pinion. Haggert & Brothers, of Brampton, have a threshing machine, driven altogether by iron gearing instead of the belts usually employed. There is another machine by C. McDonald, of Ancaster, with an improved horse-power calculated for ten horses. C. R. Wilkes, of Brantford, have also two threshing machines. There are two agricultural engines upon the ground, of a very neat construction—one made by F. G. Beckett & Co., of Hamilton, and the other by C. R. Wilkes, of Brantford. They are both portable, of about six horse-power, and admirably adapted for agricultural purposes.

MANUFACTURES OF LEATHER, FURS, &c.—In this class the number of entries was considerably larger than at previous exhibitions. There were many entries of leather worthy of remark; attention was particularly called to some fine calf-skin, manufactured by Gaige's process, which is tanned without the bark or bark liquors, by a vegetable preparation, stated to be 30 per cent. cheaper; it appeared to be tougher than ordinary leather, and is said to be impervious to water.

MANUFACTURES IN METALS, &c.—The entries were more numerous than at preceding shows.

CABINET WARE, CARRIAGES, &c.—Number of entries not quite so large as in 1856, but larger than in 1855.

POTTERY.—Few entries, not quite so many as in 1856.

WOOLLEN AND FLAX GOODS.—Fewer entries than at either of the two preceding exhibitions.

The following notice of the manufactures of the several kinds is abridged from a Toronto paper, (the *Colonist*):—

“The exhibition of manufactures, and specimens of art and industry, was very meagre and unsatisfactory, on a first glance, in comparison with those of former years; but on a close examination some would be found of singular merit. The number of new inventions also was less than might have been anticipated, judging from the number of patents recently issued; but of the few there are some likely to be of great benefit in an economic point of view; and which will readily commend themselves when the product of the inventors’ genius is brought into the market. Among these is a corn sheller, patented by Mr. J. Ptolemy, Saltfleet, in May of this year, which is decidedly the most effective and satisfactory implement of the kind yet brought into notice. By hand power alone it is estimated to be able to shell 200 bushels a day, takes the grain clearly from the cob, and on a trial to which it was subjected did not split a grain. Another is for the manufacture of fire-proof tiles, patented by Isaac Mills, Flamboro’ West, of a very ingenious pattern, yet simple and cheap. The overlapping, as in the ordinary use of roofing tiles, is of course available as a protection against wet and fire; but in order to render it more effectual, there is a ledge at the lower part of the underlying tile, and beyond that a rib of a quarter of an inch in height, rendering it very improbable, not to say impossible, for cinders to pass underneath. The price at which the inventors think the material can be furnished is \$4 per square, while that of slate is \$8. The great advantages its use, at a low price, offers over the inferior article at a high price, are sufficient to commend it at once to builders and insurance offices.

Another recent invention, for which a patent was obtained in August, is that of a mechanic at Brockville, who proposes to construct a submerged water-wheel for milling purposes, in running streams where there is no dam, the buckets so arranged, traversing on a friction roller, that the motive power is obtained from one half the number in a perpendicular or oblique position, according to the will of the miller, which the other half, by means of a simple but effectual leverage while moving against the current, are thrown horizontally, presenting a flat surface to the water. By the same leverage, the whole of the buckets can be thrown horizontally so as at once to check the power, as is ordinarily accomplished by shutting down the gates. Another advantage claimed by the inventor is that, in consequence of his wheel being submerged, it cannot freeze in the winter.

W. C. Stivers, of Ingersoll, exhibits a lightning rod, constructed on a different principle from those generally in use, and for which he claims considerable superiority. As lightning rods are at present manufactured, he asserts that the conducting power is insufficient to carry of the quantity of electric fluid attracted by the large points. To remedy this he employs copper solely as the material, as the conducting power is greater than that of iron, while the surface is three times as large as that of the ordinary rods, and the points are considerably smaller. By these improvements he anticipates an entire removal of the risks to which owners of property are now subjected. He has applied for a patent, but has not yet obtained it.

The deficiency in manufactures of iron, steel, and leather, strikes every one on entering this department of the Show. Many of the old competitors who have so frequently carried off honours, appear to have withdrawn

altogether, satisfied possibly with the honours they have already obtained. The same is true of cabinet work and upholsters. In these branches, however, the few persons who have exhibited, have displayed highly creditable specimens of their skill. Messrs. Millener & Co., of Kingston, the only exhibitors of edge tools, and bench and moulding planes, have an assortment showing the highest finish, and fully equal in their kind, to those which on previous occasions attracted so much attention.

B. G. Tisdale, stove and plough founder, Brantford, has a very extensive and excellent collection of coal, wood, dumb, parlor, kitchen, and dining-room stoves. The workmanship on those of an ornamental character, principally in Russian iron, is very superior, and he deservedly received several prizes. The patterns are those which have recently come most into vogue as economical in fuel; and he appears to have been zealous to adapt his wares to the popular tastes of the day. The success is evinced by the fact that he at once obtained an order from a Toronto gentleman for one of his parlor stoves. A peculiar-looking stove among his collection is intended for boiling coarse grain for feed, in an immense iron pot forming a part of a stove itself, while it is equally well-adapted for preparing milk for cheese-making, by placing a tin boiler within the iron one; or for any other object a housewife may have in view, by the employment of a series of rims adapted to the size of the pot to be boiled.

Landon & Buck, also of Brantford, are the next exhibitors, and although their collection is not so large, it is varied, well executed, and cheap in comparison with similar wares sold in Toronto. One excellent description of stove, the Victor, of large size, being priced by them with the ordinary furniture at \$35. The copper furniture for their kitchen stove, manufactured for the purpose of exhibiting, was remarkably well made and finished.

Mr. Ruttan's ventilating stoves, ticketed as intended for parlor use, may possess very considerable merits in a building specially adapted to their use; but they are coarsely cast, and awkward in appearance, and apparently better adapted for a church or a theatre, or any other extensive building than for a parlour.

Among the few specimens of cabinet work, decidedly the most noticeable is a splendid oak sideboard, elaborately carved, from the factory of Messrs. Fuller & Co., of Oshawa. From the same factory there are also a pier table of walnut, handsomely, or rather elegantly carved, and a very spicy looking chest of drawers of the same material.

Munro & Morton, of Hamilton, without showing quite so great an elaboration of ornament, show excellent taste and skill in a sideboard of walnut; and in a centre table, also of walnut, and certainly the most beautifully grained piece of timber we remember to have seen.

At a little distance from these articles, Mr. Charles Hawkins of Durham, has some singularly neat specimens of wood turning in bird's-eye maple, in the shape of spice boxes, work tables, egg-stands, and other trifles.

There are only two exhibitors of pianos—Messrs. C. Thomas, of Hamilton, and Seabold & Manby, of Toronto.

Messrs. Prince & Co., of Buffalo, have some melodeons on view, combining some principles which are said to be new. No blowing is required; and the power of the instrument can be regulated at the will of the performer over all or only half the octaves, by a new application of stops. The price of the instruments is \$175 each in Canada, freight and duties paid.

The ship and yacht models shown by Mr. Hudson, of Toronto, are the only things of the kind on exhibition, and are admirably done.

The assortment of churns and washing machines, is infinite in variety, and exhibit as usual, ardent desire to relieve the softer sex, from a considerable portion of their heavy labour.

The specimens of crockery were few in number, and poor in quality, the most valuable being some draining tiles of Wm. Lea, of York Township, and Geo. Smart, of Brooklyn.

In leather manufactures, there were numerous competitors. Some of the specimens were very inferior in quality, others evinced good and careful workmanship. Adam Fralick, of Niagara, was decidedly the best in sole leather. In other qualities, J. S. Moore, of Jordan, Emanuel Deane, of Woodhouse, and Porter McKay & Son, of Brantford, showed some very handsome leather.

In flannels and blankets there was scarcely any competition. The show was nothing like what it has been heretofore, and with the exception of some splendid articles in both kinds, sent by Mr. Rankin, of the Dundas Woollen Works, the samples were very poor.

The numerous exhibitors of wood moulding and panelling for doors and windows, are represented alone, and with credit, by David White & Son, of Woodstock. Whilst the smaller kinds of agricultural implements are also very limited in number, though very excellent in quality and workmanship. Among them one lot of steel spades at \$12 per dozen, and another steel edged at \$10 per dozen, shown by D. F. Jones & Co., of Gananoque, were perhaps the most worthy of observation.

The following notice, taking a somewhat different view, is from another Toronto daily paper, (the *Globe*):—

“ When it is considered that, as a general rule, it costs about 60 per cent. on first price to lay hardware down in Canada, if brought from England, it becomes, in that view alone, highly desirable that all home manufactures should be encouraged. It was, therefore, with peculiar pleasure that I saw many different articles which are supposed to be foreign to Canada, produced in first-rate style, with an elegance and finish which would do credit to the best English or American manufactures. And first I would mention the display of stoves, which, though not large, is certainly very fine. One, which attracted much attention, was made by Messrs. Landon & Buck, Brantford. There are others like it by Messrs. B. G. Tisdale, of Brantford. A very unpleasant smell, and one which pervades the whole house, is often caused by the cooking of meat in the stove. In the one spoken of, a plate can be taken out from the front, which exposes an iron on which to rest the meat, and the two doors form wings on which the plate is put, so that the meat is shut up on all sides but one, and the draught passing through that opening carries the scent up the chimney. Mr. B. G. Tisdale also shows a stove which he calls the Centurion, and which regulates its own draught. Other stoves he exhibits, made of Russian iron, or as it is more commonly known, Charcoal Iron. The castings with which the stoves are ornamented, are very clear and sharp with the exception of the ornaments on the top, which are a general exception to the remark. As a rule, however, better castings I have never seen, and they do the manufacturer great credit. A dumb stove by Mr. Tisdale, which is made of a number of tubes, is so constructed that it may be easily taken to pieces, and the inside of each separate tube, visited with the brush.

Passing away from this branch, we meet a direct-action steam engine, made by Ganson, Waterous & Co., of perhaps 10 horse-power. This is the only steam engine in the building, and I cannot think does us much credit. Why the maker has, instead of a regular crank, put in its place, a round flat plate is not apparent; it cannot conduce to utility, certainly it is not ornamental.

In its details, the engine seems, however, to be well finished, and would doubtless do good work. In this department of industry there seems to be some lack of energy on the part of our manufacturers, for had the machinists of Toronto alone exerted themselves, they would have been able to send to the exhibition better samples. Mr. J. P. Milliner shows some axes which are well finished, and two especially, with carved rosewood handles, are very handsome. He has also a case full of hammers, spokeshaves, socket chisels, and a good assortment of planes. Not far from this stall is a small machine, the invention of Mr. J. Ptolemy, of Brantford. It is a corn-sheller, and looks as though it would do its work satisfactorily. It consists of a barrel on which are fixed a number of teeth (something like the pins on a barrel-organ), which work between a number of the same kind, placed in the box in which the barrel turns. When the corn is drawn between them, it is instantly stripped, the grain falls into a shaker, and is freed of the husks in the regular manner. In this department also, there are a number of churns, of ingenious construction, made by Mr. W. Brandon. I must not omit to notice the splendid collection of flannels exhibited by Mr. John Rankin; they were the admiration of all who saw them, and no lady could possibly pass by without wishing to make them an addition to her possessions. Messrs. Turnbull & Thompson exhibited some doors with ornamented panels, in one of which was a painted window, which had a good effect. Mr. W. H. Tuttle, of Canfield, shows a patent augur-handle, which, by a very simple and ingenious contrivance, is made to hold the augur very securely. Another contrivance which deserves more than a passing notice, is Mr. Farnbarn's method of heating flat irons. He attaches one end of a small vulcanized India-rubber tube to a gas-burner, passes the other end into the body of the iron, and the gas gives as much heat as is required—the vulcanized India-rubber, being almost incombustible, is not affected by the heat. Mr. Alex. Graham, of Hamilton, shows some shingle nails, and kegs of larger sizes, varying from 8d to 14d. They are very well made. Mr. W. Rice, of Toronto, has a small show of wire-work, which looks very well.

Messrs. J. Becket & Co., of Hamilton, exhibit a six horse power steam engine, though I cannot say much in its favour. Messrs. Ganson, Waterous & Co., have here erected an engine for the sawing of wood. It is horizontal, and the saw, (one of Spears & Jackson's) is placed on the fly wheel shaft. It thus comes into a small space, and to judge by the test it was subjected to, to-day, would do an immense amount of work. Mr. John Gartshore of Dundas, exhibits a smut machine; Mr. Peter Logan of Paris, a straw cutter, which looks capable of cutting enough to supply a small army. Mr. M. Willoughby has a smaller machine for the same purpose, but causes the knife to be drawn across the straw by means of a crank from the fly wheel. The machine exhibited by Messrs. Porter & Schneider is remarkable for its simplicity. It is entirely of wood, with the exception of the blades.

The entries of Messrs. T. Fuller & Co., of Toronto, in furniture, were especially commendable. Among other elegant specimens of their workmanship, the most conspicuous was a very beautiful sideboard of oak; it was most elaborately wrought; on the doors were carved tasteful groups of flowers, fruits, fish, &c.; above were several shelves supported by carved brackets, between which were arranged pier-glasses; the whole piece of work surmounted by a stag's head, executed with great skill. The entire collection of Messrs. Fuller was very commendable.

Next to this lot of entries were some capital specimens of artificial limbs, which are so regulated by the simplest mechanism, that they seem as perfect as

art can make them; these articles were exhibited by the maker, J. Condell, Kemptville.

A very neatly manufactured telescope rifle was exhibited by J. J. Walker, Simcoe; and some tubing and chain pump apparatus by L. D. Campbell, Toronto.

Mr. T. Glasco, of Brantford, exhibits a case of furs. Some good specimens of Canadian map-making and mounting are exhibited by Mr. Tremaine, of Kingston. Hamilton has done well in the number of the contributions she has sent, as Messrs. Munro and Morton of that city help to show. Two sideboards they exhibit are very handsome, but the gem is a walnut table, beautifully finished; the different pieces of which the top is composed are well matched. Mr. W. Bevis of the same city, also shows a centre table, inlaid with different coloured woods, which produces a pleasing effect. Canadians however, like the English, have much to learn from Austrian and French cabinet makers, before they can pretend to anything like proficiency in the art.

LADIES' WORK.—There were fewer entries in this department than the previous year; still, there was a very good assortment of fancy and useful articles.

FINE ARTS.—The number of entries in this class exceeded that at either of the two preceding shows, and the display was highly creditable. Amongst the specimens, perhaps the photographs, colored and uncoloured, attracted the greatest attention; they exhibited considerable advance in the style of execution. Amongst the specimens of art manufacture, there were some good specimens of stained glass, by Messrs. Bullock & McCausland, of Toronto. At the head of the Floral Hall, Mr. Pell, of Toronto, had a beautiful and highly ornamental specimen of carving and gilding. In Wood Carving, Mr. D. Fleming, of Toronto, was the only exhibitor, his "Cupid Reclining," was a very meritorious work. In Sculpture, there was also one specimen, the bust of Chief Justice Sir J. B. Robinson, by Mr. Gardiner, of Simcoe, which was noticed as a work of much merit. There were but few professional exhibitors in the Fine Arts Department; many of the amateur performances possessed considerable merit while others were of a very indifferent or inferior order.

INDIAN SPECIMENS.—In this class there were but few entries of manufactured articles enumerated in the prize list. The things shown were principally heir-looms and relics, some of them of an interesting character, historically. G. H. M. Johnson, or "Onwassyshon" Chief of the Six Nations, was the largest exhibitor.

BOOKBINDING, PRINTING, PAPER, &c.—In this class the number of entries was nearly the same as the previous year. There were no specimens of paper of any kind entered. The specimens of bookbinding and printing were good.

FOREIGN STOCK.—There was but one entry, an Agricultural Stallion. In 1856 there were 3 entries, and in 1855, 12 entries in this class.

FOREIGN AGRICULTURAL IMPLEMENTS.—There were ten entries in this class, against 41 in 1856, and 72 in 1855, showing a gradual diminution in the

competition in this department. There were no entries of articles enumerated in the list.

SWEEPSTAKES PRIZES.—There were only 17 entries in this department, and these, except in one or two classes, were withdrawn from want of a sufficient number of entries to compete.

EDUCATIONAL DEPARTMENT.—Subjoined is a description of this department, which was arranged with much skill and taste by Mr. S. P. May, Librarian of the Educational Depository at Toronto, who was indefatigable in his exertions to render it as entertaining and instructive as possible :—

An entire transept of the Floral Hall was occupied with the various educational requisites which may be obtained for Public Schools from the depositories in connection with the Education Office ; this part of the exhibition attracted much attention from the beautiful finish of the apparatus, and its general appearance, the educational coat of arms in relief displayed in front, and the whole decorated with evergreens and suitable mottoes. The maps were suspended from a stage erected on the centre of the platform and comprised not only those of an elaborate character, such as raised or embossed physical maps, but also those in use in our Grammar and Common Schools ; among them were noticed Johnston's and the Irish national ancient and modern series, Varty's and Guizot's physical charts, Marshall's physiological diagrams, Johnston's philosophical charts, MaBruns and Reynold's Useful Arts and Manufacture, Varty, Reynolds and Mattison's astronomical diagrams, with various zoological, botanical and geological charts showing the principles of those important sciences in a clear and instructive manner ; most of the maps were on so large a scale that the most numerous class can be instructed with the same ease and facility as the single student. The object and tablet lessons were an interesting display of themselves ; they embraced zoology, botany, natural phenomena, scripture history, and reading and arithmetic lessons.

The extensive collection of philosophical instruments and apparatus had been selected with much care, in order to obtain those of practical utility, as well as scientific interest, thus ensuring intellectual improvement and enriching the mind with a love for philosophical observations. The selection consisted of apparatus for mechanics, hydraulics, pneumatics, optics, astronomy, electricity, galvanism, chemistry, &c., showing the laws of matter and motion, centre of gravity, fall of bodies, gyroscopes, instruments illustrating the centrifugal forces, and the tendency of bodies to revolve upon their shorter axis, mechanical powers, forcing and lifting pumps, Hiro's fountain, hydrostatic bellows, Archimede's screw pump, and air pumps of various sizes, with numerous instruments for experiments in pneumatics, microscopes, models of the eye, magic and phantasmagoria lanterns with appropriate slides, planetariums, with other astronomical apparatus, of a new and novel description, electrical machines, electro-magnetical and galvanic apparatus, instruments for exhibiting the properties of heat, chemical laboratories prepared for the use of schoolmasters and lectures, mineralogical and geological specimens, with models showing the formation of strata, crystals, &c., terrestrial and celestial globes, varying in size from 2½ to 36 inches in diameter, plaster casts and other drawing models, sectional models of machinery, including stationary and locomotive engines, and that greatest of wonders the electric telegraph.

In this department there was a Canadian section displaying school furniture,

map stands, reading tables, bent levers, substitute for black boards, geometrical forms and solids, and sectional models of steam engines, (these are of much importance to the teacher, as the difficulty of explaining the interior and exterior of the machine is removed, the whole of the interior being laid open, the entire machinery is exhibited, every valve opening and closing, the pistons rising and the whole moving in the same manner as a complete engine).

It is worthy of notice that most of the articles in the Canadian section are manufactured by the enterprising firm of Messrs. Jacques and Hay under the direction of the educational department; as an illustration of Canada being able successfully to compete with older countries in this important branch of commerce, it is sufficient to say that the highly finished school desk with two chairs, exhibited by the department are sold at the low rate of \$5 per set.

The entire collection was well fitted for philosophical research and experimental demonstration, thus meeting the aim of the department, as expressed in a circular addressed to Local Superintendents and others by the Deputy Superintendent previous to the exhibition, comprising a full view of the most important practical applications of the sciences to education; and it is by these things only that impressions of lasting utility can be given, and which alone can promote the intellectual welfare of our country.

The twelfth annual exhibition, considered as a whole, was certainly not inferior to any one of its predecessors, and had it not been for the exceedingly unfavorable weather, in connection with the want of sufficient railway accommodation, it would have far surpassed anything of the kind previously witnessed in the Province. The cash receipts were about \$8,000, which is more than at any previous show.

MEETING OF MEMBERS OF THE ASSOCIATION.

A public meeting of members of the Association, and others interested in its progress, was held on Wednesday Evening, 30th September, in the Town Hall of Brantford. The number of persons present was about one thousand. The President of the Association, Mr. Alexander, occupied the chair.

The Chairman opened the proceedings and proposed as a subject for discussion, "How can the industrial interests of the Province be best benefitted by the Association?" He called upon Wm. Mr. McDougall to lead the discussion.

Mr. McDougall said that he had been much engaged during the day, and would be as brief as possible. In his journal, the *Agriculturist*, he had called attention to two or three points in reference to this subject, which he had thought necessary. Of the Exhibition all must be proud, but the question was, how could they do more? One deficiency was, that the Association had not recorded the results of the different exhibitions, and though many papers had published much about it, still they could not show exactly what the results were. Beyond publishing the prize list, there was not a single fact recorded. He thought it was possible to have a full and complete record demonstrating the progress made. Photographic likenesses might be taken of all the prize animals, engraven on wood, and placed on the Journals of the Society. It was a matter of great satis-

faction to be able to look back to the likenesses of the fathers of the different celebrated breeds of cattle in England. Great changes had taken place in their appearance. The expense was so trifling in comparison with the advantages which would result, that he thought it ought to be done at once. There was also a deficiency in recording the way in which results had been obtained. Could any man by merely looking at a prize turnip go home and produce one like it? In order to do that they must know at what time of the year it was planted, and in what soil, and without that information they could not report the process. Printed questions ought to be put to the Exhibitors, relative to these matters, which should be answered by them; for if that were done the press would be happy to publish the results, thus obtained. The President had pronounced a great eulogy upon the Normal Schools, but he considered that this too was a school, in which they were all scholars. He thought it would be well if the Association were empowered to question them as to their acquirements, for, although a man obtained a prize they might be very much mistaken in setting him down as a good farmer. Mr. McDougall then referred to the influence of agricultural machinery, and deprecated the practice of giving prizes to implements after only undergoing a cursory survey. As was done in the United States, before a decision was come to, they ought to be made to go through with their work in the field. This morning they had tried some reaping and mowing machines, and, though the weather was bad, the trial was satisfactory, and the result, he believed, would be that a prize will be given to a machine which, if it had not been tried, would probably have been passed over. Then, he thought, all harvest implements ought to be tested in the field. Some thirty ploughs had been tried to-day, but the competition was so great, they were so nearly alike, that it was almost impossible to decide which was the best. Two of those ploughs were to the eye nearly alike, but on trial one was found to be very superior to the other. The same was the result with the fanning mills. Mr. McD. then made some remarks about having a more permanent place for the meeting of the Association. He was told that it had cost some farmers as much to get the last seven miles as the previous thirty or forty. The result would be that many would, in future, stay at home. Then in Brantford they had been obliged to pay heavy charges for accommodation; again, the Committee of the Association had all to be broken in afresh, which had occasioned much delay. In Lower Canada, Montreal had been selected as the permanent place for the Exhibitions, but he thought in the Western Province two or three places might be chosen. In this matter, he hoped, something would be done by the meeting.

Mr. E. W. THOMSON referred to the ill-omened prophecies which had attended the earlier efforts of the society, but their great success had proved them false. When they first began operations, their agricultural implements almost all came from the States. But to-day, when appointed as judge of foreign implements he could not find one from that country. He thought it would be better to appoint a committee to put the machines to a practical test in the season of the year when it could best be done.

Mr. FRENCH, of Westminster, thought it would be well if an Agricultural College were established. In the old country it was already done. He differed from Mr. McDougall as to the proficiency of the farmers; many old men could tell that some improvements now made were known to their great-grandfathers.

Mr. D. B. STEVENSON, M.P.P., Picton, Vice-President, thought that the proposal to seek information from the farmers as to the mode in which they obtained results was good, and that it ought to be acted upon. He had never seen a better sample of agricultural implements exhibited either here or in New York than on the ground to-day. Speaking of the use of reaping machines, he

said they were worked in most of the country, more or less, and often afforded help in getting in the harvest which money could not have obtained. With regard to manures, there was very little known as to the best way in which to make and preserve them.

Mr. JOHN WADE, of Cobourg, was opposed to the migratory system. The question was, should they have permanent buildings in three or four different places? The quantity of land necessary would prevent them having more. Toronto, Kingston, and London, he thought the best places. If they were to have more, he would say Cobourg and Hamilton.

Mr. GOOD, of Brantford, thought the exhibition of the different articles in various parts of the country was exceedingly beneficial, and it would be doing injustice to the country if they were locked up in one or two localities. He was on the Committee, and he knew the expenses of the building would not amount to £1,500, and of that amount £1,000 was given by the town and £500 by the public.

Mr. THOMSON again rose. He approved of what the last speaker had said. By the migratory system, they had obtained the support of the different corporate bodies, which they did not refuse to give them. The expense of the buildings was borne by the different localities in which the Exhibitions were held. He thought that a resolution to ascertain the opinion of the meeting should be made, and whichever way it was carried, it would have great weight.

Mr. McDougall said the circumstances of the country were very different to what they were twenty years ago, and the facilities of communication were so great, that the confining of the Exhibition to one or two places would do no harm. If the fifteen hundred pounds, which were now wasted in erecting buildings every year, were devoted to giving better prizes—it would be far more advantageous. Mr. McDougall concluded by moving, as a resolution, "That, in the opinion of this meeting the annual meetings of the Provincial Exhibition should be held at three of the largest cities of Upper Canada, most convenient for the purpose."

Mr. J. B. MARKS, of Kingston, thought this was not the right place for the resolution to be put; it should be left to the Delegates of the Counties to deal with on Friday.

Dr. BARKER, of the Kingston *Whig*, moved in amendment, "That in the opinion of this meeting, it would be very injudicious to alter the present system of holding the meetings of the Society, and that future Exhibitions should be held in all parts of the country, as circumstances warranted."

Mr. THOMSON said, that it might be two or three years before the question was decided; other meetings like this would be held in different parts of the country, and expressions of opinion given; he however thought that this meeting was competent to express an opinion.

Mr. MACKINNON, of Hamilton said, if the Exhibition was fixed in any particular part of the country, the remaining portion would take but little notice of it.

Ex-Sheriff JARVIS thought, those persons who advocated the perambulating system, looked more to the interests of the people in whose vicinity the Exhibition was held, than to the interests of the exhibitors. Many of the farmers had been put to a great deal of trouble, and to use a vulgar expression, "shaved." If the question were left to be discussed by the Delegates, it would be calmly considered. He hoped both resolution and amendment would be withdrawn.

The Chairman was about putting the amendment to the meeting, when

Mr. BERESFORD rose, and as a Delegate protested against an expression of opinion being made, as it would be discussed by the Council.

Mr. MCDUGALL said a proposition had been made to him, that if he would withdraw his resolution, the amendment should be withdrawn also; he thought his best course would be to withdraw it.

Both resolution and amendment were then withdrawn.

The CHAIRMAN then proceeded to speak in favour of asking the farmers to give particulars of the way in which their stock had been bred, and their crops raised; he also thought they ought to give a better price for their agricultural journals.

Mr. PERRAULT, editor of the *Lower Canada Farmer*, and Secretary of the L. C. Agricultural Association, was then called upon, and said he was very loath to give an opinion before so many old farmers. What he knew were facts which had been taught him by the Professors under whom he had studied. He thought if schools were spread over the country, in which young men could practically study agriculture, great benefits would accrue. The wheat fly had done great harm in the Lower as well as the Upper Province, and pamphlets had been written about it. Not much had been learned. Had young men had the opportunity of studying, then something might have been done. In schools of this kind, implements might also be tried.

Mr. DENISON, Treasurer of the Association, passed some strictures upon the conduct of the Buffalo and Lake Huron Railway Company, and moved a resolution expressing the dissatisfaction of the meeting with the high rates which had been charged for freight, which was carried.

VISIT OF HIS EXCELLENCY SIR WILLIAM EYRE TO THE EXHIBITION.

On Thursday, October 1st, His Excellency, Sir Wm. Eyre, Commander in Chief of the Forces, and Administrator of the Government, arrived at Brantford by special train at 1 p.m., accompanied by his suite and several members of the Administration. He was received at the Railway Station by the Mayor, and a number of other gentlemen, who escorted him to the Town Hall, where the following address was presented by the Town Council:—

To His Excellency Lieutenant-General Sir William Eyre, K.C.B., Administrator of the Government of the Province of Canada, and Commander-in-Chief, &c., &c., &c.

We, the Municipal Corporation of the town of Brantford, in the County of Brant, in council assembled, would approach your Excellency in the language of congratulation, to tender to your Excellency a hearty welcome on this, your first visit as administrator of the Government, to our young and rising town, to honour and encourage by your presence those great and noble pursuits, some of the results of which are about to be exemplified on this the occasion of the Twelfth Annual Provincial Exhibition, under the auspices of the Agricultural Association of Canada West; an institution which reflects the wisdom of its founder, a wisdom which is annually proclaimed by presenting to the world an honest rivalry and competition in the improvements and progress that have been made in all those things which constitute the wealth, and bespeak the intelligence, wisdom, and true greatness of the people of this fine Province.

Your Excellency is now within the precincts of the territory of the "Red Man," granted by an ancestor of our present most gracious and beloved sovereign

to him and his posterity as a reward of that fidelity, valour, and attachment to the British Crown which characterized his race, in perilous times past, from which, unused to the arts and appliances of civilized life, he has gradually retired, leaving it to the genius, industry, and enterprize of the "Pale Face" to use and cultivate in such a manner as to produce those happy, encouraging, and cheering results we are about to witness.

Your Excellency, conversant with our history, will readily perceive that the inhabitants of this town and county, in selecting a name—actuated by the recollection of the valour and attachment which gave birth to a monarch's grant—adopted that of an illustrious and distinguished chief of the "Red Man," Joseph Brant, whose last resting place is within sight, and whose funeral obsequies were, a short time ago, a second time attended by thousands of his white brethren from all parts of the province and neighbouring republic.

We hail in your Excellency an old and faithful servant of our noble empire. One whose fame is inseparably connected with the deeds of prowess and success which characterized the arms of England and her allies, in the recent struggle against the encroachments and bad faith of a government, the leading feature of which has always been implacable and uncompromising enmity to the great principles of freedom which we enjoy under our government and excellent municipal institutions, of which we are justly proud, and which, in the course of events, your Excellency has been called upon to administer and maintain.

While congratulating your Excellency and ourselves on this most auspicious occasion, we would also express our unfeigned regret that in other lands scenes of atrocity and barbarism are being perpetrated, which are altogether at variance with, and repugnant to the peaceful and ennobling pursuits to witness the results of which has brought us together. And we would express the hope that in the good providence of God, the day is not far distant when our brothers in arms now engaged in the suppression of those acts of atrocity and barbarism, may, like your Excellency, be witnessing scenes more congenial to the true and great interests of the human family—similar to those that are about to engage our attention, and which we hope your Excellency may be long spared in health and happiness to enjoy.

His Excellency replied verbally in fitting terms to the Address, after which another was presented by the Mechanics' Institute of Brantford, as follows:

To his Excellency Lieutenant-General Sir William Eyre, K. C. B., &c. &c. :

MAY IT PLEASE YOUR EXCELLENCY,—

The President and members of the Brantford Mechanics' Institute beg leave to welcome your Excellency to this town on the auspicious event of the first Exhibition being held therein of the Agricultural, Manufacturing, Educational and Artistical Productions of the Province.

We assure your Excellency that it is with feelings of gratitude that we observe the interest manifested by you on this and other occasions in the industrial arts and prosperity of this Province.

As a Mechanics' Institute, our special concern is in the advancement of the various classes of manufactures and handicrafts of every kind; and we think we have reason to be proud of the progress we have made therein, as well as in population, commerce, and wealth, during the last twenty years—a progress with which the surrounding country has kept pace in its improved agricultural implements and farm buildings.

We name the period of twenty years, because some of us old residents remember with pleasure, that at that distance of time your Excellency dwelt amongst

us, and we therefore venture to hope that it will not be without personal interest and a gratifying reminiscence, that you witness the rapidity with which towns grow in Canada.

We shall only just allude to your Excellency's service during that period as a distinguished warrior, but though men of peace ourselves, we trust we shall never fail in gratitude to those who peril their lives to defend the honour of our mutual country when assailed by foes; though we rejoice when they can "beat their swords into pruning hooks," and share with us the quiet enjoyments of home. This happy state of things is for the moment interrupted by the Indian revolt, but a swarm of hornets, though it may sting and irritate us for a time, has no power to inflict any enduring injury, so we solemnly trust that the Providence which has hitherto favored and protected the British nation, will remove these threatening eastern clouds, and restore us peace, and as a happy omen of which, and a complete epitome of human life, we regard the scene presented here to-day, where Agriculture, Mechanics and Arts combine to offer to our view, their varied productions, under the patronage of a soldier like your Excellency.

In conclusion, we beg to present our best wishes for the continued health and happiness of your Excellency, and all connected with you.

His Excellency replied and expressed his high gratification at receiving such an address, for there was no institution more honourable to its promoters than the Mechanics' Institute. Nothing could be more gratifying than to see all classes assembled to cultivate their minds, making other important matters subordinate to these higher interests. He then proceeded to the Show Ground, where he was received by the President and officers of the Association. His Excellency was first conducted to the Committee Room, where the President, Mr Alexander, read the following address:—

To His Excellency General Sir W. Eyre, K. C. B., Administrator of the Government, &c. &c. :

MAY IT PLEASE YOUR EXCELLENCY,—

We, the Directors and Members of the Provincial Agricultural Association, desire to assure you that we hail with great pleasure your Excellency's presence at our great annual Exhibition.

The farmers of Upper Canada are always happy to have an opportunity of paying homage and respect to Her Majesty's Representative in this Province, and we tender to you a warm and cordial welcome in that honoured position; but we also recognize in you a distinguished representative of that gallant and devoted army, which so nobly sustained the renown of British Arms in the Crimea.

Your Excellency has returned amongst us clothed with the honors of the battlefield, and we earnestly pray that you may long be preserved to render further services to your country, and to enjoy all the honors conferred upon you by our beloved sovereign.

GEORGE ALEXANDER, *President.*

His Excellency replied as follows:—I am very much obliged to the members and directors of the Agricultural Association for their kind and hearty reception, and for the address presented to me. I was very much afraid that I should not have had the honor of attending on this occasion, but nothing would have prevented me from doing so but positive necessity. I have heard very frequently of this great grain-growing country, and I saw something of it in passing through

on a former occasion, and although I looked then rather with a military eye, I could not be otherwise than struck with the appearance of the country. It is very gratifying to me, in the high position in which accident rather than my own merits has placed me, to be able to act in a civil capacity and to encourage the arts of peace, of which this society is one of the chief promoters. Especially upon this occasion I am proud of being present, and I am very much obliged to you for the manner in which you have received me.

Several gentlemen present were then introduced to His Excellency, among whom were the Hon. Washington Hunt, Ex-Governor of the State of New York, Mr. Allen of Black Rock, E. W. Thomson, J. B. Marks, W. B. Jarvis, Hon. A. Fergusson, the Sheriff of the County of Brant, David Christie, M.P.P., D. B. Stevenson, M.P.P., F. W. Stone, and others. His Excellency then proceeded round the grounds and inspected, as well as his limited time and the very unpropitious weather would permit, the various articles that were exhibited.

THE BANQUET.

A Public Banquet was provided for the Association, and invited guests, at 4 p.m., of this day, Thursday, October 1st, under a large tent upon the grounds, to which His Excellency the Administrator proceeded, after inspecting the Exhibition. The Hall was designed for the reception of seven or eight hundred guests; but from the inclemency of the weather, and the lack of information among the mass of visitors as to the character and hour of the entertainment, not more than half that number of persons took their seats. The President, Mr. Alexander, presided, and amongst the guests present were the following named Gentlemen:—Sir William Eyre, Hon. Mr. Hunt, Hon. Messrs. Vankoughnet and Spence, Hon. Adam Fergusson, Mr. L. F. Allen of Black Rock, Hon. J. H. Cameron, the Sheriff of Brant, D. Christie, M.P.P., D. B. Stevenson, M.P.P., George McBeth, M.P.P., E. W. Thomson, J. B. Marks, &c. Some time having been occupied in discussion of the viands, the Chairman rose and said that as His Excellency was obliged to return to Toronto that evening, he was obliged to commence the business of the evening sooner than they might otherwise desire. When I see, he continued, that we are surrounded by so many distinguished visitors from the United States as well as from this country, it would not be good taste in me to occupy your time any longer than is absolutely necessary, but I should be remiss in the discharge of my duty in your opinion, if I failed to seize the very first opportunity to say with what pleasure we hail the presence of His Excellency among us. I have always thought, and there are many who think the opinion a sound one, that we ought to rally round the Annual Exhibitions of our Society, the leading men of the country. We know that parties must exist, but we should rally round our exhibitions all distinguished men and leave politics outside. We are pleased to see them in their private capacity; and let us show that by drinking their healths, we do not show them costly viands, but we give them what His Excellency, and our other guests, will value much higher—we give them farmers' fare and a cordial welcome. (Cheers.) I hope, and I am quite sure of it, that all who now sit around our board will show that excellent sense for which the people of Upper Canada are distinguished, and allow everything to pass off in harmony and good fellowship. We will now unite in drinking that toast to which our American friends so heartily respond—the health of our beloved Sovereign.

MR. ALEXANDER—We will now show our American friends with what cor-

diality we can join with them, in drinking the health of the President of the Great Republic—The President of the United States.

The Chairman then called on MR. HUNT to reply, who spoke as follows :— I desire to express to you my cordial acknowledgment for the honor which you have paid to my country, and the cordiality with which the sentiment was responded to on your part. I receive it as an evidence of the friendly feeling, which, I trust, will always animate the people of Canada and the United States. It is very proper on this occasion that I should assure you that the sentiments you have manifested are warmly reciprocated by the people and government of the United States, and that on our side of the line we rejoice in your prosperity; and in all your enterprises for the improvement of this noble Province, and for the moral and intellectual elevation of your people, our good wishes attend you. Although the people of the United States and Canada cannot properly be called one people, yet it is impossible for us to forget that we are bound by the most intimate ties—that we are sprung from the same stock, we speak the same language, and we worship at the same altars. Is it possible then that two neighboring countries, united like these, and having common interests, should regard each other with distrust? If ever such feelings existed, I thank God that they have disappeared. We meet now, as I trust we ever shall, as friends and neighbors, having a common interest and acting together in the discharge of great responsibilities. Consider the true condition of this great American continent: with the exception of a small part in the north-west, held by the Russian Bear, and another in the south, held by the degenerate sons of the Spanish Cavaliers, all the rest, from the Atlantic to the Pacific, is held by the great and noble English race to which we belong. We in the republic, to which such friendly allusion has been made, feel on our part that we have a responsibility as a people to advance the interests given into our care, and to hand down to posterity those principles of civil and religious liberty which we have inherited from our ancestors, and although our form of government is different from yours, it has the same freedom of the Press and the same constitutional liberty. We feel that the English race, wherever we find it, forms one great family, which it has pleased Providence to place in the vanguard of civilization, and that it is held responsible for that law and liberty which are essential to the welfare of the human family. These are the sentiments which animate the great body of the American people. I rejoice to believe that the great unanimity and friendship between us has been promoted by that reciprocity of commerce adopted only one year ago. People on both sides feel that they have not only a common interest but that they are animated by the same general views and principles. They are connected by the same great objects, and the effect of this is to draw closer and give additional strength to those cords of affection and interest which I trust will ever continue to govern the relations of the people of the United States and the British Empire. I must express the pleasure I have received from the Exhibition of this day, and the honor of meeting your distinguished chief magistrate. I have long wished to meet him and to take him by the hand, sympathising as we do with him and his brave colleagues. The honest opinion of the respectable,—the conservative part of the people of the United States is with England in all her contests with the great nations of the earth. We lament with you in your defeats, and rejoice with you in your victories, except those over your brethren on the other side of the line. It gives me as much pleasure to see this proof of your advancement as to see that in my own country, and it will please us to see you through this interchange of sentiment and feeling. May that mutual intercourse which argues such friendly relations long continue, and may it always be attended with those results which are the great blessings of peace and civilization.

Mr. ALEXANDER then proposed "The health of His Excellency Sir William Eyre."

SIR WILLIAM EYRE, in responding, spoke as follows:—I am very much obliged to you for the handsome manner in which the toast was proposed and responded to. It has given me great pleasure to be here under present circumstances. Allusion has been made to my services in the Crimea, for which I feel honored. That war, which I believe to have been a righteous one, presented the spectacle of two great nations joining together in a common cause, and persevering in their efforts until they brought it to a legitimate conclusion. We went sustained on that occasion by no ordinary gratification, for no army was ever more supported by public opinion. In no part of the world was this support and this sympathy more general than in Canada and Her Majesty's other possessions in America. Nor was that sympathy confined to words, it resulted in noble action, and the feelings that prompted the people of British North America to come forward and subscribe to the Patriotic Fund, will long be remembered by the British army. That feeling still lives, and if England, in the hour of her need, ever requires the aid of her children, they will not imitate the conduct of the twelve colonies of Rome, who refused their tribute when Hannibal was at the gate. The arts of peace, however, are more noble than those of war. War has its excitement, and the love of danger is natural to manly minds; but warfare ever comes to us a curse and a scourge, and when it does come, it comes with the fury and uproar of a hurricane; but peace is refreshing and bounteous as the summer rain—of which, by the bye, we have had a little too much to-day. I trust all those who, by their talents and position, exercise great influence over the affairs of their fellow men, will do their best to cultivate the blessings of peace, and promote those courtly arts which cement men together far more closely than political treaties. I am proud to have been here on this occasion, and I trust that since ambition must contend, we may contend in the arts of peace, and see who can produce the finest stock or grow the finest grain, remembering always that it has been well said that he who makes two blades of grass grow where only one grew before, confers a benefit upon his fellow man. Let us contend in all those useful arts which form the wealth of nations, especially agriculture, which is the seat of domestic happiness. I now beg to propose as a toast, "The Agricultural Interests of Canada."

The Chairman called upon MR. VANKOUGHNET, Minister of Agriculture, to reply, which he did in the following words:—I do not believe that a more difficult subject could be given to any one than the interests of agriculture, for it is one in which all those assembled would have so much to say themselves, and with which they are so intimately acquainted, that it would be impossible for any speaker to say anything either for their amusement or to add to their knowledge. Situated as we are in the midst of what may be called the Western part of Western Canada, agriculture is an art in which all the industrial classes are more or less engaged. It fell to my lot the other day to visit the Agricultural Exhibition of Lower Canada, and I was extremely gratified with what I saw there. In many respects they made a show not equalled here to-day, but in the main points we do claim the pre-eminence in the character and amount of our productions. The interests of Canada require very little from the hands of speakers here, for the great importance of them has been shown at the Exhibition we have just been visiting, and notwithstanding the difficulty of seeing the grounds to-day, one could not fail to see the ardent interest every one took in the productions. The mechanical department of the Exhibition has justly attracted great consideration, and an exhibition of those articles is more interesting to many than the mere productions of the earth. The importance of our agricul-

tural interests could be no better exemplified than by the mixed display here shown, which proves just this, that from what was the first product of the laborer's toil have been built up those arts and manufactures, specimens of which are here exhibited. Agriculture is that on which rests the art and profession of every man. I am a lawyer, but I do not know how I could have accumulated what little I have, if the farmers had not been able to pay for it. We are all bound up with it, and no wonder if you see here at this exhibition a mixed-up assemblage of farmers, artisans, mechanics, lawyers, and even members of the Government—all are interested in the productions of agriculture, for on the success of that we all depend for the success of our country. The progress of agriculture has been wonderfully exemplified during the last few years. Between the year 1851 and 1856 the exports of our great staple have increased 280 per cent., and in the same period the population has increased 44 per cent, which accounts to some extent for the rapid increase of agricultural productions. This year we have added upwards of 32,000 inhabitants of a superior class to our population. Some 60,000 emigrants have come in, and of these upwards of 32,000 have remained in the country. I do not wish to trouble you with statistics, but I will give you another instance of the increase of wealth: I will take this very county, and I find from the assessed returns of last year, taking the population as near as we can, the average wealth of every man, woman, and child, exceeds forty-six pounds. The County of Oxford, as the President will be glad to learn, is still higher, for every man, woman, and child there, is worth £60 of assessed property, so that we have no reason to complain, or dread comparison with any other country. Our advance has been most rapid, and it has all been based upon agriculture. The Legislature, looking to the success of agriculture, and of the arts and manufactures, has combined the two together in all these exhibitions. A great many experiments must be tried, and different opinions will exist upon many points; but we have to bear in mind, so that we may not be discouraged by former failures, that in England it was only when the wealthy and noble classes joined together with the farmers, that Agricultural Associations succeeded. Whatever discouragement we may meet with, we have to bear in mind the fact that as our prosperity has been based upon agriculture, so it never can fail so long as the interests of agriculture are properly promoted, and I am happy to find that in this country the very best systems have been gradually introduced. That which was first roughly tilled is now cultivated as garden land, and if we still go on improving our process of cultivation, and if the interest shown this year be continued year after year, and if we seek one with another to harmonize our proceedings, we need have no fear but that agriculture will increase and the country increase with it. I have ever felt the deepest interest in agriculture; I was brought up on a farm; I have seen the struggles that farmers have had in early days, and the placid contentment they have enjoyed in their old age when they could no longer work, and I am happy to have had an opportunity of expressing how deep that interest is. You will allow me to remind you that a distinguished gentleman who has already spoken has had much to do with the interest of the farmer; I allude to Mr. Hunt, by whose exertions was brought about that reciprocity of trade, which has proved so beneficial. He was one of those far-seeing men who saw that there would be no danger in removing the restrictions of custom houses, and in establishing reciprocity of trade and of feeling, and I have, therefore, great pleasure in proposing the health of Mr. Hunt, and our American guests.

The CHAIRMAN, at the request of Mr. Hunt, called upon Mr. Allen, of Blackrock, to reply.

Mr. ALLEN after some humorous observations, said, I came here to attend your Exhibition, and this day, and this tent, and the rain, and the mud, put me

in mind of the time I attended an Exhibition in Hamilton. Your country has made extraordinary progress. You had then some capital stock, some very fine sheep, and some excellent horses. I came this morning in the cars from Buffalo, and the first thing I did I went and saw everything upon your ground. I examined all the animals. I have a little taste that way—I like to look at good things, and I assure you that your progress is astonishing. I never saw such a show of sheep in my life as you have in your pens, and when my friends come to me and ask where they will get the best long-woolled sheep, I say, go to Canada. I also saw some Galloway cattle, and with them I saw a little Scotchman with his plaid—and I asked him about them. He asked me to go into the pen and examine them. I said, how are they going to succeed? He said they are working their way along. Well, said I, there is one thing I admire, you have shown pluck in going to your own country for these cattle. There was something national about it and I admired it. So, my good friend, observed I, I do not know what you think of us barbarians, and I don't care, but I feel that the love of one's country is one of the holiest feelings next to the love of one's own kith and kin. When I come here nothing fills me with more grandeur than when I hear "God Save the Queen." The same ancestry, the same people who listen to that magnificent anthem in England, bear the same blood that we do.

The PRESIDENT—I call on our President of the Board of Agriculture for a toast.

E. W. THOMSON, Esq.—I rise most heartily in answer to the call to give a toast affecting equally the interests of all Canada. Recently I had the pleasure of making a visit to a show of this nature in Lower Canada, and although it struck me that the display of horses and horned cattle is not within 75 per cent. as good as our own, yet there are men in that section of the country that have commenced the contest in a very spirited manner, and I trust that the time is not far distant when they will be equal to what we were a few years ago. In mechanical articles they far exceed us. The toast I propose is "Our Canadian Guests."

Hon. J. H. CAMERON was called upon to reply to this toast in the room of another which had been originally assigned to him. He made a happy speech in reply, and in concluding, said: I profess to know little of agriculture, except that, like the President of the Council, a great deal of my prosperity has come from the farmers, and among them I have some of my kindest and warmest friends; but I always willingly return thanks for the agricultural interest, although a lawyer—as I perceive that a sort of right is given to do so, by the head of the department being himself a lawyer—I now ask you to drink "The Educational Interests of Canada."

Dr. McCAUL, having been called upon to reply, rose and said:—The subject upon which he was called upon to address them was of so great importance, and of so wide a range, that his principal difficulty in complying with their request would be, to confine his observations within those narrow limits which are suitable and necessary on such an occasion as the present. When he claimed for education that it was a subject of great importance, he was not apprehensive that any of those who heard him would suppose that he was induced to overrate its consequence by the predilection, which it was natural that he should have for a department, to which he had devoted the larger and the better portion of his life. No, I feel persuaded that the justice of the estimate which I have formed of it will be recognized by every one who knows a father's anxiety for the welfare of his children, by every one who feels a patriot's desire for the prosperity of his country.

Education is in truth the great instrument of social advancement—an essential element of national greatness. What but education has enabled so many men of humble origin and of straightened circumstances to overcome all the diffi-

culties of their position—to snap the bonds of that poverty which held them down—to surmount all the impediments of want of funds and want of friends, and want of influence, and to raise themselves by their own exertions to those elevated stations which they have graced by their talents? The history of our parent isles is full of such examples; the annals of the neighbouring republic present a multitude of similar instances; nor has Canada, young though she is, failed to produce noble specimens of men, whose talents and attainments as developed by education have been their only passport to the distinction which they have won.

What but education, again, supplies the civilized nations of the earth with the men that are required to direct and manage the different parts of the complex machinery of society? What but education furnishes competent Statesmen, Legislators, Judges, Magistrates, the members of the learned professions, and others, who are called on to take leading parts for the benefit of the community? Nor let it be supposed, whilst I insist thus strongly on the benefits of education, that I am forgetful of those worthies who have accomplished great things without its aid. No, I most willingly bear my testimony, that there have been—that there are men amongst us, who, without the advantages of education, have discharged their respective duties with honor to themselves and with benefit to their country, and of whom it may with justice be said, that it will be well indeed if their sons with all their knowledge and training will be able to tread in the footsteps of their fathers. But whilst I thus gladly pay the tribute which is due to the force of natural ability and the power of vigorous self-reliance, I must at the same time observe, that such are the exceptions and not the rule, and that of those very men, who have under such circumstances achieved success, there is not, perhaps, an individual who is not most anxious to secure for his children the possession of those advantages, the want of which was felt by himself as injurious in almost every step of his career through life, however successful it may have been.

But it may be said—the general importance of education is admitted on all hands—what we want to know is,—of what special importance is it to Canada?

Permit me then briefly to reply to this inquiry. It will, I think, be generally admitted, that the people of this Province are possessed of a degree of civil and religious liberty, such as is enjoyed in few countries, and surpassed in none. Now, sir, what security have we that these powers will be judiciously or properly used, if education has not extended the information and strengthened the judgment of those who have to use them? What security have we that these privileges will be exercised consistently with the welfare or with the safety of the community, if education does not protect our people from being misled through ignorance or duped through credulity? But there is another and a very marked characteristic of this country, which it is proper that I should mention as tending to prove the importance of education amongst us. During the last few years Canada has made an almost unexampled progress in material prosperity. In produce—in stock—in manufactures—in revenue—in resources—she has advanced with the buoyant step and rapid pace of vigorous youth. In the abundance of the necessaries—the comforts—the luxuries of life, she is on a par with nations ten times her age. In population she has increased at a rate which equals, if it does not surpass that of our neighbours and friends on the other side of the Lake; whilst in the magnitude, the solidity, and the importance of her public works, she rivals the foremost nations of the old world.

Truly, the contemplation of Canadian progress presents an astonishing spectacle.

A few years ago the Chief Justice of Upper Canada stated that there were men then living—and it is possible that they may be still alive—who could

remember the time when there was not a single cultivated farm within the limits of this Western Province. And what have we now, Sir, within the duration of human life? Millions of acres under cultivation—well managed, well stocked farms, rewarding the industry—the enterprise—and the skill devoted to them—millions of bushels of wheat exported—our agricultural products worth millions of pounds sterling—some thousands of mills and other manufacturing establishments—large and populous and thriving cities, towns, and villages, where formerly there were but tangled woods or dreary swamps—commerce spreading the sail, or driving the paddle-wheel alike over the watery highway, that stretches from the far off Gulf of Ocean to remote Superior, and over the smaller lakes that gem the interior of the country—and the whistle of the locomotive, heard above the hum of business, as it sweeps through our frontier towns, from the rocky fortress of the St. Lawrence to the grassy banks of the Detroit or waking the echoes of the primeval forest, as it rushes far back beneath its leafy arches.

If such, then, be a correct representation of the material prosperity of Canada and the picture is far from being overcharged—of what immense importance is it, that the diffusion of knowledge and spread of education should keep pace with the development of its resources and the increase of its revenue—that we should have a population who know not merely the rights but also the obligations of wealth—not merely its privileges but also its duties? But the practical question yet remains—what has been—what is being done by Canada in education?

In the few remarks which I shall make on this subject, I shall confine myself to the Western portion of the Province, as being that with which I am better acquainted from personal experience, and as being most interesting to the majority of those whom I address. I shall also confine myself to a period within my own recollection, as a resident of the Province. In the year 1842, the number of Universities, Colleges, Grammar and Private Schools in operation, was between 70 and 80; in 1856 the number of such Institutions amounted to considerably over 300. In 1842, the number of Common Schools was a little over 1,700; in 1856, there were more than double that number. In 1842, the total number of pupils attending the different educational establishments was between 60,000 and 70,000; in 1856, they were above 260,000. Of the funds which were available, in 1842, for educational purposes, I am unable to speak with accuracy; but the amount of such funds during 1856, reached the immense sum of upwards of one million and a quarter of dollars. The magnitude of these numbers may be appreciated from the facts, that the number of pupils, whom I have mentioned as in attendance during the last year, exceeds the total population of the two Canadas at the commencement of the present century, and that the sum which was available last year, for educational purposes, was considerably more than the gross Custom's Revenue of the United Province; some fourteen years ago.

To these statements, in forming an estimate of the educational condition of the Province, we must add the many and important improvements which have been—which are being introduced in such Institutions of every grade. Of this topic, however, time will not permit me to take even a cursory glance.

And now, what remains for me but to congratulate this assemblage on the prosperity which has hitherto attended the country, in the development of all the most important elements of national greatness, and on the bright prospects which are opening before her, of a happy and glorious future?

Well then, sir, may we rejoice at the blessings which have been vouchsafed to us—well may we be thankful, that the pressure of the difficulties of this trying season has been lighter on us than on older and wealthier communities—well may we pray for the continued prosperity of this fair and fertile land—and

with these prayers, we will join that old familiar petition, ever so accordant with our heartiest wishes, and now so appropriate in times of trouble and danger, such as at present cast a dark but passing shadow over our dear mother-land—

“Send her victorious,
 “Happy and glorious,
 “Long to reign over us,
 “God save the Queen!”

And with them, too, we will cordially join that equally familiar petition, taught to us by our fathers, as connected with the foundation of England's prosperity; and taught by us to our sons, as connected with the foundation of Canadian prosperity—

“God speed the plough.”

“The Provincial Agricultural Association” was next proposed.

Hon. ADAM FERGUSSON replied, stating that he could not possibly say enough in favour of the Association, and urging such amendments in its constitution as will render probable the attainment of the highest degree of perfection in the art. He concluded by expressing the warmest feelings of gratitude for the kindness ever shown him and other members of the Association by their American friends.

In the evening of this day, Thursday, October 1st, another meeting was held in the Town Hall, which was numerously attended; the President of the Association, G. Alexander, Esq., taking the chair. The subjects chosen for discussion were, the new Agricultural statute and the expediency of fixing the Provincial shows in a few of the larger cities and towns of the Province. Professor Buckland and several other gentlemen addressed the assemblage. The meeting was held more for the purpose of eliciting the views and wishes of such as feel an active interest in the progress of the Association and of Agricultural Societies than for the adoption of any formal resolutions.

ANNUAL MEETING OF THE DIRECTORS OF THE ASSOCIATION.

The annual meeting of the Directors of the Association was held on Friday, 2nd October, at 10 a.m. in the Committee room on the Show ground. The President, Geo. Alexander, Esq., in the chair.

The following Delegates from the different County Societies answered to their names :—

Essex—John McEwing.
Kent—D. Wilson, W. Miller.
Middlesex—J. B. Askin, Wm. Balkwill.
Wellington—Thomas Andrew, F. W. Stone.
Perth—W. Smith, W. McCulloch.
Oxford—John Barwick, Jas. Scarf.
Wentworth—H. O. Reilly, Thomas Stock.
Brant—Allan Good, John Tennant.
Welland—John Schofield.
Norfolk—Oliver Blake, D. W. Freeman.
Lincoln—E. C. Campbell.
York—W. McDougall, Geo. Miller.
Ontario—E. Burrill.
Hastings—T. S. Farley.
Durham—C. H. Jordison, Matthew Jones.
Northumberland—P. R. Wright, Alexander Alcorn.
Addington—Samuel Clark.
Lenox—Alexander Campbell.
Frontenac—Angus Cameron, Edward Jackson.
Leeds—Dr. Richmond.

It was then moved by Judge Campbell, seconded by Mr. Ruttan,—That D. B. Stevenson, Esq., of Picton, Prince Edward Co., be President for the ensuing year.—*Carried.*

Moved by Colonel Thomson, seconded by Mr. Marks, that Wm. Ferguson, Esq., of Pittsburg, be 1st Vice-President.—*Carried.*

Moved by Mr. Ruttan, seconded by Mr. McDougall,—That John Wade, Esq., be 2nd Vice-President.—*Carried.*

Moved by Colonel Thomson, seconded by Hon. A. Fergusson,—That R. L. Denison, Esq., be continued Treasurer, for the ensuing year.—*Carried.*

Moved by Mr. Denison, seconded by Mr. McDougall,—That the Exhibition of 1858, be held at Toronto. Mr. Denison said, he was authorized to state that the city of Toronto had voted £1,250 to the funds of the Society, and the County of York £300, which he was promised should be raised to £1,000. He could at least guarantee that the sum from the city and county would be £2,000.

Moved in amendment by Colonel Saunders of Guelph, seconded by Hon. Adam Fergusson, that the next Show be held at Guelph. Colonel Saunders was authorised to offer on behalf of the town of Guelph and County of Wellington, £1500.

Moved in amendment to the amendment by Judge Campbell, seconded by Mr. Schofield, that the show be held at Niagara. He offered on behalf of the town of Niagara £1,000, and that sum to be largely increased by private subscriptions.

Mr. Barwick, of Woodstock, seconded by Mr. Scarf, moved in amendment to the last amendment, that three permanent places for holding the shows at be resolved on, namely, Toronto, Kingston, and London, and that the next show be held at Toronto.

This motion was ruled out of order, and laid over as a notice of motion at next meeting.

The amendment in favor of Niagara being put to the vote, three hands were held up in favour of it, sixteen for the motion in favor of Guelph. The main motion in favour of Toronto was declared to be carried by a large majority.

Moved by Judge Campbell, seconded by Hon. Adam Fergusson, and *Resolved*,—That the President, Geo. Alexander, Esq., of Woodstock, for the zeal and ability he has displayed during his term of office, be strongly recommended by this meeting to the favorable consideration of the County Societies, as a person eminently qualified to fill the place of the late Mr. Harland, as a member of the Board of Agriculture.

Votes of thanks of the Association were unanimously passed as follows:—To W. N. Alger, Esq., and the Local Committee, for their valuable services: To the Mayor and Corporation of Brantford for their liberal grant of £1,000 to the funds of the Association: To the Warden and Council of the County of Brant for their liberal donation of £500: To the Municipal Councils of Oxford, Waterloo and Norfolk, for contributions to the funds: To the Judges for their valuable services: To the Ladies, for their countenance and valuable services: To the Rev. Dr. Ryerson for the attractive and instructive department of educational apparatus, &c.: To the Canada Company for their continued liberal support.

Mr. ANGUS CAMERON, of Kingston, moved, seconded by Mr. W. FERGUSON, that the Board of Agriculture be requested to memorialize the Government and Legislature for a grant of money to County Agricultural Societies towards purchasing ground for erecting buildings thereon for the use of the Annual Exhibitions.

The following notices of motions for consideration at the next annual meeting were then read. By Mr. JARVIS,—That the practice of promoting the Second Vice-President to be First, and the First Vice-President to be President, be discontinued, and that the officers be elected each year from the whole body of the members of the Association.

By Mr. MARKS,—Of a new code of By-Laws, adapted to the position of the Association under the new statute.

By Mr. JNO. BARWICK,—For the selecting of three places: Kingston, Toronto and London, at which to hold the Annual Exhibition in rotation for the future.

The meeting then adjourned.

At 1 p.m. the President delivered his Address, at the conclusion of which it was moved by Mr. THOMSON, seconded by Mr. ALGER, and carried unanimously: That the best thanks of the Association are due, and are hereby given to Mr. Alexander for his indefatigable services, and excellent Address, and that four thousand copies be printed and circulated by the Board of Directors.

ANNUAL ADDRESS

DELIVERED BY THE PRESIDENT OF THE AGRICULTURAL ASSOCIATION, GEO.
ALEXANDER, ESQ., AT BRANTFORD, OCTOBER 2ND, 1857.

Gentlemen of the Provincial Agricultural Association :

If ever there was a scene calculated to make the heart rejoice, and inspire us with feelings of gratitude to an allwise and beneficent Providence, it is that which now greets our view. While revelling amidst the richest productions of the earth, and the multifarious inventions of mechanical skill, which proclaim loudly the triumph of industry and human enterprize,—our attention is arrested by the beauty of the surrounding district, but more especially of that magnificent valley in the distance, which was for ages the haunt and the home of the Delaware and the Mohawk, with its wild associations of deep interest. But, we pause to enquire, by what magical influence the marvellous changes have been effected, which we now behold and over which we rejoice ?

It is the *unswerving industry* of our population, and their devotion to the hardy and ennobling pursuit of Agriculture which has transformed those vast forests into the green pastures,—and rich cornfields, now furnishing such abundance for man and beast. It would ill become us, who are living in the enjoyment of so many advantages, to forget the honor that is due to the early settlers of this land, whose endurance and toil have contributed so much to our present position. It is the increase flowing from their labour, which has brought the cheering whistle of the Locomotive into the finest portions of our country, giving such value to every district,—that great harbinger of busy activity and industrial progress which almost annihilates distance, and gives immediate vitality to the most sequestered spots. Where are the old scenes of former days ? We search in vain for them, amidst the lingering vestiges of the forest, but we behold everywhere around us, happy and independent homes ; and while the red man is rapidly receding to other regions, we find civilization scattering broadcast her thousand comforts and the blessings of a higher enlightenment.

Never did a country dawn into existence with brighter prospects than this, and if its conquest has been achieved at the cost of many hardships and severe toil, its inhabitants have acquired the rich possession of a territory justly distinguished for the enduring fertility of its soil and unlimited natural resources—while our climate has been found most congenial to the growth and perpetuity of man's best energies. It is also worthy of observation as a distinguishing feature of our progress,—that through the judgment, and moderation, the vigilance and foresight of our people,—institutions admirably adapted to our growing wants have been secured, under which we enjoy every privilege and right which the most ardent lover of liberty can desire,—institutions eminently calculated to diffuse the blessings of knowledge, even to the verge of the most remote settlements,—and which are designed to foster the growth of all those arts of civilized life ; upon the progress and improvement of which not only man's immediate wants, but our future wealth and greatness must depend.

What are the great objects which have brought this vast multitude together ? We have come here to pay a just tribute of homage and respect to the enterprise of our fellow citizens, who have carried off the highest honors of the day,—and to behold and admire the results of their industry, as displayed in the rich productions of the earth—and in all the inventions and beautiful handiwork designed to grace and adorn life. We claim for these great annual gatherings, that they give vigour and vitality to the aspirations of our people, and that

while they are the best public introduction to our importers and improvers of stock,—to the scientific Husbandman,—to our own Mechanics and Manufacturers,—extending far and wide the fame of their superior skill,—they cannot fail to raise in the public mind higher standards of excellence, and exercise a salutary moral and social influence.

I have felt deeply, gentlemen, my inability to do justice to the position of trust and responsibility in which your kindness has placed me, and I fear, with all our endeavours, many important means have been overlooked of furthering the great objects we have in view. In a country where the chief barrier to good husbandry is the expense and scarcity of labour, there is not a more important matter than the improvement of our harvesting and other labour-saving implements, which it is peculiarly the province of this institution to promote in every possible way. The trial of the United States Agricultural Society, at Syracuse, was a movement in the right direction, although the results may not have equalled the expectations of those present. There is a diversity of opinion as to the best method of accomplishing this object, but we doubt not that our Association will next year adopt that which is considered the most practical, and whereby the respective merits of the best implements may be fully tested and afterwards made known for the benefit of all. Another great function of this society should be, to elicit by such means as are likely to be most successful, and publish in a properly digested form, the local experience of our best farmers—illustrating their respective systems,—while contributions should be obtained, shewing the practical bearing of science upon this most important pursuit, and the *money value* of such knowledge to the farmer. How many do I now see around me who are eminently qualified to raise the status of our Canadian Agriculture? And where, Gentlemen, is there a nobler object of ambition than to have one's name identified with the advancement of a rising country such as this?

This, perhaps, would be a suitable moment to express the obligation I have felt to the Ex-Governor of New York State, Myron H. Clark, and Col. Johnson of Albany, for a valuable collection of the Transactions of their State Society, which I mention as a pleasing testimony of the friendly regard and consideration existing between the two countries. Long may such continue to be the feeling between countries so intimately connected, not merely by the ties of consanguinity, but by the weightiest interests of trade; and we would assure our American friends, that we not only desire a continuation of that free commercial intercourse which has been so beneficial to us and to them, but we shall at all times be happy to reciprocate those courtesies which strengthen the bonds of amity between us.

But it would be well for us to remember that we are living in an age of great industrial and commercial activity. Never, at any previous period in the world's history, have we found such a restlessness and earnestness of purpose. Man has invaded every province of nature, and made every element tributary to his wants. We now travel by steam, and employ as our daily messenger the electric fluid. As a modern writer of great force exclaims:—"Into how many channels is human labour pouring itself forth! What a rush into all the departments of trade! What vast enterprises agitate every community! and while industry pierces the forest and startles with her axe the everlasting silence, commerce penetrates into every inlet—girdles the earth with railroads—and breaks down the estrangements of nations." But amongst nations we also behold an unceasing struggle for supremacy in power and influence, and if we are to hold a prominent position amongst the powers to be,—if we are to fulfil those bright predictions heralded forth with so much pride by the parent at the Industrial Exhibitions of London and Paris,—at which the infant colony took the world by surprise, we must not slacken in our enterprise, but with diligence avail ourselves of all the valuable discoveries and appliances, by means of which other

countries have risen to greatness—and if the parent exults in the prosperity of the child, we have assuredly cause to be proud of the parent, and should try to excel, as she has done, in all the arts of civilized life.

One cannot regard but with admiration and wonder the skill and science displayed in the varied improvements of British Husbandry, the greater part of which have been the work of scarce half a century. “Prior to 1798” (observes a writer in the ‘Edinburgh Journal of Agriculture’) “hardly any wheat was attempted to be grown in Scotland. Few potatoes were raised, and the artificial grasses little known; but we have lived to behold a great change. Waving fields of wheat are now to be seen. Drilled green crops every where abound, and whole parishes of waste lands have been transformed into rich cornfields, yielding heavy crops per acre and heavy weight per bushel.” Scotland has by the *industry* and *science* of her sons become one of the richest and most productive countries in the world. Let such results animate us to continued exertion, and if the soil is the treasury from which the largest portion of our future wealth must flow, our material progress will depend upon the skill of the husbandman. Agriculture may be followed as a simple rude art, yielding but a scanty return, or it may be practised as one of the noblest sciences which can engage man’s physical and mental energies, furnishing material plenty and abounding wealth. If there is dignity in labour and in human industry,—that industry becomes ennobled under the guidance of enlightened judgment, and brings in its train a thousand blessings. As the poet observes :—

“ Life without work is unenjoyed,
The happiest are the best employed;
Work moves and moulds the weightiest birth,
And grasps the destinies of earth.”

I do not presume to imagine that I can enlighten this vast assemblage of intelligent men by any thing I can advance upon the subject of Agriculture. From your experience and observation, you are better acquainted than I am, wherein our husbandry has been defective. You know the endurance which is required to obtain the mastery over the many enemies the farmer has to contend with,—the value of getting entire possession of the soil by the most *thorough cultivation*, and when that is accomplished,—that we are then only entering upon the threshold of interesting and scientific enquiry as to the crops which are best adapted to our soil, and the rotation in which they should be grown. To shew what nice and subtle considerations are involved in some of those investigations, we find, that to produce the perfect sample of grain in fullness and weight, there must be a properly balanced supply of organic and inorganic food in the soil, and that where too much of the former prevails, the straw grows too rank, while the grain is shrunk and deficient, and where the mineral or inorganic elements have been exhausted, the returns will be proportionately small. Science, ever ready to come to the farmer’s aid, suggests systems of cropping and management by which that adjustment may be produced and permanently sustained, which is indispensable to the successful growth of our staple and other products,—and we hope to see the *suicidal* system of indiscriminate and severe grain cropping, so fatal in its results, wherever practised, give way to a more enlightened course of husbandry, by which the fertility of our country may be preserved. If we continue to draw so heavily upon our capital, we shall have inevitably at some future day to experience all the disadvantages and loss of farming impoverished lands, viz :—That while the same expenses for cultivation, seed, harvesting and thrashing must be incurred, we shall receive but diminished and unremunerative returns. The soil is but the treasury of the Farmer’s wealth. The stores which are found therein, may be husbanded with care to

administer abundantly to the wants of man with the return of the seasons, or they may be wasted and dispersed in a short period of time.

What is the practice of British Husbandry in this matter? If we take the distribution of crops over the cultivated districts of England, comparing it with a similar reduction of the returns from this country—we find, the ratio which the grain producing or flint crops bear to the whole hundred acres is in—

Upper Canada about 50 to 100 = one-half.
 England “ 25 to 100 = one-fourth.

M. de Lavergne, a modern writer of great scientific research, who has written a most valuable work on the rural economy of Britain, dwells with force upon this important enquiry. He observes of England,—“That small country, which is no larger than a fourth of France, produces alone 13,000,000 quar. of wheat, 6 of barley and 12 of oats. If France produced in the same ratio, her yield, deducting seed, would be 50,000,000 of quarters of wheat and 70 of barley and other grains—equal to at least double her present production, and she ought to produce more, considering the nature of her soil and climate—both much more favorable to cereals than in England. These and many other facts verify this principle in Agriculture, that to reap largely of cereals it is better to *reduce than to extend the breadth of land sown*,—and that by giving a greater space to the forage crops, not only is a greater quantity of meat, cheese and wool obtained, *but a larger production of corn also.*”

There is only one other question to which I will advert, viz:—The difficulty and expense of wintering stock, which is the heaviest drain upon the farmer's resources. In the first place it is clearly established by science, that after the grain has reached a certain point of maturity, the straw becomes transformed into woody fibre, losing its most nourishing properties. Of what importance therefore that the crops should be harvested at the earliest moment compatible with the safety of the grain! And of what immense value are those harvesting implements, which enable us to secure our cultivated grasses and cereals with such expedition, and in the best possible order! But how much valuable hay and fodder of all kinds are wasted and destroyed from not being carefully stored! And how many thousands never avail themselves of straw-cutters and other economical arrangements, by which the supplies may be made to go much further? But the last and most important consideration, is that of proper shelter for stock. It is now patent to all that a large amount of sustenance goes to the production and maintenance of animal heat, and that where the stock is exposed to the sleet, storms, and cutting winds of our rigorous winters, nearly double the quantity of food is required to support animal life, and almost any amount will fail without shelter to keep them in proper condition—which explains (as instanced by Liebig) how the inhabitants of the tropics subsist upon rice and such light diet, while the Esquimaux require and consume immense quantities of blubber and oil. We can hardly over-estimate the value of housing and warmth in winter, to our fattening animals, milch cows, and stock of every kind, but especially the young. But with respect to the young stock,—there is another point involved besides the economy of fodder. Is it not reasonable to suppose that while a colt is growing, its muscles developing, and its bones forming, that the frame and physical constitution of the animal must depend upon the feeding and shelter during this stage of developement? How many horses do we see that have no bottom or constitution? Must not the result of neglect in such matters be to dwarf and deteriorate every description of stock? The barns generally built by the Germans or Dutch, with an extensive range of stone foundations, admirably planned for convenience and shelter, are in this particular a model to the country.

I have thus selected one or two familiar illustrations to show that the measure of our agricultural wealth depends upon our studying to give a wise direction to the industrial labour of the country. It is not the *extent of cultivated surface*, or the amount of expended toil, that will ensure great results; and if we aspire to become distinguished for our Agriculture, and to attain to a position of wealth, we must abandon that most fallacious of all ideas that the farmer needs no education or science. We see what modern science has done to ennoble and enrich Britain, many districts of which were originally barren and worthless. How favorable should our prospects be, commencing our career with the accumulated fertility of ages.

But while Agriculture is and will continue to be our chief and leading interest, there are other objects which must enlist the enterprise of our people. The husbandman raises more than he can consume, while in this age of high civilization, he is the creature of a thousand wants. We must look to commerce and manufactures to supply those wants, and to give a marketable value to all our surplus produce. We must foster in every way those branches of industry which will give population to our towns and cities, secure to us a home market—*diminish the amount of our imports*, and consolidate our wealth. Canada has already been successful with her Foundries, Tanneries, Asheries, Soap, Chair, and Nail Factories, Cloth, Oil, and Paper Mills.—Toronto, Hamilton, and Kingston, have produced their Locomotives, and Galt her highly finished edge tools; but she has done more, and it is with pride we chronicle the fact, that Galt has exported to Australia during the present season, a steam engine and other manufactures.* There is a marked spirit of enterprise abroad in our country, and when we look at our noble St. Lawrence and those great inland seas, which along with our railways afford such facilities for carrying on all our commercial exchanges—when we regard the boundless extent of water power—the certain local demand for all manufactured products—while we have territory that can sustain a dense and teeming population—I say that we cannot behold all this without feeling that our country presents an unlimited field for human enterprise.

There is one striking feature in the history of all young countries to which it will be expected I should advert, viz:—the suddenness with which at certain periods, their floating wealth and circulating medium become increased or diminished. It is but a short time since the property throughout this Province almost trebled in value, and money was every where abundant. What then has caused the pressure now felt by every portion of the community? We cannot arraign the bounty of Providence, for the labours of the husbandman have been crowned by the usual returns, and up to the present we have had all the benefit of high ranging prices. To what then must we ascribe the languor which now prevails throughout every channel of trade? Was the bright sunshine of prosperity too much for us to bear? Has it with us produced too rapid a growth, and a general improvidence, leading us too largely into improvements and wild speculation, involving monetary engagements which we are now unable to fulfil? Has luxury been lending a helping hand to scatter the fruits of our industry?—Or did the large influx of British capital for the construction of our Railroads, along with other circumstances, induce heavy overtrading, the results of which we have felt, more especially since those works were completed? Such are regarded as the prominent sources of our present money pressure. But if we examine our trade and navigation returns, we shall find further causes lying at the foundation of our commercial difficulties. We must assume it to be a correct

* Messrs. James Crombie & Co., exported a 20 horse-power high pressure engine
Messrs. Wm. Quarry & Co. exported manufactured harness.

principle in political economy that so long as a Nation's expenditure exceeds its income, its floating wealth cannot increase, and until we approximate a little nearer in our trade returns, we shall not have wealth enough to carry on the business of the country. What is the natural result? We find that enterprise is frequently checked from the scarcity and exorbitant value of money, and that with all our magnificent territory, valuable property, and abundance of food, a very small general indebtedness brings such a pressure as we now find to exist. Let us see what has been the relative value of our imports and exports during the last four years—and it may be interesting to subjoin the American returns, for the last year, ending 30th June, 1857.

	Imports.	Exports.	Bal. against us.
1853	£7,995,359	£5,950,325	£2,045,034
1854	10,132,331	5,754,497	4,377,534
1855	9,021,542	7,047,115	1,974,427
1856	10,896,096	8,011,754	2,884,342

UNITED STATES.

Imports.	Exports.	Bal. in their favor.
£90,222,525	£90,746,286	£523,751

Time will not admit of my enlarging further upon this subject than to observe that there are only two ways in which we can reduce this steady drain upon our resources, viz :—by keeping down luxury, and studying to make the industry of the country more productive. We have in our *cornfields* and *workshops* inexhaustible mines of virtuous wealth, and only want the *light of modern science* to make them accessible to us. It is to science that we are indebted for all those discoveries, inventions and appliances which have enriched the world with so many comforts, and ministered so powerfully to our present high civilization.

Let us for a moment turn to the happy circumstances under which we are living, and see how everything around us is calculated to induce private and public enterprise, and inspire our Canadian people with love and attachment to their country. Here all can become the possessors of their own broad acres—hold their patents, which nothing can disturb—and every improvement they make, whether of utility or taste, is adding to their future comfort and wealth—and to the comfort and wealth of all those who are nearest and dearest to them. But this is not all. We are living in a state of society where the invidious distinctions of rank and wealth are little known—and *industry* and *integrity* command everywhere respect—while the highest posts of honor and emolument are fairly and equally open to all. We have thus every natural incentive to honorable ambition, and a thousand considerations to animate us to strain every nerve for our country's advancement. It would, perhaps, not be out of place to observe, that we cannot unfold the page of history without perceiving that every nation which has risen to eminence, in ancient or modern times, has been distinguished for the patriotism of her sons. What led to the boundless conquests, the glory and renown of ancient Greece and Rome? What absorbing passion animated the immortal Wallace to such deeds of heroic valour and self-sacrifice? His memory will be warmly cherished to the end of time. What noble enthusiasm led the British soldier (for those regiments were composed alike of men from the rural districts of England, Scotland and Ireland,) to scale so gallantly the heights of the Alma—and rush into the sanguinary but triumphant struggle at Inkermann? We unhesitatingly reply—a far higher honour than that of gain. The fame of British valour—the integrity of the Empire—the future peace of Europe—and the cause of liberty throughout the world hung upon the issue. But in this utilitarian and wealth-amassing age, or at least in this region of the globe, “our swords” have been turned into “ploughshares,” and our “spears”

into "pruning-hooks;" and we behold in the great neighbouring republic and elsewhere, this spirit of nationality warming into life, a general zeal to excel in all the arts of peace and a thirst for national pre-eminence. May this great public virtue continue to manifest itself amongst us, stimulating the improvement of our agriculture, the increase of our manufactures, and the extension of our commerce—and imbuing all with an anxious concern for the public interests of our country. "Zeal for the public good (says Addison) is the character of a man of honor, and must take place of pleasures, profits and most other private ends. Whoever is wanting in this motive is an open enemy, or inglorious neuter to his race, in proportion to the mis-applied advantages with which nature and fortune have blessed him."

Let all therefore be ready when called upon, to fill with diligence and honour the various offices of public trust and responsibility, Let our leading practical farmers rally round our Agricultural Societies—support *liberally our Agricultural Journals*—and persevere in such efforts until a thirst for improvement pervade every homestead. Let nothing, gentlemen, dampen your ardour in upholding our national school system, which has been framed and introduced with so much ability and judgment. In giving education to the young, (I mean in its highest sense,) we leave the richest legacy which one generation can give to another. Let us make every sacrifice to secure the best methods of our country for our public teachers, and in addition to all the other branches of knowledge, let the elements of Agricultural and mechanical science be taught in our more advanced schools, which, if only to a limited extent, "will be sowing the first seeds from which an after crop will spring up." But above all let us uphold our great depositories of science and learning—I mean our academic and collegiate institutions. To them it is we must look for that higher mental discipline, which makes the *pathways easy* to the great "ocean of knowledge and truth." The chairs of our Universities are at this moment filled by men of the highest attainments, while Professor Buckland, who has the department of Agriculture, unites to his other qualifications an intimate knowledge of the best practices of British husbandry.

But above all, it is important that the Canadian character now forming *should be moulded upon the noblest foundations*—and be *imbued with the virtues of the races* from which we have sprung. And if we wish to see our country accomplish its highest destinies, we must have loftier objects of ambition than the mere attainment of wealth. It was observed of "Britain" by an American Statesman, "That the sun never sets upon her dominions, and that the beat of her morning drum makes one unbroken sound "round the world." But the immensity of her wealth, and the extent of her dominions have been powerful instruments in her hands to accomplish good. Where are we to look for the real elements of her greatness? *In the soundness of heart and principle* pervading the great mass of her people. While luxury has never palsied her enterprize, her sons have contributed largely to the treasury of science and art, and to the *general enlightenment of the world*. Her wealth—her energies—and her strength have been devoted to some of the noblest objects. She has given liberty to the slave, and has been the messenger of the "glad tidings of peace from pole to pole."

Shall it be said that our Canadian soil is unfavorable to the growth of intellect and genius, and of those virtues which have cast so bright a halo around the parent country? Who can behold our township and county libraries, which have justly been pronounced "the crown and glory of our institutions," carrying to every one's door, the accumulated wisdom of ages, or witness the earnestness with which throughout our rural districts, the great mass are anxious to further every good object, and not feel inspired with the hopes of a bright future?

But we must guard the young against the shoals and quicksands which beset our path—unfold to them the higher enjoyments of the mind, which will elevate them—give them self-respect—and enhance the value of all their other possessions. Teach them that a nation's honour is a nation's greatness—and that its true greatness consists in the virtue of its citizens—but above all we must teach them that it is to the bounty of an all-merciful Providence that we are indebted for all the blessings we enjoy.

LIST OF PRIZES.

AWARDED AT THE TWELFTH ANNUAL EXHIBITION OF THE PROVINCIAL AGRICULTURAL ASSOCIATION, HELD AT BRANTFORD, SEPTEMBER 29, 30, AND OCTOBER 1, 2, 1857

HORSES.

CLASS I.—BLOOD HORSES.—(12 Entries.)

Judges—Richard Jackson, Guelph; George Robson, London; William Carrick, Sarnia.

Best thorough-bred stallion, James Armstrong, Yarmouth, Elgin, "Oxonian," imported from Ireland, 1857, £24 15s; 2d do Dew & Nightingale, York Township, "Sir Tatton Sykes," £5 10s; 3d do Francis Major, Markham, "Hermit," £2 15s.

NOTE BY JUDGES.—The Judges are sorry to find so few entries in the thorough-bred department. The three first stallions we pronounce good, especially the imported horse "Oxonian;" the rest only middling.

CLASS II.—AGRICULTURAL HORSES.—(333 Entries.)

Judges—W. Peers, Woodstock; H. Battell, Northumberland; W. Hardy, Norfolk.

Best stallion for agricultural purposes, not less than 16 hands high, George & Thomas Wilson, Guelph, £8 5s; 2d do Thomas Abraham, Norwich, £5 10s; 3d do William Harkins, Etobicoke, £2 15s.

Best stallion for agricultural purposes, not more than 16 hands high, nor less than 15, Joseph Black, Guelph, "Perfection," £8 5s; 2d do John Sanderson, Markham, £5 10s; 3d do William Shipley, London, £2 15s.

Best heavy draught stallion, D. Rowntree, Weston, £8 5s; 2d do M. Armstrong, South Dumfries, £5 10s; 3d do A. Harvey, Beverley, £2 15s.

Best roadster or carriage stallion, George Macbeth, Dunwich, £8 5s; 2d do R. Williams, Dereham, £5 10s; 3d do J. B. Johnson, Cainsville, £2 15s.

Best three year old stallion, George Gowland, Vaughan, £5 10s; 2d do Jas. Hunter, Toronto Tp., £3 10s; 3d do J. P. Lake, Morven, £1 15s.

Best two year old stallion, George Tisdale, Chinguacousy, £3 10s; 2d do W. Dixon, Markham, £2 10s; 3d do R. Stephens, Streetsville, £1 5s.

Best yearling colt, John Gill, Toronto Tp., £2; 2d do R. Young, Beverley, £1 10s; 3d do D. Lefter, Oakland, £1.

Best three year old filly, A. McMichael, Townsend, £4 10s; 2d do James Ferris, Beverly, £2 15s; 3d do R. Vandecar, Oxford Centre, £1 15s.

Best two year old filly, R. Lawrie, Bowmanville, £3 10s; 2d do John Robson, London, £2 5s; 3d do Joseph Walker, London Tp., £1.

Best yearling filly, John Turnbull, Glenmorris, £2; 2d do B. Yeo, South Dumfries, £1 10s; 3d do J. Davidson, South Dumfries, £1.

Best brood mare and foal, or evidence that the foal has been lost, R. Sander-son, Brantford, £5 10s; 2d do R. Turnbull, Glenmorris, £3 10s; 3d do J. Culver, Woodhouse, £1 10s.

Best roadster, or carriage brood mare, N. White, East Zorra, £5 10s; 2d do D. Lefler, Oakland, £3 10s; 3d do B. Yeo, South Dumfries, £1 10s.

Best span matched carriage horses, M. Zimmerman, Niagara Falls, £5; 2d do A. Fralick, Drummondville, £3 15s; 3d do John Gibb, Ops, £2 10s.

Best span of draught horses, George Black, Nissouri West, £5; 2d do Logan & Thompson, Paris, £3 15s; 3d do John Reid, Cainsville, £2 10s.

Best saddle horse, W. Applegarth, Flamboro', £2 10s; 2d do C. Lyons, Flamboro' West, £2; 3d do Patterson Bros., Richmond Hill, £1 10s.

Best single carriage horse in harness, Patterson Bros., Richmond Hill, £2 10s; 2d do W. S. Griffin, Simcoe, £2; 3d do R. & R. S. Patterson, Belleville, £1 10s.

Extra Prizes to J. Gibson, Thorold, for a pair of 3 year old horses, £1 5s; and W. L. Ewing, Brantford, for a pony, 10s.

The President's Prize of £15, for the Agricultural Stallion which should receive the First Prize, if imported from England since the previous exhibition, was not claimed, neither of the Stallions in this class receiving first premiums, having been imported within the time specified. The President, however, decided to pay the premium to the best horse exhibited, irrespective of importation, and it was on adjudication awarded to the horse "Perfection," above named, exhibited by Joseph Black, Guelph.

CATTLE.

CLASS III.—DURHAMS.—(127 Entries.)

Judges of Durham Bulls—James Wright, Guelph; Thomas Hatt, Ancaster; Matthew Jones, Hope.

Best aged bull, 5 years old and upwards, J. P. Wheler, Scarboro', £10; 2d do W. F. McCulloch, Stratford, "Nelson," £6; 3d do R. Currie, Niagara, "George III," £4; 4th do W. Dickson, Oxford, "Reformer," £2.

Best 4 years old bull, Arthur Hogg, Guelph, "John O'Gaunt," £9; 2d do Thomas Windatt, Clark, "American Belleville," £6; 3d do E. Jones, Stamford, "Young Cambridge," £4; 4th do S. Moffatt, Galt, "Belleville," £2.

Best 3 years old bull, Hon. A. Fergusson, Woodhill, "Hero," £8; 2d do C. Place, Beachville, "Lord Barrington II.," £5; 3d do A. Forrester, St. Mary's, "Big John," £3; 4th do W. Douglass, Onondaga, "Sultan," £1 10s.

Best 2 years old bull, John Robson, London, "London Lad," £6; 2d do W. R. Armstrong, Markham, £4; 3d do W. Miller, Pickering, "Red Kirk," £2 5s; 4th do John Bellwood, Clarke, "Washington," £1 5s.

Best one year old bull, R. R. Bown, Brantford, "Master Graham," imported from England, 1857, £15; 2d do W. Miller, Pickering, "Young England," £3; 3d do J. Nixon, Westminster, £2; 4th do J. Petty, Kippen, Huron, "Despatch," £1.

Best bull calf (under 1 year,) W. & R. Armstrong, Markham, "Young Tweedside," imported from England, June, 1857, £12; 2d do F. W. Stone, Guelph, "3rd Grand Duke," £2 10s; 3d do George Roddick, Hamilton Tp., "Young Prince Charley," £1 10s; 4th do John Snell, Chinguacousy, "Belted Will V." 15s.

NOTE BY JUDGES.—The Judges of Durham Bulls in making their report feel much pleasure in being enabled to say, that they were much gratified at the marked improvement observable in the younger bulls, compared with the aged. The four years old were good, and the three years old many of them they considered excellent animals, and that they do great credit to the breeders. The two years old were perhaps some of them equally good, and many of the year olds they consider to be most superior animals; one of them which they understood to have been imported, and to which they with much pleasure awarded the 1st prize, they consider worthy of the highest recommendation.

Judges of Durham Cows—Charles Mitchell, Peel; Peter C. Servos, Lincoln; J. B. Woolnough, Norfolk.

Best cow, John Iles, Puslinch, "Margaret," £5; 2d do Hon. A. Fergusson, Flamboro' East, "Duchess," £3; 3d do Wm. Douglass, Onondaga, "Belle," £2; 4th do Conyers Place, Beachville, "Rosina," £1.

Best three years old cow, William Miller, Pickering, "Siren," £4; 2d do William Douglass, Onondaga, "Victoria," £2; 3d do Conyers Place, Beachville, £1 10s; 4th do W. R. Forster, Credit, "Lady Franklin," £1.

Best two years old heifer, R. R. Bown, Brantford, "Roan Duchess," imported from England, 1857, £6; 2d do George Miller, Markham, "Snow Drop," £2; 3d do F. W. Stone, Guelph, "Eugenie," £1 5s; 4th do George Miller, Markham, "Young Starling," 15s.

Best one year old heifer, F. W. Stone, Guelph, "Sanspareil," £2 10s; 2d do John Snell, Chinguacousy, "Fancy," £1 10s; 3d do F. W. Stone, Guelph, "Marchioness of Gloster," £1; 4th do William Douglass, Onondaga, "Ruby," 10s.

Best heifer calf (under 1 year,) Charles Taylor, Brantford, "Alice Grey," £1 10s; 2d do William Douglass, Onondaga, "Gaudy," £1; 3d do Robert Warren, Niagara, 10s; 4th do Conyers Place, Beachville, 5s.

NOTE BY JUDGES.—A number of the three years old, never having had calves, could not be taken notice of.

As there were only 4 two years old shown, we have placed them all, but consider some of them over the age, and would recommend that at future exhibitions more attention be paid to the proper age of all animals shown in particular classes.

Some animals shown along with this class by Mr. Sampson Baker, of Norfolk Co., but not entered, owing to deficient pedigree, considered by the Judges worthy of commendation.

A great many complaints have been made to us that parties owning animals have their names put on the exhibition cards, and they consider it improper. We would recommend that at future exhibitions the name only of the Secretary be put upon the card—that would be a sufficient warrant to the Judges that the animal was regularly entered. Parties owning animals should not be allowed to interfere with the Judges while in the performance of their duty. We would further recommend that different classes of animals should not be allowed to be put into the same pen.

CLASS IV.—DEVONS.—(91 Entries.)

Judges—Alexander Alcorn, Cobourg; John Dow, Whitby; Robert Young, Lanark.

Best aged bull, 5 years old and upwards, John Masson, Nissouri West, £10; 2d do Nathan Choate, Hope, £6; 3d do Robert Ferrie & Co., Doon, £4; 4th do W. H. Lock, Yarmouth, £2.

Best 4 years old bull, Daniel Tye, Wilmot, "Don Juan," £9; 2d do Richard Coates, Oakville, "Duke of Devonshire," £6; 3d do D. W. Freeman, Simcoe, "Red Rover," £4.

Best 3 years old bull, John Moore, Etobicoke, "Duke," £8.

Best 2 years old bull, William Scott, Wilmot, "Fordham," £6; 2d do Richard Coates, Oakville, "Red Jacket," £4; 3d do Christopher Courtier, Darlington, "Buck of Devon," £2 5s.

Best 1 year old bull, Daniel Tye, Wilmot, "Captain" £5; 2d do W. H. Lock, Yarmouth, £3; 3d do W. H. Lock, Yarmouth, £2; 4th do Daniel Tye, Wilmot, "Colonel," £1.

Best bull calf, under 1 year, W. H. Lock, Yarmouth, £4; 2d do Samuel Peters, London, £2 10s; 3d do W. H. Lock, Yarmouth, £1 10s; 4th do Daniel Tye, Wilmot, 15s.

Best cow, Christopher Courtier, Darlington, "Beauty," imported from England, May, 1857, £10; 2d do W. H. Lock, Yarmouth, £3; 3d do W. H. Lock, Yarmouth, £2; 4th do John Masson, Nissouri West, £1.

Best 3 years old cow, W. H. Lock, Yarmouth, £4; 2d do John Masson, Nissouri West, £2; 3d do W. H. Lock, Yarmouth, £1 10s; 4th do W. H. Lock, Yarmouth, £1.

Best 2 years old heifer, Christopher Courtier, Darlington, "Graceful," imported from England, 1857, £6; 2d do W. H. Lock, Yarmouth, £2; 3d do W. H. Lock, Yarmouth, £1 5s; 4th do W. H. Lock, 15s.

Best 1 year old heifer, W. H. Lock, Yarmouth, £2 10s; 2d do W. H. Lock, Yarmouth, £1 10s; 3d do D. W. Freeman, Windham, £1; 4th do Daniel Tye, Wilmot, 10s.

Best heifer calf, under 1 year, W. H. Lock, Yarmouth, £1 10s; 2d do W. H. Lock, Yarmouth, £1; 3d do Robert Ferrie & Co., Doon, 10s; 4th do W. H. Lock, Yarmouth, 5s.

CLASS V.—HEREFORDS.—(6 Entries.)

Judges—Same as of Devons.

Best aged bull, 5 years old and upwards, James McMicking, Stamford, £10.

Best 1 year old bull, James McMicking, Stamford, £5.

Best cow, James McMicking, Stamford, £5; 2d do James McMicking, Stamford, £3.

Best heifer calf, under 1 year, James McMicking, Stamford, £1 10s; 2d do James McMicking, Stamford, £1.

CLASS VI.—AYRSHIRES.—(23 Entries.)

Judges—Same as Devons and Herefords.

Best 4 years old bull, Thomas Dawes, Lachine, C. E., £9; 2d do J. M. Kerby, Dundas, £6.

Best 3 years old bull, Hugh Hutchison, Wellesley, £8; 2d do W. H. Essery, London, £5.

Best 2 years old bull, Dr. Richmond, Gananoque, £6; 2d do John File, Brantford, £4; 3d do Christopher Waugh, London, £2 5s.

Best 1 year old bull, George Stanton, St. George, £5; 2d do R. L. Denison, Toronto, £3.

Best bull calf (under 1 year) R. L. Denison, Toronto, £4.

Best cow, R. L. Denison, Toronto, £5; 2d do R. L. Denison, Toronto, £3; 3d do George Stanton, St. George, £2.

Best 2 years old heifer, John Masson, Nissouri West, £3; 2d do R. L. Denison, Toronto, £2; 3d do George Stanton, St. George, £1 5s.

Best 1 year old heifer, George Stanton, St. George, £2 10s; 2d do R. L. Denison, Toronto, £1 10s.

Best heifer, calf, (under one year) R. L. Denison, Toronto, £1 10s; 2d do R. L. Denison, Toronto, £1.

CLASS VII.—GALLOWAY CATTLE.—(30 Entries.)

Judges—Same as Devons, &c.

Best aged bull, 5 years old and upwards, W. R. Grahame, Vaughan, £10.

Best 4 years old bull, William Roddick, Hamilton Tp., £9.

Best 3 years old bull, John Fleming, Vaughan, £8; 2d do A. Willcox, Toronto Tp., £5.

Best 2 years old bull, William Roddick, Hamilton Tp., £6; 2d do William Roddick, Hamilton Tp., £6.

Best 1 year old bull, William Roddick, Hamilton Tp., £5; 2d do E. W. Thomson, York Tp., £3.

Best bull calf (under 1 year) William Roddick, Hamilton Tp., £4; 2d do George Roddick, Hamilton Tp., £2 10s; 3d do John Fleming, Vaughan, £1 10s; 4th do W. R. Grahame, Vaughan, 15s.

Best cow, William Roddick, Hamilton Tp., £5; 2d do W. R. Grahame, Vaughan, £3; 3d do John Fleming, Vaughan, £2; 4th do William Roddick, Hamilton Tp., £1.

Best 3 years old cow, George Roddick, Hamilton Tp., £4.

Best 2 years old heifer, George Miller, Markham, £3; 2d do George Miller, Markham £2; 3d do John Fleming, Vaughan £1 5s.

Best one year old heifer, Wm. Roddick, Hamilton Tp., £2 10s; 2d do William Miller, Pickering, £1 10s.

Best heifer calf (under 1 year,) William Roddick, Hamilton Tp., £1 10s.

CLASS VIII.—GRADE CATTLE.—(60 Entries.)

Judges—Robert Kirkwood, Hamilton; Peter Young, Lanark; J. B. Carpenter, Norfolk.

Best cow, Samuel Hodgskin, Guelph, £5; 2d do Christopher Edmondson, Brantford, £3; 3d do Christopher Edmondson, Brantford, £2; 4th do George Miller, Markham, £1 5s.

Best 4 years old grade cow, Joseph Pierson, Whitby, £5; 2d do Joseph Pierson, £3; 3d do Edward Jones, Stamford, £2.

Best three years old cow, John Randall, Brantford, £4; 2d do Joseph Pierson, Whitby, £2 10s.

No 1, a 3 year old heifer in calf, exhibited by Samuel Hodgskin, Guelph, cannot exhibit as a cow, but being a superior animal, recommended a discretionary prize, £3.

Best two years old heifer, Samuel Hodgskin, Guelph, £3; 2d do Samuel Hodgskin, Guelph, £2; 3d do John Smith, Stamford, £1 5s; 4th do Benjamin Yeo, S. Dumfries, 15s.

Best 1 year old heifer, John Snell, Chinguacousy, £2 10s; 2d do Samuel Hodgskin, Guelph, £1 10s; 3d do Samuel Hodgskin, Guelph, £1; 4th do Benjamin Yeo, S. Dumfries, 10s.

Best heifer calf (under 1 year,) I. H. Anderson, Flamboro' West, £1 10s; 2d do Joseph Pierson, Whitby, £1; 3d do Joseph Pierson, Whitby, 10s; 4th do Samuel Hodgskin, Guelph, 5s.

CLASS IX.—FAT AND WORKING CATTLE, ANY BREED.—(36 Entries.)

Judges—Phillip Armstrong, Toronto; Stuart Campbell, Stratford; Chas. Ross, Elgin.

Best ox or steer, Kirkwood and Lawry, Hamilton, £7 10s; 2d do Kirkwood and Lawry, Hamilton, £5; 3d do F. Abbott, London, £3.

Best cow or heifer, W. Robinson, Reach, £7 10s; 2d do John Dow, Whitby, £5; 3d do John Dow, Whitby, £3.

Best yoke working oxen, W. Metler, Pelham, £5; 2d do Henry Dochstader, Oneida, £3; 3d do I. H. Anderson, Flamborough West, £2.

Best yoke of 3 years old steers, J. W. Cook, Brantford Tp., £4; 2d do P. Hinman, Haldimand, £2 10s; 3d do H. Wright, S. Dumfries, £1 10s.

SHEEP.

CLASS X.—LEICESTERS.—(194 Entries.)

Judges—James Miller, Brant; John Cade, Whitby; John Iles, Guelph.

Best ram, two shears and over, W. J. & G. Miller, Pickering, imported from Britain, 1857, £12; 2d do Thomas Guy, Oshawa, £2 10s; 3d do W. G. & J. Miller, Markham, £1.

Best shearling ram, Thomas Guy, Oshawa, £4; 2d do James Petty, Kippen, £2 10s; 3d do John Snell, Chinguacousy, £1.

Best ram lamb, William Miller, Pickering, £2; 2d do W. L. Ewing, Brantford £1; 3d do John Robson, London, 10s.

Best 2 ewes, two shears and over, John Snell, Chinguacousy, £4; 2d do Geo. Miller, Markham, £3; 3d do Christopher Walker, London, £1 10s.

Best 2 shearling ewes, William Miller, imported 1857, from England, £6; 2d do W. G. & J. Miller, Pickering, £2; 3d do John Snell, Chinguacousy, £1.

Best 2 ewe lambs, John Snell, Chinguacousy, £1 10s; 2d do William Miller, Pickering, £1; 3d do Wm. L. Ewing, Brantford, 10s.

CLASS XI.—COTSWOLDS.—(45 Entries.)

Judges—James Miller, Brant; John Cade, Whitby; John Iles, Guelph.

Best ram, 2 shears and over, James Petty, Kippen, imported from England, 1857, £12; 2d do F. W. Stone, Guelph, £2 10s; 3d do R. R. Bown, Brantford, £1.

Best shearling ram, F. W. Stone, Guelph, £4; 2d do John Snell, Chinguacousy, £2 10s; 3d do W. G. & J. Miller, Pickering, £1.

Best ram lamb, J. Snell, Chinguacousy, £2; 2d do J. Snell, Chinguacousy, £1; 3d do F. W. Stone, Guelph, 10s.

Best 2 ewes, 2 shears and over, G. Miller, Markham, imported from Britain, 1857, £8; 2d do F. W. Stone, Guelph, £3; 3d do F. W. Stone, Guelph, £1 10s.

Best 2 shearling ewes, F. W. Stone, Guelph, £3; 2d do John Snell, Chinguacousy, £2; 3d do F. W. Stone, Guelph, £1.

Best 2 ewe lambs, J. Snell, Chinguacousy, £1 10s; 2d do F. W. Stone, Guelph, £1; 3d do Wm. Miller, Pickering, 10s.

CLASS XII.—CHEVIOTS.—(16 Entries.)

Judges—James Miller, Brant; John Cade, Whitby; John Iles, Guelph.

Best ram, two shears and over, James Dickson, Clarke, £4; 2d do Wm. Roddick, Hamilton Tp., Northumberland, £2 10s; 3d do Wm. Roddick, Hamilton Tp., Northumberland, £1.

Best shearling ram, J. Dickson, Clarke, £4; 2d do W. Roddick, Hamilton Tp., Northumberland, £2 10s.

Best ram lamb, J. Dickson, Clarke, £2; 2d do W. Roddick, Hamilton Tp., £1; 3d do J. Dickson, Clarke, 10s.

Best 2 ewes, 2 shears and over, J. Dickson, Clarke, £4; 2d do W. Roddick, Hamilton Tp., Northumberland, £3.

Best 2 shearling ewes, Robert Middlemost, North Dumfries, £3; 2d do J. Dickson, Clarke, £2; 3d do W. Roddick, Hamilton Tp., £1.

Best 2 ewe lambs, Wm. Roddick, Hamilton Tp., £1 10s.

CLASS XIII.—LONG WOOLED SHEEP, NOT PURE LEICESTER, COTSWOLD OR CHEVIOT.—(62 Entries.)

Judges—S. Brown, Lincoln; John Gill, Toronto Tp.; Robert Hartley, Peel.

Best ram, two shears and over, G. Miller, Markham, £4; 2d do Thomas Guy, Oshawa, £2 10s; 3d do James Dickson, Clarke, £1.

Best shearling ram, John Snell, Chinguacousy, £4; 2d do Wm. Davis, York Tp., £2 10s; 3d do George Douglass, Onondaga, £1.

Best ram lamb, George Douglass, Onondaga, £2; 2d do George Miller, Markham, £1; 3d do John Snell, Chinguacousy, 10s.

Best 2 ewes, two shears and over, John Snell, Chinguacousy, £4; 2d do W. Miller, Pickering, £3; 3d do George Miller, Markham, £1 10s.

Best 2 shearling ewes, John Snell, Chinguacousy, £3; 2d do W. Miller, Pickering £2; 3d George Miller, Markham, £1.

Best 2 ewe lambs, George Miller, Markham, £1 10s; 2d do John Snell, Chinguacousy, £1; 3d do John Johnson, Waterloo, 10s.

NOTE BY JUDGES.—The Judges in this class thing it injurious to the Association to have the names of exhibitors on the cards.

CLASS XIV.—SOUTHDOWNS.—(88 Entries.)

Judges—Daniel Matthews, Norfolk; J. P. Wheler, Scarboro'; J. Coulson, Middlesex.

Best ram, 2 shears and over, F. W. Stone, Guelph, imported from England since preceding exhibition, £12; 2d do John Spencer, Whitby, £2 10s; 3d do James Dickie, Galt, £1.

Best shearling ram, T. A. Milne, Markham, imported from England, May, 1857, £12; 2d do John Spencer, Whitby, £2 10s; 3d do E. Jones, Stamford, £1.

Best ram lamb, John Spencer, Whitby, imported from England, 1857, £6; 2d do John Spencer, Whitby, £1; 3d do James Dickie, Galt, 10s.

Best 2 ewes, two shears and over, James Dickie, Galt, £4; 2d do do £3; 3d do E. Jones, Stamford, £1 10s.

Best 2 shearling ewes, John Spencer, Whitby, imported 1857, from England, £6; 2d do S. Baker, Charlotteville, £2; 3d do H. S. Lossee, Norwich, £1.

Best 2 ewe lambs, John Spencer, Whitby, £1 10s; 2d do J. Dickie, Galt, £1; 3d do D. Tye, Wilmot, 10s.

CLASS XV.—MERINOS AND SAXONS.—(28 Entries.)

Judges—Daniel Matthews, Norfolk; J. P. Wheler, Scarborough; J. Coulson.

Best ram, 2 shears and over, N. Choat, Hope, £4; 2d do J. Rymal, Barton, £2 10s; 3d do J. Rymal, Barton, £1.

Best shearling ram, L. A. Sovereign, South Dumfries, £4; 2d do J. Rymal, Barton, £2 10s; 3d do N. Choat, Hope, £1.

Best ram lamb, J. Rymal, Barton, £2; 2d do N. Choat, Hope, £1; 3d do N. Choat, Hope, 10s.

Best two ewes, 2 shears and over, J. Rymal, Barton, £4; 2d do N. Choat, Hope, £3; 3d do L. A. Sovereign, South Dumfries, £1 10s.

Best 2 shearling ewes, J. Rymal, Barton, £3; 2d do J. Rymal, Barton, £2; 3d do N. Choat, Hope, £1.

Best 2 ewe lambs, N. Choat, Hope, £1 10s; 2d do N. Choat, Hope, £1.

CLASS XVI.—FAT SHEEP.—(23 Entries.)

Judges—Phillip Armstrong, Toronto; Stewart Campbell, Stratford; Charles Ross, Elgin.

Best 2 fat weathers, C. Scott, Whitby, £3; 2d do D. O'Neil, South Dumfries, £2; 3d do C. Scott, Whitby, £1.

Best 2 fat ewes, G. Miller, Markham, £3; 2d do F. W. Stone, Guelph, £2; 3d do J. Snell, Chinguacousy, £1.

PIGS.

CLASS XVII.—LARGE BREED PIGS.—(23 Entries.)

Judges—Joseph Woodruff, Niagara; John Tilt, Peel; A. L. Wilson, Brant.

Best boar, one year and over, C. A. Jordison, Hope, (imported from New York State since last Show,) £10.

Best breeding sow, one year and over, Richard Coates, Oakville, £3; 2d do C. A. Jordison, Port Hope, £2; 3d do Daniel O'Neill, Dumfries, £1.

Best boar, under 1 year, George Savage, Toronto Tp., £3; 2d do Richard Coates, Oakville, £2; 3d do J. Card, Guelph, £1.

Best sow, under 1 year, C. A. Jordison, Hope Tp., £2; 2d do J. Card, Guelph, £1 10s; 3d do Richard Coates, Oakville, £1.

CLASS XVIII.—SMALL BREED PIGS.—(56 Entries.)

Judges—John Elgie, Barrie; Robert Patterson, Perth; John Foott, Port Hope.

Best small breed boar, one year and over, James Durand, Kingston, £5; 2d do R. & W. Gordon, Paris, £3; 3d do John McGlashan, Pelham, £2.

Best small breed sow, 1 year and over, R. & W. Gordon, Paris, £3; 2d do J. Marshall, Brantford, £2; 3d do R. & W. Gordon, Paris, £1.

Best small breed boar, under one year, John Marshall, Brantford, £3; 2d do John Marshall, Brantford, £2; 3d do James Durand, Kingston, £1.

Best small breed sow, under one year, John Marshall, Brantford, £2; 2d do W. Rankin, Kingston, £1 10s; 3d do H. Battell, Haldimand, £1.

POULTRY.

CLASS XIX.—POULTRY, &c.—(226 Entries.)

Judges—John Horne, London; W. B. Crew, Toronto; Nathan Choate, Hope.

Best pair white dorkings, Joseph Lamb, City of London, £1; 2d do Samuel Peters, London, 10s.

Best pair spangled dorkings, Samuel Peters, London, £1; 2d do W. O. M. King, London, 10s; 3d do Joseph Lamb, London, recommended, 5s.

Best pair golden Polands, Joseph Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair game fowls, James McCartney, Brantford, £1; 2d do E. Hall, Ingersoll, 10s.

Best pair of buff Cochin China, Shanghai, Canton, or Bramah Pootra fowls, Joseph Lamb, London, £1.

Best pair of white Cochin China, Shanghai, &c., Samuel Peters, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair of grey Cochin China, Shanghai, &c., Joseph Lamb, London, £1.

Best pair of black Spanish fowls, Joseph Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair of black Java fowls, Joseph Lamb, London, £1.

Best pair of Bolton grays, J. Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair of Hamburg fowls, W. O. M. King, London, £1; 2d do H. White, Ayr, 10s.

Best pair of feather-legged bantams, Edward Young, Brantford, 10s; 2d do Samuel Peters, London, 5s.

Best pair of smooth-legged bantams, Samuel Peters, London, 10s; 2d do Samuel Peters, London, 5s; 3d do Edward Young, Brantford, commended.

Best pair of turkeys, white or coloured, Joseph Lamb, London, £1.

Best pair of wild turkeys, John Peters, London, £1; 2d do David Bastedo, Blenheim, 10s.

Best pair of large geese, James Durand, Kingston, £1; 2d do Joseph Lamb, London, 10s.

Best pair Bremen geese, Joseph Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair Muscovy ducks, Joseph Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair common ducks, Samuel Peters, London, £1; 2d do G. Miller, Markham, 10s.

Best pair of Aylesbury ducks, Samuel Peters, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair of Poland ducks, Joseph Lamb, London, £1; 2d do Joseph Lamb, London, 10s.

Best pair of Guinea fowls, Wm. Parkin, Brantford, £1.

Best lot of poultry in one pen, owned by the exhibitor, Joseph Lamb, London, £2; 2d do Henry White, Ayr, £1.

Best lot of Poultry in one pen, owned by the exhibitor, J. Lamb, London, £2; 2d do Samuel Peters, London, recommended, £1 10s.

EXTRA PRIZES IN CLASS XIX.—Joseph Lamb, London, pair silky fowls, recommended, £1; Joseph Lamb, London, English pheasants, £1; Joseph Lamb, London, Leghorn fowls, recommended, 10s; Robert Watts, South Dumfries, pea fowls, recommended, 10s; S. Peters, London, Rouen ducks, recommended, £1; Charles Taylor, Brantford, lot of ferrets, recommended 10s.

REMARKS BY JUDGES.—Recommended in future not to divide Cochin China, Shanghai, and Bramah Pootras into classes of black, white, buff, and grey; one class for the whole being sufficient.

The Bolton Greys are a very useful, hardy fowl.

The exhibition of poultry, although confined to a few persons, is most excellent, and shews a great improvement upon former years. The Judges would however suggest that the Prize List next year should be prepared by persons who have a thorough knowledge of poultry. Some changes could evidently be made in the present list for the better. They would also hope that the exhibitors' tickets shall not again be filled in with the owners' names, the Judges thereby being placed rather unpleasantly, and rendered subject to remarks which might be avoided; the number of prizes awarded to any person being sufficient to establish to whom the prize for the best lot of poultry in the various classes by one exhibitor should be awarded. The Local Committee ought also to have some person in attendance to see that the poultry, as it arrives, may be placed in its proper class, so as to avoid confusion. The present coops were made with the bars so wide apart that many of the fowls escaped. If a shed, with shelves alone, were provided, it would be sufficient, and would save a great expense. The exhibitors should have their own coops, of an uniform plan, say three feet cube, with wire fronts.

The proprietors of many of the prize birds consider themselves entitled to extra prizes, having imported them this year from England at great cost.

AGRICULTURAL PRODUCTIONS.

CLASS XX.—GRAINS, SEEDS, &c.—(329 Entries.)

Judges—Charles Girvin, Huron; Robert Pierson, Oxford; Chauncey Johnson, Prescott Co.

The Canada Company's prize for the best 25 bushels of fall wheat, the produce of Canada West, being the growth of the year 1857. The prize to be awarded to the actual grower only of the wheat, which is to be given up to, and become the property of the Association, for distribution to the County Societies for seed, John Brown, Burford, £25; 2d do by the Association, D. W. Freeman, Wyndham, £10; 3d do Isaac Merritt, Burford, £5.

The winners of the second and third prizes retain their wheat.

Best two bushels of winter wheat, I. H. Anderson, Flamborough West, 66 lbs. per bushel, £2 10s; 2d do T. Turnbull, South Dumfries, £2; 3d do J. M. Kennedy, Blenheim, £1 10s; 4th do J. Phipps, Burford, £1.

Best two bushels spring wheat, Christopher Anderson, Haldimand, £2 10s; 2d do Joseph Nixon, London, £2; 3d do H. Kennedy, London, £1 10s; 4th do C. C. Small, Toronto, £1.

Best two bushels of barley, 2 rowed, A. McDonald Lockhart, Sherbrooke, £1 10s; 2d do C. Anderson, Haldimand, £1; 3d do I. H. Anderson, Flamborough West, 10s; 4th do A. M'Donald Lockhart, Sherbrooke, Vol. Transactions Board of Agriculture.

Best two bushels barley, 6 rowed, I. H. Anderson, Flamborough West, £1 10s; 2d do J. Campbell, Brantford, £1; 3d do D. M'Intyre, Onondaga, 10s; 4th do J. Tennant, Brantford Tp., Vol. Transactions.

Best two bushels rye, I. H. Anderson, Flamborough West, £1 10s; 2d do J. Gilbert, Sydney, £1; 3d do P. R. Palmer, Thurlow, 10s.

Best two bushels of oats, (white,) Wm. Smith, Brantford, £1 10s; 2d do J. Bartholomew, Wyndham, £1 5s; 3d do J. S. Ross, Sydenham, 15s; 4th do J. Simpson, Downey, Vol. Transactions.

Best two bushels of oats, (black,) R. L. Denison, Toronto, £1 10s; 2d do T. Ballingal, Paris, £1 5s; 3d do H. Moyle, Brantford, 15s; 4th do A. Sharp, Brantford, Vol. Transactions.

Best two bushels of field peas, J. Gilbert, Sydney, £1 10s; 2d do J. Gilbert, Sydney, £1 5s; 3d do J. Durand, Kingston, 15s; 4th do J. Banks, Brantford, Vol. Transactions.

Best two bushels of marrowfat peas, J. Durand, Kingston, £1 10s; 2d do C. Anderson, Haldimand, £1 5s; 3d do A. Shaw, Toronto, 15s; 4th do J. Gilbert, Sydney, Vol. Transactions.

Best two bushels tares, C. Taylor, Brantford, £1 10s; 2d do F. W. Stone, Guelph, £1 5s; 3d do E. W. Thomson, York Tp., 15s.

Best bushel of white field beans, N. C. Widner, Wyndham, £1 10s; 2d do D. Wilson, Chatham, £1; 3d do J. A. Woodruff, Niagara, 15s; 4th do J. G. Bastedo, Blenheim, Vol. Transactions.

Best two bushels Indian corn in the ear, (white,) P. Hinman, Haldimand, £1 10s.; 2d do R. C. Gill, Cramahe, £1 5s; 3d do W. L. Ewing, Brantford, 15s.

Best two bushels Indian corn in the ear, (yellow,) Jacob McMichael, Townsend, £1 10s; 2d do Robert Warren, Niagara, £1 5s; 3d do John Bray, Brantford, £15s; 4th do C. O. Benedict, Niagara, Vol. Transactions.

Best bushel of timothy seed, David Wilson, Chatham, £2; 2d do P. R. Palmer, Thurlow, £1 10s; 3d do Jacob McMichael, Townsend, £1.

Best bushel of clover seed, David Gibson, North Dumfries, £2; 2d do James Campbell, Brantford, £1 10s; 3d do John Bray, Brantford, £1.

Best bushel hemp seed, Joseph Nixon, London, £1 10s.

Best Swedish turnip seed, John Bartholomew, Windham, £1 10s.

Best Swedish turnip seed, from transplanted bulbs, not less than 20 lbs., John Wilson, Westminster, £1 10s; 2d do George Roddick, Hamilton, £1; 3d do R. C. Gill, Cramahe, 10s.

Best 12 lbs. field carrot seed, R. C. Gill, Cramahe, £1 10s; 2d do R. C. Gill, Cramahe, £1.

Best 12 lbs. yellow mangel wurzel seed, R. C. Gill, Cramahe £1 10s.

Best bale of hops, not less than 112 lbs., Humphrey Davis, Brantford, £5; 2d do Humphrey Davis, Brantford, £3; 3d do H. J. Greenstreet, Paris, £2.

EXTRA PRIZES.—The following articles were recommended for prizes:—Bushel Italian rye grass seed, James Cowherd, Newport, £1; bushel millet seed, John Bartholomew, Windham, £1; two bushels buck-wheat, W. L. Ewing, Brantford, 15s; bushel Chinese millet, M. C. Nickerson, Woodhouse, 15s; bushel millet seed, J. A. Woodruff, Niagara, £1; two bushels buck-wheat, J. A. Woodruff, Niagara, 10s; 20 lbs. Aberdeen turnip seed, Henry Girouard, Hamilton, £1; sample flour corn, Wm. Kerby, Brantford, 15s; specimen Canada Coffee, Henry Girouard, Hamilton, 5s.

CLASS XXI.—ROOTS AND OTHER FIELD CROPS.—(243 Entries.)

Judges—E. C. Campbell, Niagara; D. Campbell, Lanark; James Farley, Elgin.

Best bushel pink-eyed potatoes, John Smith, Burford, 15s; 2d do J. McMichael, Townsend, 10s; 3d do D. Bastedo, Blenheim, 5s.

Best bushel of any sort, C. O. Benedict, Niagara, 15s; 2d do C. O. Benedict, Niagara, 10s; 3d do W. L. Ewing, Brantford, 5s.

Best bushel Swede turnips, H. Wright, South Dumfries, 15s; 2d do N. C. Widner, Windham, 10; 3d do H. & J. W. McLaren, Lowville, 5s.

Best bushel of white globe turnips, F. W. Stone, Guelph, 15s; 2d do J. Smith, Burford, 10s; 3d do G. Stanton, St. George, 5s.

Best bushel of Aberdeen yellow turnips, D. Stirton, Puslinch, 15s; 2d do F. W. Stone, Guelph, 10s.

Best 20 roots, red carrots, J. Caldwell & Bros., Waterloo, 15s; 2d do A. Shaw, Toronto, 10s; 3d do J. Cowherd, Newport, 5s.

Best 20 roots of Belgian carrots, (white,) J. Cowherd, Newport, 15s; 2d do A. W. Taylor, Barton, 10s; 3d do D. McNaughton, Onondaga, 5s.

Best 12 roots mangel wurzel, (long red,) J. Cowherd, Newport, 15s; 2d do R. Malcolm, Scarboro', 10s; 3d do D. McIntyre, Onondaga, Vol. Transactions.

Best 12 roots yellow globe mangel wurzel, A. W. Taylor, Barton, 15s; 2d do W. Sage, Brantford, 10s; 3d do A. Shaw, Toronto, 5s.

Best 12 roots long yellow mangel wurzel, A. Shaw, Toronto, 15s; 2d do F. W. Stone, Guelph.

Best 12 roots of khol rabi, C. O. Benedict, Niagara, 10s; 2d do A. Shaw, Toronto, 5s.

Best 12 roots of sugar beet, D. McNaughton, Onondaga, 15s; 2d do H. Battell, Haldimand, 10s; 3d do J. Harvey, Barton, Vol. Transactions.

Best 20 roots of parsnips, F. W. Stone, Guelph, 15s; 2d do A. W. Taylor, Barton, 10s; 3d do J. Cowherd, Newport, Vol. Transactions.

Best 20 roots of chicory, A. Shaw, Toronto, 15s; 2d do R. C. Gill, Cramahe, 10s; 3d do E. C. Campbell, Niagara, 5s.

Best two large squashes for cattle, D. Millar, Wilmot, 15s; 2d do J. A. Woodruff, Niagara, 10s; 3d do J. A. Woodruff, Niagara, Vol. Transactions.

Best two mammoth field pumpkins, F. Johnson, York Tp., 15s; 2d do D. Wilson, Chatham, 10s.

Best 3 common yellow field pumpkins, S. Bingham, Oakland, 15s; 2d do D. McNaughton, Onondaga, 10s; 3d do W. Kilpatrick, South Dumfries, 5s.

Best 20 lbs. of tobacco leaf, growth of Canada West, David Rose, Hamilton, £1.

Best broom corn brush, 28 lbs., W. Dutton, Onondaga, £1.

EXTRA PRIZES.—F. W. Stone, Guelph, red round turnips, 10s; orange jelly turnips, 10s; red globe mangel, 7s. 6d; M. C. Nickerson, Woodhouse, purple turnip, 5s; Chinese sugar cane, 5s; David Burtch, Brantford, sample Indian corn on stalk, 7s. 6d; S. Bingham, Oakland, Chinese sugar cane, 5s; James Cowherd, Newport, red round turnips, 5s; David Wilson, Chatham, cattle squash, 5s; Chinese sugar cane, 10s; W. Hanson, Walsingham, field squash, 5s.

NOTE BY JUDGES.—Many articles were not found, and were probably not on the ground. Mr. Shaw, of Toronto, exhibited what he termed two mammoth field pumpkins, and as we considered them to be squashes, we passed them over. As squashes they compared favorably with others of that name, but the owner did not offer them as such. If really pumpkins, they are very superior.

HORTICULTURAL PRODUCTS.

CLASS XXII.—FRUIT.—(305 Entries.)

Judges—Wm. Mundie, Hamilton; Wm. Gray, Woodstock; A. J. Burnham, Cobourg.

Best 20 varieties of apples, named (six of each,) H. Beal & Co., Waterford, £1; 2d do Hon. J. Young, Montreal, 15s; 3d do Jacob Steele, South Dumfries, 10s.

Best 12 table apples, named (fall sort) Wm. Smith, Brantford Tp., 10s; 2d do Wm. Smith, Brantford Tp., 7s. 6d; 3d do E. C. Campbell, Niagara, 5s.

Best 12 table apples, named (winter sort) Asa Wolverton, Paris, 10s; 2d do George Smith, Brantford Tp., 7s. 6d; 3d do E. C. Campbell, Niagara, 5s.

Best 12 baking apples, named, S. Bingham, Oakland, 10s; 2d do J. D. Humphreys, Toronto, 7s. 6d; 3d do George Smith, Brantford Tp., 5s.

Best 20 varieties of pears, named (3 of each,) E. C. Campbell, Niagara, £1; 2d do Charles Arnold, Paris, 15s; 3d do Hon. John Young, Montreal, 10s.

Best 12 table pears, named (fall sort) E. C. Campbell, Niagara, 10s; 2d do A. Huntington, Brantford, 7s. 6d; 3d do E. C. Campbell, Niagara, 5s.

Best 12 table pears, named (winter sort) C. O. Benedict, Niagara, 10s; 2d do Henry Girouard, Hamilton, 7s. 6d; 3d do Rev. E. Baldwin, Toronto, Vol. Transactions.

Best dozen plums, named (dessert) Wm. Smith, Brantford Tp., 10s; 2d do A. B. Bennett, Brantford, 7s. 6d; 3d do James Randall, Brantford Tp., 5s.

Best 12 baking plums, named, Rev. E. Baldwin, Toronto, 10s; 2d do Asa Wolverton, Paris, 7s. 6d; 3d do Wm. Smith, Brantford Tp., 5s.

Best quart of damsons, (English,) James Randall, Brantford, 10s; 2d do E. C. Campbell, Niagara, 7s. 6d; 3d do C. O. Benedict, Niagara, Vol. Transactions.

Best 6 peaches, grown in hot-house, Charles Arnold, Paris.

Best 12 peaches grown in open air, named J. A. Woodruff, Niagara, 10s; 2d do John Freed, Barton, 7s. 6d; 3d do Miles O'Reilly, Hamilton, 5s.

Best 10 varieties of peaches, grown in open air, (3 of each) John Freed, Barton, 15s; 2d do Henry Girouard, Hamilton, 10s; 3d do E. C. Campbell, Niagara, 7s. 6d.

Best 3 clusters of grapes, (hot house,) James Fleming, Toronto, 15s; 2d do Charles Arnold, Paris, 10s.

Best 3 clusters black Hamburg (hot-house) grapes, Charles Arnold, Paris, 15s; 2d do James Fleming, Toronto, 10s

Best clusters black grapes, grown in open air, Dr. D. Campbell, Niagara, 10s; 2d do Russell Smith, Burford, 7s. 6d; 3d do Charles Arnold, Paris, 5s.

Best 4 clusters white grapes, grown in open air, Charles Arnold, Paris, 10s; 2d do John McKee, Norwichville, 7s. 6d; 3d do C. O. Benedict, Niagara, 5s.

Best 4 clusters grapes, of any other sort, (open air,) Fergus Anderson, Blenheim, 10s.

Best and heaviest 2 bunches of grapes, (open air) C. O. Benedict, Niagara, 15s; 2d do Dr. D. Campbell, Niagara, 10s.

Best collection of grapes, grown in open air, two clusters of each sort, Charles Arnold, Paris, 15s; 2d do Charles Arnold, Paris, 10s; 3d do E. C. Campbell, Niagara, 7s. 6d.

Best water melon, Robert Currie, Niagara, 10s; 2d do Peter Howell, Ancaster, 7s. 6d; 3d do R. Murray, Mount Pleasant, Vol. Transactions.

Best musk melon of any sort, Hon. John Young, Montreal, 10s; 2d do E. C. Campbell, Niagara, 7s. 6d; 3d do James Fleming, Toronto, 5s.

Best six citrons for preserving, Ezra Parney, jr., Townsend, 10s; 2d do B. C. Shaw, Townsend, 7s. 6d; 3d do R. Bugler, London, Vol. Transactions.

EXTRA PRIZES.—Basket Siberian crabs, James Cowherd, Newport, 5s; collection crabs, Charles Arnold, Paris, 10s; 6 nectarines, Charles Arnold, Paris, 5s; pomological design, Charles Arnold, £1; clusters grapes, cold frame, E. C. Campbell, Niagara, 10s; 12 pears, 3 varieties, William Smith, Brantford Tp., 5s; 2 sorts currants, James Randall, Brantford, 5s; 2 sorts cherries, James Randall, Brantford, 5s; forty varieties pears and thirty varieties apples, Ellwanger & Barry, Rochester, £1 5s. and diploma.

NOTE BY JUDGES.—Messrs. Ellwanger & Barry, from Rochester, exhibited 40 varieties of pears, named; also 30 varieties of apples; we would highly recommend this collection to consideration for a prize. We would also beg to make mention of a large variety of both fruits and flowers sent for exhibition from the Hon. Mr. Young of Montreal, which were very creditable indeed.

CLASS XXIII.—GARDEN VEGETABLES.—(336 Entries.)

Judges—Wm. Mundie, Hamilton; Wm. Gray, Woodstock; A. J. Burnham, Cobourg.

Best 12 roots of salsify, William Percy, London, 10s; 2d do John Pegler, 7s. 6d; 3d do James Cowherd, Newport, 5s.

Best 4 heads brocoli, John Gray, Toronto, 10s; 2d do John Gray, Toronto, 7s. 6d; 3d do John Gray, Toronto, 5s.

Best 4 heads cauliflower, John Gray, Toronto, 10s; 2d do John Gray, Toronto, 7s. 6d; 3d do A. W. Taylor, Barton, 5s.

Best 4 heads cabbage, (summer,) H. Beal & Co., Waterford, 10s; 2d do George S. Wilkes, Brantford, 7s. 6d; 3d do Robert Moore, Shakespeare, 5s.

Best 4 heads cabbage, (winter) William Smith, Brantford Tp., 10s; 2d do H. Beal & Co., Waterford, 7s. 6d; 3d do William Smith, Brantford Tp., 5s.

Best 4 sorts winter cabbage, including savoys, 2 of each sort, William Smith, Brantford Tp., 15s; 2d do James Caldwell & Brothers, Waterloo, 10s; 3d do William Kilpatrick, South Dumfries, 5s.

Best 4 heads red cabbage, H. Beal & Co., Waterford, 15s; 2d do C. O. Benedict, Niagara, 10s; 3d do George S. Wilkes, Brantford, 5s.

Best 12 carrots for table, long red, Wm. Smith, Brantford Tp., 10s; 2d do W. Kilpatrick, South Dumfries, 7s. 6d; 3d do James Caldwell & Bros., Waterloo, 5s.

Best 12 early horn carrots, George Murton, Guelph, 10s; 2d do John Pegler, London, 7s. 6d; 3d do C. Lane, Brantford Tp., 5s.

Best table parsnips, R. Bugler, London, 10s; 2d do Wm. Smith, Brantford Tp., 7s. 6d; 3d do A. W. Taylor, Barton, 5s.

Best 6 roots of white celery, James Cowherd, Newport, 10s; 2d do Hon. John Young, Montreal, 7s. 6d; 3d do O. Veal, Brantford, 5s.

Best 6 roots of red celery, James Harney, Barton, 10s; 2d do Hon. John Young, Montreal, 7s. 6d; 3d do George S. Wilkes, Brantford, 5s.

Best dozen capsicums, E. C. Campbell, Niagara, 10s; 2d do Joseph A. Woodruff, Niagara, 7s. 6d; 3d do E. C. Campbell, Niagara, Vol. Transactions.

Best collection capsicums, Robert C. Gill, Cramahe, 15s; 2d do Wm. Percy, London, 10s; 3d do J. A. Woodruff, Niagara, 7s. 6d.

Best 6 egg plants, purple, C. O. Benedict, Niagara, 10s; 2d do Henry Girouard, Hamilton, 7s. 6d.

Best 12 tomatoes, A. W. Taylor, Barton, 10s; 2d do W. Kilpatrick, South Dumfries, 7s. 6d; 3d do E. C. Campbell, Niagara, Vol. Transactions.

Best assorted collection of tomatoes, 6 of each sort, E. C. Campbell, Niagara, 15s; 2d do C. O. Benedict, Niagara, 10s; 3d do Henry Girouard, Hamilton, 7s. 6d.

Best 12 blood beets, W. Kilpatrick, South Dumfries, 10s; 2d do E. C. Campbell, Niagara, 7s. 6d; 3d do John McFarlane, Brantford, Vol. Transactions.

Best peck of white onions, A. W. Taylor, Barton, 10s; 2d do Richard Bugler, London, 7s. 6d; 3d do James Cowherd, Brantford Tp., 5s.

Best peck of yellow onions, A. W. Taylor, Barton, 10s; 2d do Richard Bugler, London, 7s. 6d; 3d do W. H. Essery, London, Vol. Transactions.

Best peck of red onions, A. W. Taylor, Barton, 10s; 2d do H. J. Killmaster, Walsingham, 7s. 6d; 3d do James Cowherd, Newport, 5s.

Best 12 white turnips, (table) F. W. Stone, Guelph, 10s; 2d do F. W. Stone, Guelph, 7s. 6d; 3d do A. W. Taylor, Barton, Vol. Transactions.

Best 12 yellow turnips, (table,) F. W. Stone, Guelph, 10s; 2d do F. W. Stone, Guelph, 7s. 6d; 3d do James Caldwell & Bros., Waterloo, 5s.

Best 12 ears sweet corn, Thaddeus Smith, Brantford, 10s; 2d do J. D. Humphreys, Toronto, 7s. 6d; 3d do William Percy, London, Vol. Transactions.

Best and greatest variety of early potatoes, half peck of each sort, named, William Percy, London, 15s; 2d do E. C. Campbell, Niagara, 10s; 3d do W. Kilpatrick, South Dumfries, 5s.

Best 4 squashes, (table,) Wm. Thompson, Oakland, 10s; 2d do Richard Bugler, London, 7s. 6d; 3d do Joseph A. Woodruff, Niagara, 5s.

EXTRA PRIZES.—Windsor beans, O. Veal, Brantford, 5s; potato onions, O. Veal, Brantford, 5s; peck white pickling onions, H. Girouard, Hamilton, 5s; 6 white egg plants, E. C. Campbell, Niagara, 5s; specimen Chinese yams, Jas. Fleming Toronto, 5s.

NOTE BY JUDGES.—This class comprises an extensive collection of vegetables and roots, among which some very superior specimens were exhibited.

CLASS XXIV.—PLANTS AND FLOWERS.—(84 Entries.)

Judges—Same as class 22 and 23.

Best dozen dahlias, named, Hon. J. Young, Montreal, 10s; 2d do P. C. Vanbroeklin, Brantford, 7s. 6d; 3d do E. C. Campbell, Niagara, 5s.

Best and largest collection of dahlias, Hon. John Young, Montreal, £1; 2d do E. C. Campbell, Niagara, 15s.

Best bouquet of cut flowers, (for table,) C. Whitlaw, Paris, 10s; 2d do E. C. Campbell, Niagara, 7s. 6d; 3d do Mrs. Coucher, Brantford, 5s.

Best hand bouquet, Charles Whitlaw, Paris, 10s; 2d do John Gray, Toronto, 7s. 6d; 3d do R. Murray, Mount Pleasant, 5s.

Best collection of green house plants, not less than 12 specimens, J. Fleming, Toronto, £2 10s; 2d do C. Arnold, Paris, £1 10s.

Best twelve pansies, Hon. J. Young, Montreal, 10s; 2d do Charles Arnold, Brant, 7s. 6d.

Best 6 fuchsias in flower, R. Murray, Mount Pleasant, 10s.

Best collection of annuals in bloom, J. Fleming, Toronto, 10s; 2d do O. Veal, Brantford, 7s. 6d; 3d do Hon. J. Young, Montreal, 5s.

Best six coxcombs, Hon. J. Young, Montreal, 10s; 2d do E. C. Campbell, Niagara, 7s. 6d; 3d do R. Bugler, London, 5s.

Best six balsams in bloom, R. Murray, Mount Pleasant, 10s; 2d do Charles Arnold, Paris, 7s. 6d.

Best collection of China asters, Hon. J. Young, Montreal, 10s; 2d do O. Veal, Brantford, 7s. 6d; 3d do O. Veal, Brantford, 5s.

Best collection of ten weeks' stock, Henry Girouard, Hamilton, 10s; 2d do George Smith, Brantford, 7s. 6d; 3d do O. Veal, Brantford, 5s.

Best collection of hybrid perpetual roses, not less than 12 blooms, John Gray, Toronto, 10s; 2d do Henry Girouard, Hamilton, 7s. 6d; 3d do John Pegler, London, 5s.

Best floral ornament or design, R. Bugler, London, £1.

Best collection of verbenas, not less than 12 varieties, Charles Arnold, Paris, 15s; 2d do John Gray, Toronto, 10s; 3d do Hon. J. Young, Montreal, 5s.

Best collection of native plants, dried and named, Mrs. C. P. Traill, Rice Lake, £1 10s; 2d do Mrs. C. P. Traill, Rice Lake, £1.

EXTRA PRIZES.—Collection Noisette and Bourbon Roses, John Gray, Toronto, 5s; bouquet native cut flowers, H. Girouard, Hamilton, 5s; collection French marigolds, do do 5s; 12 hollyhocks, do do 5s; collection coxcombs, do do 5s; collection carnations, do do 5s; 12 perpetual roses, do do 10s; dozen phlox, P. C. Vanbrocklin, Brantford, 5s; roses, P. C. Vanbrocklin, 5s.

NOTE BY JUDGES.—The collection of plants and flowers, though not very extensive, are in most instances well selected and good of their kind.

CLASS XXV.—DAIRY PRODUCTS, PROVISIONS, &c.—(152 Entries.)

Best firkin of butter, not less than 56 lbs., James Wilson, North Dumfries, £2 10s; 2d do P. R. Palmer, Thurlow, £2; 3d do Henry Moyle, Brantford, £1 10s; 4th do David Wilson, Chatham, £1.

Best cheese, not less than 30 lbs., Hiram Ranney, Dereham, £2 10s; 2d do P. R. Palmer, Thurlow, £2; 3d do James Cowan, Waterloo, £1 10s; 4th do Hiram Ranney, Dereham, £1.

Best two Stilton cheeses, not less than 14 lbs. each, Hiram Ranney, Dereham, £2 10s; 2d do Hiram Ranney, Dereham, £2; 3d do Hiram Ranney, Dereham, £1 10s; 4th do Dan. McNaughton, Onondaga, £1.

Best butter, not less than 20 lbs., in firkin, crock, or tub, James Wilson, North Dumfries, £1 10s; 2d do Mrs. Maine, Jr., Beverley, £1 5s; 3d do Mrs. M. Charlton, Brant, £1; 4th do Wm. Burrill, Onondaga, 15s.

Best 30 lbs. maple sugar, Peter Howell, Ancaster, £1; 2d do Peter Howell, Ancaster, 10s.

Best candles, (collection,) R. M. Beamer, Oxford, 15s.

Best six kinds of preserves, James Harvey, Barton, Wentworth, 15s; 2d do James Harvey, do 10s; 3d do James Harvey, do 5s.

Best collection of confectionery, C. Whitlaw, Brantford, £1 10s.

Best barrel of flour, Thomas Perrin, Jr., Mount Vernon, £1 10s; 2d do John Ernst & Son, New Dundas, £1.

Best 14 lbs. manufactured tobacco of Canadian growth, Henry Girouard, Hamilton, 15s; 2d do David Rose, Hamilton, 10s.

Best box of soap, 28 lbs., R. M. Beamer, Blenheim, 15s; 2d do R. M. Beamer, Blenheim, 10s.

Best collection of bottled pickles, Henry Girouard, Hamilton, 15s.

Best honey in the comb, not less than 10 lbs., Charles Hawkins, Dereham, 15s; 2d do John McKee, Norwichville, 10s.

Best jar of clear honey, George S. Armstrong, Nichol, Wellington, £1; 2d do Charles Hawkins, Oxford, 10s; 3d do J. McKee, Norwichville, Vol. Transactions.

Best lot of sauces for table use, H. Girouard, Hamilton, 15s.

EXTRA PRIZES.—Hiram Ranney, Dereham, pine apple cheese, £1; do 2d quality, 15s; W. Wright, Stratford, fancy mixed cakes and biscuits, £1 5s; James Alexander, Toronto, sample ginger wine, £1 5s. and diploma; John Nasmith, Toronto, cabin biscuit, 10s., Abernethy biscuit, 10s., Elgin biscuit, 10s., wine biscuit, 10s., soda biscuit, 10s., crackers, 10s., and diploma for the collection; Sluman Bingham, Oakland, Chinese sugar cane syrup, 5s; C. Whitlaw, Brantford, large cake, £1; Miss Merritt, Hamilton, currant wine, 5s; Mrs. C. H. Waterous, Brantford, samples catsup, 5s; raspberry wine, 5s; W. Conkey, Sidney, syrup from Chinese sugar cane, 10s; E. Brown, Bowmanville, soda biscuit, 10s., wine biscuit, 10s., pic-nic crackers, 10s.

DOMESTIC MANUFACTURES.

CLASS XXVI.—AGRICULTURAL IMPLEMENTS.—(279 Entries.)

Judges—W. McDougall, Toronto; John Wade, Cobourg; Wm. Paulin, Woodstock; S. D. Farley, Hastings; R. Ball, Lincoln.

Best wooden plough, Patrick Logan, Paris, £2 10s; 2d do G. Morley, Thorold, £1 10s; 3d do Isaac Modeland, Brampton, £1.

Best iron plough, D. Duncan, Ancaster, £2 10s; 2d do Wilson & Adams, Paris, £1 10s; 3d do A. McSherry, Paris, £1.

Best sub-soil plough, J. Kellum, Townsend, £2 10s; 2d do J. Kellum, Townsend, £1 10s.

Best pair of harrows, L. McIntosh, Paris, £1 10s; 2d do Johnson & Allen, Whitby, £1; 3d do G. Bryce, Mount Pleasant, 10s.

Best fanning mill, J. O. Wisner, Brantford, £1 10s; 2d do M. McTaggart, Clinton, £1; 3d do E. Boss, Port Dover, 10s.

Best horse-power thresher and separator, C. R. Wilkes, Brantford, £5; 2d do C. McDonald & Co., Ancaster, £3; 3d do Haggart & Bros., Brampton, £2.

Best grain drill, Ganson, Waterous & Co, Brantford, £3.

Best seed drill or harrow, Wm. Crowe, Guelph, £1; 2d do Wm. Crowe, Guelph, 15s.

Best straw cutter, Matthew Willoughby, Toronto, £1; do Patrick Logan, Paris, (horse-power,) £1; 2d do Isaac Modeland, Brampton, 15s; do (horse-power,) R. & R. S. Patterson, Belleville, 15s; 3d do John Shuttleworth, Weston, 10s.

Best portable grist mill, John Gartshore, Dundas, £3.

Best corn and cob crusher, Alexander Miller, Chatham, £1.

Best machine for cutting roots for stock, A. Cant, Galt, £1 10s; 2d do H. P. Brown & Co., Woodstock, £1; 3d do J. Watson, Ayr, 10s.

Best clover cutting machine, R. & R. S. Patterson, Belleville, £2.

Best clover cleaning machine, J. Adams, Hope, £3; 2d do Harris & Merrill, Clinton, £2.

Best cider mill and press, Levi Howell, Ancaster, £3; 2d do Levi Howell, Ancaster, £2.

Best cheese press, Charles Ash, Brantford, £2; 2d do G. Bryce, Glenmorris, £1 10s.

Best two-horse waggon, Johnson & Allen, Whitby, £3; 2d do W. Scarff, Woodstock, £2; 3d do J. Hagaman, Oakville, £1.

Best one-horse light market waggon, W. Gammon, Cainsville, £2 10s.

Best horse rake, Lyman Judson, Yonge Tp., £1; 2d do G. Vandawaters, Sidney, 15s; 3d do Salem Eckardt, Markham, 10s.

Best metal roller, John Watson, Ayr, £2 15s.

Best wooden roller, A. C. Bruce, Glenmorris, £2 10s.

Best garden roller, A. C. Bruce, Glenmooris, £1.

Best stump extractor, H. & J. W. McLaren, Lowville, £2.

Best reaping machine, Paterson & Bros., Richmond Hill, diploma and £5; 2d do John Watson, Ayr, £3; 3d do G. W. Goodall, Brantford, £2.

Best mowing machine, B. Bell, St. George, £5; 2d do C. Wolsoncroft, Ancaster, £3; 3d do Ira S. Lefler, Streetsville, £2.

Best combined mower and reaper, Darling & Aitchison, Thornhill, £5; 2d do R. & R. S. Patterson, Belleville, £3; 3d do H. A. Massey, Newcastle, £2

Best thistle extractor, Rodolphus Lounsbury, Grimsby, 10s.

- Best farm gate, A. M. Tarbell, Stratford, 15s.
 Best field or two horse cultivator, J. Hetherington, Clarke, £3; 2d do S. Eckardt, Markham, £2; 3d do John Watson, £1.
 Best horse hoe, or single horse cultivator, John Watson, Ayr, £1, and Diploma for general excellence of this and other implements shown; 2d do W. Crowe, Guelph, 15s.
 Best wooden pump, G. F. Howell, Ancaster, £1; 2d do George Burgess, Ancaster, 15s.
 Best brick-making machine, Landon & Buck, Brantford, £2 10s.
 Best half-dozen hay rakes, Thomas Drummond & Co., Kingston, 10s.
 Best half-dozen manure forks, Thomas Drummond & Co., 15s; 2d do D. F. Jones, Gananoque, 10s; 3d do Oshawa Manufacturing Co., Vol. Transactions.
 Best half-dozen hay forks, D. F. Jones, Gananoque, 15s; 2d do T. Drummond & Co., Kingston, 10s; 3d do Oshawa Manufacturing Company, Vol. Transactions.
 Best half-dozen scythe snaiths, T. Drummond & Co., Kingston, 15s.
 Best ox-yoke and bows, J. Caulfield, Puslinch, 10s; 2d do P. Hinman, Haldimand, 5s.
 Best grain cradle, T. Drummond, Kingston, 10s; 2d do G. F. Howell, Ancaster, 5s.
 Best half-dozen grain shovels, D. F. Jones, Gananoque, 15s; 2d do T. Drummond & Co., Kingston, 10s.
 Best half-dozen iron shovels, D. F. Jones, Gananoque, 15s; 2d do D. F. Jones, Gananoque, 10s.
 Best half-dozen spades, D. F. Jones, Gananoque, 15s; 2d do D. F. Jones, Gananoque, 10s.
 Best half-dozen steel hoes, D. F. Jones, Gananoque, 15s; 2d do Oshawa Manufacturing Company, 10s.

EXTRA PRIZES.—D. F. Jones, Gananoque, case of implements, spades, &c, £1; John Watson, Ayr, combined sub-soil plough, 10s., gang plough, 10s; W. H. Tuttle, Caufield, set of auger handles, 5s; David Duncan, Ancaster, three-horse yoke, 5s; Rice Lewis & Son, Toronto, recommended the following prizes for imported articles, as the agents of the manufacturers: patent rotary knife cleaning machine, from England, 5s., box apple parers, from Massachusetts, 5s., No. 4 hydraulic ram, from Connecticut, 15s., patent 2 wheel iron plough, from England, £1, do with steel mould board, £1 5s., patent iron swing plough, from England, £1, patent double action turnip cutter, 10s; Israel Seaman, St. Catharines, rotary grain separator, for mill use, £1 10s., vertical bran duster for do, £1 10s; Boucher & Oates, Toronto, French burr mill stones, £1 10s; Jason Kellum, Townsend, gang plough, £1; John Tait, Galt, double mould board iron plough, 10s; Robert Night, New Hamburg, self-acting circular sawing machine, £2 10s; John Watson, Ayr, set of trees for three-horse plough, 5s; James Overholt, Blandford, horizontal sawing machine, £2 10s; John Ptolmey, Stoney Creek, corn sheller, £1; Isaac Mills, Flamboro', machine for making roof tiles, £1; John Gartshore, Dundas, combined double suction smut machine and shaker, £1 10s; A. M. Tarbell, Stratford, patent iron wind-mill, with pumping apparatus attached, 10s; Rodolphus Lounsbury, Grimsby, corn planter, 10s; C. W. Card, Whitby, pump of wood and iron, 15s; E. Spencer, Brockville, submerged water wheel, £1 5s.

NOTES BY JUDGES.—Fifteen wooden ploughs were tried in the field. The owners were allowed to plough several furrows, and if there had been time, they would have been required to begin and finish a "land" each. They were also tested with a Dynamometer, but though every effort was made to ensure equal

conditions, the imperfection of the instrument, and the little time at the disposal of the judges, prevented them from arriving at results that were entirely satisfactory. The competition was exceedingly close, and several ploughs, to which no prizes were awarded, are quite as deserving as those that obtained them. The judges commend especially the plough of Jacob Bingham, Burford, and G. Huntingdon & Co., Norwich, Oxford. There were seven iron ploughs tested. The same remarks as above are applicable to this class. The trial in the field was of essential importance, but it should hereafter be made the special duty of a Committee who could give their whole attention to it.

The combined reapers and mowers and single mowers were tried in the field. The weather and the crops were unfavourable, but the performance of all the machines was very satisfactory. The combined machines were quite equal as mowers to the single machines. The Judges found it a difficult matter to decide between them. The reapers were not tried, for want of time. The Judges would strongly recommend that all harvest implements be hereafter tried at the proper season, by a committee appointed for the purpose.

The thrashing machine exhibited by Ganson, Waterous & Co., of Brantford, was a well made machine, and the Judges found it very difficult to determine upon the respective merits of each exhibited.

The Judges found several machines adapted to horse-power, competing with the small machines not so adapted. They propose, as above, that among these, that one of Mr. P. Logan's get a first prize, and that of Messrs. R. & S. Patterson should get a second.

The machine offered as a clover cutting machine, and to which the prize is awarded, is a combined mower and reaper. It will no doubt answer the purpose, but the other combined machines will perform the work equally well.

CLASS XXVII.—LEATHER, FURS, &c.—(111 Entries.)

Judges—Col. Saunders, Guelph; E. Birrel, Pickering; R. Patterson, Belleville.

Best saddle and bridle, J. McKay & Co., Brantford, £1; 2d do McKay & Smith, 15s.

Best set of farm harness, R. Malcolm, Scarboro', £1 10s; 2d do McKay & Smith, Brantford, £1; 3d do Welford & Finlayson, Paris, 10s.

Best set of pleasure harness, McKay & Smith, Brantford, diploma and £1 10s; 2d do J. Buchan Clarke, £1; 3d do McKay & Smith, Brantford, 10s.

Best travelling trunk, McKay & Smith, Brantford, £1 10s; 2d do McKay & Smith, Brantford, 15s; 3d do McKay & Smith, Brantford, Vol. Transactions.

Best side of sole leather, John Fitzgerald, Shakspeare, 15s; 2d do Jacob Snure, Jordan, 10s; 3d do T. Howe, Dundas, 5s.

Best side of upper leather, Jacob Snure, Jordan, 15s; 2d do E. Doan Woodhouse, 10s; 3d do Gaige & Co., Whitby, 5s.

Best kip skin, P. McKay & Son, Brantford, 15s; 2d do Christopher Doering, Philipsburgh, 10s; 3d do Christopher Doering, 5s.

Best stirrup leather, P. McKay & Son, Brantford, 15s.

Best skin cordovan, P. McKay & Son, Brantford, 15s.

Best specimen of belt leather, P. McKay & Son, Brantford, 15s.

Best specimen linings, Ott & Brother, Brantford, 15s.

Best skirting leather, D. McKay, Brantford, 15s; 2d do D. McKay, Brantford, 10s; 3d do Porter McKay, Brantford, 5s.

Best side of harness leather, T. Howe, Dundas, 15s; 2d do D. McKay, Brantford, 10s; 3d do Jacob Snure, Jordan, Vol. Transactions.

Best calf skin, dressed, Gaige & Co., Whitby, 15s; 2d do E. Doan, Woodhouse, 10s; 3d do Jacob Snure, Jordan, 5s.

Best skin of leather for carriage covers, P. McKay & Son, Brantford, £1 ; 2d do J. Snure, Jordan, 10s.

Best half-dozen coloured sheep skins, Ott & Brother, Brantford, 15s.

Best specimen bootmaker's work, Alexander Pelham, Woodstock, 15s ; 2d do Alexander Pelham, Woodstock, 10s ; 3d do Alexander Pelham, Woodstock, 5s.

EXTRA PRIZES.—George Coleleugh, Ayr, case of shoe pegs, £1 5s ; Thomas Glasco, Brantford, show case of furs, 15s ; John Buchan, Clarke, set single pleasure harness, 15s ; Leopold Mayer, Brantford, assortment of ladies' and gentlemen's furs, £1.

NOTE.—There are two cases of furs, and it is difficult to say which is most complete. That of Mr. Glasco is perhaps most complete in ladies' furs ; that of Mr. Mayer contains a very large assortment of ladies' furs, to which is added a gentleman's coat and some caps, and on that account we think it entitled to the higher premium.

CLASS XXVIII.—MANUFACTURES IN METALS, &C.—(195 entries.)

Judges—J. W. Hough, Brockville ; William Carpenter, Whitby ; Oliver T. Macklem, Chippawa.

Best steam engine, in operation on the ground, Ganson, Waterous & Co. Brantford, £15.

Best portable steam engine for farm purposes, 4 to 6 horse power, (open to foreign competition) C. R. Wilkes, Brantford, diploma and £10.

Best model in metal of engine, general millwright's work or machinery, James Skimin, Brantford, diploma and £2 ; 2d do H. Yates, Brantford, £1.

Best specimen of silversmiths' work, T. P. Ware & Co., Hamilton, diploma and £2.

Best specimen cast ornamental iron work, Ganson, Waterous & Co., Brantford, diploma and £1 10s.

Best specimen of coppersmith's work, B. G. Tisdale, Brantford, diploma and £1.

Best specimen of locksmith's work, J. & J. Taylor, Toronto, diploma and £1.

Best lot of plumber's work, George Harding, Toronto, diploma and £1 10s.

Best metal pump, J. Philips, Brantford, diploma and £2 ; 2d do Munger & Harris, Kingsville, £1 10s.

Best iron fire-proof vault door (price considered) Thomas Lalor, Hamilton, diploma and £2.

Best iron fire-proof safe (price considered) J. & J. Taylor, Toronto, diploma and £1 10s.

Best refrigerator (price considered) D. Ramore, Galt, diploma and £1.

Best hall stove, Landon & Buck, Brantford, £1 ; 2d do Landon & Buck, Brantford, 10s ; 3d do B. G. Tisdale, Brantford, 5s.

Best parlor stove, B. G. Tisdale, Brantford, £1 ; 2d do Landon & Buck, Brantford, 10s ; 3d do B. G. Tisdale, Brantford, 5s.

Best cooking stove with furniture, B. G. Tisdale, Brantford, £1 10s ; 2d do B. G. Tisdale, Brantford, £1 ; 3d do Landon & Buck, Brantford, 10s ; 4th extra, Thomas Smith, Mitchell, 15s.

Best cooking stove for coal, Thomas Smith, Mitchell, £1 10s.

Best system of ventilating buildings, with model and description, and reducing the same to practical use, Henry Ruttan, Cobourg, diploma and £5 ; 2d do F. G. Wilson, Saltfleet, £2 10s.

Best specimen of iron casting for stoves or general machinery, B. G. Tisdale, Brantford, diploma.

Best balance scales, Dalley, Ware & Co., Hamilton, £1; 2d do W. Rodden, Montreal, 15s.

Best set of bench planes, J. P. Millener & Co., Kingston, 15s.

Best saddle tree, Male & Gleeson, Haldimand Township, 10s.

Best specimen 20 lbs. cut nails, Alexander Graham, Hamilton, 10s; 2d do Alexander Graham, Hamilton, 5s.

Best rifle, John J. Walker, Simcoe, 15s; 2d do J. Hunter Sears, Brantford, 10s.

Best half dozen narrow axes, J. P. Millener & Co., Kingston, 15s; 2d do J. P. Millener & Co., Kingston, 10s; 3d do J. P. Millener & Co., Kingston, 5s.

Best set of horse shoes, D. Duncan, Ancaster, 15s; 2d do Charles Weeks, Ancaster, 10s; 3d do Charles Weeks, Ancaster, 5s.

Best assortment of edge tools, J. P. Millener & Co., Kingston, diploma and £5.

Best railway locomotive truck wheels, Pierson & Benedict, Niagara, diploma and £2 10s.

Best railway passenger car wheels, Pierson & Benedict, Niagara, diploma and £2 10s.

EXTRA PRIZES IN CLASS XXVIII.

A. C. Chewett, Kingston, specimen of axles, 10s; J. Philips, Brantford, iron wagon boxes and skein and wrought iron axles, 15s; John Donogh, Toronto, improved gas flat iron, 5s; B. G. Tisdale, Brantford, farmer's boiler, 10s; C. H. VanNorman, Hamilton, imported electro plate goods, 15s; F. G. Beckett & Co., Hamilton, paper cutting machine, 5s; plate bending machine for tin or coppersmith's use, 5s; B. Bell, St. George, lot of cast steel files, 5s; W. H. Rice, 4 rolls plain wire cloth, 5s; do. 4 bird cages, wire, 5s; do. dozen assorted wire riddles, 2s 6d; Dalley, Ware & Co., platform scales, 5s; Pierson, Benedict & Co., Niagara, two cast iron boxes for railway cars, 10s; J. H. Burdick, Woodstock, point for lighting rod, 5s; Wm. Marks, Toronto, piano fire engine, £1; J. P. Millener & Co., Kingston, case moulding planes and ploughs, 5s; blacksmith's sledges, 10s, 2 fleshers for tanners, 5s; Maitland Fisher, Hamilton, 3 safes, American manufacture, 5s; W. C. Stiver, Ingersoll, lightning rod, 5s; B. G. Tisdale, Brantford, 4 gridirons, 5s; W. Rodden, Montreal, iron cradle and trimmings, 5s, hat and coat stand, 5s; G. W. Folts, Toronto, sewing machine, 5s; Dalley, Ware & Co., Hamilton, even balance, counter brass beam scale, 5s; Henry L. Beverley, Toronto, rotary shingle machine, 10s; W. B. Jarvis, Toronto, railway self-coupler, diploma and 15s; B. M. Clark, Toronto, model working section of a low pressure steam engine, and model locomotive engine, for use in schools, diploma and 15s.

CLASS XXIX.—CABINET WARE, CARRIAGES, &c.—(128 Entries.)

Judges—James Scarff, Woodstock; E. W. Thomson, Toronto; D. B. Stevenson, Picton.

Best side board, T. Fuller & Co., Oshawa, diploma and £3; 2d do Monroe & Merton, Hamilton, £2; 3d do Monroe & Merton, Hamilton, £1.

Best piano, Canadian manufacture, Seebold, Manby & Co., Toronto, diploma and £5; 2d do Seebold, Manby & Co., Toronto, £3.

Best veneers from Canadian wood, D. McNaughton, Onondaga, diploma and £1.

Best specimen of sawn oak, N. Howell, Ancaster, 10s.

Best specimen of curled maple, D. McNaughton, Onondaga, 10s.

Best specimen of graining wood, W. F. Chave, Brantford, diploma and £1 10s.; 2d do W. F. Chave, Brantford, £1; 3d do W. F. Chave, Brantford, 10s; 4th do W. Edwards, Woodstock, 10s.

A specimen exhibited by John Murphy, Toronto, was not in its place when the judges first made their inspection, but having since noticed it, they consider it exceedingly good and recommend a diploma.

Best centre table, W. Bevis, Hamilton, diploma and £1; 2d do Monroe & Morton, Hamilton, 15s.

Best work box, W. Bevis, Hamilton, 10s; 2d do Isaac Latschaw, Dundas, 5s.

Best one horse pleasure carriage, Smith & McNaught, Brantford, diploma and £2; 2d do Smith & McNaught, Brantford, £1 10s; 3d do James Adams, Dunnville, 15s.

Best two horse pleasure carriage, J. Hagaman, Oakville, diploma and £2.

Best two horse pleasure sleigh, J. Hagaman, Oakville, £2; 2d do one horse sleigh, J. Shuttleworth, Weston, £1 10s.

Best half dozen corn brooms, M. B. Bealey, Hamilton, 10s; 2d do J. A. Smith, Brantford, 5s.

Best half dozen broom handles, turned, G. Barnard, Brantford, 10s.

Best wooden pail, W. Scotland, Oakland, 7s. 6d.

Best wash tub, Hector Gilchrist, Woodstock, 7s; 2d do H. Gilchrist, Woodstock, 5s.

Best washing machine, G. Burgess, Ancaster, 10s; 2d do Andrew Bridge, Blenheim, 5s.

Best churn, Alexander Qua, Paris, 15s; 2d do J. Dennis, Ingersoll, 10s.

Best 4 or 6 paneled door, D. White & Son, Woodstock, 15s; 2d do D. White & Son, Woodstock, 10s; 3d do Turnbull & Thompson, Paris, 5s.

Best window sash, 12 lights, hung in frame, D. White & Son, Woodstock, 15s.

Best model beehive, Hugh McKee, Norwichville, 10s; 2d do Charles Hawkins, Dereham, Oxford, 5s.

EXTRA PRIZES.—Isaac Latschaw, Dundas, workstand, 15s., looking glass, 10s; Charles Hawkins, Dereham, variety turned work, 50s; P. Hagle, Ingersoll, one barrel, 5s; A. & J. Cant, Galt, model scaffold for building purposes, 10s; M. B. Bealey, Hamilton, half dozen corn whisks, 5s; D. White & Son, Woodstock, venetian blinds, 10s., sample mouldings, 20s., cornice brackets, 10s. and diploma for the assortment; R. H. Hudson, Toronto, models of clipper ship and yacht, 25s., screw ship for line between Chicago and Collingwood, 10s; T. Fuller & Co., Oshawa, bureau, 5s; M. Almas, Windham, specimen cooperage, 7s 6d; Turnbull & Thompson, Paris, venetian blinds, 10s; T. Fuller & Co., Oshawa, pier table, 15s; W. Scott, Oakland, cheese tub, 5s; William Watt, Brantford, window blinds, 10s; Thomas Bell, Preston, chair making machine, 25s; Monroe & Morton, Hamilton, therapeutic chair, 15s., dumb waiter, 10s; Thomas Shuttleworth, Dereham, child's carriage, 10s; J. Quiggin, London, bent stuff for sleighs, 15s; G. W. Clarke, Rochester, N. Y., melodeon, 15s., do do 25s; S. S. Hickok, Toronto, patent anti-friction buggy wheel, 10s.

CLASS XXX—POTTERY—(23 Entries.)

Judges—The same as in class 29.

Best specimen of pottery, J. Woodyatt & Co. Brantford, £1; 2d do W. Lea, York Township, 15s.

Best specimen of draining tiles and pipes of different sizes, Geo. Smart, Bowmanville, £2 10s; 2d do W. Lea, York Township, £1 5s; 3d do W. Lea, York Township, 10s.

Best dozen common bricks, Oliver and Soule, Stratford, 10s; 2d do H. Workman, Brantford, 5s.

Best dozen pressed bricks, T. C. Bramley, Toronto, 10s; 2d do C. Whitlaw, Paris, 5s.

Best assortment of pottery, J. Woodyatt & Co., Brantford, £1 10s; 2d do W. Lea, York, £1.

EXTRA PRIZES.—James Woodyatt, Brantford, fire brick, 20s., stove lining, 10s., grate cheeks and backs, 10s; well bricks, J. Nixon, London, 7s 6d; sewerage pipes, G. Smart, Bowmanville, 10s; socket pipe, W. Lea, York, 10s; Victoria fire proof roofing tiles, Isaac Mills, Flamboro, 25s; well bricks, H. Workman, Brantford, 10s.

CLASS XXXI—WOOLLEN AND FLAX GOODS.—(77 Entries.)

Judges—Robt. Warren, Lincoln; P. F. Caniffe, Hastings; Robert Whiteside, Victoria.

Best piece of not less than 12 yards of woollen carpet, T. G. S. Nevills, Holland Mills, £2; 2d do T. G. S. Nevills, Holland Mills, £1 10s; 3rd do John DeCow, Woodhouse, £1.

Best pair woollen blankets, John Rankin, Dundas Woollen Works, £2; 2d do John Rankin, Dundas, £1 10s; 3d do John Rankin, Dundas, £1.

Best counterpane, H. Ranney, Dereham, £1 10s; 2d do Mrs. A. Clarke, Glanford, £1; 3d do J. Rose, South Dumfries, 10s.

Best piece 12 yards flannel, John Rankin, Dundas Woollen Works, £1 10s; 2d do C. Whitlaw, Paris, £1; 3rd do C. Whitlaw, Paris, 10s.

Best piece satinet, 12 yards, P. R. Palmer, Thurlow, £1 10s; 2d do A. Boyle, St. Catherines, £1; 3d do A. Boyle, St. Catherines, 10s.

Best piece broadcloth, Canadian wool, A. Boyle, St. Catherines, £2; 2d do A. Boyle, St. Catherines, £1 10s; 3rd do A. German, South Dumfries, £1.

Best piece flannel, 10 yards, not factory made, John Rose, South Dumfries, £1; 2d do G. Moore, Norwich, 15s; 3d do John Rose, South Dumfries, 10s.

Best piece winter tweed, 12 yards, A. Boyle, St. Catherines, £1; 2d do A. Boyle, St. Catherines, 15s; 3d do Mrs. Maine, junr., Beverly, 10s.

Best piece fullled cloth, 10 yards, not factory made, D. G. Forbes, Whitby, £1 10s; 2d do J. Rose, South Dumfries, £1; 3d do J. DeCow, Woodhouse, 10s.

Best half dozen pairs knitted factory woollen drawers, J. Crane, Ancaster, £1.

EXTRA PRIZES.—John Rose, South Dumfries, home made shepherd's plaid, 15s, woollen yarn, 5s; Elijah Haight, Brantford, rag carpet, 5s; Duncan G. Forbes, Whitby, gentleman's plaid, 10s; Elijah Haight, Mount Pleasant, pair woollen sheets, 25s, home made woollen yarn, 10s.

CLASS XXXII—LADIES' DEPARTMENT.—(297 Entries.)

Judges—Mrs. Alexander, Woodstock; Miss Vanderburgh, Miss Racey, Brantford; Mrs. Taylor, Mrs. Goold, Mrs. Kennedy, Mrs. Buchanan.

Best specimen of crochet work, Miss Bidwell, Cobourg, £1; 2d do Miss Agar, Toronto, 15s; 3d do Miss Bidwell, Cobourg, 10s; 4th do Mrs. H. Wiggins, Brantford, 5s.

Best specimen of guipure work, Miss Bidwell, Cobourg, £1; 2d do Mrs. T. Christie, Bowmanville, 15s; 3d do Miss Bidwell, Cobourg, 10s.

Best specimen of lace work, Mrs. Mary Chapman, Mount Pleasant, £1; 2d do Mr. John Cox, Toronto, 15s; 3d do Mrs. M. Chapman, Mt. Pleasant, 10s.

Best specimen of fancy knitting, Miss Watt, Paris, 15s; 2d do Mrs. R. A. Hartley, Chinguacousy, 10s; 3d do Mrs. R. A. Hartley, Chinguacousy, 7s 6d; 4th do Mrs. R. A. Hartley, Chinguacousy, 5s.

Best specimen of fancy netting, Mrs. R. A. Hartley, Chinguacousy, 15s; 2d do Miss Merritt, Hamilton, 10s; 2d do (discretionary) Mrs. R. A. Hartley, Chinguacousy, 10s; 3d do Miss S. P. Narrayay, Brantford, 7s 6d.

Best embroidery in muslin, Miss Christie, Niagara, 15s; 2d do Mrs. G. R. Armstrong, Toronto, 10s; 3d do Miss Birrell, Pickering, 7s 6d; 4th do Mrs. M. A. C. Rich, Brantford, 5s.

Best embroidery in silk, Mrs. Botham, Brantford, 15s.

Best embroidery in worsted, Mrs. H. A. Hildred, Brantford, 15s; 2d do Mrs. H. A. Hildred, Brantford, 10s.

Best specimen of worsted work, Mrs. Unwin, Toronto, 15s; 2d do Miss O'Neil, South Dumfries, 10s; 3d do Mrs. Costello, Brantford, 7s 6d; 4th do Mrs. C. Higgs, Stratford, 5s.

Best specimen raised worsted work, Mrs. Weller, Cobourg, 15s; 2d do Miss O'Neil, South Dumfries, 10s; 3d do Miss Clement, Brantford, 7s 6d; 4th do Mrs. E. McPhee, Brantford, 5s.

Best specimen of ornamental needle work, Mrs. C. R. Wilkes, Brantford, 15s; 2d do Mrs. F. Warren, Niagara, 10s; 3d do Mrs. F. Warren, Niagara, 7s 6d; 4th do Mrs. Charles Near, Ancaster, 5s.

Best specimen of quilts, in crochet, Miss Caroline Graham, Woodstock, £1; 2d do Misses S. & J. Graham, Toronto Tp., 15s.

Best specimen in knitting, Mrs. M. Irwin, Brantford, £1; 2d do Mrs. Unwin, Toronto, 15s; 3d do Miss Eliza Good, Brantford 10s; 4th do Mrs. F. H. Leonard, Brantford, 5s.

Best specimen in silk, Miss Merritt, Hamilton, £1; 2d do Mrs. W. Davidson, Berlin, 15s; 3d do Mrs. E. Jackson, Kingston, 10s; 4th do Mrs. P. Jones, Brantford, 5s.

Best piece-work quilt, Mrs. R. Donaldson, Brantford, £1; 2d do Mrs. Magin, Burford, 15s; 3d do Mrs. Magin, Burford, 10s; 4th do Miss Janet Silverthorne, Toronto Tp., 5s.

Best specimen in tatting, Miss Bidwell, Cobourg, 15s.

Best specimen of braiding, Miss Bidwell, Cobourg, 15s; 2d do Miss Jane Thornton, Whitby, 10s.

Best specimen of wax fruit, Miss M. A. Sparrow, Galt, 15s; 2d do Mrs. Gardham, Brantford, 10s.

Best specimen of wax flowers, Miss Niven, Niagara, 15s; 2d do Mrs. John Wilkinson, Brantford, 10s; 3d do Mrs. W. E. Welding, Brantford, 5s; 4th do Mrs. Gardham, Brantford, 2s 6d.

Best pair woollen socks, Mrs. Platt Hinman, Haldimand Tp., 10s; 2d do Mrs. Eliza Haight, Brantford, 7s 6d; 3d do Mrs. Eliza Haight, Brantford, 5s; 4th do Mrs. F. Choate, Glanford, 2s 6d.

Best pair woollen stockings, Mrs. E. Haight, Brantford, 10s; 2d do Mrs. E. Haight, Brantford, 7s 6d; 3d do Mrs. F. Choate, Glanford, 5s; 4th do Mrs. Racey, Mount Pleasant, 2s 6d.

Best specimen of gentlemen's shirts, Mrs. John Doty, Oakville, 15s; 2d do Mrs. E. Jackson, Kingston, 10s; 3d do Mrs. John Doty, Oakville, 5s; 4th do Mrs. Jacob McMichael, Townsend, 2s 6d.

Best pair woollen mittens, Mrs. Battell, Haldimand, 10s; 2d do Mrs. E. Jackson, Kingston, 7s 6d; 3d do Mrs. S. Green, Dundas, 5s; 4th do Mrs. S. Green, Dundas, 2s 6d.

Best pair of woollen gloves, Mrs. Henry Battell, Haldimand, 10s; 2d do Mrs. E. Jackson, Kingston, 7s. 6d; 3d do Mrs. Merritt, Burford, 5s; 4th do Mrs. J. McMichael, Townsend, 2s. 6d.

EXTRA PRIZES.—Miss J. A. Newson, Hamilton, lady's bonnet, 5s; Mrs. Charlotte Higgs, wreath of flowers, shell work, 10s., shell work tables and pedestals, 10s; Mrs. Charles Near, Ancaster, hearth rug, 10s., pair stools, 10s; Mrs. A. Wheeler, Brantford, hair wreath, 5s; Mrs. Cyrus Nixon, Brantford, needle work quilt, 10s; Mrs. McVicker, Paris, hair work flowers, 10s; Mrs. Gardham, Brantford, wax figures, "The Sultan of Turkey," 10s., "Samuel," 15s., basket of shells in wax, 5s; Mrs. C. E. Kelsey, Brantford, wreath of hair flowers, 10s; Mrs. D. Smith, Oxford East, lady's skirt, 10s; Miss J. Silverthorne, Toronto Tp., coverlet, 10s; Miss J. Everell, Paris, coverlet, 10s; Mrs. Weller, Cobourg, pair fancy bead tables, 10s., sofa in bead and chenille, 10s., chair in do, 10s; Mrs. M. A. Street, Cobourg, picture in moss and bark, 15s; Montgomery & Duncan, Brantford, velvet mantel, 5s.

CLASS XXXIII.—FINE ARTS, &c.—(209 Entries.)

[Executed since last Exhibition.]

Judges—J. D. Humphreys, Toronto; Dr. Beatty, Cobourg; Dr. Barker, Kingston.

PROFESSIONAL LIST.

Oil.

Landscape, Canadian subject, Robert Whale, Burford, diploma and £3; 2d do Robert Whale, £2.

Animals, [grouped or single,] Robert Whale, Burford, diploma and £3.

Portrait, James Dickson, Hamilton, diploma and £2 10s; 2d do Robert Whale, Burford, £1 10s.

Water Colors.

Landscape, Canadian subject, W. Armstrong, Toronto, diploma and £2.

Pencil and Crayon.

Crayon portrait, James Dickson, Hamilton, diploma and £1 10s; 2d do Wm. Armstrong, Toronto, diploma and £1.

Pencil drawing, James Dickson, Hamilton, diploma and £1 10s.

Crayon drawing, George A. Walkem, Toronto, diploma and £1 10s; 2d do George A. Walkem, Toronto, £1.

Colored crayon, Wm. Armstrong, Toronto, diploma and £1 10s; 2d do Wm. Armstrong, Toronto, £1.

AMATEUR LIST.

Oil.

Historical painting, Canadian subject, J. H. Whale, Burford, diploma and £2 10s.

Landscape, Canadian subject, J. H. Whale, Burford, diploma and £2 10s.

Animals, [grouped or single,] 2d prize, Mrs. A. A. Drummond, Brantford, £1 10s.

Portrait, J. H. Whale, diploma and £2; 2d do Mrs. A. A. Drummond, Brantford, £1.

Water Colors.

Landscape, Canadian subject, Miss Isabella Bird, Toronto Tp., diploma and £2.

Portrait, Mrs. P. Jones, Brantford, diploma and £1 10s; 2d do Miss Thompson, Toronto, £1.

Flowers, Mrs. C. Foster, Toronto, diploma and £1; 2d do Mrs. C. Foster, Toronto, 15s.

Pencil and Crayon.

Crayon portrait, Miss Isabella Bird, Toronto, diploma and £1; 2d do Dr. C. Hostetter, Grantham, 15s.

Pencil drawing, Mrs. R. Ball, Niagara, diploma and £1; 2d do Mrs. Costello, Brantford, 15s.

Crayon drawing, Miss E. Watts, Brantford, diploma and £1; 2d do Mrs. R. Ball, Niagara, 15s; 3d do (discretionary,) H. Whealey, West Zorra, 10s.

Colored Crayon, Mrs. R. Ball, Niagara, diploma and £1; 2d do Miss E. Watt, Brantford, 15s.

MISCELLANEOUS.

Best colored geometrical drawing of engine or millwright work, F. G. Beckett & Co., Hamilton, diploma and £2.

Daguerreotypes, best collection, S. Park, Brantford, diploma and £1 10s; 2d do F. G. Lewis, Brantford, £1.

Best collection of photographs, (uncolored,) Armstrong, Beere & Hime, Toronto, £1 10s; 2d do Armstrong, Beere and Hime, Toronto, £1.

Best photographs, colored, Carson Bros., Toronto, £1 10s; 2d do Armstrong, Beere & Hime, Toronto, £1.

Lithographic drawing, Barr & Corss, Toronto, £1 10s; 2d do G. C. Tremain, Brantford, £1.

Wood engraving, J. B. Seymour, Toronto, diploma and £1 10s; 2d do T. Wheeler, Toronto, £1.

Engraving on copper, T. Wheeler, Toronto, diploma and £1 10s.

Seal engraving, T. Wheeler, Toronto, diploma and £2.

Best specimen of carving in wood, D. Fleming Toronto, diploma and £2; 2d do J. E. Pell, Toronto, £1.

Best specimen carving in stone, R. Bates, Brantford, diploma and £2.

Best specimen modelling in plaster, R. Bates, Brantford, diploma and £2; 2d do J. G. Dow, Hamilton, £1.

Best specimen ornamental turning, W. Bevis, Hamilton, diploma and £2; 2d do George Barnard, Brantford, £1.

Ornamental penmanship, W. McLeod, Ingersoll, diploma and £1; 2d do H. Browne, Toronto, 10s.

Stuffed birds, H. White, £1; 2d S. W. Passmore, Toronto, 10s.

Picture frame, gilt, G. E. Pell, Hamilton, £1.

Picture frame, veneered, Wm. Bevis, Hamilton, 2d prize, 10s.

Specimen gilding, J. E. Pell, Toronto, diploma and £2.

Stained glass, McCausland & Bullock, Toronto, £1; 2d do McCausland & Bullock, Toronto, 10s.

Dentistry, M. D. Frencl, M. D., Toronto, diploma and £2; 2d do Miles B. Stennett, Hamilton, £1 10s.

EXTRA PRIZES—FINE ARTS AND MANUFACTURES.

Two artificial legs, Morris Black, Rookwood, 15s.

Ambrotypes, Seth Park, Brantford, 10s.

Sphereotypes, Seth Park, Brantford, 10s.

Case of stuffed fishes, S. W. Passmore, Toronto, 5s.

- Sketch, Canadian subject, W. Armstrong, Toronto, 5s.
 Halotype, James Dickson, Hamilton, 5s.
 Universal object and reading table for elementary composition, S. P. May, Toronto 15s.
 Case of stuffed fish, S. Herring, Toronto, 15s.
 Display card, consisting of sketches in photography, crayons, &c., W. Armstrong, Toronto, 5s.
 Halotype, W. Armstrong, Toronto, 5s.
 Landscapes in oil, Scottish scenery, Eben. Birrell, Pickering, £1 5s.
 Sphereotypes, Francis G. Lewis, Brantford, 5s.
 Pastille painting, Miss C. Hostetter, Grantham, 10s.
 Ornamental painting on glass, Wm. Hearn, Toronto, 10s.
 Set of manuscript school maps, Elizabeth Edwards, East Oxford, 10s.
 Statue of Sir J. B. Robinson, Samuel Gardner, Simcoe, £1 5s.
 Watch movement, P. T. Ware, Hamilton, 10s.
 Letter cutting and painting for signs, Edward Downs, Brantford, 15s.
 Painting of Masonic emblems, Edward Downs, Brantford, 10s.
 Samples of hair jewelry, Mrs. A. Wheeler, Brantford, 10s.
 Group of heads in oil, Cyrenus Hall, Westminster, 5s.
 Case artificial limbs, John Condell, Kemptville, £1.
 Pen and ink drawing, W. Simpson, Hamilton, £1 5s.
 Collection of Ambrotypes, Carson & Brothers, Toronto, 15s.
 Model Ship, J. Wilkinson, Brantford, 5s.
 Specimen penmanship, Bryant & Stratton, Mercantile College, Buffalo, highly commended, diploma.
 Oriental paintings on glass, Miss Merritt, Hamilton, 15s.

NOTES BY JUDGES.—The Judges would record their opinion that works of Art for exhibition should be done within the previous year, which some on exhibition, they have reason to believe, were not.

The Lithography exhibited by Barr and Corss, of Toronto, is a splendid specimen, and worthy of particular mention.

The carving in wood exhibited by Mr. Pell, of Toronto, and to which we award the second prize, is not properly classed. The Judges think it ought to have been entered as ornamental carving, of which it is a beautiful specimen.

The Judges wish to bring to most favorable notice, "the universal object and reading table for elementary composition," exhibited by Mr. S. P. May of the Education Department, as an article of great utility, and at the same time cheapness. They can be manufactured for \$6 each. The Judges also beg to remark, that many things are entered in classes, and particularly amongst the extras, for which the Judges in the Fine Arts Department are quite incompetent. They recommend a separate classification.

MUSIC.

Judges—S. H. Crozier, Thomas R. Watts, Thomas Cook.

The Judges of the amateur bands award the 1st prize of £20 to the Galt, and the 2d prize of £15 to the Brantford Philharmonic Band.

CLASS XXXIV.—INDIAN PRIZES.—(32 Entries.)

Judges—J. D. Humphreys, Toronto; Dr. Beatty, Cobourg; Dr. Barker, Kingston.

Best bark canoe, G. H. M. Johnson, Tuscarora Chief, Six Nations, 5s.

Best pair of snow shoes, [8 inches long,] G. H. M. Johnson, Tuscarora, 10s.

Best tobacco pouch, worked with porcupine quills, G. H. M. Johnson 5s.
 Best pipe of peace, Henry Ellis, Brantford, 15s.
 Best pipe of war, G. H. M. Johnson, Tuscarora, 15s.
 Best pair of Moccasins, plain, Thomas Bero, St. Regent's, 7s.
 Best pair Moccasins, worked with beads, G. H. M. Johnson, Tuscarora, 7s ;
 2d do Thomas Bero, St. Regent's, 5s.

EXTRAS.—Model lumber waggon and sleigh, made by Indian boys at Mohawk School, exhibited by Rev. Abraham Nelles, Brantford, 10s ; G. H. M. Johnson, Tuscarora, set table mats, 10s., do do 5s., do table top, 10s., do two Indian Chief dress coats, 5s., do ladies' work box, 7s. 6d., do small canoe, porcupine quills, 2s. 6d., do pair of Indian warrior cuffs, 5s., do scalping knife, 2s. 6d., do beaded sash, 5s., do chief's cap, 5s., scalping knife sheath, 2s. 6d., do portfolio, worked with porcupine quills, 7s. 6d., do war club, 2s. 6d., do Indian pipe, 2s. 6d., do pair rattles, 2s. 6d ; Mrs. Peter Smith, Middleport, two burden straps, 2s. 6d ; Thomas Bero, St. Regent's, bead work-bag, 5s., do work-bag, 2s. 6d., do work-bag, 2s. 6d., do bead basket, 5s., do work pin-cushion, 2s. 6d., do work cap, 5s,

CLASS XXXV.—BOOK-BINDING, PAPER, &c.—(24 Entries.)

Judges—Dr. Barker, Kingston ; R. Symes and Thomas White.

Best specimen of book-binding, Smiley & Gillespie, Hamilton, £1 ; 2d do W. Warwick, Woodstock, 15s ; 3d do Brown, Brothers, Toronto, 10s ; and special prize, recommended, Brown, Brothers, Toronto, £1.

Best specimen letter-press printing, executed since last exhibition, John Blackburn, Toronto, £2 10s ; 2d do John Blackburn, Toronto, £1 10s ; 3d do Farrel & Jacques, £1.

EXTRAS.—Posting bills, Farrel & Jacques, Toronto, 5s ; lithographs, notes, cheques, &c., Smiley & Gillespie, Hamilton, £1 ; maps and plans in typography, John Blackburn, Toronto, 5s.

NOTES.—A very beautiful specimen of Foreign Book-binding was exhibited by Messrs. Collins & Clapp, of Buffalo, N. Y. State.

The Judges recommend that in future, separate premiums be awarded to plain Letter Press Printing and to ornamental Letter Press Printing, as they are separate branches of the same art.

CLASS XXXVI.—FOREIGN STOCK.—(1 Entry.)

Judges—E. W. Thomson, Toronto ; D. B. Stevenson, Picton ; James Scarff, Woodstock.

Best agricultural stallion, Abraham Butler, Waine County, N. Y. State, £3.

CLASS XXXVII.—FOREIGN IMPLEMENTS AND MANUFACTURES.—(10 Entries.)

Judges—The same as Class 36.

The following articles were exhibited by Messrs. E. & T. Fairbanks & Co., St. Johnsbury, State of Vermont, who were the only exhibitors in this class, viz : 30 ton track weighing scale, 6 ton depot scale, 4 ton hay scale, 30 bushel hopper scale, flour packing scale, No. 7 wheels and drop lever scale, No. 11 do union scale, counter scale, No. 1 even balance brass scales, £5 and diploma.

NOTE.—The above articles are all of superior workmanship, and on testing the accuracy of the scales, the Committee are quite satisfied of their correctness, and they recommend that the exhibitor shall receive a diploma and five pounds.

SWEEPSTAKES PRIZES.—(17 Entries.)

Judges—Thomas Leach, Toronto; George Stanton, St. George.

Best stallion for general purposes, 3 entries, \$10 each, \$20 added by Association, awarded to Joseph Black, of Guelph, for horse "Perfection," \$50.

Best single horse in harness, 3 entries, \$10 each, \$20 added, awarded to Patterson & Brother, Richmond Hill, \$50.

The other entries were withdrawn for want of competition.

ADDENDUM.—The following item is accidentally omitted in the class of Blood Horses:—

Best thorough bred mare and foal, Wm. Balkwill, London Township, £5 10s.

RESULTS OF THE EXHIBITION OF 1857.

STATEMENT showing the amount of premiums definitely offered in each class, the number of entries, and the amount awarded. The amount offered admitted of expansion by the increased premiums for imported cattle, or by discretionary premiums. This is the explanation of the amount awarded exceeding that offered in some classes:—

CLASSES.	AMOUNT OFFERED.			NO. OF ENTRIES.	AMOUNT AWARDED.		
	£	s.	d.		£	s.	d.
Torough Bred Horses	70	10	0	12	38	10	0
Agricultural Horses, and for general use.....	179	5	0	333	181	0	0
Durham Cattle.....	129	0	0	127	150	0	0
Devon Cattle.....	129	0	0	91	124	5	0
Hereford Cattle.....	129	0	0	6	25	10	0
Ayrshire Cattle.....	129	0	0	23	74	0	0
Galloway Cattle.....	129	0	0	30	85	10	0
Grade Cattle.....	47	0	0	60	46	10	0
Fat and Working Cattle.....	59	0	0	36	49	0	0
Leicester Sheep.....	36	0	0	194	47	0	0
Cotswold Sheep.....	36	0	0	45	48	0	0
Cheviot Sheep.....	36	0	0	16	32	0	0
Long Woold, not of above pure breeds.....	36	0	0	62	36	0	0
South-down Sheep.....	36	0	0	88	59	0	0
Merino or Saxon Sheep.....	36	0	0	28	35	10	0
Fat Sheep.....	12	0	0	23	12	0	0
Large Breed Pigs.....	26	10	0	23	26	10	0
Small Breed Pigs.....	26	10	0	56	26	10	0
Poultry.....	59	10	0	226	40	5	0
Grain and Seeds.....	130	5	0	329	119	5	0
Roots and other hoed crops.....	49	0	0	243	29	15	0
Fruit.....	31	10	0	305	32	0	0
Garden Vegetables.....	32	1	0	336	32	2	6
Plants and Flowers.....	28	12	6	84	24	10	0
Dairy Products, Provisions, &c.....	62	10	0	152	50	10	0
Agricultural Implements.....	190	2	0	279	160	10	0
Leather and Furs.....	42	15	0	111	29	10	0
Manufactures in Metals, &c.....	97	5	0	195	88	12	6
Cabinet Ware, Carriages, &c.....	72	14	0	128	56	7	6
Pottery.....	12	5	0	23	15	2	6
Woollen and Flax Goods.....	45	15	0	77	33	0	0
Ladies' Work.....	55	8	6	207	48	15	0
Fine Arts (including music).....	165	10	0	215	137	15	0
Indian Prizes.....	14	4	0	32	9	0	0
Bookbinding, Printing, &c.....	14	0	0	24	9	15	0
Foreign Stock.....	68	0	0	1	3	0	0
Foreign Implements.....	26	5	0	10	5	0	0
Sweepstakes [am't offered besides entrances]	47	10	0	17	25	0	0
	£2517	17	0	4337	£2046	10	0

ment to pay grants to the County Agricultural Societies was £8,403 10s. The amount paid to the County Agricultural Societies, after deducting 10 per cent. for the use of the Agricultural Association, as provided by the Act, was £7563 3s.; leaving for the use of the Association £840 7s.

AMOUNTS RECEIVED AND PAID ON ACCOUNT OF THE AGRICULTURAL ASSOCIATION.

September 1856—Government Grant.....	£1000	0	0
“ “ Seven Life Members’ Subscriptions.....	17	10	0
“ “ Carriage and Horsemen’s Tickets sold.....	14	2	6
“ “ 1,249 Badges sold to Members.....	312	5	0
“ “ 15,082 single Admission Tickets.....	942	12	6
“ “ 1,566 Single Tickets to Children.....	48	18	9
“ “ Extra charges for late entries of articles for exhibition.....	7	10	0
“ “ Baron de Longueuil, donation for special premium.....	15	0	0
December 1856—Old dues collected by H. J. Ruttan.....	23	0	0
“ “ Canada Company’s annual grant.....	35	0	0
“ “ Government allowance for printing Transactions, &c.....	500	0	0
“ “ Grant from County Council of York and Peel to pay Agricultural Societies of those Counties.....	80	0	0
July 1857—To Town of Brantford grant, being half the amount voted.....	500	0	0
“ “ County of Brant grant.....	500	0	0
“ “ Government advance to pay off the extra expenses of the Kingston Exhibition building.....	1000	0	0
“ “ Grant from the County of Brant Agricultural Society.....	200	0	0
		£5195	18 9
By amount paid on account of the Provincial Agricultural Association as per vouchers examined and passed.....	£5335	15	6½

SUMMARY.

Dr.

1857—To amount received on account of the Agricultural Association.....	£5195	18	9
“ “ “ “ Experimental Farm.....	200	7	9
“ “ To amount received to pay County Agricultural Societies.....	8403	10	0
		£13,799	16 6

Cr.

By amount paid on account of the Agricultural Association.....	£5335	15	6½
By amount paid on account of Experimental Farm and House.....	347	0	9½
By amount paid on account of Board of Agriculture.....	92	5	0
By amount paid to County Agricultural Societies.....	7563	3	0
By balance in Upper Canada Bank.....	461	12	2
		£13,799	16 6

All of which is respectfully submitted,

R. L. DENISON,
Treasurer, P. A. A.

We, the undersigned Auditors to examine the accounts of the Treasurer of the Provincial Agricultural Association, certify, that we have done so for the period commencing 20th September, 1856, and terminating 19th September, 1857, that we find by the books that the sum of thirteen thousand seven hundred and ninety-nine pounds sixteen shillings and sixpence, Provincial currency, has been received, and the sum (including balance of £84 10s. 5d. due the Treasurer at last audit) of thirteen thousand three hundred and thirty-eight pounds four shillings and four pence, Provincial currency, has been paid, (as per vouchers produced) thereby showing a balance in the hands of the Treasurer of four hundred and sixty-one pounds twelve shillings and two pence, Provincial currency.

[Signed,]

G. P. RIDOUT,
E. W. THOMSON,
GEO. BUCKLAND, } Auditors.

Toronto, C. W., 7th April, 1858.

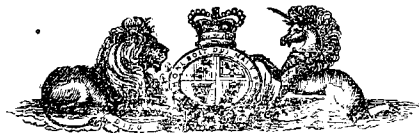
APPENDIX.

ESSAY
ON THE
INSECTS AND DISEASES
INJURIOUS TO
THE WHEAT CROPS.

BY H. Y. HIND, ESQ., M.A.,
Professor of Chemistry at Trinity College, Toronto.

TO WHICH WAS AWARDED, BY THE BUREAU OF AGRICULTURE AND STATISTICS
THE FIRST PRIZE.

"The progress of agriculture ought to be one of the objects of your constant care; for upon its improvement or decline depends the prosperity or decline of empires."—*Speech of NAPOLEON III.*



TORONTO:
PRINTED BY LOVELL & GIBSON YONGE STREET.
1857.

INTRODUCTION.

BUREAU OF AGRICULTURE AND STATISTICS,
Toronto, 7th Sept., 1857.

On the 18th August, 1856, there issued from this Department the following notice:—

BUREAU OF AGRICULTURE AND STATISTICS,
Toronto, 15th August, 1856.

PRIZE ESSAYS—£40, £25, AND £15.

The above premiums will be paid for the three best Essays, respectively, on the "Origin, nature, and habits,—and the history of the progress, from time to time,—and the cause of the progress, of the weevil, Hessian fly, midge, and such other insects as have made ravages on the wheat crops in Canada; and on such diseases as the wheat crops have been subjected to, and on the best means of evading or guarding against them."

The essay to be furnished to the Bureau by the 15th day of January next; and to be designated by a motto, a copy of which shall be also forwarded, in a sealed note, with the name and address of the author. The prizes will be awarded according to the decision of a committee, to be named by the Board of Agriculture for Upper and Lower Canada; or, in default of any such decision, by the Bureau. The essays selected to become the property of the Bureau. A premium will only be awarded in case an essay of sufficient merit is produced.

It is feared that the farmer, in his eagerness to produce wheat, is not paying sufficient attention to the danger of over-cropping; and it is hoped that this warning, and the information and advice which may be obtained through the essays sought for, will aid in arresting the great scourges of the wheat.

P. M. VANKOUGHNET,
Minister of Agriculture, &c.

The time named in the notice first issued having been extended to the 15th day of April, twenty-two essays were received up to that time. The Boards of Agriculture for Upper and Lower Canada named Professor Hincks, of University College, Toronto, and Professor Dawson, of McGill College, Montreal, as a Committee, to decide upon the merits of the several essays.

According to the decision of these gentlemen, the *First Prize* has been awarded to H. Y. HIND, Esq., Professor of Chemistry at Trinity College, Toronto, author of the Essay with the motto—

"The progress of agriculture ought to be one of the objects of your constant care, for upon its improvement or decline depends the prosperity or decline of empires."—EMPEROR NAPOLEON III.

The *Second Prize* to the Rev. GEORGE HILL, Rector of Markham, author of the Essay with the motto—

"Mox et frumentis labor additus."

And the *Third Prize* to EMILIE DUPONT, Esq., of St. Joachim, in the county of Montmorency, author of the Essay with the motto—

"Spinas et tribulos germinabit tibi (terra) et comedes herbam terræ."

The Judges also state that they consider the four Essays bearing the following mottoes as worthy of honorable mention, as containing much valuable information:—

"Nil sine labore."

"Trunca pedum primo, mox et stridentia permis
Miscentur, tenuemque magis acra carpunt."

"They are all the work of His hands."

"And the Lord God prepared a gourd, and made it come up over Jonah, that it might be a shadow over his head to deliver him from his grief; so Jonah was exceedingly glad of the gourd."

"But God prepared a worm when the morning rose, and it smote the gourd that it withered."

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PRIZE ESSAY.

CHAPTER I.

Accounts of the ravages of destructive insects, common, 1, 2.—Remedial measures not recorded; reason of this apparent negligence, 2, 4.—Distinction between foreign and naturalized insects, 5, 6.—Certain destructive insects, common in America; general immunity in Canada, and reasons for it, 6, 9.—Locusts at the Cape of Good Hope; Europe and Africa, 9, 12.—The seventeen year locust, 12.—Broods of seventeen year locust in the United States, 14.—Found in Canada, 14.—Vast abundance in Ohio, 16.—Appearance in the western prairies, 16.—Destructiveness of, 16.—Pine Beetle in South Carolina, on the Ottawa, and in the Hartz, 17.—Palmer Worm in New England, 18.—The Aphis, destructiveness of, in Great Britain, in Belgium, in America, 20, 21.—The Chinch Bug, 21.—Common in the Western States, unknown in Canada, 22.—Cost of maintaining destructive insects, in France, (22 a), in the United States, (22 a) (22 b) Food of insects, 23, 24.—Distribution of wind, 25.—Connection with rocks, 26.

1. Accounts of the sudden appearance and devastating progress of insects, injurious to vegetation, have been handed down to us from the earliest times. Few events would seem to be more likely to secure universal attention at the time of their occurrence than the excessive multiplication over wide areas of countless millions of insects, threatening the destruction of the food of man.

2. Such calamities must have appeared at all times and in all nations, as alarming omens of future wide spreading distress; while, however, we frequently find interspersed among the records of history numerous melancholy recitals of the ravages committed by clouds of grasshoppers, locusts, and flies of various kinds, the narrative frequently stands alone, without informing us by what providential interposition the plague was stayed, or what human efforts were made to arrest the scourge and guard against its return.

3. This arose, no doubt, in great part, from the migratory character of the insect depredators, coming, as many species did, from distant and uninhabited lands, where their increase was unnoticed, and perhaps, even their presence generally unknown, thus rendering all human efforts absolutely futile in the attempt to stay the insect plague.

4. In part also from the unaccountable disappearance in a single season of the dreaded enemy, with perfect immunity from its attacks during many succeeding years, thus allowing an event which had struck terror among entire nations to pass from remembrance, until a renewal of its ravages produced similar alarm and destruction, to be again deplored and forgotten. Such, indeed, is the case at the present day, but with this difference, that while we are subject to as great or even greater dangers arising from insects which have made their home in our midst than our forefathers were, an effort is now made to guard against their destructive attacks, by acquiring and spreading a knowledge of their habits and history, so that those remedial measures may be adopted which experience and accurate information suggest.

5. It is highly important to distinguish between the sudden invasion of an infinite multitude of insects from distant lands and the gradual increase of those which have taken up their permanent abode with us, and multiply upon the fruits of our toil. The foreign invader suddenly appearing in innumerable hosts, requires for his subjection and destruction a power infinitely greater than man can call to his aid; while the increase of our indigenous enemies or of destructive

colonizers may sometimes be arrested by the uniform adoption of these remedies which a knowledge of their history and habits confers.

6. The excessive appearance of foreign insects is of common occurrence in countries situated within certain geographical limits even at the present day, and although we do not often read of such devastating legions as those which composed "the army of the Almighty, strong to execute his word,"⁽¹⁾ we know that parts of Europe occasionally suffer from local invasions of a most alarming and threatening character. On this continent we have witnessed during the last ten years the immense local injury caused by grasshoppers, seventeen year locusts, wire worms, aphides, curculios, wheat flies, chinch bugs, turnip flies, catworms, palmer worms, and others, and some of these are of foreign origin.

7. Their ravages might be considered of secondary importance when compared with the terrible visitations of insect pests which have not been uncommon in inhabited countries during the past century, but they are sufficiently destructive and alarming as to become a subject of national importance. It may be useful to enumerate a few instances of these excessive appearances of insects, by way of contrast to that comparatively mild form of insect plague in Canada, which has been the occasion of this essay.

8. We are too much inclined to over estimate the degree of injury we occasionally suffer from the natural causes, because we have not always the opportunity of comparing our losses and troubles with those sustained by our fellow-men in less favoured countries than our own. It is obviously unjust to attribute to climate, geographical position or peculiarities of soil, the general appearance of destructive insects, which we have encouraged and invited by the best means in our power, or perhaps, which it was possible to devise. In the following pages it will be shown that we enjoy in Western Canada a singular immunity from insect depredations, arising no doubt from our insulated position and humid climate.

9. I do not wish to under-rate the injury sustained by the country at large by the ravages of such insects as the Hessian fly, the wheat fly, and the wire worm, &c. ; but when it can be shown that we possess to a considerable degree the means of arresting the devastating progress of those we have suffered to make their home in our midst, and of so reducing their numbers as to render them comparatively harmless ; it cannot fail to be a matter of congratulation and thankfulness that insect enemies over which we cannot exercise control, neither trouble nor as yet threaten us, although the gradual approach of some of them from the South is a sufficient cause for anxious watchfulness and care. (See paragraphs 14, 21.)

10. Our sister colony at the Cape of Good Hope, has been particularly subject to the dreadful scourge of locusts, (*Gryllus decastator*,) whose invasions are invariably followed by famine in the region they devastate. The inroads of the locust are apparently periodical, according to Pringle, about once every fifteen years. In 1808 after having laid waste a considerable portion of the country, they disappeared, and did not return until 1824. They then remained for several years, but in 1830, took their departure. The proper home of the locust is yet a mystery. Experience only tells us that at the Cape they come southwards from the north.⁽²⁾

11. It is well known that the locust sometimes multiplies in Europe to such a degree as to devastate provisions. Africa is rarely free from its ravages, and of their infinite multitude we have records from the earliest authors, fully confirmed by the accounts of recent travellers. In France, Germany, Spain, Italy and Russia, armies of locusts have appeared from time to time, and with such devas-

(1) Every one is familiar with the thrilling descriptions of insect visitations recorded in the sacred pages: "Stretch out thy rod and smite the dust of the land, that it may become lice throughout all the land of Egypt."—"There came a grievous swarm of flies into the house of Pharaoh and into his servants' houses, and into all the land of Egypt, the land was corrupted by reason of the swarm of flies." (Ex. iii.)—"And the locusts went up over all the land of Egypt, and rested in all the coasts of Egypt." (Ex. x.)—"And I will restore to you the years that the locust hath eaten, the cankerworm, and the caterpillar, and the palmer worm, my great army which I sent among you." (Joel ii.)

(2) Lake Ukasni Page 285.

tating progress that "the land is as the Garden of Eden before them, and behind them a desolate wilderness." North America is not exempt from the plague of insects, allied to locusts, and while in Europe they seldom penetrate further north than latitude 43°, their congeners have committed great ravages as far north as Lord Selkirk's settlement, at Pembina, on the Red River, in latitude 54°, coming from the Western prairies.

12. The seventeen year locust, as it is popularly but erroneously termed, is an American insect of most singular habits and destructive character. Its appearance was first recorded about Philadelphia in May, 1715, and since that date "punctually at the same month every seventeenth year, now certainly for nearly one hundred and fifty years, has this extraordinary insect been known to make its visit. No causes have affected it during that period, not even so far as relates to the month in which it appears." (1)

13. This remarkable insect appears in different parts of the United States in separate broods, which have each their appointed year for assuming the winged state, and propagating their species. An entire brood hatches in a few days time, and countless millions of these large black flies (not true locusts) suddenly appear over areas occupying many thousand square miles. Dr. Fitch, State Entomologist of New York, says that three of these broods exist partly within the boundaries of the State, and there appear to be six other broods in different parts of the United States.

14. One brood inhabits the valley of the Hudson River. Its last appearance was in 1843, and it will appear again in 1860. A second brood is found in Western New York, Western Pennsylvania and Eastern Ohio. It appeared in 1849, and it is very probable that the outskirts of the brood extend into Canada. It may be looked for again in 1866. The third brood, which came forth in 1855, extends from the Atlantic to the Ohio, and into Canada; several individuals of this brood are said to have been taken near Toronto in that year, and it is quite certain that the loud note of a cicada was heard repeatedly in the woods west of the city in July of that year. Dr. Fitch, quoting a letter from Mr. Robinson, dated Pallchassie, May 24th, says, "I have heard the seventeen year locusts for ten days past, but they are not plenty here. At Park Hill, however, twenty-five miles south of this, in the Cherokee country, they are very numerous, and in these hungry times, occasioned by the severe drought of last year and this spring, the people (Indians) are glad to gather and eat them."

15. The great Pennsylvania brood before noticed reached from that State to Georgia; another or fifth brood extends from Western Pennsylvania through the valley of the Ohio River, and down that of the Mississippi to Louisiana; it appeared in 1846, and will, therefore, make its re-appearance in 1863. A sixth brood assumed the fly state in 1854 around the head of Lake Michigan, and across Northern Illinois into Iowa. Other and minor broods are recorded to have made their appearance in different parts of the Union, but Dr. Fitch thinks that some of them may have consisted of other species, mistaken for the true seventeen year locusts. (2)

16. In Ohio it is stated on the best authority, that the grubs have been collected in such vast quantities, that they have been used in the manufacture of soap by the farmers in the localities where they are abundant. The number of them is so immense that the ground is described as riddled by their holes. Dr. Hildreth says they dwell for 16 years and ten months in a grotto of their own construction, probably near the root of some tree, for they are forest dwellers, and derive their nourishment from the roots of trees, grasses and herbs. In 1846 a large number of these locusts emerged from the earth in Dr. Hildreth's garden, in the branches of which the parent cicada had deposited her eggs in 1829. (3) In 1854 this

(1) W. S. W. Ruschenberger, M.D., U. S. N.

(2) For a most interesting account of this insect see page 38 of the first report on the noxious and other insects of the State of New York. Dr. Asa Fitch, 1855.

(3) p. 216, Vol. 3, 2nd series. H. J. of Science.

extraordinary insect was noticed as being more wide spread in many places in Illinois than it was on its previous visit. Fruit and forest trees wherever they had been planted on the prairies, were seventeen years ago destitute of these insects, but in 1854 they came from the ground among such trees as abundantly as in the original timber lands. (1) An enemy there lying concealed and preying for seventeen years upon the choicest treasures of the garden and field, must be entitled to a place among insect scourges in the first rank. Canada is happily yet free from the destructive presence of this extraordinary depredator, but it is found in all the States of the Union surrounding her, warning us of its approach and visit. It appears to infect the oak, apple, poplar, and probably many other trees, for the purpose of depositing its eggs, for which object it punctures the small limbs and does incalculable injury, so weakening the branches it attacks, that, as in Wisconsin in 1854, every gust of wind suffices to break off many of the twigs at the point where the locust had deposited its eggs. Mr. T. W. Morris speaks of having seen the tops of the forest trees in Pennsylvania and Ohio, for upwards of one hundred miles, appearing as if scorched by fire a month after this locust had left them. (2)

17. In some of the forests in South Carolina ninety pine trees out of one hundred have been killed by a small beetle. Great numbers of noble pines, three feet in diameter, and 150 feet high, stand with their naked arms stretched abroad, lifeless, like hundreds and thousands of others prostrate on the ground without any successors of their kind. (3) In the great timber region of the Ottawa there is a narrow strip of dead pines extending thirty miles up the river, no trace of fire or any other agent likely to have effected their destruction is visible; their erect trunks stand in gloomy grandeur almost stript of their branches by long exposure to wind, rain and snow. Although no outward sign is visible of the destroying enemy, yet, no doubt the destructive pine beetle has been the secret cause of their decline and death. (4) It has long been known that a beetle (*Bostrichus typographus*) has several times threatened the entire destruction of the forests in the Hartz Mountains. In 1783 a million and a half of trees were destroyed by this insect in the Hartz alone. As many as 80,000 larvæ have been found on a single tree.

18. The palmer worm which visited New England and the eastern part of the State of New York with such unparalleled destructiveness in 1853, is common in Canada. In 1791 the orchards and forests of New England were overrun by this worm, and the leaves of the apple, oak and other trees devoured by it. In 1853 the trees everywhere assumed a brown withered appearance under their destructive attacks, looking as though they had been scorched by fire. On jarring or shaking a tree hundreds would instantly let themselves down from among the leaves, by fine threads like cobweb, some dropping to the ground, others remaining suspended in the air. They continued in full force until 23rd June, when rain accompanied by heavy thunder caused them to disappear. (5)

19. The Aphis tribe, of which many species were so abundant and destructive in the neighbourhood of Toronto during the dry summer of 1856, is in some countries a most dreaded and devastating pest. So wonderfully productive are the green plant lice that in five generations one aphis may be the progenitor of 5,904,900,000 descendants; and it is supposed that in one year there may be 20 generations (Reaumer). In 1810 the Pea crop was almost entirely destroyed throughout Great Britain by an aphis. Indeed next to the locust the aphidæ may be said to be the greatest enemies of the vegetable world (Kirby). The wonderful fertility of this tribe of insects exceeds that of any known species, and elevates them to a position in the scale of pests and plagues which secures for

(1) Dr. Fitch's Report, page 43.

(2) Dr. Fitch's Report.

(3) Trans. Amer. Ins., 1846.

(4) Related to the writer by a very competent eye-witness, who spent several years with the Lumbermen.

(5) See 2nd Report by Dr Fitch.

them the second, if not in many temperate climates, the first place among insect depredators. A few weeks is sufficient to convert a handful of these viviparous and oviparous insects into countless legions, which taking flight, darken the air by their numbers. In 1834 a great flight of these insects was distributed by a strong wind over Belgium. In 1836 the inhabitants of Hull, England, were seriously incommoded by a host of them loading the air in numbers so immense as to fill the eyes, nose, and mouth of all who were in the open air at the time of their visit.⁽¹⁾ There are numerous species of aphid. Forty-nine named species have been recorded by Stephens, in his catalogue of British insects. They are found to infest most of our cultivated vegetables. Fortunately they have numerous enemies, otherwise their wonderful fecundity would enable them to destroy every blade of grass and every green thing in our gardens and fields.

20. Mr. Curtis states that from one egg, in seven generations, 729 millions will be bred; and if they all lived their allotted time, by autumn everything upon the surface of the earth would be covered by them. Dr. Fitch relates that "on the last day of October, 1854, it being a warm sunny day, after many nights of frost, I observed myriads of winged and apterous lice wandering about upon the trunks, the limbs, and the fading leaves of all my apple trees, many of them occupied in laying their eggs. These were scattered along in every crevice of the bark—in many places piled up and filling the cracks; and others were irregularly dropped among the lichens and moss growing upon the bark: every unevenness of the surface, or wherever a roughness afforded a support for them, being stocked with as many as could be made to cling to it."

21. The history of the *chinch bug* is probably not familiar to the majority of Canadian farmers, as this insect does not yet appear to have crossed the Detroit and St. Clair Rivers; but while it is to be hoped that many years will elapse before it finds a home in this country, there is reason to fear that sooner or later we may have to deplore, perhaps in a mitigated form, its advent in our midst. As allusion will be made to this destructive and disgusting insect⁽²⁾ in subsequent pages (paragraph 52), the following account of its progress and destructiveness is submitted from Dr. Fitch's reports. "The chinch bug has now multiplied and extended itself over all parts of Illinois and the adjacent districts of Indiana and Wisconsin, and has become a most formidable scourge. The dry seasons which have recently occurred have increased it excessively. In passing through Northern Illinois, in the autumn of 1854, I found it in myriads. In the middle of extensive prairies, on parting the grass in search of insects, the ground in some places was found covered and swarming with chinch bugs. The appearance reminded me of that presented on parting the hair of a calf that has been poorly wintered, where the skin is found literally alive with vermin."

22. Our western neighbours have for years past been congratulating themselves upon the security of their wheat crops, exempt from the midge and other insect depredators which were causing us such losses here at the east. But they now find that they have, in the chinch bug, a foe more formidable and destructive even than the wheat midge, since it not only cuts off their wheat, but in many localities it takes the corn and other crops also. Although it is commonly only a strip of the outer edge of the field which they devastate, yet in several instances the entire field is invaded and swarms with them, so that no grain is developed in the heads; and some have set fire to their wheat fields to consume the hosts of these vermin which were gathered therein, with the hope of thereby lessening the numbers upon their farms the following year. The disgusting smell, moreover, which these bugs emit, is most loathsome and sickening to the labourers engaged in harvesting the wheat fields. Lilley's reaping-machine, made at Elgin, Illinois, has small deep boxes sunk in the platform, for the raker and three binders to

(1) See Smee on the potato plant, for numerous instances of the incredible numbers and destructiveness of various species of aphidæ.

(2) In 1856, the chinch bug injured spring wheat in Fayette County, Iowa.

stand in, that they may not have to stoop to their work, as they would if standing on the platform. As the machine is in operation, the feet of the men standing in these boxes become buried among the insects and fine chaff which fall into them. The men are so annoyed by these vermin thus covering their feet and crawling up their legs, that they many times stamp to shake off and crush the tormenting things; and, whether dead or alive, when thus heaped together in masses, such a stink arises from them, as, when wafted by the air it happens to come full in one's face, is the most loathsome and nauseating of anything that can be imagined.

22. (a) It is difficult to arrive at accurate conclusions respecting the annual cost of maintaining destructive insects. In France, where great efforts are constantly made to diminish the numbers of these terrible foes to the agriculturist and public economy, upwards of four hundred thousand pounds have been paid out of the government chest, in one year, to armies of men, women, and children, for their labours in extirpating these pests. This large outlay occurred during a season in which destructive insects prevailed to an unusual extent, threatening the country with famine. It has been said, on very excellent authority, that the damages done by insects in France alone, amount on the average to \$50,000,000. This sum, immense as it appears to be, is actually approached in some years in the United States. The damages done by the wheat midge in 1854, exceeded, undoubtedly, \$16,000,000 throughout the Union. When to the injuries committed by the terrible pest just named, those of the chinch bug, Hessian fly, wire worm, and the hosts of insects preying upon fruit trees are added, \$30,000,000 would not cover the cost of their maintenance in that year. The quantity of human food annually consumed by insects in France, is equal to the entire consumption of the nation for a period of five weeks, and two species alone are computed to consume annually more than three millions of men.⁽¹⁾ The celebrated curculios, and the 'terrible' Angoumois moth, so dreadfully destructive in 1760, are among the wheat pests of France.

22. (b) The progress and increase of insects destructive to cultivated crops in the United States, is a subject of the utmost importance to agriculture. So many threatening and uncontrollable circumstances govern their increase on this continent, that the danger of short harvests arising from their depredations is year by year growing more imminent, and will some day come upon the country with a blow as sudden as it will be terrible. The immense area occupied by cultivated crops, the almost total absence of rotation, and the remarkable character of some of the indigenous insects which have already proved seriously destructive in the middle States of the Ohio and Mississippi valleys, all threaten a calamity which will be felt from Maine to Mexico. As I propose to enlarge upon this subject in a future chapter, further remarks are at present unnecessary. (Chapter VIII. On the cultivation of wheat in the United States.)

23. The food of insects embraces the utmost variety the animal and vegetable world can offer. Some species are restricted to particular plants, and if these fail, the race may for a time disappear.⁽²⁾ Insects appear to be the instruments designed to arrest the excessive growth and increase of certain species of plants, and it is probable that there is not a species of plant, which does not furnish nutriment for one or more tribes of insects, either in their larvæ state or in their perfect condition, whereby it is prevented from multiplying to the exclusion of others.

24. Not less than two hundred kinds of caterpillars are supposed to feed upon the oak; and upwards of 50 different species of insects are known to live upon the nettle, which is so repugnant to quadrupeds that few will touch it, yet such is the rapid increase of this vegetable, that if it were not for its insect depredators it would soon annihilate all plants in its neighbourhood. The naturalist, Wilke, tells us that every plant has its proper insect allotted to it, to curb its usuriance and to prevent it from multiplying to the exclusion of others. The

⁽¹⁾ M. Delamane.

⁽²⁾ Carpenter.

peculiarity of the agency of insects consists of their power of suddenly multiplying their numbers to a degree which could only be accomplished in a considerable lapse of time in any of the larger animals, and then as instantaneously relapsing without the intervention of any violent disturbing cause into their former insignificance. (1) Many instances of this sudden increase and corresponding disappearance a few days or weeks after, will be noticed in the following pages.

25. The wind seems to play a very important part in the distribution of insects over wide areas and in particular directions. A wind from the coast of Africa drove such myriads of flies upon the fresh paint of H. M. S. Adventure, then 100 miles from land, that not the smallest point was left unoccupied or uncovered. The Hessian fly, and particularly the wheat midge, both select low and sheltered places for their depredations. Elevated and exposed fields are not unfrequently untouched in the midst of the greatest devastation.

26. The connection of insects with rocks is a subject which has been investigated to a very slight degree, and offers a fertile and instructive field for the enquiring agricultural entomologist. Mr. Wailes always found the larvæ of *enicoceri* on rough shiny stones, and he found it as great a waste of time to look for it upon a smooth limestone as to turn up a fragment of basaltic rock (whitstone), in search of a geodephagous (?) insect. "So far," says Mr. Wailes, "as my observations, whether confined to single stones, or extended over a whole district, go, any place having limestone, particularly the magnesian, for its subjacent stratum, will afford abundance of the geodephaga as well as most other coleoptera, whilst they will be found very thinly scattered over a basaltic region." (3)

CHAPTER II.

Use of scientific terms common and necessary, 27, 28.—Reasons why an outline of entomological classification and nomenclature is necessary, 28, 29.—Importance of Entomology, 30, 31.—Reasons why the study of insects has not been popular, 33, 34.—Definition of insects, 36.—Changes which they undergo, 37.—Breathing organs of insects, 38.—Systematic arrangement of, 39.—Definition, 40.—Scheme, 40.—Order I., Coleoptera, 41.—Order II., Orthoptera, 47.—Order III., Neuroptera, 48.—Order IV., Hymenoptera, 49.—Order V., Trichoptera, 50.—Order VI., Strepsiptera, 51.—Order VII., Hemiptera, 52.—Chinch Bug, 52.—Aphidæ in the United States, 53.—Order VIII., Dermaptera, 54.—Order IX., Diptera, 56.—Technical characters of the *Cecidomyia*, the genus to which the wheat midge belongs, 56.—Order X., Aphaniptera, 57.—Order XI., Thysanoura, 58.—Order XII., Parasita, 59.

27. Every agricultural publication contains from time to time descriptions of insect depredators, in which are frequently employed many of the scientific terms used by entomologists to designate the species, genus and order, to which the maurauder belongs. The use of some scientific terms is very often absolutely necessary in giving even a popular description of a fly, a beetle, a weevil, a parasite, or a so called bug.

28. Every one is familiar with the frequent occurrence of such terms as coleopterous insect, dipterous insect, parasitical insect, larva, pupa, &c. Farmers ought to be familiar with these terms, and to be able to form a correct idea of the nature of an insect depredator, which may occasion injury or alarm, whether they acquire their information from the perusal of a popular but sufficiently accurate description, or whether they seek to convey in written words an account of what they observe with such accuracy and distinctness as would enable any one acquainted with the outlines of entomology to identify the insect, if among well

(1) Lyell.—Principle of Geology.

(2) Geodephagous. The geodephaga form a coleopterous subdivision containing two families, the cecideliidæ and the carabidæ. Of the former there are between fifty and sixty species known in the United States and Canada. They prey on insects. The carabidæ are very numerous, voracious, feeding upon insects and also upon vegetables. They are generally found under stones and rubbish.

(3) Quoted in Enc. Britt. 8th Ed.

known destructive species, here or abroad. It is for the purpose of affording a general view of insect classification and nomenclature that the following brief definitions and descriptions are given. They contain merely those terms which are continually occurring even in popular descriptions of insects, and without which most attempts to convey in words an idea of a new, a strange, or even a common species, must necessarily be comparatively worthless, because indistinct and imperfect.

29. The definitions and outlines of classification are prefaced by a few remarks upon the distribution and importance of insects, the science which treats of their history, habits and relation to man, and the difficulties which prejudice and a want of a proper appreciation of its merits have thrown in its way as a subject of popular instruction and enquiry. The increase and ravages of insects injurious to many of our cultivated crops have already become matters of the highest importance on this continent, and year by year threatens us with a terrible calamity. Like many other unseen yet impending evils, the magnitude of this one is unappreciated, and it is only when a devastation similar to that which occurred in New York State in 1854, or in the Niagara Townships in 1856, become as widespread as the Union itself, that men generally will regard the subject in a proper light.

30. There is no branch of natural history which can claim so many distinct objects of study and admiration as that of Entomology.⁽¹⁾ The number of distinct species of insects contained in collections, probably amounts to 200,000. In the Museum at Berlin about 100,000 species are arranged and classified, among which are upwards of 40,000 coleoptera or beetles, and it is computed that all the species of insects taken together, which exist in nature do not fall short of 400,000.

31. It is, however, probable, that there are more known species of plants than insects, but the vegetable world has been far more sedulously studied and ransacked than the apparently less striking and less important world of insects. A very large number of plants have been collected in distant parts of the globe, without the insects which live on them or near them being brought at the same time. But if we limit, says Humboldt,⁽²⁾ the estimates of numbers to a single part of the world, and that the one which has been the best explored in respect to both plants and insects, viz., Europe, we find a very different proportion, for while we can hardly enumerate between seven and eight thousand European phœnogamous (flowering) plants, more than three times that number of insects are already known.

32. The relations of insects to man are not only remarkably numerous but of the utmost importance, and with the exception of the domesticated animals, they exceed those of all other classes in this kingdom of nature. Nevertheless, we find that the study of entomology is still in its infancy, and has neither progressed so rapidly nor won so many admirers as her sister science botany, or some of her kindred departments in zoology.

33. From the time of Pliny to that of Linné in Sweden, Reaumer in France, Sulzer in Germany, Ray, Kirby and Spence in England, Say in America, entomologists have found the necessity of seizing every opportunity of showing that their favorite science was not a frivolous amusement or devoid of utility, as popular opinion seemed inclined to consider it.⁽³⁾ Old impressions, says Reaumer, are with difficulty effaced. They are weakened, they appear unjust even to those who feel them, at the moment they are attacked by arguments which are inadmissible; but the next instant the proofs are forgotten, and the perverse association resumes its empire."

34. During the last half century the low estimation in which the science of

(1) Entomology. *Entomon*, an insect, *logos*, a discourse.

(2) Aspects of nature.

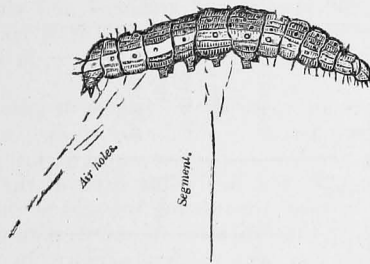
(3) See introduction to Kirby and Spence's Entomology.

entomology was formerly held, has been slowly giving way to a more correct appreciation of its value and of the benefits which a general study of its details might confer upon mankind. At times like the present, when a vast province is trembling at the prospect of one of its staple productions dwindling away under the attacks of minute but numberless insects, all are willing to listen to the teachings of the entomologist, and would seek to elevate to the position of an invaluable science, the study which, when proofs are forgotten, will probably be allowed, in popular estimation at least, once more to subside into a harmless or frivolous pursuit.

35. It would be an easy task to show by numerous illustrations the great economical value of the science of entomology, but as this would swell out the pages to too great an extent, I shall content myself with a reference to the statistical facts interspersed throughout this essay, which may serve to create, where it is most needed, a proper appreciation of the magnitude of those evils which are growing upon us, by the selfishness, indifference and neglect, which a mistaken impression of individual security has cherished.

36. Insects may be defined as animals without vertebræ; six-footed; with a distinct head furnished with two antennæ, and a pair of compound immoveable eyes; breathing through openings which lead to internal air tubes or trachæ; sexes distinct; adult state attained through a series of changes called metamorphosis.

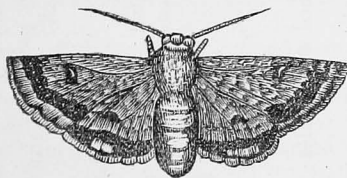
37. Nearly every insect undergoes three changes, (fig. I., II. and III.) before it reaches its perfect condition. From the egg to the larva; from the larva to



CATERPILLAR.—FIG. I.



PUPA.—FIG. II.



MOTH.—FIG. III.



MOTH.

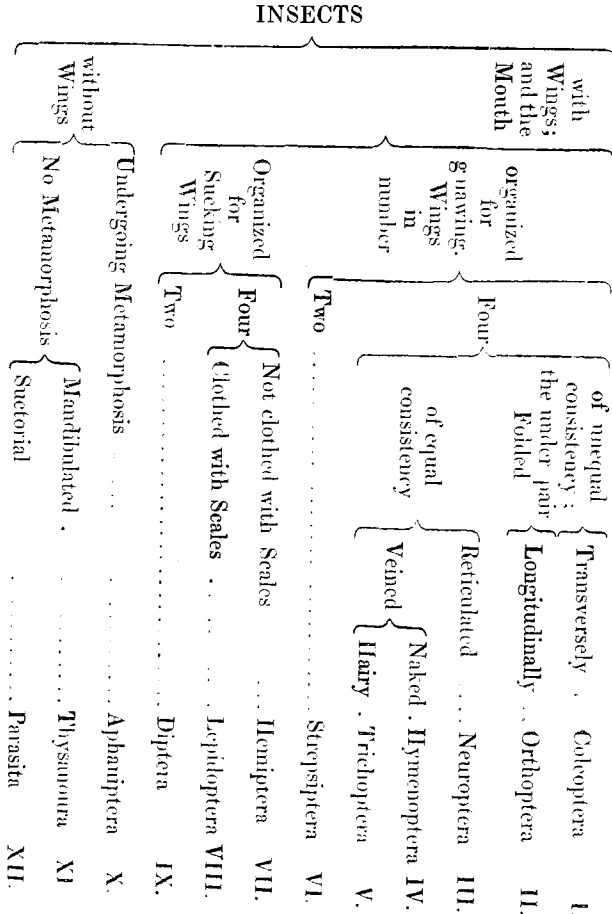
the pupa; and from the pupa or chrysalis to the imago or perfect insect. The larvæ of insects are commonly distinguished in popular phraseology in the following manner:

Grubs are the larvæ of the coleoptera or beetles; maggots the larvæ of the diptera or two winged flies; caterpillars the larvæ of butterflies, moths and sphinges.

38. Most insects breathe through small openings called stigmata, spiracles or air holes, placed on the side of each segment of the body. These air holes can be distinctly seen without difficulty in naked caterpillars (fig. I.) The opening can be closed at will by the insect. The air holes are connected with ramifying tubes called air tubes or trachæ.

39. The following scheme of a systematic arrangement of insects is based upon the peculiarities in the construction and number of the wings or organs of flight, as appears from the derivation of the names given to the several orders. This arrangement must be considered as representing the most marked peculiarities of each particular order, and susceptible of various modifications as our knowledge of insect structure and analogies increases ; it is in fact but one out of many systems which have been proposed by entomologists, and is selected because it recognizes many primary divisions which are employed in popular descriptions, and which have been approved since the time of Linnæus, their originator.

40. The primary divisions are termed orders ; the orders are divided into sections ; the sections into families ; the families into genera, and the genera into species or individuals. As it will be absolutely necessary to refer from time to time to the different parts or organs of an insect, the annexed diagram of these organs, with their scientific designations, should be consulted before perusing the description of the orders into which insects are divided for the purpose of classification :—



ORDER I.

Coleoptera. (*Koleas*, a sheath; *ptera*, wings.)

41. The Beetle tribe. Wings four in number; two for flight, two for protection, and termed *elytra*, or wing cases. The *elytra* are hard and horny. There are exceptions to this general rule, which it is not necessary to mention here. The under wings are membranous and transparent.

42. The larvæ are popularly termed grubs, and commonly possess twelve segments, exclusive of the head. The pupæ are incomplete, that is, each part of the perfect insect is visible, and enclosed in a separate sheath, thus differing from the pupæ of butterflies in which the parts are all cased in one sheath. Beetles are composed of three distinct parts, the head, the thorax, and the abdomen. (Fig. IV.) The most prominent and important parts of the head are the compound eyes, the two antennæ, the two mandibles or jaws, and the two maxillæ or under jaws. The insects of this order are all masticators.

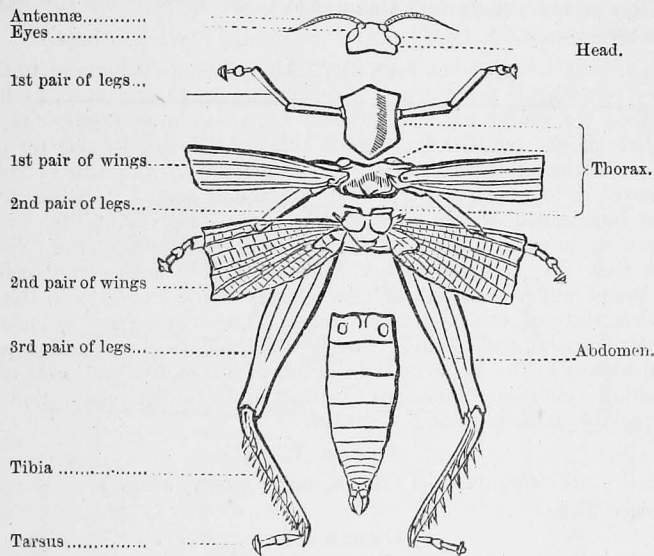


FIG. IV.

43. The thorax is composed of the three segments of the larvæ body next to the head. In the larvæ these are generally very distinct; in the perfect insect or beetle one of the segments is often greatly enlarged at the expense of the other two. To the thorax are attached the wings and the legs.

44. The abdomen is generally distinguished by the absence of all external appendages, but in some insects we find an ovipositor, a pair of forceps, a hook, &c. The abdomen consists of segments not exceeding nine in number. The openings for the breathing organs may be observed near the lateral margin of each segment.

45. The legs consist of five parts, the first joint, coxa or hip, the second or trochanter, the third, the femur or thigh, the fourth, the tibia or shank, and the fifth, the tarsus or foot. The tarsus is composed of three, four or five joints, and terminates generally in two-hooked claws. The tarsus is sometimes made the basis of the sections into which the order *coleoptera* is divided.

46. This order of insects is one in which the agriculturist is particularly interested. It contains the tribe *Rhincophera* (snout beetles), which is so numerous in species that not less than 8,000 different insects belonging to it have been described by one entomologist (Schœnherr.) It includes the insatiable

evils which are justly distinguished and dreaded for their attacks upon grain and seeds. Immense quantities of Indian corn and wheat in the crib or granary are destroyed every year in the United States by the grain weevils, *calandra granaria* and *calandra remolepunctata*.

ORDER II.

Orthoptera. (*Orthos*, straight; *ptera*, wings.)

47. This order includes crickets, grasshoppers, locusts, ear-wigs, cockchafers, the mantis tribe. Most of these insects are eminently destructive to vegetation. Upper wings of the consistency of parchment; mouth with mandibles and maxillæ.

ORDER III.

Neuroptera. (*Neuron*, a nerve; *ptera*, wings.)

48. Dragon flies, May flies. Termites; wings membranous, naked and reticulated; masticators.

ORDER IV.

Hymenoptera. (*Hymen*, a membrane; *ptera*, wings.)

49. Wasps, bees, ichneumons, flies, &c. Many insects belonging to this order exhibit very remarkable peculiarities in providing for their young, by laying up a store of food for winter use. The busy bee it is almost needless to mention. Some members of the families into which this order is divided lay up a stock of provisions consisting of larvæ, and complete insects by the side of their eggs, in holes gnawed in branches and trunks of trees, and sealed up when full. The insects thus imprisoned do not appear to be quite deprived of life, but only so much injured as to deprive them of the power of resistance to the young larvæ, whose food they are designed to be. The admirably constructed cells of the mud wasp, found under the eaves of nearly every house and barn in the country, is filled with a store of spiders for its young. The "wise ant" belongs to this order. Their burrows and mounds may be observed in every garden and field. The natural history of the Hymenoptera is full of instructive and most interesting facts, furnishing examples of wonderful instinct and exquisite adaptation. Wings naked and membranous, but not reticulated.

ORDER V.

Trichoptera. (*Trichos*, hair; *ptera*, wings.)

50. Caddicee flies.

ORDER VI.

Strepsiptera. (*Strepsis*, a turning; *ptera*, wings.)

51. This order embraces a few minute parasitical species.

ORDER VII.

Hemiptera. (*Hemion*, the half; *ptera*, wings.)

52. Bugs; Aphidæ, Cicadæ, &c. The peculiarity of the insects belonging to this order is found in the beak or rostrum, which is formed for piercing and sucking, thus enabling them to find food in vegetable and animal juices. The chinch bug is a noted member of this order. The following description of this destructive insect will perhaps not be considered misplaced: "Length, one and two-third lines, or three-twentieths of an inch; body black, clothed with a very fine greyish down, not distinctly visible to the naked eye; basal joint of the antennæ honey yellow; second joint the same, tipped with black; third and fourth joints black; beak brown; wings and wing-cases white; the latter are black at their insertion, and have near the middle two short irregular black lines, and a conspicuous black marginal spot; legs dark honey yellow; terminal joint of the feet and the claws black. The youngest individuals are vermilion red, the thorax or anterior part of their bodies inclining to brown, and a white band across the middle of the body, comprising the two basal segments of the abdomen. As

they increase in size they become darker, changing first to brown, and then to a dull black, the white band still remaining. The antennæ and legs are varied with reddish. In their final or perfect state they acquire white wings, varied with a few black spots and lines."⁽¹⁾

53. Dr. Fitch enumerates and describes many species of *Aphis* infesting fruit trees, forest trees, crops and garden vegetables in the State of New York. Most of these are common in Canada. A list of them will most probably serve to give us an insight respecting the extraordinary variety and incredible destructiveness of this single genus of insects.

1. *Aphis Caryella*.—The little Hickory *Aphis* lives on the under surface of the leaves.
2. *Aphis Punctatella*, the little dotted winged *Aphis*.
3. *Aphis Maculella*, the little spotted winged *Aphis*.
4. *Aphis Fumipennella*, the little smoky winged *Aphis*.
5. *Aphis Marginella*, the little black margined *Aphis*.
6. *Aphis Cerasi*, the little cherry plant louse; very destructive to the cherry tree. Dr. Fitch calculated that on some small cherry trees which he examined, ten feet high, not less than *twelve millions* of these creatures were on each tree.
7. *Aphis Cerasifoliæ*, the cherry leaf plant louse; found on the choke cherry.
8. *Aphis Cerasicoldus*, found on the common black cherry.
9. *Pemphigus Caryæcaulis*, the hickory-gall *Aphis*.
10. *Aphis Maidis*, the maize *Aphis*.
11. *Aphis Mali*, the apple plant louse.
12. *Aphis Malifoliæ*, the apple leaf louse.
13. *Aphis Prunifoliæ*, the plum leaf louse.

In this order the Mandibles and Maxillæ are replaced by a sheath and sucker.

ORDER VIII.

Lepidoptera. (*Lepis*, a scale; *ptera*, wings.)

54. Butterflies, Moths, &c.—This order comprehends the most beautiful and richly ornamented individuals of the insect world. In the caterpillar state they are exceedingly voracious, feeding upon vegetables, hair, wool, &c., and not unfrequently causing serious apprehension on account of their numbers and ravages. In the perfect state they feed upon the nectar or liquids of flowers, and it is stated that some species do not require food in the adult state. Among the destructive insects belonging to this order, we find the *Tinea Granella*, whose larvæ feed upon stored grain; the *Galleria Cereana*, living in bee-hives; the *Carpocapsa Pomonella*, whose larvæ feeds upon and lives in apples, hence called the apple worm. Others eat the buds and leaves of pine trees, &c. Some species are of the utmost importance to the industrial arts, as the silkworm family. Others again greatly destructive, as the larvæ of the *Cossus Ligniperda*, which burrows in willows, poplars, the ash, and other trees. In another family of this order we find the peach worm, the larva of *Egeria Excitiosa*, the palmer worm, the larva of *Chatochilus Pomatellus*, and a host of others.

ORDER IX.

Diptera. (*Dis* twice, *ptera*, wings.)

55. The distinguishing character of the *Diptera* is the single pair of wings. The mouth is furnished with a proboscis, and behind the true wings are placed two small organs, called poisers or balancers, (*halteres*) one on each side. The larvæ of these insects are found in every conceivable situation; some are aquatic, others live in and on fungi, in carrion, in flowers, in galls, in meat vats, &c., &c. The perfect insect feeds upon the juices of vegetables, or the blood of animals, or decaying vegetable and animal products, or on other insects. Many of the species are eminently noxious and troublesome; such are bot flies, grain flies, mosquitoes,

(1) Dr. Le Baron,—*Prairie Farmer*, 1850.

and numerous flies which torment and sometimes destroy domestic animals. It is sufficient to mention the Hessian fly and the wheat midge to stamp this order with due importance.

56. The technical characters of the genus (*cecidomyia*) to which the Hessian fly and wheat midge belong, are as follows:—Wings resting horizontally, and having three longitudinal nervures; head hemispherical; antennæ as long as the body, and generally twenty-four jointed, the joints hairy; (in the females fourteen-jointed;) the two basal joints short; legs long; basal joint of the tarsi very short, second long.

ORDER X.

Aphaniptera. (*Aphanes*, inconspicuous; *ptera*, wings.)

57. Fleas are emblematic of this order. It is said that common fleas (*pulex irritans*) not unfrequently lay their eggs under the toe-nails of uncleanly persons; the larvæ is white and active, acquires maturity in a fortnight, and spins for itself a cocoon in which it assumes the pupa states. The tropical chigo, is a much dreaded pest in hot countries.

ORDER XI.

Thysanoura. (*Thiazo*, to dance; *oura*, tail.)

58. Insects belonging to this order are often found on the surface of water in summer and on snow in winter. In Pennsylvania vast multitudes of a certain species were noticed in February, 1849, covering the snow for about a quarter of a mile with a breadth of several rods. The species was probably the *Podura nivicola*, one not uncommon in Canada.

ORDER XII.

Parasita.

59. This order embraces the disgusting parasitical insects called lice. The *pediculus capitis*, infests the human head. Leenwentrock, actuated by a desire to acquire information respecting the habits of this insect, kept a male and female louse in his stocking for eight weeks. He ascertained that in that short space of time they might increase to five thousand. A species of parasite is found infesting the human body in connexion with a dreadful disease of the skin, named Phthiriasis. Many historical names are associated with this terrible infliction; among them we find those of Herod, Plato, Antiochus, Epiphanes, and the Emperor Maximilian.

60. Another family of these insects are appropriately named bird lice, from the animals on which they are found. Every farmer is familiar with the parasitical insects found on sheep, dogs, horses, oxen, &c.

The gnawing louse infecting the sheep (*Trichodectes sphaerocephalus*) destroy the wool by cutting it near the root. The ox is attacked by two kinds of lice, one being a sucking and the other a gnawing insect. Indeed, it may be said generally that every species of quadruped is inhabited by one or more species of the louse tribe.

CHAPTER III.

The Hessian Fly.

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THE HESSIAN FLY. (*Cecidomyia Destructor.*)

61. The distinguished entomologist of the State of New York, Dr. Asa Fitch, in a history of the character, transformations and habits of the Hessian fly, ⁽¹⁾ written and published more than ten years ago, tells us that no other insect of the tens of thousands which teem on this continent has received a tithe of the attention or been chronicled with a tithe of the voluminousness that has been assigned to this species. As a natural consequence of this close investigation, every point in its history has from time to time been made public, so that very little that is new can now be embodied in an account of the insect.

62. In strict agreement with the preceding paragraph, the following account of the Hessian fly brings down its history to the present day, briefly describes the extent and frequency of its ravages, and the means which have been adopted, successfully or otherwise, to guard against them, but does not profess to announce anything new with respect to the habits and economy of this alarming depredator.

63. Some few points in its history have been amplified, more especially those which relate to the effect which it, in conjunction with the wheat midge, is likely to have upon the cultivation of wheat in the north-western States of the American Union, and the practical but expensive lesson it teaches the Canadian farmer to recognize and adopt—that first law of good husbandry—rotation of crops.

ORIGIN OF THE HESSIAN FLY.

64. It appears at first sight to be a matter of little moment to farmers whether the Hessian fly be a native of this continent or an importation from Europe. As

(1) The Hessian Fly, its history, character, transformation and habits; by Asa Fitch, M. D. American Journal of Agriculture and Science, Vols. IV., V. Also, in the transactions of the New York State Agricultural Society, 1846.

a question of natural history and public economy it is both interesting and important, as it shows the necessity of acquiring information respecting the habits of both indigenous and foreign insects injurious to cultivated crops, so that the introduction of new species into this continent, in the ordinary way of commercial traffic, or by the curious in such matters, may, if possible, be prevented; and if by any means a new foreign insect should take up its residence with us and attract public attention by its ravages, much valuable and available information might be speedily disseminated from a familiarity with the history of the depredator in those countries where it had long been known, and of the means which were there adopted to arrest its progress or lessen its destructiveness.

65. Instances are continually occurring which illustrate the value of the kind of information referred to. During the last few years two new importations of insects from Germany, destructive to the turnip, have been made in Great Britain. These new arrivals are described in a paper (have mislaid the reference) published in a recent agricultural Scottish journal.

The Australian wheat ravager, so destructive to the splendid crops of grain produced in many parts of that magnificent country, has been brought to Canada as an entomological curiosity; and I am very credibly informed that several *living specimens* are now in this country, closely, and it is to be hoped securely imprisoned, in a glass bottle.

66. It is quite possible from the habits of the Hessian fly in its larvæ and pupa states, that it may have been brought into America in straw or otherwise from some of the many European countries, where it appears to have been well known long before it committed on this continent those terrible devastations which threatened at one time to arrest the cultivation of wheat in some of the Atlantic States of the American Union.

67. A common impression prevails that this insect was introduced into America by the Hessian troops in their straw from Germany, during the year 1776, at which time the British Army, then in occupation of Staten Island, received large reinforcements of Hessians under General de Heister. This idea has been ridiculed by many European entomologists, who have asserted that the insect is strictly American. It appears, however, that its existence has long been established and known in France, Germany, Switzerland and some of the larger Islands of the Mediterranean; probably for more than a century it has attracted attention in those countries, although the extent of its ravages may not have been known and consequently not recorded.⁽¹⁾

68. This insect was first noticed in America in Long Island in the year 1776, or 80 years ago. It proceeded inland at the rate of fifteen or twenty miles a year, and in 1789 it had reached 200 miles from its original station.⁽²⁾ It is now found as far west as Iowa and Minnesota, following the cultivation of wheat, wherever that cereal is introduced in the westward progress of settlement on this continent. The Southern States have suffered greatly from its ravages, and it seems to adapt itself without any difficulty to all the climates which admit of the cultivation of its favourite food.

69. In a communication with which the writer of this Essay was favoured by Dr. Fitch, during February of the present year, the following interesting notice occurs of the ravages committed by the Hessian fly in the Provinces of Simbirsk and Saratov in Russia during the year 1852.

In addition to the evidence I adduce, showing the Hessian fly to be a European insect which has been introduced into this country, I meet with the following in the "*Etudes Entomologiques*" of the Russian naturalist, Motschalsky, page 23:—

"*Cecidomyia funesta*, Motsch, voisine de la *cec. destructor* Say, mais de couleur moins foncée, qui paraît avoir des mœurs analogues avec l'espèce

(1) See an article by Mr. Herack in the 12th vol. of the American Journal of Science and Art. The Essay by Dr. Fitch trans. N.Y.S.A.S., 1846.

(2) Kirby and Spence.

“d’Amérique. Elle a causé l’année pãssés des grands ravages au froment des “Gouv. Simbirsk et Saratov. Je l’ai décrite avec son parasite le *platygaster* “*funestus* m., dans le Journal du Ministère de l’Interieur, 1852.” I have no doubt that this Russian insect is identical with our Hessian fly, which, when first hatched, is paler than afterwards.

70. The foregoing paragraphs seem to show, without any remaining doubt, that the Hessian fly is a European insect, and that its depredations have been known and lamented many years before it was heard of or observed in America. We may, therefore, accept the popular narrative of its introduction here, and avail ourselves of all the information which the experience of its past history, habits and ravages in Europe can afford.

HISTORY OF ITS PROGRESS.

71. The following records of the appearance of this destructive insect in the United States and Canada, have been collated from various resources, but chiefly from the United States Patent Office Reports; Dr. Fitch’s Essay; the transactions of the New York Agricultural Society; American and Canadian agricultural periodical publications, correspondence, &c.

About the year 1776 the Hessian fly was introduced into Staten and Long Island from Europe.

1779.

Caused great damage to wheat in Long Island.

1786.

Appeared in New Jersey, 40 miles south-east of Staten Island; east end of Long Island; Shelter Island.

1788.

Very destructive near Trenton, N. J.; commenced its ravages in the State of Pennsylvania.

1789.

Reached Saratoga, 200 miles north of its original station; very destructive there in 1791; continued until 1803, when it disappeared. Re-appeared in 1845. Common in the middle Atlantic States.

1790.

Very common and destructive in the middle Atlantic States of the Union.

1791.

Less common in the middle States; arrived in Delaware in vast multitudes.

1792.

Destroyed in Delaware an immense quantity of wheat.

1797.

Appeared west of the Alleghany Mountains.

1801.

First appeared near Richmond, Virginia.

1802-3 and 1804.

Very destructive in Virginia.

1805, 1816.

Ravages not recorded; probably not general or in great excess in the United States. Prevalent and destructive in some parts of Lower Canada.

1817.

Ravages renewed in New York State, Pennsylvania, Maryland and Virginia.

1818, 1819.

Noticed in Pennsylvania.

1820.

Common in Maryland and Pennsylvania.

1830-6

Disappeared in Lower Canada.

1831.

Crops much injured in Seneca County, New York.

1842.

Very destructive in Pennsylvania; Maryland and Ohio visited by it.

1843.

Western Pennsylvania, Maryland, Virginia and Ohio all suffered this year.

1844.

Very destructive in Illinois, Indiana, Michigan, Wisconsin, Iowa, Ohio, Western New York, west end of Long Island, Pennsylvania.

1845.

Destructive in Illinois and Maryland, very destructive in Georgia; disappeared from the districts in Michigan and Indiana, where they had committed havoc the preceding year.

1846.

Very destructive in Maryland and ruinous in Georgia. Common in New York, parts of Western Canada and Eastern Pennsylvania. In Illinois, Wisconsin and Iowa, near the Mississippi. Unusually destructive this year. In Georgia the Hessian fly was observed to issue from its pupa case May 6th.

1847.

Common throughout the wheat growing States of the West. Common in New York, but not generally destructive this year. General, but not destructive, in the County of York, U. C. It was observed very generally in the autumn depositing its eggs on the young wheat over wide areas in the United States; also in County of York, Canada West. Great fears excited in the United States for the safety of the harvest of the ensuing year.

1848.

"The crop of 1848 was, undoubtedly, one of the best and largest ever grown."⁽¹⁾

1849.

Very general and destructive in some of the counties of New York—Oswego, Albany, and Columbia Counties. Ravages great in Ohio.

1850.

Disappearing from parts of Ohio, also from parts of Michigan. "The Hessian fly, one of the enemies to our wheat growers, visits us at intervals of from four to six years, continuing its ravages through two or three seasons, and then apparently disappears."⁽²⁾

1851.

General improvement in Pennsylvania and Maryland; Hessian fly not troublesome. Virginia much improved; the fly "scarcely dreaded." No Hessian fly in Galena County, Ohio; disappearing in Oakland County, Michigan, "for years." Not troublesome in Indiana; general insecurity from its ravages. In Buckingham County, Vermont, 1851, the Hessian fly had almost disappeared, and from its great diminution the farmers thought they could sow their wheat in September, which resulted in the immediate increase of the fly, and a consequent falling back to late sowing and proper preparation of seed.

1852.

Hessian fly attacked wheat in Fauquier County, Virginia, when sown before October. The same in Buckingham County, Vermont. Not known to any extent in Penobscot County, Maine.

(1) Hon. C. P. Halcomb, of Delaware, U. S. P. O. Rep. 1849-50.

(2) Northville, Wayne County, Mich. J. P. Yukes, P. O. R., 1850.

1853.

Committed great ravages in some parts of Pennsylvania—Centre County and Clinton County.

1854.

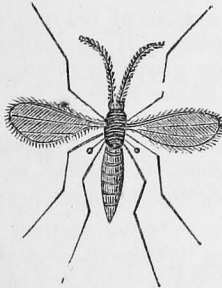
Visited Niagara County, N. Y. "The Hessian fly is another enemy of ours, and in trying to get an early crop of wheat by early sowing, we *constantly* incur danger from the Hessian fly in the fall of the year. If frost occur soon after wheat is sown in the fall, in time to kill the Hessian fly, we rarely suffer much from it.—Onondaga County, N. Y. Wheat more or less injured in Kent County, Michigan, when sown before the 20th September.⁽²⁾ Destructive in Maine,⁽³⁾ Aristook County.

DESCRIPTION OF THE INSECT.

72. Numerous descriptions of the Hessian fly are to be found in scientific and agricultural publications; in all of the most important features these descriptions coincide. Perhaps the most popular, and at the same time one of the most accurate delineations, is from the pen of the late Dr. Harris, in his admirable "Report on Destructive Insects."

73. "The head and thorax of the fly are black; the hind-body is tawny, and covered with fine greyish hairs. The wings are blackish, but are more or less tinged with yellow at the base, where also they are very narrow; they are fringed with short hairs, and are rounded at the end. The body measures about one-tenth of an inch in length, and the wings expand one-quarter of an inch or more. * * * * * The transformation of some in each brood appear to be retarded beyond the usual time, as is found to be the case with many other insects; so that the life of these individuals, from the egg to the winged state, extends to a year or more in length, whereby the continuation of the species, in after years, is made more sure."⁽⁴⁾

74. In the admirable essay on the Hessian Fly, by Dr. Asa Fitch, before referred to, a very exact description of the male and female insect is given, of which the following is an abstract. The illustrations to which reference is made are taken from the drawings of the same author. The high standing of Dr. Fitch, as an entomologist, coupled with the attention he has devoted for many years to the history and habits of insects injurious to vegetation and to the agriculturist, confers the utmost value upon his delineations and descriptions.

FIG. I.—HESSIAN FLY—FEMALE (*C. destructor*.)

Nat. Size.



(FIG. e.)

JOINTS OF THE ANTENNE.

THE FEMALE HESSIAN FLY.

75. The head and thorax of the female (Fig. I) are black. The antennæ (Fig. e) are about half as long as the body, and composed of sixteen joints, each

(1) Address of the Hon. G. Geddes, 1854.

(2) Pat. Off. Report, 1854.

(3) *Ibid.*

(4) I have not lately had an opportunity of referring to Dr. Harris' work, the description given in the text is consequently second hand.

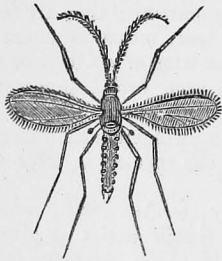
of a cylindric oval form, the length being about double the diameter; each joint is clothed with a number of hairs, surrounding it in a whirl. The joints are separated from each other by very short translucent filaments, having a diameter about one third as great as the joints themselves. The thorax is oval and black; the poisers are dusky; the abdomen is of a black colour above, more or less widely marked at the satures (joints) with tawny fulvous, and furnished with numerous fine blackish hairs.

75. The ovipositor is rose-red. The wings are slightly dusky. The legs are pallid brown, the tarsi black. The several pairs of legs equal each other in length, being about one-fifth of an inch long when extended, of which length the tarsus embraces one-half. Short basal joint indistinct.

THE MALE.

76. In the male (Fig. II) the antennæ (Fig. *d*) are three-fourths the length of the body. The abdomen (Fig. II) consists of seven joints besides the terminal one, which (viewed from beneath Fig. *c*) consists of a transversely oval joint giving off two robust processes, armed with in-curved hooks at the tips.

In the living specimen the abdomen is of a brownish-black colour, more or less widely marked at the satures with pallid fulvous or smoky whitish lines. In all other points the male coincides with the female in its character.



HESSIAN FLY—MALE (FIG. II.)



(FIG. *b*.)
Nat. Size.



(FIG. *d*.)
Joints of
Antennæ
(Male.)



(FIG. *c*.)
Ventral view of the
terminal segments
of the abdomen.

HABITS.

77. The Hessian fly lays her eggs upon the young leaves of wheat in the autumn (September) and in the spring (May). Many observers have witnessed the fly in the act of depositing her eggs at these seasons of the year.⁽¹⁾ The eggs are placed upon the upper surface of the young leaves of the autumn wheat, and sometimes exceed thirty in number. They are generally arranged in the longitudinal depressions between the minute ridges of the blade. Their appearance is that of very small reddish coloured points or spots. Their length is considerably greater than their diameter, and appears to bear the ratio to the latter dimension of five to one, the length being about one fiftieth of an inch, the breadth or diameter about one-two-hundred-and-fiftieth. The form is cylindrical.

78. The eggs of the autumn brood are hatched within a week of the time they are laid, if the weather be warm; during the prevalence of cold and unfavorable weather they may remain unhatched for a period of three weeks. The white-colored maggot, as soon as it is liberated from the egg, passes down the leaf, between the sheath and stem, until it reaches the first joint (the crown); here it becomes stationary and apparently fixed upon the tsem (Fig. *m* and Fig. *a* § par. 80), nor does it



(FIG. *m*.)



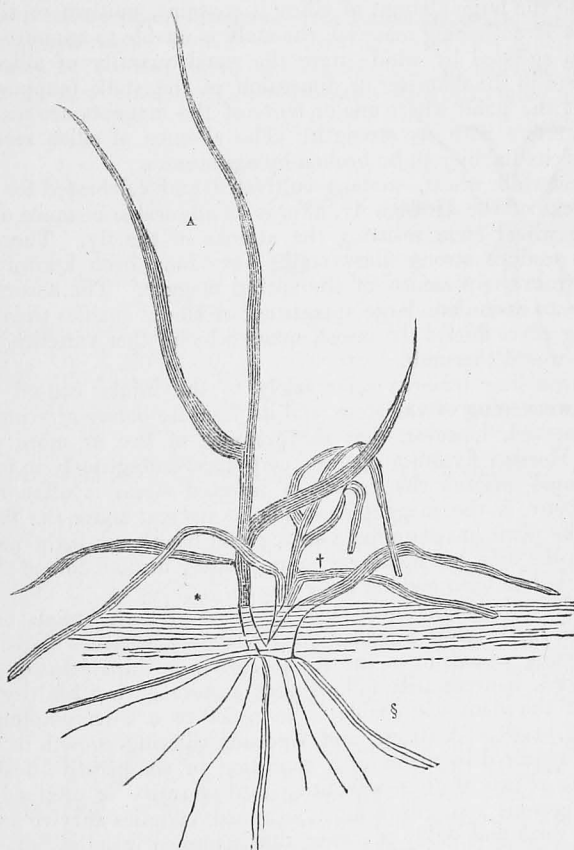
(FIG. *n*.)

(1) Mr. E. Tilghman of Maryland; Mr. Merritt of Yale College, &c., &c.

change its position until it assumes the form of the inert worm or its pupa. (n) It reposes with its head towards the root of the plant.

79. When young autumnal wheat is attacked by one or more of the maggots, the infested shoots will be seen in the following spring to be withered and changed to a straw colour. If two or more shoots proceed from the crown of the root, those only to which the maggot is attached will wither and die. In young plants, death of the part affected is produced by the abstraction of the nutritious juices which would otherwise be appropriated to the nourishment of the shoot. The increased power of absorption and assimilation of food possessed by the plant when the spring brood of the fly appears (in May), enables it to resist to a great extent the wasting attacks of the maggot, whose attachment is then made to the second and sometimes the third joint.

80. In young autumnal wheat the base of the sheath is at the crown of the root, as shown in figure (A. §), and it is here that the autumn brood of the fly must be sought for.



Appearance of a healthy (*) and of a diseased (†) shoot of wheat in autumn;—the worms lying at (§).

In the preceding diagram the right-hand shoot is represented as withered and lifeless from the attacks of the maggot at the crown of the root under the surface of the soil. The left hand stem is free from any attack and consequently unin-

jured. The process of tillering would throw out a number of new shoots from the crown of the root to replace those which are destroyed.

81. The maggots appear to live wholly by suction. They do not penetrate the stem, or make any apparent incision; they produce, however, a depression, caused by the obstruction they offer to the growth of that part of the plant where they are seated. These depressions, though not always apparent on the outside, when produced by several maggots of the second brood in the early summer months on the first or second joint, greatly weaken the stem, and render it liable to be blown down and broken by a light breeze of wind, when it has attained the attitude it acquires on approaching maturity. Sometimes a swelling or gall is the result of the attack as shown at (§ §) in Fig. B, page 56, (paragraph 92.)

81½. The manner in which the maggot of the spring brood affects the stem in the early summer months, seems to arise from its presence preventing the deposition of the necessary amount of silica or flint immediately under its body. It is well known that the great strength of the hollow cylindrical stem of the wheat plant is due to the large amount of silica it contains, and where there is a deficiency of this strengthening material, the stalk is unable to support the weight of the ear when agitated by wind; were the usual quantity of silica present the small reduction in the diameter or dimension of the stalk (supposing no gall to be formed) at the point where one or more of the maggots are seated would not materially interfere with its strength. The absence of silica seems to be the chief cause of its liability to be broken by agitation.

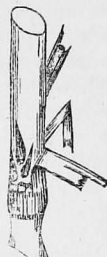
82. The underhill wheat, so long cultivated and celebrated for its immunity from the attacks of the Hessian fly, affords an admirable instance of the silicious shield of the wheat stem resisting the attacks of the fly. Those varieties of wheat which produce strong flinty stalks have long been known not to suffer much injury from the presence of the spring maggot. The natural tendency of these varieties to assimilate large quantities of silica, enables them to withstand the weakening effect due to the insect, under which other varieties, naturally less rich in silica, would succumb.

83. The preceding remarks refer solely to the injury caused to the wheat plant by the weakening of the stem, and its fracture before arriving at maturity. It is to be observed, however, that the presence of two or more of the spring larvæ of the Hessian fly must operate very disadvantageously in other respects. On thin-stemmed varieties the growth of infected stems is often altogether arrested by fracture, if the maggot descends to its seat above the first or second joint before the plant has acquired a strong and healthy growth, and under such circumstances the field has been very appropriately likened to one through which a herd of cattle had been making their way.

84. Since the injury occasioned by the larvæ of both broods of the Hessian fly is produced in the *first instance* upon the stem, whether above the crown of the root in young wheat, or at the first, second, or third joint of that which is farther advanced, it necessarily follows that a more or less healthy condition of those parts of the plant will enable it to resist to a corresponding degree, the attacks of the insect. A strong and vigorous tillering growth in the fall (111) and spring is required to maintain a condition of comparative health under the attacks of one or two of these parasites, until maturity is attained. Hence the reason why vigorous well-grown flinty stemmed varieties survive and yield a fair return, while weak and sickly plants or thin-stemmed varieties fail, no new stalks or shoots being formed in the fall or early spring when the infested ones die, and in the early summer the weak stems which have survived sink under the exhausting drain of the spring brood. So far then the depredations of the Hessian fly when not present in overwhelming numbers, may be greatly lessened and in part overcome by good husbandry, and a careful selection of seed of approved varieties.

85. When the autumn maggot has arrived at its full growth, its outer skin, at

the approach of winter, becomes detached from the body, and serves first as a larva, and ultimately as a pupa or chrysalis case. This separation arises from a general contraction of the body of the maggot, whereby it occupies less space than the outer skin, which invested it during its growing state. The outer skin now acquires a tough consistency, and a dark brown colour, somewhat similar to a flax-seed in appearance, hence the name of this state of the insect, which might be more properly distinguished as its cased larva condition. The figures (*n*) and (*o*) show the position and appearance of these cased larvæ of the Hessian Fly (flax seed state) on the stems of wheat plants from which the leaves have been torn away.



(FIG. n)



(FIG. o.)

86. The maggot remains in this protecting case throughout the long and cold winter months, without any marked change of form, and is represented in Fig. (*k*), which shows a magnified appearance of the worm when taken out of its larvæ case, &c. (*i*) and (*j*).



(FIG. k.)



(FIG. g.)



(FIG. h.)



(FIG. i.)



(FIG. j.)

DORSAL VIEW OF THE DORMANT LARVA TAKEN FROM THE LARVA CASE.
g. Magnified dorsal view of the worm or active larva. *h.* Magnified view of the 'flax seed' or larva case. *i.* Magnified ventral view of the same. *j.* Magnified lateral view of the same.

87. At the advent of spring the dormant larva assumes the pupa or chrysalis state, still remaining within its now pupa case, which has become quite brittle, "breaking asunder transversely if rudely handled, and one of its ends slipping off from the enclosed pupa, like a thimble from the end of the finger."⁽¹⁾ Fig. 1 shows the pupa removed from its pupa case, and magnified like the preceding illustrations.



(FIG. 1.)

88. After remaining in this condition for ten days or a fortnight it wriggles out of its case, works its way up to light and air, emerges through its cracked pupa skin, and takes the form of the fly, to live its short life ten days or more. Dr. Fitch thinks that in all parts of the United States the Hessian fly will probably be found in its fully formed pupa state, about a week after the liverwort, (*Hepatica triloba*), the trailing arbutus, (*Epigæa repens*), and the red or swamp maple first appear in bloom, and simultaneously with the flowering of the dry strawberry (*Comaropsis Fragarioides*), the common five-finger (*Potentilla Canadensis*), the hill-side violet (*Viola Ovata*).

89. The wonderful adaptation exhibited during the winter sleeps of the larvæ of the Hessian fly in its larvæ case, to resist atmospheric influences, such as great extremes of temperature, moisture and drought, throughout the winter months, is perhaps the most remarkable feature in the economy of this insect. A somewhat similar provision is noticed in one of its kindred, the wheat midge, which will be referred to hereafter. We see at the close of autumn the larva preparing for its long dormant winter state, not by changing its position, and seeking security from wet, or frost, or drought, (for dry air is common in the winter months), nor by spinning a cocoon, in which similar protection may be secured, but by shrinking within itself, and allowing its outer skin to form a hard and impervious protecting shield to its tender body, which remains soft and pliant within, and, as far as we know, safe from all ordinary atmospheric changes.

90. The resistance of insects to the influence of intense cold has long been known, but the source of the heat which enables them to preserve their flexibility

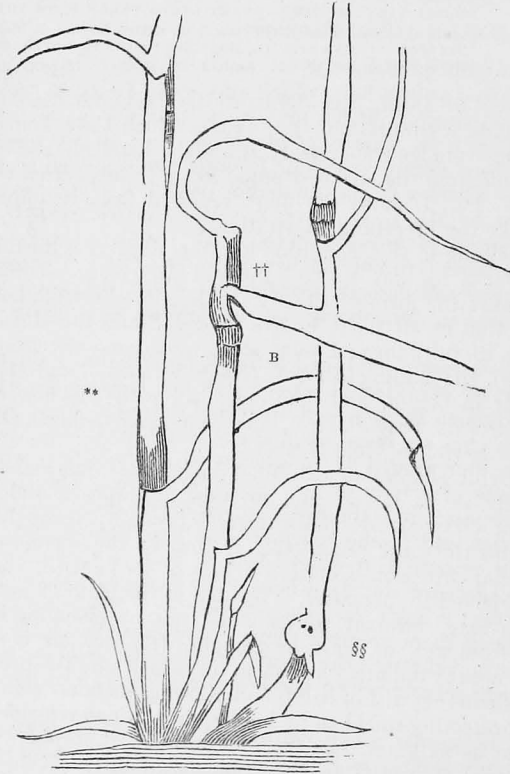
(1) Dr. Fitch.

within their pupa cases during the greatest extremes of temperature, still remains a mystery. Dr. Wyman lately stated, at a meeting of the Boston Natural History Society, that he had examined chrysalids of the common mud wasp, a species of *pelopæus*, and found that they were not frozen during the coldest weather.

91. On the morning of February 7th, 1855, when the thermometer had fallen as low as 18 deg. Fah., or 50 degrees below the freezing point, and had risen to 8 deg. Fah., the chrysalids were still unfrozen, and when removed from their pupa cases made obvious muscular motions. The pupa preserved its usual transparency and flexibility; but when crushed upon the surface of the material on which they rested, the fluids of the body instantly became opaque, and were congealed. Dr. Wyman has also examined the eggs of the moth of the canker worm, and found their contents unfrozen.

SECOND GENERATION OF THE HESSIAN FLY.

92. The following concise history of the second generation of the Hessian fly is from Dr. Fitch's admirable essay on this insect: "About the first of May the fly appears, and deposits its eggs upon the same crop of grain that had already reared one brood, and also upon any spring wheat that is sufficiently forward for its purposes. The radical leaves of the winter wheat are now more or less withered, and the fly therefore selects the more luxuriant leaves that have



Appearance of a healthy (**) and two diseased stalks of wheat, at harvest-time. (++) Stalk broken, from being weakened by the worms. (§§) Base of sheath swollen from worms having lain under it, and perforated by parasites coming from those worms.—From Dr. Fitch's Report.

put forth above these. The worm hatches, and again makes its short journey to its future home, at the base of the sheath; it consequently now nestles at the first and second joints of the young stalk, and is sometimes, though rarely, as high as the third joints. Even before the worm reaches the base of the sheath, it has frequently grown nearly to its full size (as shown Fig. *m*, para. 78.) The stalk has now attained such vigour and hardness that it is seldom destroyed by this spring attack. A slight swelling immediately above the joint, (Fig. B §§) commonly indicates the presence of the larva beneath."

93. "This is a fact which has been overlooked, or at least not distinctly stated by writers hitherto. We only find it noticed by Mr. Bergen, (Cultivator, VIII, 133,) who informs us that in a crop of barley which was destroyed by the Hessian fly, many of the stalks were 'at the joints, as thick as a man's finger.' The insect is, therefore, a true gall-fly, although when but one larva succeeds in reaching the joint, the swelling caused by it is little if at all apparent. More commonly, however, the straw becomes so weakened that it is unable to sustain the weight of the wheat-head, and it accordingly bends down (as represented, Fig. B ††,) with the force of the wind and rains. The appearance of a badly infested field, as harvest time approaches, cannot better be described than in the words of M. Kollar. The grain looks as though a herd of cattle had passed through it, so broken and tangled together is the straw. The worm attains its growth and enters its flax-seed state about the first of June, and the flies of this second generation come forth about the last of July, and in August."

PARASITES.

94. The excessive multiplication of all kinds of insects is providentially kept within bounds by a well known law, which appears to assign to each species one or more destructive parasites, which prey upon them during all stages of their existence. Were it not for this wise provision, some of the most prolific and hardy tribes, being exclusively vegetable feeders, would prevail to the exclusion of all others. The Hessian fly has numerous parasites, which have been studied with marked success by Mr. E. C. Herrick. Mr. Herrick's papers, published in the "American Journal of Science," (vol. XLI,) and in the Patent Office Reports for 1844, are most favorably spoken of by Dr. Fitch, who states that these papers evince the close and patient investigation which the writer has made, and the utmost carefulness in announcing nothing beyond what he had clearly ascertained.

95. In Dr. Fitch's essay, published in 1846, he introduces the following brief sketch of that part of Mr. Herrick's papers on the Hessian fly, which relates to parasites: "The Hessian fly is preyed upon and devoured by at least four other insects. When its eggs are layed upon the wheat leaves, they are visited by an exceedingly minute four-winged fly, a species of *Platygaster*,) which punctures the egg, and deposits in it four or six eggs of its own. The Hessian fly worm hatches, grows, and passes into the flax-seed state, with these internal foes feeding upon it. It now dies, and its destroyers in due time escape from the flax-seed shell. Three other minute four-winged flies, or bees, as they would be called in common language, destroy the fly when in its flax-seed state. The most common of these, by far, is Say's *ceraphon destructor*. Alighting upon the wheat stalks, instinct informs them precisely where one of these flax-seeds lies concealed. They thereupon 'sting' through the sheath of the stalk, and into the body of the worm, placing an egg therein, which hatches to a maggot, lives upon and devours the worm."

96. "Such are the means which nature has provided for preventing this pest from becoming unduly multiplied. And so efficient and inveterate are these foes, that more than nine-tenths of all the Hessian fly larvæ that have come into existence are probably destroyed by them, Mr. Herrick thinks, and we have strong reasons for believing that his estimate is within the truth."

97. It has been suggested that it is principally the second or spring generation upon which the parasites prey. The immense abundance of these parasites is easily ascertained by collecting the infested straw at harvest time, and securely enclosing it to preserve all the insects which hatch from it. Parasites in abundance will be obtained, and only occasionally a Hessian fly; whereas young plants taken up in April by Dr. Fitch, evolved only Hessian flies. The observations of a single season are not considered sufficient to establish a point like this, but coupled with the apparent difficulty of the short ovipositors of the parasites reaching the flax-seeds of the first generation at the first joint of the plant, and consequently *under* the surface of the earth to a slight extent, favours the suspicion that the second generation is chiefly infested by parasites, and the first comparatively free from them. This supposition appears quite in accordance with the operations of other agents limiting the produce of the first generation, for they have all the vicissitudes of a long winter, and the changeable atmospheric conditions of spring, to overcome.

ON THE MEANS THAT HAVE BEEN ADOPTED IN ORDER TO LESSEN THE
RAVAGES OF THE HESSIAN FLY.

98. No one, even remotely familiar with insect economy, and the admirable purposes these minute creatures are designed to fulfil in preserving a proper equilibrium between the vegetable and animal world, will suppose that any remedy, properly so called, fitted to arrest the devastations of the Hessian fly altogether, could ever be put in general operation, even were such a remedy found to exist.

99. We can check, and partially avoid, their ravages, but we cannot obtain entire immunity at all seasons from the attacks of this insect. Where good husbandry prevails, we may indeed so far diminish their depredations that they will cease to be regarded with anxiety; but we shall be at all times liable to temporary invasions from other quarters where a careless, selfish or ignorant system of farming practice obtains, and also when seasons remarkably favorable for insect multiplication occur. (Para. 24.) These contingencies need only compel that degree of watchfulness which every farmer should continually exercise upon all natural phenomena.

100. I now propose to enumerate the different methods which have been adopted in the United States and elsewhere to arrest the progress and destructiveness of this insect, and to state in a few words the nature of the result obtained. As this part of the subject is one of much importance, I have not scrupled to dwell upon each so called remedy according to its merits. We must bear in mind too, that while endeavouring to secure a way of escape from the depredations of the Hessian fly, we do not blindly point out the road to certain destruction from the *wheat midge* on the one hand, and *rust* on the other.

101. 1. *A fertile soil.* "We regard this as a primary and indispensable measure and one which must accompany others in order to their full success."⁽¹⁾ From what has been said in preceding paragraphs (84), good husbandry must necessarily play the first part as a remedial measure. And good husbandry implies a fertile soil. In other words the application of manure, deep ploughing, and the introduction of a judicious rotation of crops. The Hessian fly has in some instances been instrumental in compelling farmers to have recourse to a rational system of farming practice. Mr. Ezra L' Houmediea tells us in the Genesee farmer, that in his county (Suffolk, N.Y.) the land was so constantly tilled without manuring, that on an average not more than five or six bushels to the acre of wheat was raised. The Hessian fly put an end to this kind of husbandry, no other way being found to prevent injury to this crop by the insect than that of highly manuring the land.

102. We need not cross the frontier for examples of the encouragement which

(1) Fitch.

has been afforded to the Hessian fly and the wheat midge, during the past quarter of a century, to take up their abode in our midst. We everywhere find a practice similar to that related by Mr. L'Houmediea obtaining in Canada, and there are many reasons why such a system should have prevailed before railroads opened up the country and created a market for produce, and few cared to look forward to the future condition of their farms.

103. By way of contrast to the foregoing paragraphs, it may be well here to notice the magnificent crops of wheat obtained in 1852 in Niagara County, N.Y., on the Canadian frontier; they are recorded in the Patent Office Report for 1853, by Mr. Heman Powers of Lewiston. In 1849-50 Mr. William Hotchkiss had a field of six acres which averaged $63\frac{1}{2}$ bushels to the acre, weighing 63lbs. to the bushel. The seed was 'Soule's wheat.' Mr. Thomas Powell of the same County, raised in 1853, 489 bushels from a field of seven measured acres; this showing a yield of nearly 70 bushels to the acre. The circumstances under which this large yield was produced were as follows:—

In the fall a heavy dressing of swamp muck was applied. During the winter the field was used as a yard for stock, including a flock of sheep. In May was carted on a liberal coating of farm-yard manure which was immediately ploughed in very deep. Up to the 15th August, it was used at night as a sheep yard, when the field was again ploughed three times, until the soil was perfectly pulverized. Two bushels to the acre of 'Soule's wheat' was then sown broadcast, and covered with a light plough which completed the process. The variety known in Western New York as "Soule's Wheat" is in fact no other than the very best Genessee "White Flint," having a *stiff straw* and *maturing early*.

The following is Professor Emerson's analysis of this soil:—

Water of Absorption	3.00
Organic Matter	7.75
Silicates	76.93
Carbonate of Lime	2.82
Phosphate of Alumina	0.15
Magnesia	0.25
Peroxide of iron and Alumina ..	8.82

99.72

104. 2nd. *Late Sowing*. "We regard it as one of the most efficient, as it certainly is the most facile of any that can be resorted to."⁽¹⁾ "It is universally admitted that it is the earliest sowed fields which are always the most infested."⁽²⁾ Objections,—winter killing, rust and wheat midge. Remedies to these,—drain- ing, protecting with litter or cow dung, and for rust see paragraphs 190 to 227. Time of sowing, about the last week in September, seed being properly prepared for reasons given elsewhere and in appendix. Depth of sowing, 2—2½ inches. Depth of ploughing, 6 to 8 inches or more. In parts of Ohio late sowing is found to be a very excellent artifice, the varieties sown being the "Soule and white-blue stem;" these have nearly "driven the Illinois, Mediterranean, Red-chaff, Bald, &c., out of cultivation," (1852.)

105. 3rd. *Grazing*. This measure is alluded to as worthy of attention, "we cannot, therefore, but regard this as a most judicious and important measure if seasonably resorted to."⁽³⁾

106. 4th. *The Roller*. "No doubt this measure is a judicious one."⁽⁴⁾ It snakes off the eggs, and crushes the young worms; the condition of the ground must be particularly attended to before this remedial measure is employed.

107. 5th. *Mowing*. A valuable proposal for exterminating the second or spring brood from a wheat field.⁽⁵⁾

108. 6th. *Fly-proof Wheats*. "That there are any kinds of wheat which are perfectly "fly-proof" (to use a common and expressive term) as has been some-

(1) Fitch. (2) Ibid. (3) Ibid. (4) Ibid. (5) Ibid.

times stated, we wholly disbelieve.⁽¹⁾ Among famous varieties we find the following :—

1st. *Underhill Wheat*—a strong silicious stemmed variety—flour good.

2nd. *Spelter Wheat*—flour indifferent.

3rd. *Clima Wheat*—ripens early, and yields largely.

4th. *Mediterranean Wheat*, introduced into Maryland in 1837—very prolific, very coarse, ripens early, and a very general favourite in the United States. Is considered almost fly-proof, but soon becomes acclimated, and, although it improves in quality, it loses its “fly-proof” qualities. (See paragraph 110.) The Mediterranean wheat is a slight red chaff, with a long stiff beard, and a long red and very flinty berry.

7th. *The Etrurian Wheat*—very prolific, very early ripener, and has none of the defects of the Mediterranean. A bald wheat, with a round plump white kernel, and very thin bran.

8th. *The White Flint Wheat*. “One of the choicest varieties of Western New York. Withstands the attack of the fly better than any of the other kinds there in use.”

109. Mr. Rawson Harmon, in a report of experiments on the varieties of wheat cultivated in the State of New York, and to whom a premium for the experiments was awarded by the N.Y.S. Agricultural Society, says that the white flint variety has withstood the Hessian fly better than any other now cultivated. The solidity of the straw at the root gives the fly less chance of destroying it. “Some of the stalks of this variety will be so eaten (!) as to fall down, yet *mature the berry*; while in other varieties, after it has fallen from the injury of the fly, the greater part of it fails to mature.”⁽²⁾

110. Mr. H. G. Stewart, of Montrose, Lee County, Iowa, reports that the variety of winter wheat called the “Mediterranean,” is the only kind known there which escapes the attack of the Hessian fly. At the same time, Mr. Stewart reminds us of the very important peculiarity of rapid deterioration which is frequently observed in change of climates. The Mediterranean wheat does not ripen in Iowa so soon, by *ten days*, as it did *five years* ago, and is consequently more liable to rust and the attacks of other wheat pests.⁽³⁾ The white blue-stem is also fast deteriorating in the State of Pennsylvania. “Our crops this year fall below ten bushels to the acre.”⁽⁴⁾

111. Certain varieties of wheat possess the property of ‘tillering’ to a much greater extent than others under the same or similar conditions. It is evident that this power of throwing out fresh stalks is one of great importance in resisting the autumn attacks of the Hessian fly. Certain stems are sacrificed to its ravages, these are replaced by others which shoot out after the first stems are weakened or destroyed, and so preserve the crop from the autumn attack, while it is well known that on good soil the spring brood is not half so destructive as its predecessor. Tillering is largely increased by *room*, and limited by *crowding*. Late tillering retards the ripening of the crop, increases the danger of rust and the midge, and deteriorates the quantity of the grain. Fall seeding recovers the tendency to tiller by occupying the ground, and thus hastens the maturity of the crop.

112. *The Chilham Wheat*, introduced by the Secretary of the N. Y. S. A. Society into America in 1851, and distributed by him in various localities, fulfils the condition of ‘tillering’ to a remarkable degree. “A remarkable feature in its character is its great multiplicity of stalks, many of which were counted, averaging from 50 to 60 to each stool.”⁽⁵⁾ Cultivation has a vast deal to do

(1) Fitch.

(2) Transactions of the N.Y.S.A. Society. Page 218, 1843.

(3) Patent Office Report, 1854. Agriculture.

(4) *Ibid.* Page 147.

(5) W. R. Coppock, Esq., Black Rock, Erie County, N.Y. Trans. N.Y.S.A.S., 1853. Mr. Miller, the curator of the Botanical Gardens at Cambridge, England, obtained by continued division of the growth of a single grain of wheat, 500 plants, which yielded, by computation, 567,840 grains.

with 'tillering,' so also has the variety of seed. This property is of importance sufficient to merit careful and exact enquiry into the best modes in which it may be made available. Mr. Lauce, of Blackwater, Bagshot, England, obtained from one seed, by subdivision and cultivation, 43,000 grains.

113. In a Report furnished to the Patent Office, dated February 5th, 1855, "on the seeds and cuttings recently introduced into the United States," a variety of wheat from the central part of France is highly recommended for trial. It is named "Early Noé Wheat" (blé de Pile de Noé) after M. de Noé, who first introduced it into France. It is hardy and productive, has the property of ripening some days before the common sorts. It is generally known in the parts of France where it is cultivated by the name of 'blé bleu.' This property of ripening early is of *immense advantage* if coupled with a strong flinty stem, as one plant will then furnish two highly important qualifications required to resist the *Hessian fly*, the *wheat midge* and *rust* conjointly. (Para. 224.)

114. 7th. *Steeps for the Seed*. "Much lies within the compass of human instrumentality to accelerate the growth of vegetation, by means of this kind."⁽¹⁾ It is probable that a great advantage in many respects will be found to flow from a judicious adoption of this artifice. Not only is growth accelerated, but the steep may be made to possess great fertilizing properties; and steeps are constantly employed as a preventive to smut.

115. Mr. Pell, of Penam, N.Y., prepared his seed wheat by soaking in brine, scalding with hot water containing common salt, mixing with pearl ashes, and when distributed nicely over a barn floor by sifting a composition containing charcoal dust, guano, sulphate of ammonia, and various other mineral ingredients over it. It was sown at the rate of two and a half bushels to the acre; at the expiration of fifteen days the wheat was so far above ground as to be pronounced by a neighbour far in advance of his which had been sown in the usual way on the first of September, nearly four days earlier. The crop weighed 65 lbs. per bushel, and was eminently rich in gluten, containing 18 per cent. The yield per acre was about 70 bushels.⁽²⁾

117. In another part of this essay a steep for wheat as a preventive to smut is noticed, (par. 236) and it may be remarked here that the following proportions will serve the purpose:—Two and one half pounds of sulphate of soda (Glauber's salts) dissolved in one gallon of water, will serve for ten bushels of wheat; the moistened or soaked grain may be dried with quicklime. Arsenic and sulphate of copper (blue vitriol) should be avoided; both are poisonous, especially arsenical compounds.

118. In steeping or pickling wheat in strong chamber ley, a practice both common and beneficial, the use of lime for drying should by all means be avoided. Gypsum should be employed instead; but of all substances, finely powdered charcoal, as a most efficacious absorbent of the ammonia of the urine, is to be recommended. For further observations on the pickling or steeping of wheat, as a method of preparing the seed for rapid growth and immunity from smut, see paragraphs 231, 232, 232a.

8th. *Oats as a Decoy*.—The oats being ploughed in after the deposition of the egg—"if the fly will deposit its eggs upon oats." This remedy is equivalent to late sowing.⁽³⁾

9th. *Wheat as a Decoy*.—If two or three acres across the middle of a large field be sowed with wheat about the middle of August, all the flies in the vicinity will be attracted to this point, and there retained, so that it will be safe in ordinary seasons to sow the remainder about the middle of September. Plough the early sowed wheat under, and bury the unhatched eggs and maggots. In years when "clouds" of Hessian flies migrate, it is evident that this remedy would be of little avail, if the season were at all late. The measure should re-

(1) Fitch.

(2) Pat. Off. Rep.

(3) Fitch.

ceive a fair trial from some intelligent wheat grower, in a district suffering under this pest.⁽¹⁾

119. 10th. *Deeply Covering the Seed.*—"Good as a subordinate measure, but it falls far short of ranking as a primary one."⁽²⁾ I am much inclined to doubt the value of this remedial measure; late and shallow sowing, with a properly steeped seed, and deep preparation of the soil, should go together. The most trustworthy experiments have shown that deep sowing is destructive to a very large majority of the seeds committed to the ground. Out of 150 seeds of wheat sown at different depths, 140 out of the number came up from a depth of 2 inches, 40 from a depth of $4\frac{1}{2}$ inches, and 14 from a depth of $6\frac{1}{4}$ inches. Another experiment gave the following result:⁽³⁾

Seed buried $\frac{1}{2}$ inch deep, up in 11 days	7-8ths of them.
" " 1 " " " 12 " "	All of them.
" " 2 " " " 18 " "	7-8ths of them.
" " 3 " " " 20 " "	6-8ths " "
" " 4 " " " 21 " "	4-8ths " "
" " 5 " " " 22 " "	3-8ths " "
" " 6 " " " 23 " "	One came up.

120. 11th. *Procuring Seed from Uninfested Districts.*—Of no utility; the eggs are not deposited in the seed. The only possible value of this artifice would be to obtain early varieties of wheat, or seed from a considerable distance (two or three degrees) to the south⁽⁴⁾ of the locality where it is intended to sow, whereby to ensure its maturity, for a few years, some days earlier than acclimated varieties.

121. 12th. *Sun-drying the Seed.*—Germination retarded; therefore equivalent to deferring sowing for a few days.

13th. *Drawing Elder Bushes over the Plants.*—A fancy.

14th. *Sprinkling Salt, Ashes, or Caustic Lime over the Young Plants.*—This top-dressing serves as a manure, and nothing more. It will strengthen the plant and accelerate the period of its maturity.

122. 15th. *Burning and Ploughing up the Wheat-stubble.*—Dr. Fitch says: "We commenced our account of this remedy, impressed with a belief that it was the best that had ever been proposed; we close it, persuaded that it is the very worst." By burning the stubble, you burn the parasites of the fly, which, as has been shown, destroy nine-tenths of each generation. (See paragraph 96.)

We cannot give assent to the very sweeping denunciation of this remedial measure, contained in the foregoing sentence. It is quite clear that *before* the parasites accumulate so as to overcome the Hessian fly, the artifice is worthy of adoption. With the exception of certain seasons, the ravages of the fly are local, and may, therefore, be arrested by this artifice. It has received so many favorable notices from different quarters, that it is certainly worthy of trial. We subjoin an extract from the "Genesee Farmer" (1849) on this subject:

"This destroying insect is becoming more and more plenty over the whole wheat district, subject to slight variations through the effect exercised over them by the severe and open winters and frosts. That they are extremely local, and, when once colonized, do not emigrate far, when they can find a proper pabulum for existence near home, we have been a long time satisfied. A respectable and extensive farmer in Pennsylvania, states that he has, for ten years past, almost entirely prevented their depredations by burning over the stubble directly after

(1) Fitch. (2) *Ibid.* (3) Petri.

(4) This applies to the seed obtained from the shores of the Mediterranean, and sown in Canada or the Northern States; but whether its peculiarity be dependent upon change of soil or climate, or both, is not yet fully established. It is known that in Sweden the farmers are in the habit of obtaining their seed from the north of the Gulf of Bothnia, and sowing it on the most exposed farms of the southern part of the country, where the season is short. The effect is to advance the ripening, by several days, the first season. Whether wheat grown at the Sarzenay, or in districts below Quebec, would ripen much earlier than an acclimated kind in Western Canada, does not appear to have been fully tried. Both this and the opposite experiments are well worthy of trial.

cutting his wheat, and before they had changed from the larvæ to the winged state; while fields in his immediate neighborhood were destroyed.

"This view of the subject is remarkably confirmed by a case related to us a few days since, by one of our best wheat farmers in this section. His crop was so entirely destroyed that it did not pay for harvesting; and the land being in fine tilth, he resolved to follow it again with wheat, and consequently turned it over pretty soon after. About the 1st of September he commenced cross-ploughing; and when about half the field was finished, the other half looked in such good order that he omitted ploughing it, and sowed his wheat. The next summer the grain was so destroyed on the part twice ploughed, that he did not harvest it; while the other was a full average crop.

"The *rationale* is plain. The insect, when in the worm state, was ploughed under with the stubble, and on that part twice ploughed was brought up again, hatched out, and attached their eggs to the young wheat; while in that part but once ploughed they were buried beyond their power of getting to the surface, and were destroyed."

In 1851, Mr. John Delafield, in a general view and agricultural survey of the county of Seneca, N.Y., taken under the direction of the New York State Agricultural Society, tells us that the Hessian fly has *ceased* to be a formidable enemy there, probably for two reasons: "First, the period of sowing the seed-grain has been retarded until a period too late to offer a nidus to the fly; and, second, the soil is better prepared, by due fertility, to give the plant vigour to resist the influence of the larvæ."

123. The remedial measures which have been enumerated, either imply the presence of the Hessian fly in destructive abundance, or contemplated invasions from neighbouring districts. They may be thus briefly summed up for *winter wheat*:—

1st. Have your soil in good heart and order.

2nd. Drain as much as is consistent with true economy in Canada, and plough deep.

3rd. Sow late an approved flinty-stemmed variety, and an early ripener.

4th. Prepare the seed for rapid germination and growth, by steeping, and afterwards drying in some special manure.⁽¹⁾ (See appendix, for drying manure.)

124. With reference to steeping wheat before it is sown, there can be no longer any doubt as to the benefit it confers, when properly done, both in accelerating germination and future growth, and in preventing, or greatly diminishing, the affection of smut. (See Smut, para. 231.)

125. The recommendation, "Sow late," to avoid the Hessian fly, appears to be diametrically opposed to the advice given in paragraph 121, &c., to avoid the ravages of the wheat midge and that dreadful scourge "rust." It is to meet the case of a simultaneous presence or appearance of both Hessian fly and wheat midge, that late sowing, with a forcing preparation of the seed, is recommended and practised. If acting with special reference to an individual insect, one would sow late to avoid the Hessian fly, or early to avoid the wheat midge; but it is very manifest that, under ordinary methods of culture, if both insects prevail (and they may now *always be expected*) during the same year, or if they succeed one another, the crops must suffer from the attacks of one of them. Therefore, it is better to be ready for both contingencies; sowing late on well prepared land, to avoid the Hessian fly, and anticipating the arrival of the midge by stimulating your crops to attain, before winter sets in, the same development of parts which they would have acquired by being a fortnight longer in the soil; taking care, at the same time, to select a good variety of seed, flinty-stemmed, and an early ripener, and one which is *not* acclimated. This subject of sowing early will be more particularly alluded to in the chapter on "the wheat midge."

126. With respect to spring wheat, it has been urged that the election of

(1) Lime (?), gypsum, charcoal, &c. Experiments on this subject not complete. (See Appendix.)

varieties which can be sown so late as to escape the May attack of the Hessian fly, the June and July attack of the midge and rust will cover all contingencies. Can this be accomplished? Have we such a variety of wheat as will satisfy these conditions? The late lamented Mr. Wade, of Cobourg, recommends the "Fife wheat," which is described in paragraph 161. The Fife wheat, or, as it is called in the townships east of Lake Simcoe, Scotch wheat, is there a great favourite. It is not "liable to rust," may be safely sown much later than many other varieties, and is at the same time very productive. For additional notice of the Fife wheat, see paragraph 161.

THE CAUSE OF THE SPREAD OF THE HESSIAN FLY.

127. A point of interest in the history of this insect is the stated apparent periodical character of its visits. A little reflection will show that this seeming regularity may be attributed to causes which are independent of one another, but yet have an important bearing upon its multiplication or diminution. The first, and probably the most influential, relates to the general wide-spread cultivation of its favourite food; the second to the favourable meteorological conditions of the season—these stimulate and encourage its increase; the third affects the diminution of its numbers, and involves the excessive multiplication of the parasites which prey upon it.

128. Under the article "Wheat Midge," paragraphs 158-9, a much more apparent periodicity is observable in the successive appearances of that insect. The following notices of the excessive appearance of certain insects in the United States and Canada, with the character of the season during and immediately preceding their visit, may prove interesting. They are not advanced with any expectation that a near approach to a clue to the cause of the greater or less distribution of the Hessian fly in different years will be attained, but rather to direct attention to a class of extremely interesting natural phenomena which cannot fail to become of value as they accumulate.

129. (1) It has long been known in Germany that the race of pine beetles increased most in warm dry summers, followed by cold dry winters. "Hot weather shortens the period of transformation, and thus affording time for the maturation of the several broods, causes a superabundant number of insects to be found."⁽¹⁾

(2.) The oak trees in Devonshire have suddenly appeared studded with gallnuts during the last three or four years, and in numbers so abundant as nearly to equal the leaves.⁽²⁾ The Hessian fly and wheat midge are true gall flies, and the sudden increase of one of their kindred giving rise to the common gallnut in countless multitudes, shows how universally the capability of rapid and unexpected increase is shared by different species of this allied generation.

(3.) See paragraph 160.

130. In the communication to the writer, (before referred to) dated Feb. 2nd, 1857, Dr. Fitch says: "It has long been my opinion that the great multiplication of the insect depredators on wheat, and of insects generally, which takes place in particular years, is caused in part, at least, by certain peculiarities of the atmosphere of that and of the preceding year. This subject is alluded to under several of the species in my reports. What those atmospherical peculiarities are, in the case of any particular insect, is yet unknown to us. One of the general laws relating to this matter, I think, will be found to be this—that whatever peculiarities of the season occasion a luxuriant growth of a particular plant, will also favour the multiplication of the insects feeding upon that plant. But we are here treading upon slippery ground. It is a very obscure subject, requiring an extended series of very careful observations to lead us to the exact truth. And in such enquiries as this we are very liable to be misled, and to mistake mere coincidences for established laws. For instance, if an insect has been observed in two or three

(1) David Gorrle, Esq., Farmers' Note Book; Highland Agr. Soc. Trans.

(2) Illustrated London News, March, 1857.

instances to be very numerous, say, after an unusually wet season, we should confidently conclude such a season to be the cause of its multiplication. But it may perchance again show itself in equal abundance after a dry season. Authors have so often been humiliated by having their speculations falsified in ways analogous to this, that I have felt disinclined to venture upon such precarious ground, except with the utmost caution. It is a most important topic, however, and all the facts which fall under our observation, having a bearing upon it, should be recorded, and in time such records will lead to correct theories in the premises."

131. There can be no doubt that the excessive and continuous cultivation of its favourite food, wheat, without rotation, has fostered, encouraged and cherished the Hessian fly, and indeed, all other wheat depredators, until they have become firmly established in the country, and always to be looked for and guarded against. Little or no rotation has been allowed to interfere with their progress. They have been provided with all situations of exposure or shelter in one locality or another, to ensure the propagation of their species; and all that the sensible farmer can do to protect himself from the swarms which will continually be thrown off from the nurseries maintained through selfishness or ignorance in this country, is to adopt the artifices which will enable him to escape the attacks of the depredators.

132. It has been suggested that the name 'Hessian Fly' should be discontinued and the term 'wheat stem-fly,' substituted for it. The change, however, is decidedly objectionable, on the ground that there exists in Europe an insect which has long borne the name of the 'wheat stem-fly,' (*chlorops pumilionis*.)

CHAPTER IV.

THE WHEAT MIDGE (*Cecidomyia tritici*).

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ORIGIN OF THE WHEAT MIDGE.

133. This destructive insect has long been known in Europe, and during the latter half of the past century it attracted general attention on account of the ravages it committed in various parts of Great Britain. Simultaneous with its appearance in America in the northern part of Vermont in 1828, it occasioned great havoc in Scotland and England, creating universal alarm in many of the best wheat growing districts of those countries.

134. In 1828 the ravages of the wheat midge in Northern Vermont became so general as to cause serious apprehensions for the wheat crop. In 1829 these fears were confirmed by the appearance of the fly in such countless numbers as to threaten the entire destruction of the growing grain. Its spread was so rapid and uniform in all directions where its favourite food was cultivated, that, in 1832, we find the wheat crops greatly injured or altogether destroyed in Vermont, New

Hampshire, part of New York and Pennsylvania, and damaged over a large area in Lower Canada.

135. Doubts have been expressed by European entomologists as to the identity of the American wheat midge with the *cecidomyia tritici*, described by Mr. Kirby. In the spring of 1855, however, Dr. Fitch sent some specimens of the American insect to M. Amyot, a distinguished French entomologist. At the meeting of the Entomological Society of France, November 14, 1855, M. Amyot announced the results of a most rigid examination, which he, in company with M. Lucas, had submitted the specimens sent to him by Dr. Fitch. These entomologists find the American insect perfectly identical with the European *cecidomyia tritici*, or wheat fly. This announcement leads to the conclusion that our wheat midge is an importation as is the Hessian fly; and an examination into the habits of the insect exhibits no peculiarity which can militate against the adoption of this conclusion.

136. In 1740 the wheat fly was destructive in Scotland, during the winter of which year the Thames was frozen over. In Ellis' *Modern Husbandman* for 1745, the attacks of the vast numbers of black flies (the ichneumon parasites) are noticed in the following quaint terms: "after this we had a melancholy sight, for as soon as the wheat had done blooming, vast numbers of black flies attacked the wheat ears, and blowed a little yellow maggot which ate up some of the kernels, in others part of them, and which caused multitudes of ears to miss of their fulness, acting in some measure like a sort of locust, till rain fell and washed them off; and though this evil has happened in other summers to the wheat in some degree, and not done much harm, yet if the good providence of God had not hindered it, they might have ruined all the crops of wheat in the nation."

HISTORY OF ITS PROGRESS.

137. The following records of the appearance of this destructive insect will furnish a tolerable idea of the extent of its ravages on the American continent:—

1820.
Wheat midge first appeared in Western Vermont. (1)
1827.
Occasioned local injury in Athens County, Ohio(?) (2)
1828.
Committed extensive depredations in Northern Vermont, and the frontiers of Lower Canada.
1829.
Greatly destructive in Vermont and parts of Lower Canada and New Hampshire.
1830.
Appeared in North-eastern New York.
1831.
Considerable injury in Eastern New York.
1832.
Very destructive in Eastern New York; cultivation of wheat abandoned.
1834.
Commenced its depredations in the State of Maine. First appeared in numbers in Lower Canada, near Montreal.
1835.
"7th or 8th July, 1835, I discovered the fly on my wheat in myriads. They disappeared on the 11th or 12th July. They appeared to be depositing their eggs in the glumes of the ear in the 7th or 8th July. Six or eight days subsequently live maggots were produced. The earliest wheat was all destroyed. A part of my wheat that was not fully in ear when the fly appeared, was not so much

(1) Mr. Jewett—New England Farmer.

(2) Statement of Mr. Elmer Rowell, page 252. Pat. Off. Rep., 1852-3.

injured. The tops of the ear had the maggots, but the lower part that was not shot out was uninjured" (Evans). Considerable injury from the wheat midge on the Island of Montreal.

1836.

Fly seen June 29th, and commenced depositing eggs in Lower Canada on the 4th July. Wheat on the Island of Montreal greatly damaged. The fly extended its ravages west and northward of Montreal for many miles.

1842.

Appeared in Western New York.

1845.

Very destructive in Western New York.

1846.

Approaching Seneca County, New York.

1847.

Destructive in Townships north of Seneca County, New York.

1848.

Appeared in Seneca County, New York.

1849.

Committed ravages in the county of Lennox, Upper Canada. Prevalent in Addington, Hastings and Frontenac. Disappeared from Monroe County, New York. Destructive in Seneca County, New York.

1850.

Wheat midge greatly increased in the County of Hastings, Upper Canada. Also in Prince Edwards and adjacent counties. The following notice of its progress contains some facts and observations both interesting and valuable:

"To account for this (the low average of the crop) it must be observed that the weevil (wheat midge) has been very destructive, having been two years in the county, and in its journey westward has reached about the centre of our western tier of townships; some few instances have occurred of its having been found beyond that limit. We cannot but expect that next year it will be still more destructive; one fact, however, is well established, that in *early* situations, on *early* spots, where the seed was sowed *early*, there was little or no weevil (wheat midge.) In low, damp, late situations, and where late sown, it has been extremely destructive, especially in the eastern part of the country, where it first appeared. This important fact ought to be well remembered by our neighbours to the west of us, where they will have it undoubtedly in a very short time, and exertions ought to be used by them to sow early, and early kinds of seed, to drain the land well, and make small ridges, and otherwise expedite the growth as much as possible. The early sowed sole wheat escaped last year, in many instances, in the very centre of the weevil's destructive ravages. The maggot is generated from a fly blow deposited in the blossom by a very small greyish fly, with a small stripe of orange down the back, and it is most busy when the wheat is in full blossom, about the first of July.⁽¹⁾

138. In the Canadian Census Report for 1851, we find the following remarks on the progress and destructiveness of the wheat midge in certain counties of Upper Canada during this and the following year. They are from the pen of the able Secretary of the Board of Registration and Statistics, William Hutton, Esq., whose experience, position and practical knowledge, confer the highest value upon his views and statements:

"With perhaps equal advantages we find an enormous discrepancy in some of our own wheat-growing districts. In the year 1850, the township of Esquesing, in the county of Halton, produced 26 bushels of wheat to the acre, and that of Adolphustown, in the county of Lennox, only six bushels to the acre, and this with soil and climate perhaps equally good. This is at once accounted for by the

(1) Prize Report, county of Hastings, 1852. W. Hutton, Esq.

ravages of that fearful plague to the farmer—the weevil. The worst wheat crops in Canada West, in the year 1851, were in those counties where the weevil was prevalent. It committed the most serious depredations, in very many cases having rendered whole fields of most promising wheat not worth the threshing. This fly, which deposits its larvæ in the blossom of the wheat in order to feed upon the milk of the grain as it ripens, was, unfortunately, in that year most abundant in the counties of Frontenac, Lennox, Addington, Hastings, and Prince Edward, and is travelling gradually west at the rate of about nine miles every summer, and remains from five to seven years in a locality. The only prevention yet discovered has been to sow early seed on early land, and very early in the autumn, so that the wheat may blossom before its enemy takes wing, the period for which depends much upon the earliness of the season. So destructive was the fly in 1851, that the fine agricultural county of Lennox produced only six bushels per acre, Hastings about ten, and Prince Edward, Addington and Frontenac, about eleven. It had not in that year reached the county of Northumberland, but was very destructive in that county the following year, 1852.”

Contrary to expectation, did not commit ravages in Seneca County, New York.

1851.

Very destructive in Frontenac, Lennox, Addington, Hastings, and Prince Edward Counties, Upper Canada. Destructive in the great wheat district west of Cayuga, New York.

1852.

Committed excessive ravages in late wheat in the county of Hastings. Destructive in Northumberland; travelling westward. The subjoined notice is by the author of the preceding quotation:

140. “They are numerous in this county in late wheat—*very* numerous in later, and *very, very* numerous in the latest. I should say that very probably one-half (certainly one-third) of the whole wheat of this county is destroyed by this weevil. I saw the fly about the first of this month, (July, 1852,) almost forming a little cloud, proceeding *westward*. It will be in Murray and Sydenham this season, and will proceed westward from seven to nine miles each year. The only remedy I can perceive, as yet, is *very early* sowing on *very early* ground, well drained, of *very early* kinds of grain. I have four fields of wheat; in the *earliest* there is little or none, except where there was aftergrowth, but it becomes worse in each field in proportion to its lateness, either in whole or in spots. Perhaps, through your valuable journal, you will be able to hurry the farmers west of us in their preparations for wheat sowing, and thus do a world of good, as the progress of the weevil is as certain as the progress of time itself, and how great a scourge it is—few of our brother farmers in the West are aware. The Sole and Hutcheson wheat appear to be the earliest, and will be ready for harvest with me, and around me, on the 22nd of July, which is early for this season. I cannot say exactly *why* the earliest wheat is the safest, but I dare say nature provides that the fly comes to its natural strength at the *usual* time for wheat to blossom; and if the wheat be *earlier than usual*, the grain is too forward to nourish its deposit. This year the coldness of the season retarded the *animal* creation probably more than it did the *vegetable* creation, and this may be another reason why the fly was too late for early *sown* wheats.” * * * * *

Weevil (wheat midge) common and destructive in Vermont. Not generally prevalent in New York. “The weevil has done us no injury yet in Genesee County, New York.” Destructive in Westmoreland, Pennsylvania.

1853. (1)

141. “The weevil has made its appearance in some localities in this part of our State, but not in sufficient numbers to injure our crop.”—J. D. Verres, Wayne County, Michigan.

(1) See Patent Office Reports

"The midge or weevil has done a great deal of damage to our white wheat." "The Hessian fly has not for many years done us any injury."—G. Wiborn, Ontario County, New York.

"The wheat crop was less with us than an average last season, in consequence of injury by the weevil."—James De Mott, Seneca County, New York.

Midge appeared in moderate abundance in Northumberland and Durham, Canada West.

In Mr. Principal Dawson's "Scientific Contributions," we find the subjoined general notice of the wheat midge in Nova Scotia: "The wheat midge has in recent times been the most destructive of all wheat blight." Hence we may consider it established in Nova Scotia.

1854.

142. *Maine*.—Wheat midge destructive. "Wheat has been almost entirely neglected for some years past on account of the weevil; but it is again assuming a place in the fields of our farmers with fair success."⁽¹⁾

Western New York.—Committed dreadful ravages. Estimated loss in the State exceeding nine million dollars.

Pennsylvania.—Destructive.

Northern Ohio.—Destructive.

Very general and destructive throughout the northern wheat growing districts of the United States. In 1854, at the August meeting of the American Institute, in New York, Mr. Solon Robinson stated that the red weevil (wheat midge) is the most terrible pest ever encountered by wheat growers. Destructive in Grand Bay, Saguenay, L. C.

143. "In almost every section of the State of New York, where the wheat crop is grown, the ravages of the wheat midge have been most extensive, especially with the white wheat. The Mediterranean wheat, when early sown, has generally escaped. Assuming that the loss was one-third from this cause—although it was probably considerably greater—it is represented in money value (at \$2.15 per bushel, the average price,) by \$9,403,012,85. (Abstract from N. Y. S. A. S., 1854. Seg. Agr. Meeting.)"

"The pecuniary loss which our country has sustained from this insect, is incalculable; but it is truly appalling, nay terrific. Some writers have thought that a wet season favored the increase of the midge, but in this country it has never been more destructive than it was in the summer of 1854, noted as one of the driest seasons known. In gathering the agricultural statistics of that year, our State Agricultural Society inserted in its circular the query: 'To what extent was the wheat crop in your vicinity injured by the midge?' And the answer to this inquiry furnishes us with quite authentic information upon this topic. The able and efficient Secretary of the Society, Hon. B. P. Johnson, informed me, that on getting together all the replies to this inquiry, and placing everything at the lowest figure, so as to be certain the estimate was within truth, the wheat which this insect had that year destroyed in our State, at its then current market price, exceeded in value *fifteen millions of dollars!* This amount would be more than a third larger, if estimated at the price to which wheat afterwards arose last winter. Truly, it is a formidable enemy, that has the power to take such an amount of money from the pockets of our citizens in a single year."⁽²⁾

As every fact connected with the midge is of importance, the following caution from the "Genesee Farmer" is appended:

Weevil.—Caution to Farmers.—The Hon. E. Blackman, of Newark, N. Y., exhibited to the writer samples of Timothy seed obtained by him at Buffalo, which was literally alive with weevils. The seed was understood to be from Ohio; and most of the seed from many parts of that State, having been obtained from grass

(1) E. Weston, Somerset County, Maine. P. O. R.

(2) Asa Fitch, M. D., "Rural New Yorker," 1856.

in the wheat crop, the weevil falls into their timothy seed and thus is sown broadcast over the land. As the insect lives through winter, or in some other way appears in the same locality every season, it may be possible that the sowing of this seed containing them may hasten the general prevalence of that dread scourge throughout the entire wheat-growing section of our State. Ought not farmers to be on their guard against thus distributing destruction to their crops of wheat?"

1855.

Very destructive in the counties of Northumberland and Durham, C. W.

In Lower Canada, wheat badly damaged by fly in Grand Bay, Saguenay.

Not generally prevalent in the United States. This is one of the peculiarities of insect life before referred to, in paragraphs 24, 159. Being most abundant and destructive generally in 1854, and in certain localities absolutely ruinous, the succeeding year finds it dwindling away into an insignificant and almost forgotten pest; yet numberless examples show how little the causes which govern its increase are understood, and how immensely deserving they are of most careful study over the wide areas on this continent where wheat is cultivated.

1856.

144. Wheat fly common on the lake shore counties west of Toronto. Committed excessive ravages in the counties bordering on the Niagara River. Estimated loss in Canada from the wheat fly in 1856 probably exceeds \$2,500,000. Made its first appearance in the county of Middlesex, C. W. General but not destructive along the Detroit River. County of Wellington affected. Common in the county of Peterborough. Common in parts of Maine. Destructive in County of Saguenay, L. C. In the township of Thorah, C. W., hitherto considered altogether free from all insect wheat pest, except "grasshoppers;" in some instances the top kernels of wheat were found partially attacked by a "small light brown worm, with a black head," thought to be the "weevil." The intervention of a thunder shower preserved the infested ears. Whether this insect be the larvæ of the midge, is quite uncertain, and a notice of it is introduced to show that even so far north and east, as the Townships of Saguenay and Thorah, the midge, or another wheat depredator, is attracting attention, and perhaps silently establishing a home.

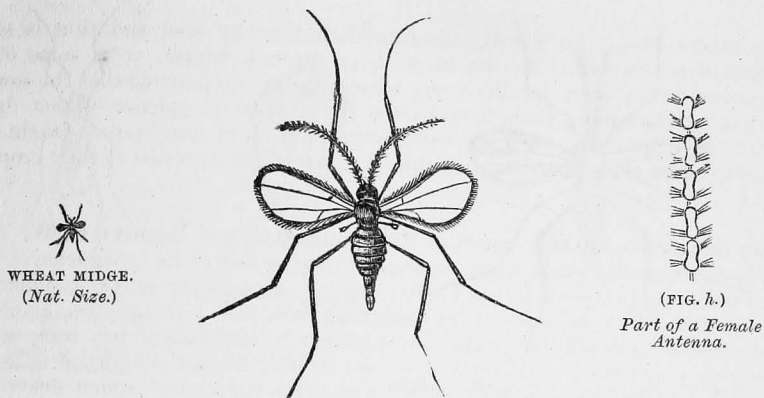
DESCRIPTION OF THE WHEAT MIDGE.

145. A small orange-colored fly, (or flies, as there are several species,) with delicate, transparent, iridescent wings, and long slender legs. The length of this insect is about the tenth of an inch, rather less than more; the breadth of its expanded wings slightly exceeds the tenth of an inch. A good magnifying glass is required in order to distinguish the following particulars.

THE CLEAR-WINGED WHEAT MIDGE.

146. The eyes of the female (Fig. I) *clear-winged wheat midge* (*Cecidomyia tritici*) occupy two-thirds of the entire head.⁽¹⁾ They are large, of a deep black colour, and are separated from each other on the top of the head only by a light and almost imperceptible cleft, so that when viewed in front they appear like a continuous broad black band surrounding the head. The face is pale yellow. The antennæ are of a deep brown or black colour, less intense than the eyes, of the same length as the body and composed of twelve joints. Each joint (Fig. A) is commonly oblong, with a contraction in its middle, and is surrounded with a row of hairs near its base, and another near its apex. The joints of the antennæ are connected by a slender thread. The thorax is of a pale yellow colour; the abdomen throughout of an orange colour; the wings are colourless, appearing like

(1) For a full and complete technical description of the Wheat Fly, or Midge, see Dr. Fitch's Report in Vol. V. Trans. N. Y. S. A. S., 1855. Many scientific terms are omitted in the text, for obvious reasons.

FIG. I.—MAGNIFIED CLEAR-WINGED WHEAT MIDGE.—(*Cecidomyia tritici*.)

thin plates of mica. Their margins are densely ciliated with hairs. The legs are pale yellow; the basal joint of the tarsi is the shortest of all, its length little exceeding its diameter. All parts of the body are clothed with minute hairs.

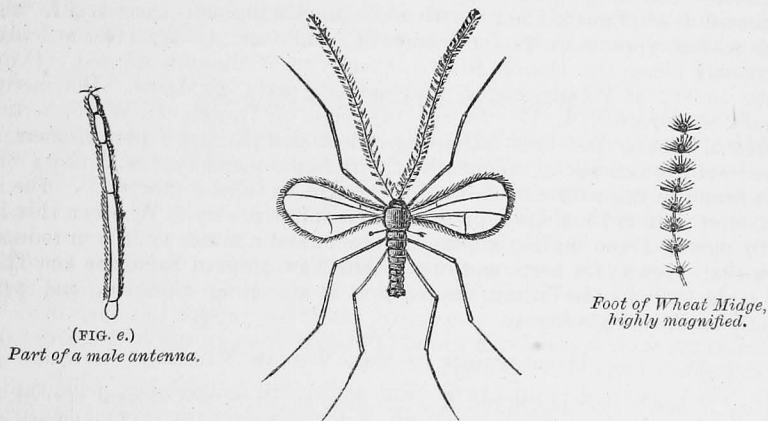


FIG. IV.—MALE OF THE CLEAR-WINGED WHEAT MIDGE—MAGNIFIED.

146 (a). The male wheat midge is a rare insect, and differs from the female in one particular point by which it may be easily distinguished (Fig. IV.) The antennæ are double the length of the body, and twenty-four jointed. The joints are of an exact globular form, and encircled with a row of hairs. (Fig. e.)

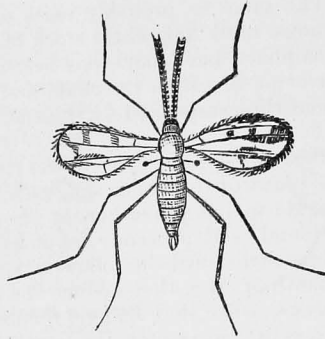
THE SPOTTED WINGED WHEAT MIDGE.

(*Cecidomyia arealis*. Fitch.)

147. The spotted winged wheat midge is distinguished from the preceding insect by having spotted wings; six spots are commonly found on each wing. The length of this insect is about one-twentieth of an inch, while that of the common clear-winged wheat midge is about one line, or the twelfth part of an inch, although much smaller specimens are not unfrequently met with.

148. In the Rural New Yorker for June, 1856, Dr. Fitch says, in an admirable communication on the wheat midge:—

“The fact then is, there are two species of this insect devastating our wheat.



SPOTTED-WINGED WHEAT MIDGE—MAGNIFIED.
(*C. cerealis*. Fitch.)



Magnified wing
of *C. cerealis*.



Wheat Midge at
rest, with its
wings in their
natural position,
—magnified.

But as these species are alike, so far as we yet know, in their habits, transformation and external appearance, and can only be distinguished from each other by their wings when in their perfect state, it will be more convenient to designate them collectively as the WHEAT-MIDGE, and only in cases where technical accuracy and precision is required, is it worth while to discriminate them by the names "spotted winged wheat midge," (*C. cerealis*,) and "clear winged wheat midge," (*C. tritici*.)

HABITS OF THE WHEAT MIDGE.

149. In Canada the wheat midge appears during the latter part of June, and remains until the middle of August.⁽¹⁾ It prefers low and sheltered places, being always found in greater abundance in vallies than on hills, under the lee of fences, or the forest rather than the open field. It is most active at sunset, and during the day may be found lurking among the lower leaves of the plant, and especially among the weeds which are frequently suffered to grow in profusion among our crops. At twilight and during the night it is chiefly occupied in depositing its eggs. It does not confine its attacks to wheat but infests the ears of various kinds of grass, such as the couch grass, (*Triticum repens*), the wild bearded oats, (*Avena Festuca*,) and other grasses.

150. The eggs are deposited in the germ of the still undeveloped grain, through its chaff or sheath.⁽²⁾ When the chaff is far advanced, or very silicious in its nature, the insect cannot puncture it, a fact which is important to bear in mind, and of value as a guide in the selection of varieties of wheat for seed where the fly abounds. The number of eggs deposited in one floret rarely exceeds 10, but it often happens that several insects lay their eggs in the same floret, hence from 10 to 40 larvæ have been counted in the same floret.

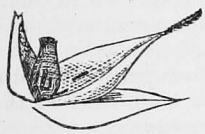
151. "Go into an infested wheat-field in the evening, with a lantern, and you will find a swarm of these flies, everywhere dancing up and down along the heads of the wheat, intently engaged in selecting the kernels, upon which to deposit their eggs. They are all females. The males are very rare, and have never been found, I believe, except by the German naturalist, Meigen, and myself. Having discovered a kernel, the chaff of which is not too old and hard, the fly alights upon it and pierces the chaff with her sting or ovipositor, which is a slender tube resembling a fine hair. This she protrudes from her body, insinuating it through the chaff until its point reaches the germ or young soft kernel. She then leisurely passes her eggs one after another through this tube, thus dropping them upon

(1) The precise time varying by a few days with flowering of wheat.

(2) It has been said that the eggs are deposited on the chaff scales. Perhaps both localities are selected under different circumstances. As the maggot is footless it would find the greatest difficulty, except when the chaff scales were moist, in entering inwards to the young grain or germ.

the surface of the germ or embryo seed. The same fly probably visits several kernels in this manner upon successive evenings, until her whole stock of eggs is disposed of, by which time she, having completed her labors, has become so exhausted that she is often unable to draw her ovipositor from the chaff, and thus dies. These dead flies may frequently be found thus suspended by their tail-like ovipositors, to the outer scale of the chaff."⁽¹⁾

152. About a week suffices to hatch the young maggots, and three weeks enables them to attain maturity. They feed upon the juices of the grain, and, as it were, dry it up. When full grown the maggots wriggle in damp weather, or when the stalk is wet with dew or rain, down to the ground, and penetrate about half an inch or an inch below the surface. Here they remain until the following spring, still retaining their maggot state. In the month of May they assume the pupa condition, and preserve it for two or three weeks, when they wriggle themselves to the surface of the ground, break their pupa skin, and assume the form of the midge.



Kernel of Wheat, the chaff pulled down to show the Maggots in their usual situation.



A mature Maggot—highly magnified.

153. It frequently happens that the maggots are gathered with the grain and carried into the barn, but instead of remaining soft and pliant, they become stiff and inactive, and their bodies losing a portion of their moisture by evaporation, contract and separate from the thin outer skin, which forms a case in which the little yellow worm is enclosed. It thus reposes in the wheat heads until the grain is threshed and winnowed, when most of these larvæ are collected with other screenings, and often emptied out among the litter of the barn-yard. Here their bodies imbibe moisture, and swell until they fill the case or skins in which they are enclosed, and the worms crawl or wriggle away to a place of security. (Asa Fitch—Rural New Yorker, January, 1856.)

154. We may form some conception of the innumerable multitudes of these insects which accumulate among the screenings of infested wheat by attempting to estimate the number which are annually swept out of barns in those districts where they abound. Mr. Dawson relates in his 'contributions towards the improvement of Agriculture,' that a friend informed him that not less than four bushels of larvæ had been obtained from the wheat of eight acres. After making a large deduction for dust this quantity must have contained about 150 millions of these insects.

155. It thus appears that these differences in the habits of individuals hatched and so far matured in the same field are dependent upon atmospherical conditions. Some of the full grown maggots leave the grain at the close of a shower, or heavy dew, and wriggle down the wet straw to the earth. Others which are later in arriving at maturity, or in finding suitable weather for making their descent to the earth, are carried during harvest with the grain into the barn, and become subject to the singular condition or state described in paragraph 153.

156. Some very excellent observations on the habits of this insect have been made by Mr. Principal Dawson, of McGill College, Montreal, of which a record may be found in a work by that gentleman before noticed, entitled, "Scientific contributions towards the improvement of Agriculture in Nova Scotia." The following are the observations referred to:—

"I procured a quantity of the larvæ, full grown and in that motionless and

(1) Asa Fitch, M.D. Rural New Yorker, 1856.

torpid state in which they usually appear when the grain is ripe. A portion of these larvæ were placed on the surface of moist soil in a flower pot. In the course of two days, the greater number of them had descended into the ground, *previously casting their skins which remained at the surface* (p. 157.) I afterwards ascertained that they had penetrated to the depth of more than an inch, and were of a whitish colour, softer and more active than they had previously been. The fact is thus established, that these apparently torpid larvæ, when they fall from the ripe wheat in autumn, or are carelessly swept out from the threshing floor into the barn yard, at once resume their activity, and bury themselves in the ground.

“The larvæ thus buried in the ground, were allowed to remain undisturbed during winter and spring, the flower-pot being occasionally watered. About the end of June they began to reappear above the surface, in the winged form; the little grubs creeping to the surface, and projecting about half their bodies above it, when the skin of the upper part burst and the full grown winged midge came forth and flew off. This completes the round of changes which each generation of these little creatures undergoes, and we have thus actual evidence of each stage of its progress from the egg to the perfect insect.”

157. Dr. Fitch's observations do not agree in one particular with those of Mr. Dawson. The following extract from the paper published in the Rural New Yorker, before referred to, explains Dr. Fitch's views :—

“The insect does not moult or cast off its skin from the time it leaves the egg until it enters its pupa state, nor do I think the larva skin forms a case or envelope within which the pupa lies, but that the skin of the larva gradually changes and becomes the skin of the pupa, as it certainly does in our willow gall-fly (*Cecidomyia Salicis*.—FRICH.) I infer this from the fact that in those instances in which I have reared these flies from the larvæ, the empty pupa skins were the only ones which I found remaining.” * * * * *

“Gather a number of the worms from the wheat at the time of harvest and place them in a pill box. They all soon cease crawling about, and ere many days become cased larvæ—the yellow worms being shorter than the semi-transparent pod in which they are inclosed. They may now be kept for months, even in a dry, stove-warmed office, without losing their vitality. Then, upon placing them between the folds of a wet cloth, they will next day be found actively crawling about within the cloth, till reaching its outside they with a skip throw themselves away from it, not one of them leaving a case or empty skin behind in the cloth.”

Mr. D. J. Browne, in the Patent Office Report for 1854, page 74, says, “towards the last of July or beginning of August, the full grown maggots cease eating, and become sluggish and torpid, *preparatory to shedding their skins*, which takes place in the following manner :—The body of the maggot gradually shrinks in length within its skin, and becomes more flattened and less pointed, as readily may be seen through its delicate transparency. This torpid state lasts only a few days, after which the insect casts its skin, leaving the latter entire, excepting a little rent at one end of it. These empty cases or skins may be *found in great abundance* in the *wheat ears* after the moulting process is completed.”

APPARENT PERIODICITY IN THE VISITS OF THE WHEAT MIDGE.

158. A singular apparent regularity in the periods of its recurrence in vast numbers so as to prove eminently destructive, has been hinted at by Dr. Fitch in 1844.⁽¹⁾ When these instances of periodicity are associated with its late destructive depredations in the United States and Canada, they seem to acquire a peculiar although perhaps speculative interest. Its appearances at different periods are as follows :—

1st. Very prevalent in Scotland in 1740.⁽²⁾

(1) See succeeding paragraph.

(2) Ellis' Modern Husbandry.

2nd. Abundant a few years previous to 1771, or about 25 years after its first appearance, and in that year (1771) eminently destructive.⁽¹⁾

3rd. After 25 years or in 1796, it was again observed by Messrs. Kirby and others, in abundance in different districts for three or four years.

4th. After about 25 years more, or in 1825 to 30, it once again became destructive and appears in America as well as in Europe.

5th. After a fifth epoch of about 25 years, it occasioned in New York State damage to the extent of \$15,000,000 to the wheat crops in 1854, and in Canada West exceeding \$2,000,000 in 1856. The season of 1854 was one of unexampled drought in the State of New York.

159. In a letter from Dr. Fitch to the writer, (before referred to) the following reference to this curious subject is made:—

Though I allude to a seeming regularity in the recurrence of the wheat midge in England, after long intervals, I have no idea there really is any such regularity in the return of this or any other insect. We thought the midge had run its race in this section of country, some years ago, and that the general cultivation of wheat might be resumed. But in 1854 it suddenly reappeared, as numerous as it had ever before been; indicating that it has become a naturalized insect in our midst, ready to multiply whenever those circumstances which favor its increase recur. And all over the western country, this and other wheat insects are introducing themselves, to remain there no doubt, as long as wheat is cultivated there, ever and anon multiplying and devastating the crops for one or more years, and then diminishing and for a time ceasing to attract notice.

160. There can be no doubt that certain peculiarities in the season have a marked effect upon the increase of the wheat midge. The year, perhaps, of its greatest ravages, on this continent, 1854, was one of unparalleled drought, and it has been observed that numerous species of insects appear in incredible numbers during dry and hot summers.⁽²⁾ The palmer worm, which committed such ravages in the orchards during the summer of 1853, was preceded by remarkably dry and hot weather. The chinch bug in 1839 became excessively numerous in Virginia and the Carolinas, and was preceded by a very dry spring. In 1850 this insect was abundant in Illinois, but during the two following years it was little noticed, "but the three dry summers which have now occurred have increased it prodigiously."⁽³⁾ Numerous other examples might be quoted to show that hot and dry weather favours in a remarkable degree the excessive multiplication of insects. The green plant louse was excessively common in gardens near Toronto in 1856, during the dry early summer months (129.)

ON THE REMEDIAL MEASURES WHICH HAVE BEEN ADOPTED AND SUGGESTED WITH A VIEW TO LESSEN THE RAVAGES OF THE WHEAT MIDGE.

161. The remarks under this heading made in the chapter on the Hessian fly may be here repeated; we can employ remedial measures to check the destructive increase and devastations of this insect, but we cannot provide a remedy against its general appearance from time to time, under favourable conditions.

The following plans have been adopted in the United States, and also recommended frequently in Canada. The general result is, as before, attached in a few brief words:—

1. *Smoking the flies when in the act of depositing their eggs*—Not generally practicable, and too much dependent upon wind to be of much utility.
2. *Sowing with lime, or ashes, or gypsum* when the flies are in the act of depositing their eggs. Experience and observation have shown this artifice to be without any effect. Instances have often been cited when it has proved of value,

(1) Mr. Gullet.

(2) For various instances of the concurrence of hot and dry weather with the sudden appearance of insects of different kinds, see Dr. Fitch's Reports.

(3) *Ibid.*

in Ohio, Vermont, Canada. The true reason must have escaped observation. Wheat in blossom *strewed* with lime will not *deter* the insect from depositing their eggs, as observation has most distinctly shown.

3. *Early sowing*.—In the *absence* of the Hessian fly this artifice is no doubt valuable with regard to winter wheat.

4th. *Late sowing of spring wheat*—of value where rust is not likely to prove equally destructive as the midge. With *good* varieties of wheat this remedy is probably the best that can be suggested. Many instances are recorded of the very successful employment of this simple artifice. In the Canadian Agriculturist for September, 1856, the late Mr. John Wade, of Hamilton Gardens, county Northumberland, describes a kind of wheat adapted to late spring sowing, which appears to possess the required qualities.

“The Fife is now as good after being grown 7 years as it was at first, without the least sign or vestige of failure in any shape *except* from weevil; and to know that you can be sure of a crop of wheat sown as late as the 10th of June, and to fill and ripen without a speck of rust, and yield 20 to 30 bushels an acre, is surely a consideration.”

5th. *Fumigating with sulphur*.—Is not the remedy, when practicable, as bad as the disease? Sulphurous acid—the result of burning sulphur in air, is a most deadly vegetable poison.

6th. *Fly-proof wheat* (so called). See paragraphs 108-112. The Black Sea wheat has long been a favourite in Canada, it is now fast deteriorating in some of the qualities which commended it some years since; it has become acclimated. Fresh seed would no doubt be in full possession of its most valued properties.

The *Turkish Flint Wheat*, from near Mount Olympus, in Asia, is a hardy fall variety, and has recently been introduced into the United States through the Patent Office. It has a dark coloured chaff, a very heavy beard, and a long, flinty, white-colored berry, and is thought by the Commissioner of Patents likely to prove highly profitable to the farmer and miller, from its superior weight and the excellence of the flour it produces. It has withstood the severity of an American winter in the middle States, and “from its long thick beard will probably be protected in a measure from the depredations of insects in the field as well as from heating or moulding in the stalk.” P. O. R. 1855.

7th. *Burning of Orpiment*.—This is a most dangerous recommendation. If it were attempted on a large scale, sufficient to be of practical utility, the destruction of many flies would be very probable, but the poisoning of a manipulator now and then would be absolutely certain. This suggestion has been copied from a “Canada Journal,” into the Patent Office Report for 1847.

162. Sound and practical advice on this subject is given to a correspondent whose wheat was beginning to suffer from the ‘Weevil’ in the county of Middlesex, by the editor of the Canadian Agriculturist, in the Sept. number, (1856) of that Journal. The extract is subjoined.

1st. Prepare your land *well*. 2nd. Sow early (*winter wheat*)—for this neighbourhood, we should say not later than the second week of September (of course the *absence* of the Hessian fly is here supposed.) 3rd. Select early and hardy varieties of wheat, such as the *Improved White-Flint*; *Kentucky White-bearded*, or as it is commonly called, *Hutchinson’s*;—*Blue stem*; *Soule’s*, and *Hume’s White Wheat*. There may be other kinds equally valuable, but the above are the earliest, hardest, most prolific, and produce the best flour of any with which we are acquainted. Ploughing wheat stubble in the fall has been recommended, with much show of reason in its favour, but it is evident that the practice must become general before much good can be expected from it. One large field left unploughed would furnish flies enough in the spring to spread the mischief over the whole neighborhood, or settlement. (!) (?)⁽¹⁾

(1) The notes of interrogation are the author’s—it is very improbable that one large field would spread the mischief if the other artifices above noticed were adopted.

There is no variety of wheat entirely exempt from the attacks of insects. The *Mediterranean* is said to be less liable to their attacks than any other, but it is a coarse, red-bearded wheat, and makes inferior flour. It is an early kind, but the grain is as dark as the rye, and seldom plump. It is not grown in Upper Canada to any great extent.

163. It will be well here to draw attention once more to the suggestions of Mr. Hutton, although given at length in paragraph 137.

"One fact is well established, that in *early*⁽¹⁾ situations, on early spots, where the seed was sown early there was no Weevil (wheat midge.) In low, damp, late situations, and where late sown, it has been extremely destructive. This important fact ought to be well remembered by our neighbours west of us, where they will have it undoubtedly in a very short time, and exertions ought to be used by them to sow early, and early kinds of seeds, to drain the land well and make small ridges, and otherwise expedite the growth as much as possible. The early sowed Soule wheat escaped last year in many instances, in the very centre of the Weevil's destructive ravages." Prize Report, county of Hastings, by W. Hutton, Esq., 1852.

163(a). With reference to change of seed of the same variety it should be borne in mind that it is advisable to obtain the fresh seed from a soil and climate better and earlier than those of the locality in which it is sown. In America, where our winters are so prolonged that vegetation in the summer months progresses as in a hothouse, it seems very probable that seed obtained from the north would ripen earlier for a year or two in southern districts, than acclimated varieties.⁽²⁾

163(b). The remedial measure which appears to be immediately suggested by a study of the habits of the wheat midge, is of the simplest description, and everywhere practicable. It will be seen from paragraphs 152, and 156, that the maggot of the midge, previous to assuming its larvæ condition, buries itself an inch or a little more below the surface of the ground. That when the time arrives for their assuming the fly state, they *wriggle* themselves to the surface for that purpose. It is only by a series of alternate contractions and expansions of one side and the other that they can make their way up from an inch below the surface to the light and air, for they possess no feet or other exposed members when in the pupa case. If, therefore, the pupa be buried, say six inches below the surface, it is *permanently imprisoned*, for nature has not provided any apparatus to enable it to effect its escape under such circumstances. If, therefore, at any time between August and May of the following year the ground be ploughed to a depth of at least 6 inches, and in such a way that the furrow slices lie as compactly as possible, there can be no doubt that a vast majority of the pupæ will perish from inability to escape from their imprisonment.

163(c). But how much greater will be the probability of every individual pupa perishing if the ground be ploughed seven inches deep immediately after harvest, and left untouched until the following August? Every one knows that it is not possible, in ploughing, to turn a sod or furrow slice completely over, so that all parts shall be altogether reversed. The furrow slices may be made to lie with great compactness, but there will be interstitial spaces into which the pupa may fall or wriggle themselves, and eventually escape. When the field is ploughed immediately after harvest, not only will the autumnal rains fill the spaces beneath and between the furrow slices by washing down fine particles of earth, but the influence of the many months of winter and spring will consolidate the furrow slices, and their compactness may be ensured by rolling in May or the early part of June, before the fly appears.

163(d). Rolling the land immediately after ploughing is accomplished, will give further security to the prison in which the pupa are enclosed by this simple artifice.

163(e). We may now consider the feasibility and adaptation of this artifice

(1) In the absence of the Hessian Fly.

(2) See paragraph, or rather note to paragraph 120, page 36.

of *after harvest ploughing and rolling*, to those sections of Canada where the fly has not yet appeared. The country about Lake Simcoe has not yet apparently suffered from the depredations of this insect, and we know that the districts between London and the Detroit River are now only threatened at their borders with the invasion of the wheat midge. The question proposed is, what ought the farmers of these favored districts to do in order to avoid the slow but sure progress of the devastator.

163(f). Every one will say, first banish the idea from your minds that you are safe from an invasion; let the experience of half a continent foreshadow the contingencies of a few townships. Acknowledging, then, the necessity of preparing for the invasion, what is to be done? The answer depends upon the presence or absence of another insect. 1st. Are you liable to the attacks of the Hessian fly? No; then sow early, &c., &c. (See Art. 162.) Yes; then sow late; prepare your seed with steep, choose *earliest* varieties, and have your land in good order. Watch the progress of the midge, but do not depend upon that; plough as soon after harvest as possible, and let that field remain untouched, except by the roller, until after harvest the succeeding year. Whatever invaders may have appeared unobserved, (and millions will have so done, sooner or later,) will be buried beyond their powers of restoring themselves to light and air.

ITS PARASITES.

164. These are not well known in this country. Several have been recognized in Europe, and described by distinguished entomologists. One American species, found by Dr. Fitch, is a hymenopter of the family Chalcididæ. It is probable that the wheat midge, like the Hessian fly, has several parasites, which increase with it until they finally overcome it, and for a time arrest the destructive ravages of this terrible devastator.

165. In Europe, nature herself has provided a considerable check to the multiplication of these flies, by making them the prey of no fewer than three kinds of ichneumons, viz: *Encyrtus insereus*, about half the length of the wheat fly; another, *Platigaster tipulæ*, which commits its eggs to the larvæ of the wheat fly; and the third, *Eurytoma penetrans*. Some of these ichneumons appear in great numbers where the fly abounds, and multitudes must become their victims. —*Quarterly Journal of Agriculture*, vol. 12.

A very full description of these ichneumons, taken from Mr. Curtis' celebrated works and papers, is given in the February (1857) number of the "Canadian Naturalist and Geologist," by E. Billings, Montreal.

166. Many birds prey upon the maggots. Mr. Elmer Rowell, of Athens County, Ohio, has a colony of swallows amounting to one hundred individuals, which he thinks secure him from the ravages of the midge. It is probable, however, that the most destructive to the midge maggot among the feathered tribes is the beautiful little yellow bird. (*Fringilla Tristis*—Lin.)

167. In Madison County, New York, during the prevalence of the wheat midge, in the years 1838 and '52, flocks of yellow birds were seen busily employed in the wheat fields, much to the *alarm* of the farmers, who, observing these active and beautiful little creatures picking the heads of wheat to pieces, imagined that they were destroying the crop, and hence resorted to various means to kill them, and drive them away. The same warfare has been frequently noticed elsewhere, and should at all times be discouraged to the utmost by all who desire to cherish the most interesting, beautiful and useful class of insect destroyers the world contains. Birds, and especially the insectivorous birds, ought to be encouraged in every way on this continent. Facilities so unusual have been furnished by man for the increase of certain destructive insect tribes, and no corresponding effort made to maintain a check upon their excessive multiplication, that we have permitted a host of enemies to obtain a firm footing in our midst, which are at all times liable to paralyze our industry in the most alarming and grievous manner.

CHAPTER V.

The Wheat-Stem Fly, and other Depredators.

Wheat stem fly, 168.—Origin of its name, 169.—Probably not *identified* on this continent, 168.—Description of the wheat stem fly, 169.—The American *Meromyza*, 170.—The *Obese Siphonella*, 171.—Habits of the insect, 172.—The common chlorops, 173.—The feathered horned chlorops, 174.—The shank-banded oscinis, 175.—The yellow-hipped oscinis, 176.—The thick-legged oscinis, 177.—The deceiving wheat fly, 178.—The similar wheat fly, 179.—The wheat mow fly, 180.—The wheat thrips—the three-banded thrips, 181.—Gaylord's grain worm, 182.—The wire worm, 183.—The larva, 184.—The pupa, 185.—The perfect insect, 187.—Remedial measures—ammonia, 188.—Sir Joseph Bank's remedy, 189.—The Hon. A. B. Dickenson's remedy, 189 (a).

168. *The Wheat-Stem Fly*, (*Chlorops Pumilionis*.)—Perhaps this species has not yet been identified on this continent, nevertheless* it is quite certain that numerous insects belonging to the same genus infest the wheat crops in America. As every kind of information bearing upon the subject of wheat culture and wheat depredators is of the utmost value in Canada, the following notices of insect depredators, which may be met with in our wheat fields, are subjoined. Their habits and distribution have not been much studied on this continent; it is to be hoped, however, now that attention is so painfully drawn to the insects preying upon wheat, that observers will be found in Canada zealous to record the approach, and describe the habits, life and history of the unknown insect pests on this most valuable cereal.

169. The wheat-stem fly derives its name from the colour of its eyes, and the effect it produces upon the plants it attacks. It destroys the central shoots, and thus occasions the dwarfing of the many lateral ones which are pushed out during the decline of the main stem. These side shoots are not only short in height, but carry a small head irregularly filled with grains. The colour of the fly is black;⁽¹⁾ the under side of the head and two narrow longitudinal lines in the thorax yellow; under side of the body pale yellow, with two black spots on the mesosternum; halteres or poisers white; the legs ash grey, and black at the tips; maggot small and white; pupa yellow, smooth and shining, and rather more than one-twelfth of an inch in length.

170. *The American Meromyza*, (*Meromyza Americana*⁽²⁾—Fitch.)—Length about one-fifth of an inch from tip to tip of its wings; colour yellowish white, with a black spot on the top of its head, continued backward towards the neck; thorax with three black stripes; abdomen with three broad blackish stripes; wings semi-transparent; eyes bright green; found in the latter part of June.

171. *The Obese Siphonella*, (*Siphonella Obesa*—Fitch.)—About the size of the preceding insect; body short and thick;—colour black; under side of the body yellow, with a tinge of green under the abdomen; legs tawny yellow, with their tips black; head yellowish white; antennæ tawny yellow, their tips black; an egg shaped spot on the crown, two dark stripes on each side of the breast, and the anterior pair of feet black.

172. The larvæ of these insects burrow in the stalk, rendering them dwarfish, and often causing the heads to perish; small, slender, pale green and watery white shining maggots.

173. *The Common Chlorops*, (*Chlorops Vulgaris*.—Fitch.)—Length about one-fifth of an inch from tip to tip of its wings; colour, pale, tawny yellow, with a round black spot on the top of its head; tips of antennæ and feelers black; two black bristles at the end of the middle shanks, and one at the end of the forward ones, with rows of black bristles upon the thorax; on the top of the head two pairs of bristles incline forward, and two backward.

174. *The Feather-horned Chlorops*, (*Chlorops antennalis*.—Fitch.)

(1) Duncan, quoted by Stephens.

(2) For notices of these insects, see Dr. Fitch's Report on the Insects of New York 1836.

175. *The Shank-banded Oscinis*, (*Oscinis tibialis*.—Fitch.)

176. *The Yellow-hipped Oscinis* (*Oscinis coxendix*.—Fitch.)

177. *The Thick-legged Oscinis* (*Oscinis crassifemoris*.—Fitch.)

Several of the above species have been met with on wheat in the State of New York; too little is known of them, however, to make further remarks upon them necessary.

The Deceiving Wheat Fly (*Hymelyia deceptiva*.—Fitch.)

178. Very common in the latter part of June in Eastern New York. A quarter of an inch in length from tip to tip of its wings. Colour ash gray, legs, antennæ and feelers black. A row of brown black spots form an intercepted stripe down the middle of its abdomen. A tawny yellow spot upon the front of the thorax, passing into a black stripe upon the top of the head.

179. *The Similar Wheat Fly* (*Hymelyia similis*.—Fitch.)

The Wheat Mow Fly (*Agromyza tritici*.—Fitch.)

180. Showing its larvæ in the form of myriads of pale maggots crawling from the mow of wheat soon after it is placed in the barn; the kernels of the grain shrivelled and dwarfish. The flies are like the common house fly, very much reduced in size. Colour black, with a pale reddish yellow band upon the front, above the base of the antennæ, the mouth margined with dull yellow. The legs brownish-black. The wings notched on their outer margin near the base.

The Wheat Thrips (*Thrips tritici*.—Fitch.)

The Three-banded Thrips (*Coleothrips trifasciata*.—Fitch.)

181. Found upon the heads and stalks of wheat in June and July, exhausting the juices of the kernels and rendering them dwarfish and shrivelled, exceedingly minute, long and narrow, six-legged insects, of a bright yellow or of a shining black colour; very active. First noticed by Dr. Fitch from specimens sent from Wisconsin, July 9th, 1855, where it was causing some alarm in the neighbourhood of Geneva. Seen near Geneva in countless numbers. Found in the blossoms of wheat and clover. The *thrips cerealeum* is a most destructive insect, and is said to have destroyed, in 1805, one-third of the wheat crop in Piedmont. According to Mr. Kirby it is by far the most numerous of any insect upon the wheat in England; he does not think he ever examined an ear of wheat without meeting with it.

GAYLORD'S GRAIN WORM—(undescribed.)

182. Common in Western New York, Pennsylvania, Maine, Connecticut, &c., and in parts of Canada (Northumberland Co.) A small caterpillar, orange-coloured, and longer and darker than the maggot of the wheat midge; feet distinct, and twelve in number. They are found half an inch long, and when disturbed they let themselves down by a thread from the ear. They feed on the grain in all stages of its growth. The perfect insect is unknown. In some agricultural publications this insect is described as Gaylord's Wheat Caterpillar. (See Canadian Agriculturist, page 81, 1856.)

THE WIRE WORM (*Elatér lineatus*).⁽¹⁾

183. The wire worm is a name frequently given by farmers to the larvæ of numerous species of beetles belonging to the genus *elater*. Upwards of sixty different species of this destructive insect are known in Britain, and the same number in Massachusetts,⁽²⁾ and it is probable that they are equally numerous in this country. These larvæ feed upon the roots and the underground stem of

(1) Called also *Agriotes lineatus*: *Agriotes*, &c., and *Cataphæzus lineatus*; *Cataphægus*, &c.

(2) Harris.

wheat, indian corn, the grasses, and most varieties of cultivated vegetables. They continue in the larvæ state for several years, and where they prevail are excessively injurious to growing crops.

184. Wire worms have a long, slender and very tough cylindrical body, composed of twelve segments, with six feet attached to the three segments next the head. The length of the larva of *Elatér lineatus* is about an inch, colour yellow, head more inclined to brown, skin tough and rigid, legs conical, body smooth, with a few scattered hairs.

185. The pupa is whitish, with two black spots over the eyes, it is about a quarter of an inch in length. At the extremity of the abdomen are two short spines, terminating the tenth ring of which it consists.

186. The perfect insect or beetle is one of those popularly called "snapping bugs;" colour brown, legs dark yellow, length of body a third of an inch.

187. Sometimes the wire worm is found in such destructive abundance that it cuts off most crops as fast as they appear two or three inches above the surface. Under such circumstances, starving them out perhaps is the only remedy; a field kept perfectly free from vegetation can afford them no nourishment, and they must either perish or forsake the field in search of food. Crops of white mustard seed are particularly obnoxious to this insect and have frequently succeeded in eradicating them. It is questionable, however, whether the remedy in this country would not prove as terrible as the disease; every one knows what a noxious weed the mustard becomes where land is not kept clean.

188. Liquid ammonia has been tried with most favourable results for the destruction of this insect. Also, steeping wheat seed in wine and then drying it with sulphur has been strongly recommended, but although the sulphur may and does prevent the wire worm from destroying the young root, yet it can have no effect in protecting the stem which is so frequently cut off. Ammonia, even in a state of great dilution, kills the worm, which brine fails to do. Under all circumstances, the most certain method of conquering the wire worm is to starve him out by frequent ploughing and keeping the land perfectly clean.

189. Sir Joseph Banks suggested the burying of slices of potatoes and turnips strewed over the field as traps to catch the worms. The insectivorous birds are perhaps among the greatest enemies of these ravenous depredators. In Europe they are preyed upon by an ichneumon parasite, also by a small black shining beetle, (*Steropus madidus*) and several other insects.

189(a). The Hon. A. B. Dickenson, in an address delivered before the Cortland County Agricultural Society, 1854, thus facetiously describes his efforts to destroy the wire worm; "ploughing late in the fall will not kill all of them, but most of them. In three years, I think they may all, or nearly all be destroyed, and it is the only remedy I know of to destroy the most mischievous and ruinous of insects the farmer has to contend with. I have heard it said that five bushels of salt to the acre would destroy them, or 100 bushels of lime. I have tried both, and have sowed 10 bushels of salt to the acre, and they only laughed at my folly, and tried 100 bushels of lime, as recommended, and they fattened on my bounty. I have only proved one remedy for the rascals, and that is to break the sod, and sow it with buckwheat; plough late and as often as possible in the fall, and then sow peas in the spring; with the like ploughing next fall, they will not disturb any crop the next season."

CHAPTER VI.

Rust—Smut—Pepper Brand—Ergot.

- Rust*, 190.—Devastating character of this enemy to wheat, 190.—Notices of the appearance of rust in the United States and Canada, 192, 197.—Isolated tracts of country affected, 198.—Description of Rust, 199.—Mode of growth and nutrition, distinction from mildew, smut, bunt, and other fungi, 199.—Magnified drawing of rust on wheat, 199(a).—Description of the fungus, showing spores and mycelium, or organs of reproduction and organs of nutrition, 199(a), 199(b).—Description of fungi generally, 200.—Conditions of the growth of fungi, 201.—Necessity for abundance of Ammonia, 201.—Description of the cuticle and epidermis of plants, on which fungi appear, 203.—Stomata, their functions, 204.—Cellular tissue, its mechanical composition, 204(a).—Mode in which water passes through plants, 205.—Evaporation and exhalation, 205.—Exhalation, 206.—Influence of light upon the opening of the Stomata, 208.—Evaporation, independent of vitality; exhalation in a measure dependent upon vitality, 210.—Under suppressed evaporation and exhalation, the juices of plants stagnate and become fitted for the growth of fungi, 211.—Conditions favourable to the growth of Rust, 212.—Ammonia in the atmosphere, 212.—Nitric acid in the atmosphere, 212, 213.—Effect of free Ammonia on vegetation, 214.—Growth of fungi in foggy weather, 215.—Presence of Ammonia in fogs, 216.—Conditions for the appearance of rust fulfilled, 216.—Rust prevalent on new land, reason of this, 217.—Remedy for Rust, 218.—Powdered charcoal as an absorbent of Ammonia, 218, 219.—Quantity of Ammonia in the atmosphere, 220(a).—Water absorbed by the roots of plants alone, 220(b).—'Cure' for mildew; also 'cure' for Rust, 221.—Influence of salt—of sea air, no Rust on sea coasts, 221.—Chemical action of salt with regard to Ammonia, 222.—Mode in which salt operates in arresting Mildew and Rust, 222.—Johnson's explanation of the action of salt erroneous, 223.—In the portions with water described it acted as a poison, 222.—Mr. Theodore Porry's experiments with salt, 223(a).—Dr. August Voelcker's experiments with salt, 223(b).—Effect of salt on wheat, 223(c).—Early sowing of prepared seed one of the best remedial measures, 224.—Connection of Rust with Ammonia exemplified, 225.—Rust not found on unexposed parts of the wheat plant, 226.—Size of the sporules of certain fungi, 226.—Size of the sporules of Rust, 226.—Professor Henslow's opinion that Rust is a miniature form of mildew.—Rev. Mr. Sidney's opinion, 227.—It is probable that American Rust is not identical with the European, Rubigo, 227.—So called Rust proof wheats, 228.—Virginia White May, Siberian wheat, Black Sea, Piper's set wheat, protection wheat, 228.—Valuable instance of checking the progress of Rust by Toronto Gas Lime, and rationale of its operations; early taking of the crop, 229(a).
- Smut*—Bunt Ear, 230.—Remedial Measures; commission at Rouen, 231.—Soda and lime, 231.—Meltzer's method of steeping and preparing seed, 232.—Rationale of washing in pure water, 232(a).
- Pepper Brand*—Bunt; stinking rust; characters, 234.—Appearance of a grain affected, mode in which the sporules enter, 235.—M. Bauer's experiments, 235.—Common effect of the mycelium of a fungus, 236.—Rationale of the use of certain steeps, 237.
- Ergot*—Cockspur; nature of this body no longer a mystery, 238.—Early opinion regarding, 238; M. Tulasne's opinion and discovery, 238(a).—Medical effects of ergot, 240.—Localities where it appears, and dreadful results from the consumption of ergoted wheaten bread in England, and rye bread in France and Germany, 241.—Ergot common in pastures when undrained; common in certain grasses.

RUST—URED O RUBIGO.

190. Many eminent American agriculturists consider 'rust' to be the greatest enemy which the farmer has to encounter in the cultivation of wheat on this continent. Compared with the ravages it sometimes occasions, the depredations of the Hessian fly and wheat midge fall into the second rank. Its attacks are so unexpected and universal that it has been likened to a sudden whirlwind of blight, which sweeps over thousands and tens of thousands of square miles of country in the short space of a single night. 'Struck with rust' is an expression more common and more to be feared than that frequent visitation in the early spring months, which we are accustomed to hear deplored under the term, 'nipt by the frost.' "In the Northern States generally it produces more disaster to the wheat crop, than all other diseases and all insects put together."⁽¹⁾

191. It is quite needless to enumerate the different theories, as they are termed, which have from time been advanced, to account for the appearance of rust. Every purpose will be answered for the objects contemplated in this essay, if the origin of rust be traced and described. It will be useful to enumerate a few instances of the appearance of rust in the United States and Canada.

(1) Prize Essay, N.Y., S.A.S., John J. Thomas, 1843.

192. In 1837 rust was common in many parts of the States. Its appearance was preceded by very hot weather, followed by rain. In many districts the wheat crops were suddenly and totally destroyed.

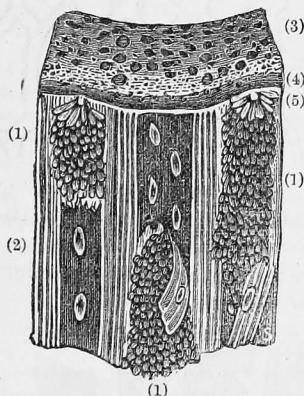
193. In 1840 an extensive rust blight occurred in Northern Indiana, affected with almost equal destructiveness all kinds of wheat crops, and on all sorts of soil.

194. From 1840 to 1846, rust was common and most destructive in the States of the Union, but in 1847 little complaint was made of its ravages.

195. In 1849 it was very destructive. Mr. A. Ruff of Xenia, Ohio, states that rust destroys much wheat and has been constantly increasing for the last 12 years.⁽¹⁾

196. During the same year, and on the same authority, we read: "The enemies of wheat in this vicinity (Racine) are the weevil, mildew, and rust, the last having the present season destroyed one-half of the crop.

197. In 1850 rust caused almost an entire failure of the wheat crop, in all North-western Virginia. Every year more or less rust is found in the States and Canada. It is, indeed, everywhere prevalent, and we are always liable to rust years. It is equally common in the high northern as in the middle wheat growing States. In 1855 and 1856 it occasioned considerable damage to the wheat crop in the County of Saguenay, C.E., common in Thorah, Canada West.⁽²⁾



SECTION AND PORTION OF A STALK OF WHEAT AFFECTED WITH RUST.

(1) (1) (1) Masses of the Rubigo. (2) Stomata, or breathing pores. (3) Cellular tissue. (4) Cuticle. (5) Epidermis.

198. It often happens that the crops over isolated tracts of country are affected, generally in stripes, narrow and long. These stripes are found to lie in valleys, or low situations; on new land rust is very destructive, the experience of every Canadian farmer will serve to assure him of the tendency 'to rust' exhibited by crops grown on virgin soil or new land in low damp situations.

199. Rust is a fungus, a minute vegetable growth, which throws that part of its structure serving the purposes of roots through the tissue of the wheat plant, and lives upon the nourishment, which should be appropriated by the growing grain. Before proceeding further with a description of 'rust,' it is essential to acquire information respecting the structure, mode of growth and reproduction of the tribe of vegetables called fungi.

Mildew is occasioned by a minute fungus called *Puccinia Graminis*.

Rust is the growth of two kinds of fungi, *uredo rubigo* and *uredo linearis*. It is probable that the rust of this country differs from the 'rust' in England, cer-

(1) P. O. Report, 1849.

(2) Rust has occasioned the almost entire destruction of the wheat crop in part of this township, during its universality. It is everywhere prevalent in America.

tainly there is a great difference between the appearance of the fungus on growing wheat stems here, and the delineations given in European works on this subject.

Smut, is *uredo segetum*.

Bunt, is *uredo foetida*; 'stinking rust.'

199(a). Many other fungi prey upon other vegetables. Mr. Berkeley thought that the potato disease was due to a parasitical fungus found in the haulm, the *botrytis infestans*. Martius also ascribed the potato malady to a fungus, differing from the one last named.

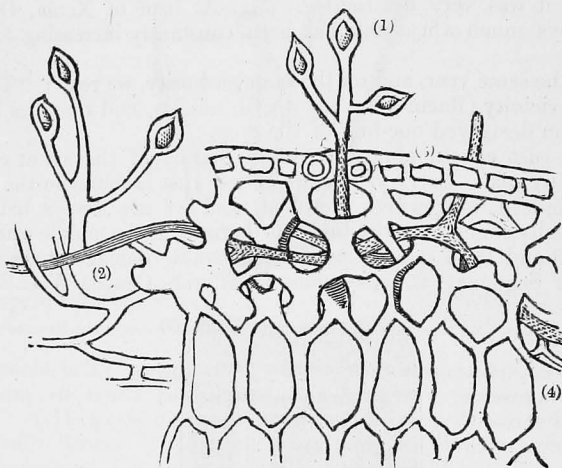
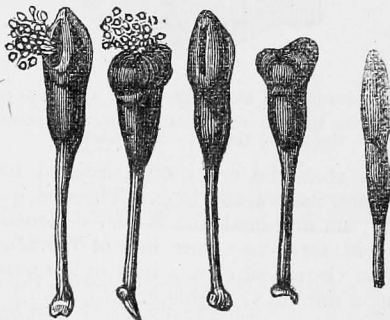


FIG. 1.—BOTRYTIS INFESTANS.

(1) Head, or spores of the fungus. (2) Mycelium, or spawn. (3) Cuticle of leaf of potato. (4) Cellular tissue.

The figure shows the manner in which the mycelium or spawn of the fungus ramifies through the cellular tissue of the leaf.



(1) UREDO RUBIGO (Common Rust.)

200. The minute vegetable organisms called *fungi*, are cellular plants having neither leaves, stems nor roots. Their organs of nutrition consist of a series of filaments called the *Mycelium* (fig. 1, 2), (*mykes*, a fungus) or spawn, which spread like a net-work through the substances on which the fungi grow. They represent the roots of the fungus. From this network proceed bodies resembling globes, (fig. 1) circular disks, mitres, cups and coralline branches, which bear the organs of reproduction.⁽¹⁾ The mycelium is developed either under ground, or in

(1) Ency. Brit., 8th Ed.

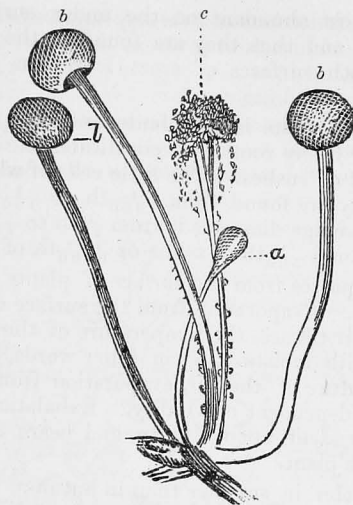


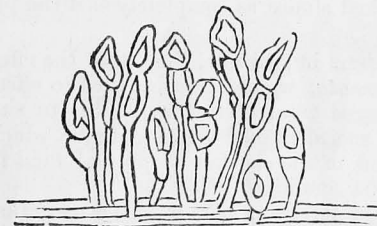
FIG. II.—FUNGUS (SMUT) FOUND ON ROTTEN POTATOES, VERY SIMILAR TO RUST.

(a) Young head, or spore. (b) More matured state. (c) Shedding or scattering the seeds or sporules.

the interior of the substance on which the plant grows. The filaments of the mycelium are composed of elongated colourless cells. Fungi are propagated by seeds or *sporules* enclosed in sporule cases or spores (*b, c*, fig. II.)

201. Fungi most commonly grow upon vegetable or animal substances in a state of decomposition. They require a very large supply of carbonic acid and ammonia for their nutrition. The proportion of nitrogenous matter contained in their tissues is much greater than in those of any other vegetable; so that their substance, if capable of being digested, is almost as nutritious as flesh.⁽¹⁾

202-3. All cultivated plants are covered with a membrane, termed the *cuticle*, and composed of cellular tissue (fig. I, p. 58.) The cells of the cuticle are filled



(2) PUCCINIA GRAMINIS (*Common Mildew*.)

with a colourless fluid, and their walls are thickened on the outside with a deposit which is usually of a waxy nature and nearly impervious to moisture. In plants growing in temperate climates, the cuticle is composed of a single row of thin-sided cells, in tropical plants several layers of thin-sided cells occur, evidently with a view to resist, by their non-conducting power, the great heat of a tropical sun. Externally to the cuticle, there is an exceedingly delicate transparent membrane called the *epidermis*.

204. In particular parts of the cuticle of nearly all plants, minute openings exist which are termed *stomata*; these may be opened or closed by an alteration in their form. They are not found upon the roots of plants, on the ribs of the leaves, or in plants growing in darkness, but they exist in general on all leafy

(1) Carpenter. Prin. of Comp. Physiology.

expansions. They are most abundant on the under surface of leaves, except when these float on water, and then they are found on the upper side alone; but they exist equally on both surfaces of erect leaves, as in the lily tribe and grasses.⁽¹⁾

204(a). Cellular tissue⁽²⁾ exists in all plants, and composes a large portion of turnips, carrots and other fleshy roots. It constitutes the pith and outer bark of trees, and the central part of rushes. The little cells of which this tissue is composed vary in size. They are found from $\frac{1}{1000}$ th to $\frac{1}{100}$ th part of an inch in diameter. The general average diameter is from $\frac{1}{20}$ th to $\frac{1}{10}$ th of a line, and that of the cellular spores of fungi $\frac{1}{300}$ th of a line or $\frac{1}{600}$ th of an inch in diameter.

205. Vapour of water passes from the surface of plants in two ways, either by *evaporation* or *exhalation*. Evaporation from the surface of plants is dependent upon the moisture in their tissues, the temperature of the air and the dew point. When air is saturated with moisture, or in other words, when the dew point is the same as the temperature of the air, evaporation from the surface of plants ceases. It is entirely independent of vitality. Exhalation is a function of the plant; is altogether dependent upon vitality, and bears a strict relation to the number of stomata on the plant.

206. Exhalation is greater in summer than in autumn, and is much less active during the winter than at other periods of the year. A laurel parts with as much fluid in two days in summer, as during two months in winter.⁽³⁾ Hales found that a common sunflower transpired on an average 20 oz. a day. The weight of the plant was 3 lbs., its height $3\frac{1}{2}$ feet, and the surface of its leaves 5,816 square inches. On one warm day it exhaled as much as 30 oz. of fluid; on a warm dry night 3 oz.; when the *dew* was *sensible*, though slight, it neither *lost* nor *gained*, and by heavy rain or dew it gained 2 or 3 oz.⁽⁴⁾

207. These and numerous other experiments establish the fact that exhalation from the stomata is greatly dependent upon the moisture of the atmosphere, and that an atmosphere saturated with moisture totally arrests this function in plants. Light exercises a most important influence upon exhalation, for it has been established that if plants in which the process is being vigorously performed be carried into a darkened room, the exhalation is *immediately stopped*, and that the absorption by the roots is checked almost as completely as if the plant had been stripped of its leaves.⁽⁵⁾

208. "It would not seem improbable, then, that the effect of light is confined to the *opening of the stomata*, which it is believed to effect; and that the large quantity of fluid discharged from them may be due to simple evaporation from the extensive surface of succulent and delicate tissue which is thus brought into relation with the air, and to the constant supply of fluid from within, by which it is maintained in a moist condition."⁽⁶⁾

209. As is shown in the foregoing paragraphs, evaporation may take place from all parts of the surface of a plant in small quantity when air is not saturated with moisture; and in the absence or presence of light, it is, in a word, independent of vitality. Exhalation, on the contrary, is dependent not only upon the dryness of the atmosphere, but upon the opening of the stomata of the plant under the influence of light; it is therefore so far subordinate to vitality.

210. The stomata opening under the influence of light, the rise of the sap⁽⁷⁾ in plants becomes due to evaporation and the pressure of the atmosphere. "By the evaporation of water at the surface of plants, a vacuum arises within them, in consequence of which water and matters soluble in it are driven inwards, and raised from without with facility; and this external pressure, along with

(1) Carpenter.

(2) Called also *Parenchyma*.

(3) Guettard, quoted by Carpenter.

(4) Quoted by Carpenter, Prin. Comp. Physiology.

(5) Senebier, quoted by Carpenter.

(6) Carpenter, Prin. Comp. Physiology.

(7) The rise of the sap in spring is probably greatly increased by a species of germination liberating gas in the plant.

capillary attraction, is the chief cause of the motion and distribution of plant juices."⁽¹⁾

211. When the plant has taken up a maximum of moisture, and evaporation is suppressed by a low temperature, or by continued wet weather, the supply of food, the nutrition of the plant ceases; the juices stagnate, and are altered; they now pass into a state in which they become a fertile soil for microscopic plants.⁽²⁾ When rain falls after hot weather, and is followed by a great heat without wind, so that every part of the plant is surrounded by an atmosphere saturated with moisture, the cooling due to further evaporation, ceases, and the plants are destroyed by fire-blast or scorching.⁽³⁾

212. I now proceed to consider the conditions favorable to the growth of rust, whose spores and sporules are at all times floating in the air. Having already discussed this subject at some length before the Horticultural and Agricultural Central Club, at Toronto, in April, 1856, I venture to append the views of the rapid appearance of rust then advanced, with some additional proofs and remedial suggestions.

212. Ammonia, we know, exists in the atmosphere, probably to the extent of one part in ten million parts on the average. At times the quantity of ammonia present is much greater than the above ratio, at other periods less. Rain water contains on an average nearly one part of ammonia to the million, and of nitric acid about five parts to the million.⁽⁴⁾ Dew always contains ammonia, and mists have prevailed so rich in this substance that the water had an alkaline reaction. Barral analyzed the water collected in the rain gauge of the observatory at Paris. He found that in one year 10.74 lbs. of ammonia fell with the rain, and 10.7 lbs. of nitric acid. In July he found the amount of the ammonia to be the greatest; in September, the amount of nitric acid to be the greatest. The ammonia was least in March, and increased gradually to July. In August it diminished suddenly, and continued to diminish until October, attaining its second maximum in February.

213. These observations, although very interesting, are not satisfactory, because they were made in the neighborhood of a great city. Hence we find that Boussingault discovered much less ammonia in the air far away from towns—a gallon of rain water containing only one twenty-fifth of a grain of ammonia. As a general fact, however, the water collected during fogs was extraordinarily rich in ammonia, containing on an average one-third of a grain to the gallon—but an instance has been known—before referred to—of a gallon of water from a fog containing not less than four grains of ammonia. The constant presence of this substance in the atmosphere is not only now fully established, but its influence upon vegetable growth in this gaseous form is of the highest interest, and possibly, of the highest importance.

214. The experiments of M. Ville upon the effects of ammonia in air upon vegetation, show how rapidly and remarkably its influence is felt. If ammonia be artificially introduced into air in the same proportional average as carbonic acid is found to be constantly present, namely, about one part in 2500 parts of air, its influence soon shows itself upon the leaves, which continually acquire a deeper and deeper tint. The presence of such ammoniacal vapours not only stimulates vegetation, but changes the growth of the plant, and causes the development and enlargement of particular organs. In prosecuting a series of experiments on the phenomena of vegetation, with a view to ascertain whether nitrogen was directly absorbed from the atmosphere and assimilated, M. Boussingault observed the growth of minute green cryptogamia on the outside of the flower-pots, which had been exposed to the air, but he failed to detect any vegetable growth on those from which fresh air had been carefully excluded.

(1) Leibig on Hales' Experiments—"Motion of the juices in the animal body."

(2) Leibig on the motion of the juices of the animal body.

(3) *Ibid.*

(4) Experiments of Dr. Gilbert and Mr. Lawes.

215. The sudden growth of varieties of fungi during misty weather has often been noticed, and their appearance may be accelerated by the introduction of a small quantity of vapour of ammonia into any confined space where they are observed. I am not aware that any extensive experiments have been made upon the growth of fungi in an atmosphere rich in ammonia, such as certain fogs. I have, however, remarked with surprise their absence in an atmosphere from which ammoniacal vapours were probably abstracted by powdered charcoal, without, however, drawing any conclusions from the observation until attracted by the curious discovery of M. Boussingault, that fogs are eminently rich in ammonia.

216. The presence of a large quantity of this important plant food in certain fogs is not difficult to account for. Not only does the gradually increasing quantity of aqueous vapour in the atmosphere before the positive appearance of mist in any locality, collect and condense rare and widely diffused ammoniacal vapours, but the exhalations from the soil produced by decomposing vegetable matter, are arrested and accumulate. The period of the year when fogs rich in ammonia may be expected depends naturally upon the frequency of the fall of rain—upon the moisture of the atmosphere, and upon the winds. In Canada it appears reasonable to suppose that we may expect to find fogs rich in ammonia during the hot months of July and August, when the rain fall is not so great as in September. During these months mists frequently hang over the fields, particularly in low situations. The exhalation of vapour of water from the leaves of plants being then checked, and their juices partially stagnating in an atmosphere often rich in ammoniacal vapours, all the conditions for the appearance of the fungus called "Rust" on the stems and leaves of the cereals appear to be fulfilled.

217. It is commonly remarked that rust is most prevalent on new land; this is perhaps explained by the large amount of vegetable matter thrown into a state of decomposition by excess of air and the consequent production of ammonia. There is no doubt that much of the ammonia thus generated would combine with vegetable acids, and be fixed by clay, &c.; but some portion could not fail to combine with carbonic acid and escape into air in the form of the volatile carbonate, as is observed to a greater degree on manure heaps even where gypsum or other solid fixers of ammonia are employed to avoid it. We must regard new land as a storehouse of ammonia and other plant food, which become liable to volatilize when liberated by too free an exposure to air without proper precautions.

218. If the supposition be correct that "Rust" is mainly occasioned by the concurrence of mists or fogs in July and August, rich in ammonia, stimulating the growth of the sporules in the stagnated juices of the plants; and that the active agent in inducing the sudden appearance of that destructive parasite is really ammoniacal vapours, we have a remedy at hand which promises, when properly and carefully applied, if not entirely to check, at least so far to arrest the growth of the parasite as to claim a general trial, especially as its effects would probably prove equally availing in arresting mildew. What we require is an available absorbent of ammonia and its volatile compounds, not an absorbent which will destroy this valuable plant food, but one which possesses the property of inducing it to assume another form, perhaps equally available as a fertilizer, although of much slower action. Recent observations show that powdered charcoal answers these requirements. Charcoal not only absorbs ammonia to an immense extent, but it also oxidizes it to nitric acid, and thus renders it temporarily inert, but not unavailable to future fertilization.

219. Powdered charcoal is distributed with the utmost ease over large areas. Being an extremely light substance and easily reduced to a fine state of division, the least breath of air is sufficient to carry it for hundreds of yards. Any one who tries the experiment of gently shaking a muslin bag, containing coarsely powdered charcoal, in a gentle wind, will find that the operation of sowing, as we

may technically express it, a ten acre field, would certainly not cost one-tenth part of the labour of sowing the same field with plaster; and as that operation is not unfrequent in this country, a practical guide is at once furnished of the amount of labour the operation involves. Powdered charcoal thus sown is very uniformly distributed by the least motion of air, and its effects are marvellous. In a stable, for example, strongly smelling of ammonia from fermenting urine, an ounce of powdered charcoal, shaken by means of a muslin bag or any fine network, rapidly and uniformly distributes itself, and instantly absorbs the ammoniacal vapours. A curious instance of the action of this deodorizer occurred at Balaclava during the heat of summer, when the stench was almost intolerable in that painfully celebrated harbour. A ship load of charcoal arrived, packed in bags, and the men who were engaged in transferring the cargo to the shore were covered with the dust, as was every object in the neighbourhood—the stench which before prevailed suddenly and completely disappeared.

220. Nothing is more simple than the manufacture of charcoal—a few billets of wood are to be piled like cordwood, then well covered with sods, with the exception of two orifices, one to admit a little fire, and the other to allow the smoke to escape, until the heap has well taken, and then to be firmly closed for the purpose of allowing slow combustion to go on in the absence of air. When cool the charcoal may be crushed in a stout canvass bag by a lever, not by blows, and when sifted, furnishes the required material for sowing.

220(a). If we assume with Fresenius that the quantity of ammonia in the atmosphere amounts to less than one ten-millionth; the amount it would contain would exceed 50,000,000 tons, while that of the carbonic acid in the atmosphere is 3,300,000,000,000 tons, the weight of the air itself being 5,050,000,000,000,000 tons or five thousand and fifty billions.

220(b). Water is absorbed by the roots of plants alone; and the same water may repeatedly pass through the same crops, for the amount crops exhale during their growing season greatly exceeds the rainfall, hence they must derive much water from dew which is absorbed by the soil, and taken up by the roots, to be again exhaled and again deposited in the form of dew. The amount of dew may be equal to one-half of rainfall during the summer months.

221. Whatever "specific" will cure mildew, will also arrest rust.⁽¹⁾ Both are fungi, very nearly allied to one another, so much so, indeed, that it has been supposed by very eminent botanists that rust is merely a state in the development of mildew, and both species are produced under similar climatic conditions. Cuthbert Johnson says, "Salt, if not a complete preventive, is an effectual cure of the mildew." Mr. Chatterton, in the annals of agriculture, tells us that "on the sea side the wheat is little damaged by the mildew, yet within three miles inland the crops are as much affected as those still further from the sea." "This fact can be supported by the experience of most farmers whose fields skirt our native shores." Not only does the soil in such situations contain an abundance of common salt, but every sea breeze bathes the growing crops near the coast in moist air, holding in solution a quantity of common salt.

222. What will be the chemical action of common salt upon the ammonia of fogs and dews? The form in which the ammonia is present is that of a carbonate; its *exact* constitution is not of the slightest consequence. As a carbonate the chemical changes which would occur are as follows:

Common salt or chloride of sodium, acting upon a carbonate of ammonia, would produce bi-carbonate of soda, chloride of ammonium, and free ammonia. The free ammonia would combine at once with free carbonic acid, and be again decomposed, and another portion fixed by the common salt present in the moist air, and so on. The real effect of the salt is, then, to fix the ammonia of fog, mist or dew, and in that way it is most probable that this substance operates so beneficially in arresting mildew and rust.

(1) Mildew and rust are often found together.

223. Johnson, in his "Essay on Salt," explains the action of this agent in the following way: "The certainty and celerity of its operation I account for thus: the mildew, it is now well ascertained, is a parasitical plant of the fungus tribe, the principal constituent of which tribe is water; when salt, therefore, is applied to them, the aqueous particles are immediately absorbed, and their vitality destroyed." The objection to this view is, that in the experiments made to test the effect of salt on mildew, it was used in a state of *solution*, in the proportion of one pound of salt to one gallon of water, so that the salt was fully *saturated* with water, and could not possibly have acted on the fungi in the manner described above. It might have acted as a poison, but its action arose, no doubt, from the fixation of the ammonia, so stimulating to mildew and rust, as described in the preceding paragraph.

223(a). Mr. Theodore Perry tells us in the "Prairie Farmer," that he sowed one-half of a ten acre field with one-and-a-half bushels of salt, just after seeding it with spring wheat; the result was that the salted portion was ready for the sickle five days earlier than the unsalted part, and not a particle of rust or smut could be found; and the increase of crop he estimated at five bushels to the acre. The effects of salt, it must be remembered, are always rather variable and uncertain.

223(b). A number of experiments were undertaken by Dr. Aug. Voelcker, of the Royal Agricultural College, Cirencester, with a view of studying the effects of salt on vegetation in general, and a notice of the results he arrived at is to be found in the Report of the British Association for 1850. The plants selected for experiments were cabbages, beans, onions, lentils and radishes. The lentils watered with a salt solution containing twenty-four grains of salt per pint of water, were greatly improved. Grasses were affected by salt more readily than any other of the plants experimented on. Solutions containing twenty-four grains of salt, decidedly benefitted radishes, lentils, onions and cabbages. Many of the plants tasted like strong brine.

223(c). The effect of salt on wheat is said to increase the weight of the grain, and diminish that of the straw.

224. Early sowing, with properly prepared seed, to escape the time when those climatal conditions occur favourable to rust, is, perhaps, one of the best remedies which can be recommended. If to this we add the selection of flinty-stemmed varieties, whose stomata on the stalk will have in great part closed before the "time for rust," little damage may be expected in ordinary years. The use of charcoal and common salt, as before described, will serve very materially to lessen the dangers arising from the appearance of this most destructive parasite. Common salt, or gypsum, finely powdered, may be sown broadcast; under all circumstances they will act in a favorable manner either as a partial preventive of mildew and rust, or as a manure, by fixing the ammonia of the atmosphere.

225. The connection of rust with ammonia is exemplified in many different ways. We often find, for instance, that richly manured fields are liable to rust; and where isolated patches of manure or droppings of cattle occur in a field of wheat, the grain growing on those patches will be rusted generally, but not always. Charcoal beds have long been considered "rust proof" in the United States. Liquid manure, when applied to crops, has proved very beneficial in enabling them to escape rust, while neighboring crops, manured in the ordinary way with solid farm yard manure, were much affected. In one case the ammonia would be all absorbed, in the other case part would return to the atmosphere. Damp situations, fogs, and the season of the year when the decomposition of vegetable matter is most active, and therefore the atmosphere often charged with ammonia, are all conducive to the propagation and development of this fungus.

226. Rust does not appear to be found on those parts of the wheat plant which are not exposed to air and light, such as the roots, and those portions of the stem enclosed in the sheath of the leaves. This arises from the simple circum-

stance that there exist no stomata in those parts which are not exposed to light, hence a species of negative evidence that a large proportion of the sporules of rust enter the stomata directly from the air, and vegetate there. Fries states that the sporules of certain fungi are so inconceivably minute that they rise like thin smoke into the air by evaporation, and are dispersed in innumerable ways. (1) He calculated that in one individual fungus the number of seeds exceeded ten millions; and Mr. John J. Thomas, of Wayne County, New York, has estimated the number of plants of rust on a single wheat stalk to be twenty millions.

227. In a paper published by Professor Henslow, in the "Agricultural Journal" for 1841, on the "Specific Identity of the Fungi producing Rust and Mildew," he endeavored to establish the position that rust, or uredo rubigo, is an immature or imperfect form of another fungus, the puccinia graminis, or mildew. The author of "Blights of the Wheat" (the Rev. Edwin Sidney) says: "All that the author can, as yet, venture to assert is, that some puccinia have clearly the appearance of uredo before the septum or division of the spores into chambers is fully developed." (See Figs. 1 and 2, page 113 (a). The figure by Corda confirms the opinion that Mr. Sidney's observation is safe and accurate, as far as regards the British or European species. I am rather inclined to suppose that the American rust is distinct from the American species. I have often seen forms very similar to those shown in figure 3, page 114 (a).

228. The following varieties of wheat have been recommended as in part "rust proof:"

1. *Virginia White May Wheat*—resembles the white flint; ripens six or eight days earlier than the white flint, and has not been injured by rust. (2) It is said to have deteriorated by culture in New York, in other words, it has become acclimated, and lost some of the properties for which it was distinguished. Fresh importations of seed are required.

2. *Pea wheat* or *Siberian wheat* "is not subject to rust," (3) (spring wheat.)

3. *Black Sea wheat*; (spring wheat;) well known in Canada, and although much deteriorated, still supposed to possess certain immunity from rust.

4. *Fife wheat*—(see paragraph 161, No. 4.)

5. *Pipers' thick set wheat* is said to be the shortest and stiffest strawed wheat in cultivation. (New ed. of Ency. Brit., 1853.) It is a yellow grained, rather coarse variety, and has been introduced into Scotland under the name of protection wheat.

229. A valuable instance of good husbandry in checking the progress of rust, is related by Mr. Curtis McFarland, under date, Toronto, 1849, and will be found in the Canadian Agriculturist for March, 1849. No doubt the application of lime greatly improved the quality of the straw, and forwarded the ripening of the crop.

The surface draining alluded to is also an artifice admirably adapted, as every good farmer knows, to increase the returns, improve the sample, hasten the maturity, and in many other ways benefit the crop.

"In the spring of 1845, being my first year in Canada. I went on a rented farm, in the Township of Whitchurch, on which there were three acres of fall wheat, which when harvest came I found to be very much injured by the rust. The wheat grew on dry ground, and had been early sown, and otherwise well laboured. It was fallow the first time broken up, and had received a dressing of farm-yard manure.

To endeavour to prevent this disease in my wheat crop the ensuing season, and to do so with as little outlay of money as possible, I took occasion every time I went to Toronto with the waggon, to bring back a load of lime from the gas works; this I got at about half the price I would have paid for it at the lime kilns. I kept it dry until I was going to use it, and applied about forty bushels to the acre on the fallow, harrowing it in with the seed.

(1) Quoted by the author of "Blights of the Wheat."

(2) Emmons' Nat. His. of New York,—Agriculture.

(3) Vide Emmons as before.

Wherever I applied the lime, there was no rust in harvest, but where it was omitted there was very considerable of it.

The lime cost 6d. per bushel, thus the expense was only £1 per acre, the benefit derived was, that where the lime was used, I had thirty bushels of good sound wheat per acre, and where it was not used, I had only eighteen of poor shrunk grain. The account stood thus:—

LIMED ACRE.	
To 30 bushels of wheat, at 4s.	£6 0 0
To 40 bushels of lime, at 6d.	1 0 0
	£5 0 0
UNLIMED ACRE.	
By 18 bushels, at 2s. 3d.	£2 0 6
Balance in favour of limed acre.	2 19 6
	£5 0 0

This I repeated the following season, and with a similar result, and I am satisfied that any person adopting the like course will find a similar result.

There is nothing from which the Canadian farmers suffer so much as from the rust in their wheat crops, and if by the simple and cheap application of a few loads of lime to every acre of fallow, and at the same time taking care that a free passage be given to carry off the surface water, they can in a great measure remedy this evil; I am certain there is no one will regret having tried it, and when they have once tried it, will continue to do so on every possible occasion."

229(a). *Early taking of the crop.*—It is now agreed on all hands that grain should be reaped before it becomes what is called dead ripe. In the case of wheat and oats, when the grains have ceased to yield a milky fluid on being pressed under the thumb nail, and when the ears and a few inches of the stem immediately underneath them have become yellow, the sooner they are reaped the better. (Ency. Bri., new Ed., 1853.)

SMUT—BUNT EAR.

(*Uredo Segetum.*)

230. Affecting the flower of the wheat plant, and reducing the ears to black masses of sooty powder. The spores of this fungus are extremely minute. M. Bauer says, that the one hundred and sixty thousandth part of a square inch contained forty-nine of them, therefore, it would require seven millions eight hundred and forty thousand to cover a square inch of surface. How inconceivably great the number required to fill one cubic inch! and yet every field of wheat contains thousands of grains of smutty wheat. The extreme smallness of the sporules leads to the supposition that they enter the plant through the spongioles of the root, and risewith the ascending sap.

REMEDIAL MEASURES.

231. In 1842 a commission was appointed at Rouen, in France, to determine the best process for the preparation of wheat for the prevention of smut. Their labours extended over several years, and resulted in the recommendation of the use of sulphate of soda, and lime, in preference to sulphate of copper, (blue vitriol,) arsenic, and other poisonous preparations. They also decided that wheat steeped in a solution of sulphate of soda, and dried with lime, yields the soundest and most productive grain. (See paragraph 117, for proportions.)

232. Metzger, in Germany, after a trial of 22 years, found only one single injured ear in all his crops, by mixing the seed with soap-suds and slacked lime. The wheat was prepared three days before it was sown, or until it began to germinate. He says, "If sown earlier after mixing with the lime it will be liable

to smut.”⁽¹⁾ The object aimed at in preparing seed wheat against smut, is to wash off or kill the sporules of the fungus which adhere to the seed. Soaking in brine and chamber ley is a common artifice in Canada. The last named substance is very valuable as a quickener of germination when the moistened seed is dried by means of sulphate of lime, or gypsum, or charcoal.

232(a). The specific gravity of the spores of smut is greater than that of water, hence *well* washing in running water will remove a very large proportion of the spores; this artifice is particularly to be recommended in preparing wheat for seed as a *foreshorter* of other modes of preparation. The rationale of the use of lime and other alkalies is said to be based upon the formation of a soap with the supposed oily matter which invests the smut sporules, which then admits of their being washed off by water.

UREDO FÆTIDA.

Bunt—Stinking Rust—Pepper Brand.

234. A fungus with a very peculiar and disgusting odour, filling the grains in which it has made a lodgment, and replacing the stalk by a black mass of spores with their mycelium attached. Under a very powerful microscope, when magnified at least one thousand times, the spores have been observed to burst and emit a cloud of inconceivably minute sporules or pepper brand seed. A grain of wheat may contain several million spores, but the numbers of sporules contained in these intelligible numbers fail to express.

235. The appearance of a grain affected by this fungus is similar, as far as external form and colour is concerned, to that of the sound grains until they approach maturity. The diseased grain is then larger, more plump, and of a dark green colour, and emits when broken a fætid smell. From the experiments of M. Bauer, it is very probable that the sporules of this fungus enter the roots and remain within the system of the plant until such a change occurs in the process of its development that the ovum of the future seed affords the appropriate nursery for its growth. M. Bauer found the *uredo fætida* in the cavity of the ovum *before* the ear emerged from its sheath, and the young fungi in partial occupation. In this experiment the *seed* had been purposely inoculated.

236. The peculiar dark green colour of the infected grains is a common effect of the presence of the mycelium of a fungus. It stimulates the formation of the green colouring matter of plants called the *chlorophyle*. Hence the rich tint of the so called fairy rings, so often seen in pastures and on lawns, which are produced by fungi. Dark green patches are occasionally seen on leaves, and if the opposite under surface be examined, it will probably be seen that a fungus has established itself there.⁽²⁾

237. The investing coat of the spores is of an oily and sticky nature, whereby they adhere to the substances with which they may happen to come in contact. Hence in preparing seed the use of alkalies or substances which will make soluble compounds with the oily matter, or insoluble compounds destitute of adhesive properties may be effectually employed to disinfect the grain used for seed. The mode of steeping wheat noticed in paragraphs 232, 232(a), 231, will serve the necessary purpose. It is very probable that a large proportion of the so-called smut of this continent is nothing more than pepper-bread, and both are certainly common in our wheat fields.

ERGOTA (*Sclerotium clavus*.)—ERGOT (*Cockspur*.)

238. The exact nature of this curious substance is no longer open to discussion. The observations of Dutrochet, Lèveillé, and Quekett seemed to show that ergot is a disease of the grain caused by a parasitical fungus. The so-called mature ergot projects beyond the chaff-scales. Its colour is violet-black. The

(1) See a paper on the selection, change, preparation and sowing of wheat seed, by D. J. Browne, in P. O. R. for 1855.

(2) Berkeley, on the Potato disease.

number of infected grains in each ear may be from one to the whole. This remarkable substance has long been a fertile subject for discussion. Its singular mode of growth, the appearance of infested grains among a host of sound ones, and the painful maladies to which the incautious use of ergoted bread has given rise over extensive areas, have all tended to clothe this distinct vegetable production with a painful and serious interest. It is popularly supposed to infest only rye; this is a dangerous error, and doubtless numerous untoward results have arisen from this belief.

238(a). The enigmatical nature of ergot has lately been cleared up by M. Tulasne, who has shown that the body of the ergot, which is externally of a blackish colour and internally white, and which has been described as *Sclerotium clavus* is only the vegetative rudiment of a claviformed fungus, which is not developed until it has fallen to the earth. The fungus is very closely allied to the *Sphaeria* growing upon caterpillars, and is described by M. Tulasne under the name of *Claviceps purpurea*.⁽¹⁾

240. The medicinal effects of ergot are well known, and when taken into the animal system to a considerable extent, as in the consumption of ergoted bread or of grasses by cattle, the results are most lamentable. It originates terrible gangrenous diseases in man, mortification of the limbs, and ultimately death.

241. On undrained lands cattle have often been made seriously ill by the ergot present in the natural grasses growing there; good drainage effectually removes this poisonous disease. Many instances are recorded in England of local epidemic diseases of a most shocking description, which have been caused by the consumption of ergoted *wheaten* bread. Ergot is common in America, and a considerable quantity is exported to Europe for medicinal purposes besides that required for home consumption, which, it is stated, forms by no means an insignificant item of the annual production for medicinal and other purposes of this curious and dangerous substance. Ergot is common in maize. In South America mules fed on this diseased grain are said to lose their hoofs and hair. In France the consumption of ergoted rye-bread has often filled villages and hamlets with the most painful records of the diseases it is capable of engendering.

241(a). Dr. R. G. Latham found ergot on eighteen species of grasses, and over large areas in 1842. It is commonest on the *Lolium perenne*, rarest on the *Hordeum murinum*. The *Pheums* and *Fescues* are very subject to it, so is the *Dactylis glomerata*; in other words, some of the best pasture grasses. The *Cynosurus cristatus* is remarkably free from it.⁽²⁾

CHAPTER VII.

Insects affecting stored grain of Wheat.

THE WEEVIL.—Description of the Insect, 242.—Female lays her eggs in Stored Wheat, 242.—Presence of insect, how detected, 243.—Habits of the Weevil, 244.—Mode of destroying, 244.—*The Wolf or Little Grain Moth*, 245.—Habits of the Insect, 246, 247.—Illustration of the Wolf, Moth and Caterpillar, 247.—Remedial measures, 248.—The Angoumois Moth, 249.—Moth and caterpillar, 250.—Summer and autumn brood, 252.—Remedial measures, 253.

The Weevil (Calandra granaria.)

242. A snout-beetle, about one-eighth of an inch in length, with a slender body of a dull reddish brown colour, furrowed wing cases and long punctured thorax. A single pair of these insects may produce six thousand descendants in a year. They are destructive to stored grain in both the perfect and larva state. The female lays her eggs in wheat in the granary. The young maggots burrow into the grain and consume its contents, leaving only the husk. Their transformations are perfected within the husks they have chambered out in the larva state, and so secretly are their operations conducted, that it is impossible to detect their operations by simple inspection of a heap of wheat.

(1) Dr. Brau—on the diseases of plants—*Journal of Microscopical Science*, 1854.

(2) *Rep. of the British Association*, 1845.

243. The presence of these insects may be detected by the weight of the grains. On throwing a handful into a bucket of water the diseased grains will float. After the female has, by means of her rostrum or beak, deposited an egg in the grain, she covers it up with a sort of glue of the same colour as the husk, hence the difficulty of detecting the presence of this depredator in the granary during the time when it is in the larva state.



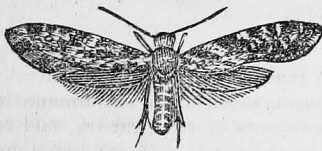
WHEAT WEEVIL.—*Calandra
Granaria.*
(Natural Size)



WHEAT WEEVIL.—(Magnified.)

244. On the approach of cold weather the weevils retire from the heaps of wheat, and seek shelter in crevices and cracks of the floor and walls. They remain torpid for a while, and after having paired soon die. They avoid the light, hence one reason why constant turning of the wheat and sifting is advantageously employed to drive them away. They lie in general four or five inches below the surface of the heap, and here the majority pair. Kiln drying appears to be the only certain destruction to this pest. Frequent turning and airing of the heaps, whitewashing the walls, and keeping the granaries clean, with abundant ventilation, are artifices strongly recommended for the purpose of diminishing the numbers of this pest. It is not likely, however, that farmers in Canada will suffer much from its depredation for some years to come. Where large quantities of wheat, and particularly of foreign wheat, are allowed to accumulate in store; there, no doubt, the ravages of this insect will be felt.

245. *The Wolf, or Little Grain Moth, (Tinea Granella.)*—Mr. Curtis says that this moth is completely established in Britain, as well as in every part of Europe. The late Dr. Harris says that from various statements, deficient, however, in exactness, he was led to believe that this insect, or an insect exactly like it in its habits, prevails in all parts of the country. Since its existence is quite established in America, and its known habits are such that it may at any time appear in destructive numbers in Canada, a notice here of its general appearance and peculiarities, will not be out of place. From April till August (1) the moth is found in granaries or magazines, resting by day on the walls and beams, and flying about only at night, unless disturbed.



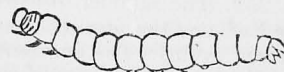
THE WOLF.—Magnified.



Nat. Size.



CATERPILLAR.



CATERPILLAR.—Magnified.

246. The female lays one or two eggs on each grain of wheat, until she has deposited thirty or more. They require the assistance of a magnifying glass in order that they may be distinguished. The small white worms penetrate grain, and close up the aperture with their roundish white excrement, which is held together by a fine web. When a single grain is not sufficient for its nourishment, the larva unites a second grain to the first by the same web, and thus ultimately adds together a great number.

247. In August and September they arrive at maturity, when they leave their wheat heaps, and seek for a place in which to undergo their metamorphosis. They form cocoons by working bits of wood into their web, in any chink of the floor, walls or roof. These cocoons look like grains of wheat dusted over. They

(1) Curtis.

assume a chrysalis state in March, April and May, according to the season. In two or three weeks they take the form of the perfect insect or moth.

248. The following remedies are suggested by Mr. Curtis: Floor of granary scoured with soft soap, and well brushed with a stiff broom; roof and beams whitewashed. The moths may be destroyed in spring by burning lights or lamps in the granaries where they abound. All cracks in the floor or walls should be stopped with plaster of Paris, and apertures for ventilation secured by fine gauze. Burning sulphur will kill the moths. Grain should be cut early to anticipate the appearance of the moth. (See Patent Office Report for 1849-50, for further information on this subject.)

249. *The Angoumois Moth (Anacamptis Cerealella).*—In the Southern States of the American Union the larva of this moth is said to feed upon the grain in the open fields. In the Northern States it is found in granaries, and of course we may expect to find it in Canada.

250. The Angoumois moth (*a*) is a four-winged insect, about three-eighths of an inch long when its wings are shut (*b*). Its upper wings are narrow, and of a



ANGOUMOIS MOTH.(1)

light brown colour, with the lustre of satin. The lower wings and the rest of the body are ash-coloured. The female lays from sixty to ninety eggs on the ears of wheat and other grains. Sometimes the eggs are laid in the field, sometimes in the granary. They breed twice in the year, there being an early summer and an autumnal brood. Each worm, like caterpillar, selects a single grain into which it burrows, and on the flower of which it subsists.

251. The caterpillar is about a fifth of an inch long; colour white, with a brownish head; it has six small-jointed legs, and ten extremely small wart-like prop legs. (2) Its chrysalis state is assumed in the grain, after having curiously provided a means of escape by gnawing a small hole in the husk of the grain for its emergence in the form of a moth.



CATERPILLAR.—*Nat. Size.*



Magnified.

252. The summer brood of caterpillars come to maturity in about three weeks, and assume the form of the moth in autumn, to propagate their kind among the stored grain. The autumn brood feed upon the contents of the granary, and remain in their pupa condition until the following summer, when they emerge and seek the young growing crops to lay their eggs.

253. Exposure to a temperature of 170° Fah., for twelve hours in a kiln, will destroy this insect in any one of its states; but, at the same time, it renders the grain useless as seed by destroying the power of germination. Mr. D. J. Browne says, in the Patent Office Report for 1854, that a very small quantity of chloroform dropped into close vessels containing these insects destroys them in a few minutes—an artifice, however, of little practical value.

(1) From the Patent Office Report for 1854.

(2) See Harris' Treatise on Insects.

This Essay passed through the Press during the absence of the author from Canada. He is not responsible for numerous errors, which in some instances have changed the original meaning of a sentence:

ERRATA.

- Page 8, Line 11, for *catworms* read *cutworms*.
9, Line 5, for *at* read *near*.
9, Line 5, for *Latitude 54°* read *Latitude 50°*.
8, Foot-note, for *Lake Ugasni* read *Lake Ngami*.
8, Line 47, for *provisions* read *Provinces*.
9, Bottom line, for *H. J. of Science* read *Am. Jour. of Science*.
12, Line 8, for *infect* read *infest*.
12, Line 8, quotation mark omitted after the word *imagined*.
13, Line 19, for *whitstone* read *whinstone*.
13, Line 33, for *Depidoptera* read *Lepidoptera*.
14, Line 14, for *threatens* read *threa'en*.
14, Line 43, for *Reaumer* read *Reaumur*.
14, Line 47, for *Reaumeur* read *Reaumur*.
15, Line 11, for *the* read *these*.
15, Line 19, for *trachæ* read *tracheæ*.
15, Line 20, for *metamorphosis* read *metamorphoses*.
15, Bottom line, for *trachæ* read *tracheæ*.
16, Line 9, for *Linnaeus* read *Linnaeus*.
18, Line 1, for *evils* read *weevils*.
18, Line 27, for *is* read *are*.
19, Line 20, for *Cerasicoldus* read *Cerasicolens*.
20, Line 26, for *Loen'centrock* read *Lewenhoek*.
20, Line 8 from bottom, for *those* read *these*.
21, Line 3, for *ravages* read *ravager*.
21, Line 13, for *each* read *each year*.
21, Line 14, for 'underhill' read 'Underhill.'
21, Line 15, for *flag seed* read *flax seed*.
21, Line 22, for *Early nob* read *Early Noé*.
22, Line 14, for *published in a recent Agricultural Scottish Journal*
read *published in a recent number of a Scottish Agricultural*
Journal.
52, Line 48, quotation marks omitted.
23, Line 5, quotation marks omitted.

- Page 24, Line 11 from bottom, for *security* read *immunity*.
- 26, Line 6, for *saures* read *saures*.
- 26, Line 18, do do
- 26, Invert (fig. n.)
- 28, Line 10, for *attitude* read *attitude*.
- 28, Line 17, for *strengthening* read *strengthening*.
- 28, Line 25, for *undrhill wheat* read *Underhill wheat*.
- 29, Invert (fig. o.)
- 29, Line 14 from the bottom, for *sleeps* read *sleep*.
- 32, Line 7, for *L'Hommedica* read *L'Hommedica*.
- 32, Line 8, for *Genessee* read *Genessee*.
- 33, Line 3, for *L'Hommedica* read *L'Hommedica*.
- 33, Line 10, for *Hman* read *Hman*.
- 33, Line 24, for *Genessee* read *Genessee*.
- 34, Line 44, for *quanity* read *quality*.
- 35, Line 22, for *Penam* read *Pelham*.
- 36, Line 23, for *it* read *its*.
- 37, Line 39, for 121 read 162.
- 38, Line 22, the word *Europe*, between *in* and *the*, omitted.
- 41, Line 39, for *sole* read *Soule*.
- 45, The lower diagrams are misnamed, and the letter-press beneath the right and left hand diagrams should be reversed.
- 45, Line 9 from bottom of page, for *arealis* read *cercalis*.
- 46, Line 17, for *oat* read *oats*.
- 59, Under diagram, for *Puccinia Graminis* read *Puccinia C. aminis*.
- 65, Line 19, for *American* read *European*.
- 65, Line 28, for *Pea* read *T.a.*
- 68, Line 36, for *Plumns* read *Phleums*.

