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Reports, Discussions, &c.

TOWNSHIP OF YORK FARMERS' CLUB.

The monthly meeting of this newly formed Club was held at Dawson's Inn, on Wednesday evening, the 12th ult., E. W. Thomson, Esq., President of the Club, occupied the chair. Among the members present were Messrs. J. Ross, J. Snider, B. Bull, J. Dunham, James Donnelly, P. Ross, G. Ward, James McIlveen, Chas. Clark, &c.

The following paper written by Mr. Hugh Ross, who was absent from indisposition, was read by Mr. McIlveen:—

THE BEST MODE OF FARMING.

MR. PRESIDENT AND GENTLEMEN,—

In accordance with the arrangements made and agreed to at our last meeting, I will now for a short time crave your indulgence, while I read my essay, or I should rather say an attempt at one. I am sorry, sir, for your sake, as well as for that of the other gentlemen present, that the task of getting up the first essay, had not been assigned to a clearer head, and abler pen, than has been employed for this occasion, to one whose time as well as abilities would have enabled him to do justice to the subject; to interest and amuse, as well as instruct. The system adopted, and I believe generally carried out, at public meetings, anniversaries, &c., where a number of speakers address the audience during the evening, the inferior preceding the superior, I think is a good one, and always attended with good effect; and in this instance as far as my case is concerned, I am sure it will not be inverted. You will now have the worst first, and then will be able more fully to appreciate the good, better and best afterwards. Without further introduction, I will proceed at once to make a few remarks on my

“subject,” selected at our last meeting, namely:—“The best mode of farming.”—Farming, sir, it has been often said, and cannot be too often reiterated, is, or ought to be, a subject of all-absorbing interest: it is one of those pursuits in which a man may properly engage, and in which, while he preserves his conscience, and his manliness, he is at the same time rendering himself, by his business, a blessing to the world. Farming, or agriculture, if you like the term better, is always, in every country that bears the stamp of civilization, the chief, the principal occupation of man. We have been informed on a former occasion, that about nine-tenths of the population of Canada are engaged in that most noble and honourable avocation.

There is an opinion which has crept into the minds of many of our young men, and as a consequence of indulging it, they look upon farming with a good degree of aversion. I would just say a few words on this point—and in the first place I would express my unqualified disapprobation of the idea, as being both false and ridiculous; it is this:—they consider farming is less noble and honourable, as a vocation, than many other pursuits. Now, if to be the owner and lord of the soil we till, of the hills and lawns, the running brooks, the giant trees laden with fruit, and to be master of our own time and efforts, relying only on the immutable Providence of the Creator for the rain and sunshine, combined with our own efforts, to give us bread; be not a position of independence and honor, then I know of none that is. But perhaps our young men would wish to have eminent examples to induce them to look on farming with any degree of favour. Then I would point them to some of the most distinguished Americans who thought it not beneath their dignity to assume the title of farmers; Washington for instance had no other profession; Jefferson, Jackson, Clay, and Webster, though they were distinguished as lawyers and statesmen, yet were proud to call themselves, and be called farmers. Hundreds of city merchants too might be enumerated, who in youth left the farm in disgust, for that which they then regarded as

a more honourable occupation, have since learned a useful lesson. Many have shaken off the dust of their feet upon the city, and retired to the healthful rural pursuits, once forsaken in disgust, happy in the fact that they have escaped from the turmoil, the anxious uncertainty and selfishness of the trading world, to find agreeable recreation and repose, on the broad generous bosoms of their own farms. They find that there is no envy in the soil they till, no malice, no ingratitude in the honest oxen and horses they use—nature's cornucopia is generously and freely poured in their laps, without stint or grudge, and they find that whoever is diligent, honest, and efficient in his dealings with the soil, is very rarely cheated in return. Whatever the sons of our good mother earth may be, as far as honesty is concerned, we invariably find she is neither knave nor bankrupt. She does not fraudulently stop payment, nor has she any respect of persons—no matter whose or what muscles they be, that bend over her bosom in well directed toil—no matter what the honest brow, that thick and sweats, in order that she may be put in harmonious action, with air, shower, and sunshine, but she acknowledges as a worthy son of her bounty, and fails not to crown him with her own green laurels, and to bestow upon him the choicest, the richest rewards of her inexhaustible treasures. I would now offer a few brief reasons as inducements, why young men should adopt, yes prefer this as a pursuit. First, it is a healthy employment—who so healthy, strong and muscular, as the farmer? Secondly, there is less chance of loss, and more certainty of good living, in this, than any other employment. Third, it is more independent, and this all will acknowledge. The farmer is his own master—he tills the soil, and the God of nature, who ordained that man should labour never repudiates, nor defrauds the worthy worker of the fruits of his toil. Nor is this all, the farmer can have his meals, and his evenings in comfort with his family—he has in a great measure the entire winter season to cultivate his social and intellectual faculties. If he only will, he can be well informed; he has the means and the time if he will but use them; and here I would just say, that our Township Council deserve the applause of every right minded man, in taking advantage of the government grant and supplying the community in which we live with valuable reading matter—it is to be hoped that every person will avail himself of such an opportunity—as we hope ere long to see these books in circulation. But to return, farming is a sphere in which there is less temptation to immorality, than that of most other pursuits. To be a successful farmer requires good sense, steadiness of purpose, energy, helpfulness, patience, and a love of nature and of home. Successful farmers, too, are men of invention, men of mechanical talent. The idea that the farmer has nothing to do with machinery, either in the line of invention, or in the exercise of skill in the use of tools, is in keeping with the clumsy contrivances for agricultural implements, and the tedious hand labor process of their use, as exemplified in old fashioned farming, say thirty or forty years ago,

as I have it by report. Then the old wooden plough was in vogue, which required a strong man to keep it in the ground, and make it tear its way through the soil, and it was, I am certain, labour for the team to draw it—then the oak tree answered for a harrow—then there were cultivators, no mowing machines, no reaping machines nor thrashing machines, no light harrows with joints to adapt them to undulating surfaces. These, the implements of modern farming, have resulted from the exercise of the mechanical faculties among farmers.

Men who were educated as practical mechanics, and those who have received at the Universities an education, in Mathematics, Chemistry, Natural Philosophy and Mechanics, have adopted Agriculture as a pursuit, and enriched it with their skill and learning, so that the implements of agriculture from an ox-cart to a pair of sheep shears, have a neatness, skill in construction, and adaptation to their uses, such as to challenge admiration, and invite the hand to their use as a matter of pleasure instead of fatiguing drudgery. These, sir, I think, ought to be matters of consideration for the young, and sufficiently inducing to determine them to become farmers, instead of hanging around the over-crowded professions, at the commercial and mercantile interests, barely eking out an inglorious subsistence, when, if they would employ as much brain work, and halt the drudgery and anxiety in connexion with agriculture in our new and inviting country as they now employ to keep soul and body together in ill paid subordinate situations, they might rise to the dignity of men, and to the substantial platform of pecuniary independence, for, as before asserted, where can you find the man, or class of men, who follow other pursuits to be compared to the farmer in point of independence, freedom from anxiety and true happiness, I would say then, the young who have hitherto indulged a feeling of dislike to this noble and honourable pursuit, follow farming for a living, and if you are assiduous and diligent at your business, you will not have cause to regret your choice.

But, sir, perhaps I have occupied too much of your time by dwelling so long on the many inducements to engage in farming, which I feel confident none present, will for a moment question, I will then leave that for the present, and return to my subject, which I must say is rather an extended one—it is this: the best mode of farming; it is so extensive as to comprehend all the future essays or subjects of discussion that may be brought before us, and at the same time may be condensed and summed up in a very brief compass. The best mode of farming might be simply defined as follows:—Raising the largest amount of crops from the ground, at the least expense, and with the least possible injury to the soil. I think no one will dispute this definition of my subject. Yet, in order to accomplish these ends, few though they be in number, the farmer will require a certain amount (might I not say, large amount) of knowledge in his possession. Who can estimate the powers of the soil to produce, or set limits to its production when the soil is brought to the highest state of productiveness.

it is capable of?—Fifty tons of turnips, I have been informed, have been raised from one statute acre, and valuing these at one shilling per hundred—which would not be overreaching the mark,—gives us the handsome sum of fifty pounds worth from that one acre. This seems almost incredible, and would no doubt be ridiculed as a fable, by some of our backwoodsmen, who never saw, or perhaps never heard of, a model farm—but if doubted by any present, it can be corroborated by one of our members, whose privilege it was to see the crop growing.

When our Canadian farmers can compete with this, or come up any thing near to it, which I have no doubt at all they may—as it is freely admitted on all hands, that the soil of Canada, as far as regards its natural capabilities, its principles and component parts, cannot be surpassed by any other under the sun.—I say when our farmers have got their fields to such a state of cultivation as this, by draining, by subsoiling, by manuring, &c., all of which we will be taught hereafter, by those who can do the subjects justice—can handle them the right way—then I will say, our farmers have made a big step towards my subject.—The best mode of farming. Now Sir, as I said before, my subject is so extensive, it will not be expected for a moment, that I could attempt to give even a passing glance at all the various subjects involved in it—in fact volumes have been written on it, and still they may be multiplied—new fields of investigation are continually being opened up to the gaze and astonishment of a wondering man, by the scientific investigator, and none will dispute the acquisition that science has been to art in agriculture, as well as in other departments—although I would say most decidedly practice must always take the lead, and science follow in its train. Sometimes indeed, science, falsely so called, for it did not deserve the name, has advanced the most ridiculous and absurd theories—but, as I said before, it was not science or scientific men, but some would-be clever fellows for speculation, or else to exhibit ignorance.

I will now for a short time allude to a few of the more important subjects which demand the farmer's knowledge and attention, if he would be in the proper sense of the word, a successful farmer; and in the first place he should be acquainted with the nature of the soil, he tills—should know what kind of crops it is best calculated to produce, as it is a well known fact, that all soils will not produce the same kind of crop with equal success—he should understand what principle is absent from the soil that would be necessary to produce a good crop of a certain kind, he should also be acquainted with the best, cheapest and most efficient means of restoring such a principle or element to the soil either in the form of artificial manures or otherwise. He should also know how to improve the different qualities or kinds of soil that may be in his farm, as very frequently we meet with various qualities of soil on our farms. From a want of knowledge of this kind manure is often injudiciously and wastefully applied. But it may be asked, where can a knowledge of this kind be obtained. I answer, from standard works on Agricultural Chemistry—such as John-son's, Leibig's, &c.

The farmer ought also to divide his farm, according to the quantity of land, I should say cleared land, he occupies, into such a number of fields as will be suitable for a regular rotation of the kind of crops he intends to cultivate; he should also pay particular attention to the kind of fences he makes, and endeavor to make those which will be most lasting and most easily repaired or renewed when they begin to decay; it is no inconsiderable expense, especially when timber is dear as it is now even in this place, to make new fences for the most part on a farm. I have lately read a plan or two recommended in fencing, which I will submit, it may perhaps lead to some beneficial conversation on this important point. One plan is in board fences, to bore an augur hole in the post in a sloping direction inwards and downwards for about two inches, just where the post will come in contact with the surface of the ground—or as the sailor would say, between wind and water—fill this hole with salt, which is said to be a great preservative of wood. It is recommended to steep the posts in sea water some time previous to putting in the ground; but as that would be rather inconvenient in this locality, perhaps the salt will answer the same purpose, at all events it would be worth while making the experiment, as it would not be very laborious or expensive, and would well repay the trouble if the posts lasted 5 or 10 years longer than they otherwise would have done.

It is also asserted by Mr. Preston, of Stockport, Penn., that if the posts be put with their tops in the ground, they will last three or four times as long as when they are put with the butt ends down. He also advises in making rail fences to place the heart side up. Some farmers cut their posts so long and mortise them in such a manner that when the lower end becomes rotten they can turn them upside down. I think this economical and good. I have read of a fence made in the following way which might answer well for line fences or fences along roads: A row of butternut trees were planted, and notches cut in them a few inches apart, as high as the fence would be required, rails were fastened in these notches from tree to tree, in time the wood of the tree grew around the rail in such a manner as to bind it firmly—no fear of it dropping out—and I am sure the posts would not readily rot. I consider this a durable fence. Might not pine or any other tree answer as well as butternut? So much for fencing; but, perhaps, I am treading on forbidden ground, however my subject embraces all the others, and therefore I consider myself at liberty to make a passing remark or two on any topic that claims my attention, more particularly as there is still abundant scope in reserve, in fact these subjects are so spacious as almost to be inexhaustible.

Farmers should also attend to draining their land in all cases where it is required, and practicable. Superfluous water resting on land always prevents and retards vegetation. Deepening should also be attended to, as it will stir up a quantity of subsoil which in a great part contains the inorganic food of plants, and also permits the roots to go deeper, and therefore they have a greater space to draw nourishment from. Stumps

should be eradicated as soon as possible, as they are always the nursery of a host of the most deleterious weeds, besides they are a nuisance in ploughing, harrowing, &c. It has been objected to on account of the expensiveness of taking them out; but I feel certain, were a man can afford to pay for their extermination, he will be remunerated in a shorter time for this expense than he at first sight would suppose. I would say in most cases, one year would suffice to defray the expenses incurred in this proceeding—let us make a rough calculation, in order to arrive at something satisfactory. Suppose a field to contain on an average 50 stumps to the acre—these with their suburbs of weeds will probably occupy one-tenth of the ground—the expense of taking out those 50, will be perhaps £2 10s. Suppose again this acre to be in good cultivation for mangel wurzel, or say turnips—it may produce 600 bushels, which would only be about 15 tons, an estimate not very high—allowing one-tenth of these or 60 bushels, to have grown on the place formerly occupied by the stumps, and these at 1s. per bushel will amount to £3, which would more than pay for eradicating these troublesome fellows, in one year. Farmers ought to pay more attention to their manure than what is commonly done. A great portion of the best of it is allowed to escape by exposure to the sun and atmosphere. Farmers should also invariably keep the best breeds of animals, as it is as easy feeding a good one as a bad one, and, as in the case of cows, one good one is worth two bad ones, and her keep costs no more than one. They should never keep more than they can feed well. Cows should also be provided, as indeed all animals should, with suitable houses in winter; it is a cheap practice that prevails in this country to a great extent of keeping cows out during the whole of a severe winter, often without even a shed to shelter them from the inclemency of the weather; besides they will not require as much food by one-third when kept comfortably warm, and will look much better—so that the saving would thus be considerable, not to say anything of the animal's comfort. I might, sir, go on, almost indefinitely with the different improvements that might be suggested in this department, which would be all necessary, fully to carry out my subject, "The best mode of Farming"; but I am afraid I have already trespassed too much on your time, and will therefore for the present, sum up with a few brief remarks. The farmer should endeavor (weather permitting) to do all his work at the proper time, each department in its due season, and always finish if possible one job before commencing another; he should cultivate the most profitable crops; he should add as much to his ground every year in the form of manure as what has been extracted by the crop; he should use the most improved implements of husbandry; he should always base his calculations on this principle, that his income may each year exceed his outlay, and thus while he is adding to his own wealth, he is also adding to the wealth of his country; and now, sir, I thank you and the other gentlemen present for your kind attention to these few unconnected remarks.

After the reading of the essay, the Chairman called on Professor Buckland to address the meeting. In the course of his remarks the Professor several times approvingly referred to the essay illustrated very clearly several important points in practical husbandry that received light, and valuable suggestions from the experimental sciences, and the importance of higher and more suitable instruction to the rising generation of farmers, particularly in this great agricultural country. He remarked that he had just come from assisting in an examination at the Normal School, for the Governor General's prizes in scientific agriculture, and expressed great satisfaction at the progress which the pupils were making in that valuable institution. With several of the examination papers of his own class in University College, he felt much pleased and encouraged, although the course had been much more contracted than it would be for the future. He trusted that by next session such arrangements would be completed by his several colleagues as would place agricultural instruction given in the College, on the most efficient and comprehensive principles. Votes of thanks having been passed to the writer of the essay and Professor Buckland for his interesting address, it was resolved that the next meeting of the Club be held on the evening of the second Wednesday in May, at the Red Lion Inn, Yorkville, where Mr. McIvreen will read a paper on "The rotation of crops."

#### TOWNSHIP OF HAMILTON FARMERS' CLUB

##### AGRICULTURAL FAIRS, AND CHANGE OF SEEDS.

A very large assembly of the members of the Club took place in Cobourg on the 29th March when very interesting addresses were delivered by several gentlemen. We copy below, slightly abridged from the *Cobourg Star*, the address by Messrs. Wright and Wade:—

Mr. WRIGHT rose and addressing the President said, that he had not prepared himself to speak on the subject assigned to him "Agricultural Fairs;" he felt, in fact, their utility was so well known to every one, who had any agricultural product to buy or sell, that anything he could say in favor of such meetings might just as well be left unspoken. However, as a speech was expected of him, he would endeavor to say something about a few matters connected with Fairs and Farmers' Clubs, which in his opinion cannot be too often talked of.

It was not often any member of the Club had an opportunity of addressing a meeting such as this, where we usually had *tens*, to-day we had *hundreds*!—a fact certainly encouraging to the few individuals who, through good and thro' bad report, have unweariedly labored to be alive our Club, the oldest in the Province, and now the parent of many others: whose object solely to protect the best interests of our country by discussing questions relating to ag-

culture, and consequently to the best interests of our noble country. Our Club is neither sectional nor exceptional, although connected with our Agricultural Society. We are always happy to meet with men engaged in other pursuits, who are willing to countenance us, and who can with very great propriety take a part in many of the subjects which by our Constitution we can legitimately discuss. He saw many such here to-day, and could not help congratulating the President on having the honor to preside over the largest and most intelligent meeting of farmers ever assembled in the County of Northumberland. The time had gone when farmers were looked upon as but a shade better in point of intelligence than the horses they drove; the various reports of the Farmers' Clubs in the Province clearly show that there are men amongst the farmers who can handle a subject practically and scientifically in a way, which was little expected; and sufficient, he thought, to make our teachers feel the necessity for a more severe course of study than has for a time prevailed. He would now make a few remarks on the subject of Fairs; it had been asked often to him that there would be a better prospect of establishing one in Cobourg than where we are now met; past experience would hardly bear this out. He believed that the system prevailing in Scotland was the true one to follow, namely: hold our meeting at such places that no extraneous business will interfere, and where, having but one object in view, it can be well and speedily executed; in short, where we can mind our own business. He understood the Town of Cobourg was soon to build a Town Hall, and was rejoiced to hear some of the Town Council express themselves much in favor of appropriating part of it for a Corn exchange, where a weekly meeting of buyers and sellers could take place with advantage to both. One thing he was firmly convinced of, we meet too seldom; there is a jealousy of feeling amongst farmers (cheers), which militates against themselves. There is no uniformity nor mode of fixing a price—it is the demand which always regulates that; but where the buyer only knows of one animal to suit him, and the seller of only one purchaser, it is quite evident both are unfavorably situated.—We must entirely remedy this evil, and commissioners establish a uniformity in price. If buyers and dealers in grain choose to adopt a different system from that which now prevails, namely—paying a certain price for 60 lb. or a bushel of wheat almost irrespective of quality.—they choose to adopt old country practice, and proportionately rise or fall in price for wheat above or below a definite standard weight, they would in one year do more, for improving the cultivation of our cereals, than all the prizes given by Agricultural Societies will accomplish in seven. But so long as the farmer believes in too much truth in it) that the miller will give as much for 60 lbs of smutty or for a mixture of wheat, barley and oats, as for a clear sample, there is truly but little inducement held out for the careful cultivator who, at increased expense, furnishes the manufacturer with the means of giving a bonus to his less deserving competitor;

but these, and many other evils, would, no doubt, gradually disappear. It is our duty, Sir, to point them out, at such meetings as this. Good results will assuredly follow the advocacy of a good cause independent of the channel through which it flows, and with this conviction he had spoken.

Mr. WADE said—It is stated in the programme of this day's proceedings that I should address you on the subject of changing of seeds from one township to another, and my friend Mr. Black, on the changing of seeds from one soil to another. The subject is somewhat hard to divide in this way, simply because the difference between one township and another is so small that the soil might be the same, the climate of necessity could not vary, and the only advantage in this way must be in changing from one kind of soil to another; supposing that in any township different varieties of soil existed, and which, in some degree is the case in most of our front townships bordering on Lake Ontario, the front concessions being generally level: a clayey subsoil, resting on limestone, with a deep vegetable loam on the surface, rather conducive in ordinary seasons to produce too great a proportion of straw; the middle and rear concessions being rolling, also on a clayey subsoil, but often with a considerable depth of sand between the vegetable deposit on the surface and the clay below, rendering such soils less subject to the overgrowth of straw, but at the same time the quality of grain produced is better than on the richer soils, so far rendering the change from the one kind to another judicious. However, as I am infringing upon the ground intended to be left to my friend Mr. Black, and knowing so well the opportunities of observation he has had, and also the great amount of experience he has had both in Scotland and Ireland, as well as over ten years of practical observation in this township, I can safely leave all this in his own hands; and I will now simply confine myself to two or three experiments that have passed under my own immediate observation with respect to the subject on hand, (still, by the way, I might say, in parenthesis, that there is no country on the face of the globe more favored in this particular than our own, simply from our own composition as inhabitants—we are composed of emigrants from all parts of the British Empire, bringing the knowledge and experience which has passed under our observation, then we settle among the natives of the soil who have been borne here, and can see what they are doing, whilst now and then a Yankey strays across our border, just to shew us the way they go ahead in their country—all shewing that we have no occasion to go through the slow and expensive experiments they had to do in the old countries, but simply to avail ourselves of the tried knowledge of the age.) I will now state the special wants under my own observation with regard to the introduction of new seeds. When our lands were first cleared, fall wheat succeeded well on all soils that were not too swampy; but after a few years' cultivation, much of the land that had produced good crops when first cleared, were found too wet for fall wheat—what I now refer to is the front townships, but in the back townships

they labored under another difficulty, their wheat sown in autumn being in three seasons out of four smothered by the snow coming early in winter before the ground was frozen, and lying on the ground until late in the Spring, consequently Spring wheat under those circumstances, if a valuable variety could be introduced, was what they would be most anxious to obtain. The first variety of Spring wheat of any value introduced into our country was the Siberian, and shows what momentous results may proceed from small beginnings. I was engaged in the seed business in the year 1840, more however in the horticultural than in the agricultural department, and at that time was a subscriber to the *Genesee Farmer*, in which paper two varieties of Spring wheat were advertised for sale, and very highly spoken of; the one was Italian and the other Siberian. I requested one of the houses with whom I had dealings at that time to send me a bushel for trial. The year before a farmer in Otanabee had a small quantity of the same wheat sent as a present from a friend; it was sown, and succeeded so well that in two or three years there was quite a rage for it; and although I had grown it for two years or more,—as fall wheat could be grown on the front,—I had not noticed its value, and was quite astonished when I found the demand for it from the back townships, and as a proof of its value to those townships, I will state that what was told me at that time by a gentleman, one of the most extensive wheat buyers, at that time, in Port Hope, and who had for years bought the crops from the best farmers in Cavan and Monaghan: that when those farmers depended only on fall wheat, they might get from 200 to 300 bushels as their yearly produce; but after this description of spring wheat was introduced, he got from the same farms from 800 to 1,000 bushels annually. This variety, so excellent at first, after a few years degenerated, and is now hardly known; but several new kinds have been since introduced with more or less success. The variety mostly grown at present, is called Fife wheat, from the name of the person who introduced it,—and our sister township Otanabee is also entitled to the credit of introducing it as well as the Siberian. Much of our rich lands undrained, which cannot be at all depended upon for fall wheat, will produce from 25 to 35 bushels of this variety of spring wheat to the acre, with only ordinary cultivation. (and mangle all the gumbings of the millers who like fall wheat best. Such crops, even at 6d. the bushel less than fall wheat are not to be sneered at, and until some system of thorough draining is established on all our flat farms, spring wheat will be the main dependence. Before I conclude I will state another circumstance which has come under my own observation, and has been the result of a judicious changing of seeds; in fact, as well as the encouragement given by the Township Agricultural Society giving premiums for crops judged in the field. In our sister County of Durham particularly in Darlington and Clarke townships, they have for several years given premiums for the best crops of fall and spring wheat judged in the field. The conditions were that

the premium crops should be threshed and sown for seed to the members of the Society at a small advance on the market price. This system introduced them to import from the States and elsewhere the best varieties that could be procured and in conjunction with the premium system had the effect of getting them into a quality of wheat which is worth more in the market by 6 per bushel than can be realised in Cobourg, Port Hope; and I am credibly informed that the reason why lower prices are obtained in our town of Cobourg and Port Hope than Toronto and elsewhere is from the inferior quality.

Mr. WRIGHT said,—He was extremely sorry that Mr. Black was called away from the meeting on important private business; we had the benefit of his great experience on the subject of changing seeds, but at another time he had promised to address us. He had further to say the Directors of the Society intended purchasing a quantity of bone manure, and at their request he had communicated with Mr. Lamb in Toronto. The manure can be had in quantity at 18¢ per bushel, and would be given to members of the Society at that price adding charges.

#### GUELPH FARMER'S CLUB.

A meeting of this Club was held on the 15th of May. There was a good attendance of members, the President, Col. Saunders, in the chair. The subject for consideration was—"The importance of Root Crops to Farmers and the best mode of their cultivation." Mr. Parsons made the following remarks:—

"The benefits arising from a good root crop are so multifarious, and at the same time so certain, that I trust the discussion of its merits this evening will lead many here present, as well as others who are absent, to think as highly of its worth as I do, and that the cultivation of roots in future may be far more widely practised in this country than it has hitherto been.

I am well aware, sir, that there are some individuals who assert that it is too expensive to grow a crop of roots in this country. To such I would say, only give it a fair trial, and I dare hazard a trifle that, at the end of three years, or in less time, you will think as I do on the subject. Besides, I would ask such individuals if it answered their purpose to bestow expensive labor upon a wheat or any other grain crop, when the necessary outlay should not answer upon a root crop, that will ultimately pay the farmer a variety of ways, so much better. And now, Sir, I will endeavour to show, by asking a few questions, how and in what manner, the cultivation of roots will be beneficial.

Is it, then, of no consideration or profit to the farmer, to have a foul sterile piece of land brought into a good and profitable state of cultivation that will ensure him three or four successive crops, if judiciously selected, each of double the

back and weight that the same piece of land has ever yielded him before, and which a proper preparation of roots will most certainly effect? Is it of so much importance to the farmer, that he is enabled to fatten five or six, or even a larger number of cattle for the butcher, according to the roots he grows? Is it again of no importance that he can turn off a number of fat sheep in the spring of the year, when both beef and mutton fetch a remunerative price? Is it nothing, too, I would ask, if the farmer can clip from a pound-and-a-half to two pounds more wool per head from his sheep, and they at the same time daily increasing in weight, which will unquestionably be the case provided they get a portion of roots every day with their food? Is it, too, nothing in the scale, that his sheep and cattle should all be in better health for such food? and especially, is it no pleasure to a man looking through his stock, to witness to the nice sleek appearance of their skins, and the prospect of well filled udders when his cows calve, with the promise of a good supply of fat beef for the butcher at Christmas; all resulting from a well stored root-house? Again, I will ask, is it nothing that a farmer should be able to make more than half fatten his pigs with parsnips, turn-beets, carrots, mangel-wurzel and the like, which he can easily do at a very considerably less cost than feeding entirely with grain, and the meat of as fine flavor as can well be produced. But sir, if all the circumstances to which I have alluded be not enough to convince the sceptic of the profit which he must derive from a good root crop, let him take fairly into consideration the advantages which he secures from the quality of his barn yard manure. This, sir, alone will more than compensate for any extra labour that he may consider his root crop demands. But it is not upon the root crop that the expenses ought to be charged. This is a most fallacious idea, although it may not be a general one, it is entertained by many whom I have heard excuse themselves on no other ground for not having a good supply of roots. The three or four succeeding crops will bear a portion of the outlay in manuring the land into good culture. But I do not consider any charge need be made on that score, as the several advantages pointed out emanating immediately from the consumption of the roots will more than pay any extra cost incurred. There is also another fact to be considered, and that of no small importance in the result derived from a root crop, the amount of other crops saved by the bulk of vegetable matter given to your stock. I am aware, too, of another expense, and certainly one more plausible than that adverted on, which others make for not furnishing themselves with a good crop of roots. It is the difficulty they experience in attending to the crop in its different stages of growth; and, however willing I may be to admit the difficulty, were a man is short-handed and overpowered with work, which is the lot of us all at times, still, if it may be surmounted by judicious arrangement, together with a certain amount of forethought and forethought—so much needed, but not practised, I am sorry to say, in this country on some farms.

I feel, sir, that it would be well, at this point of my subject, to state, for the information of those who, unlike myself, have not been accustomed to raise roots extensively, that they have very little idea of the enormous amount of labour that is saved by getting the first weeding, hoeing, and thinning of a root crop done at the proper moment. Neglecting this for even six or seven days after that it ought to be performed, will sometimes in the mugging days of June and July, when you can almost see your roots grow, be creative fully of five times, and in some instances, I may safely say from experience, ten times the labor afterwards; besides which, if longer neglected than I have stated takes place, you will lessen the yield of your crop very materially—for the amount of food, when the weeds become very strong and numerous, that goes to support them, ought to have been consumed by the crop you have sown. This is too often thought of little importance, or rather its importance is overlooked altogether, which ends as a matter of course in a very unprofitable result. And, sir, having stated my views, very imperfectly I must admit, with regard to the importance of the root crop to the farmer, I will now proceed to consider the most profitable description of roots, and to state as far as my own experience goes, the best mode of production. I must, however, be permitted to beg that anything I may advance on the subject may not be considered as in a spirit of dictation, or with a feeling even approaching to presumption in supposing for a moment that there are not those present who have practised the root culture as extensively as I have, and who are equally, or more competent to impart information on the subject; and in this opinion I hope to be confirmed by and by from their remarks.

Sir, if it were not expected that I should go a little deeper into the manner of preparing the soil for the growth of roots, I would sum the matter up in a very few words, and if the practice were followed, the issue would, generally speaking, prove advantageous: it is this—plough deep, manure heavily, and hoe and weed well! This practice, in a favourable season, is pretty certain to secure any man in a good and profitable crop, provided he sows at a proper period; for after all much of his success must depend on that. But as I presume there are those present who would wish other suggestions to be submitted for consideration, I will endeavor to condense as much as possible what I have to say; still, I fear, from the nature of the subject, that I cannot be so brief as I could wish, when I look at the range it affords.

A man cannot do wrong in ploughing up a piece of sod or stubble as early in the fall as possible, the sod being first covered with the strongest manure he possesses, and if the soil be of an adhesive texture, I would let it remain without drawing the harrow over it, that the furrow might receive all the action of air and frost that it can get, provided the grass did not show itself in the furrows. But if a light friable soil, I would certainly harrow it and leave it as compact as possible; for I think much mischief is often done by fall ploughing light land, receiving as it does the

action of the frost, and often being drenched with heavy rain at fall and spring before the crop is sown, when intended for spring grain. I would of course run the harrow again over such land previously harrowed, as well as over the heavier soil, as early in the spring as practicable, to prevent the grass starting. You cannot afterwards well harass the soil too much by ploughing, scuffling, and harrowing, if foul or of an unkindly nature; for at every operation you destroy a vast amount of weed seed germinating, as well as foul weeds and grass which have been robbing the soil of much nutritive matter that would otherwise have gone towards feeding the plants. This treatment I consider equally applicable to land that may have been unproductive for years, and although I have experienced the pleasure and profit of growing roots on a rich and well cultivated soil, it will often be found advantageous to cultivate land less favourably circumstanced. On a very light soil, I would not fall plough the land unless I could do so very early, and had the manure ready to deposit, unless it were in a very foul state; for certainly grass and weeds will not be decomposed if turned over only a few days before the frost sets in. Such are my principle reasons for fall ploughing light land.

Mr. PARSONS, regretting that circumstances over which he had no control had prevented his going so fully into the subject as he could have wished, added some remarks in reference to the propriety of a further supply of manure in the drills previous to sowing in spring, and enlarged on the relative advantages of the different modes of sowing, giving the preference to the raised drill system when the land was in a bad condition, but otherwise approving of distributing the manure broadcast, and sowing in drills on the level surface. Mr. P. concluded by recommending, from his own experience, the raising of parsnips and sugar beets conjointly with turnips and mangel-wortzel in larger quantities than was generally practised in the vicinity, as highly advantageous to the farmer.

A long discussion ensued, in which Messrs. Parkinson, Wright, Murton, and McCrea took part, but which from the late hour at which the meeting broke up, we can only very briefly notice. Mr. Parkinson was much in favor of raising root crops largely, by which means a larger stock of cattle could be kept and fattened, an increased quantity of manure obtained, and consequently a greater amount of grain grown. He advocated a thorough preparation of the soil, and recommended that turnip sowing should take place from the 15th to the end of June, an earlier sowing exposing the young plants to greater hazard from the fly. He was in favor of ploughing immediately before sowing, and preferred sowing on level to raised drills. He preferred imported to home raised seed, and stated distinguishing characteristics of the genuine article as full grown, round, plump, and dark colored. He was much in favor of giving the plants ample space for development, preferring a moderate quantity of large size roots to a larger number of smaller sized ones.

Mr. WRIGHT was disposed to have the plants

at such a distance apart as would give the greatest return in weight irrespective of the size of the roots, and entered into calculations to show that this could not be done by raising large roots a yard apart, but that a more circumscribed space producing of from 3 to 5 lbs., would yield the most profitable return. He was rather indubious as to the cultivation of parsnips and carrots under existing circumstances.

Mr. PARSONS approved of the drills 27 inches apart, and the plants 18 inches. Mr. WRIGHT preferred having the plants 18 inches apart in all ways. In regard to storing, the only recommendations not generally noticed were those of Mr. PARSONS, to let the roots lie four or five days to get thoroughly dry before putting, and to cover with a layer of straw from 6 to 9 inches deep laid on like thatch; and that of Mr. McCREA, to place air tubes in the pits to let off steam.

Thanks were voted to Mr. PARSONS for his address, to the Press for their attendance and attention in reporting the proceedings of the Club, and to the President.—Proceeds.

#### PROCEEDINGS OF THE BOARD OF AGRICULTURE

The Upper Canada Board of Agriculture, according to notice from the Secretary, met at its office in Toronto on Wednesday the 3rd of March. The members present were:—E. Thomson, Esq., President, Hon. Adam F. F. Thomson, John Harland, and R. L. Denison, Esq. Professor Buckland, and Mr. Sheriff Rutledge.

After the minutes of the last meeting had been read and approved, a number of communications which had been received since the last meeting were laid before the Board. A communication was received from the Bureau of Agriculture stating that the four members who had retired at the ballot, viz: Messrs. Thomson, Denison, F. Thomson, and Harland, had been re-elected by vote of the County Societies. At a subsequent stage of the proceedings Mr. Thomson was re-elected President of the Board for the current year.

The Treasurer's Balance Sheet was submitted to the Board, showing that according to the accounts as previously audited, the amount received by the association, including the balance of the previous year of £175 15s. 7½d., was, for the financial year, commencing before the Exhibition at Toronto, and ending before that at Hamilton £2613 7s. 6d; the expenditure for the year, including outlay on the Experimental Farm, and expenses of the Board, and expenditure on account of the Exhibition at Toronto was £2009 2s. 6d. of which £1236 19s. was paid in premises at Toronto, leaving a balance on hand at the close of the last financial year of £604 4s. 7d.

A communication was received from Mr. F. Thomson of Hamilton, with the balance sheet of the Board of Agriculture of Hamilton for the expenditure on the Exhibition in that city, showing that the amount at the disposal of the Committee for the Exhibition had been £385, and their expenditure £376 12s. 10d., leaving a balance on hand of £8 7s. 2d.

A communication was received from certain gentlemen at London in reference to the next Provincial Exhibition to be held in that Town on the 26th to 29th September next. The matter was taken into consideration by the Board and the following five gentlemen were named on the part of the Board as members of the Local Committee at London to make arrangements in view of the Exhibition, viz: Jno. B. Askin, Esq., President of the County of Middlesex Agricultural Society, Thos. C. Dixon, Esq., M.P.P., John Stachard, Esq., Warden of the County, Marcus Holmes, Esq., Mayor of London, and J. B. Stathley, Esq. The Secretary was authorised to communicate with the committee, and to state that some members of the Board will meet them shortly at London to make arrangements for the Exhibition.

Some matters of detail then came before the Board, which were severally disposed of, and the Secretary then read a sketch of a report of the proceedings of the Board and Association to be submitted to Parliament, which was approved and at half-past four the Board adjourned till the next day.

#### SECOND DAY.

Thursday, May 4th.

The Board resumed this morning at 9 o'clock, the same members being present as on the preceding day.

The first matter taken up was the revision of the Prize list for the next exhibition. The items were taken into consideration *seriatim*, and some of the premiums were increased considerably in number and amount, the principal increase being in the premiums for cattle. The matter occupied the time of the Board for several hours.

A resolution was then proposed, and after considerable discussion, carried, to the effect that as certain seeds are particularly liable to deterioration in this climate, it would be advisable for the Board to import a quantity of Oats, Barley, Peas and Spring Vetches, &c., from the United Kingdom, and distribute the same under certain regulations to the county societies at cost price.

The question of the improvement of the Experimental Farm on the University grounds having been taken up and discussed, it was resolved to proceed with the same immediately, and that the President, Secretary, and Treasurer have a discretionary power to consult with the Bursar, Mr. Buchan, and Mr. Cumberland, Architect, in reference to the erection of buildings.

The question of the importation of thoroughbred and improved stock, which has been repeatedly urged upon the Board, having been taken up and considered, and several communications upon the subject submitted, a resolution after full discussion was finally passed, not to make any direct investment this year of the funds of the Association with that object, but with the view of encouraging importation, that the Association should at the London Exhibition award to every male animal which shall be deemed worthy of the first prize, and which shall have been imported since the last Exhibition, double the amount of the Prize offered in the list.

The circular issued by the President to the county Societies, in reference to the Sydenham Exhibition, was approved by the Board. The President stated that he had received several answers from county societies in reply to the circular, and it appeared from the country papers that the matter had been taken up in several counties which had not yet communicated directly with him.

The proposal of Mr. Sheriff Treadwell, President of the Provincial Agricultural Association, to award certain Premiums for farms and gardens in the County of Prescott having been considered, the Board approved of the same, and were of opinion that the proposal of Mr. Treadwell is highly creditable to him, and will no doubt be of much interest, and productive of good results in the County where the prizes are to be awarded.

After the transaction of some further business, the Board adjourned.

#### POTATO CULTIVATION.

The following Communication, addressed to Lord Palmerston from the British Consul at Fiume, Illyria, is interesting, and may be of value to farmers. It may be that the thorough drying of cuttings for seed in the autumn, and keeping them over winter to plant in spring, may have a beneficial influence on the constitution of the plant:—

“British Consulate at Fiume,  
Sept. 30, 1853.

“My Lord—I humbly beg leave to address your lordship, at the request of a Mr. A. Frangi, a Tuscan gentleman, who is very desirous to lay before your lordship a sample of potatoes, this year's produce, on an experiment of his made from cuttings of diseased ones. As they prove to be of excellent quality, it is of great utility and benefit to agricultural interests that his method adopted to preserve and reproduce a crop of this nourishing food be explained; and, by laying this specimen before your lordship, he trusts you will find an interest therein to call the attention of agriculturists to follow up the experiment, in order to successfully preserve to themselves the means of conserving the seed necessary to insure them a crop of fine farinaceous and almost equal-sized fruit, and at an early period of the year.—Mr. Frangi last year finding his stock of potatoes fast decaying from disease, resolved on drying them, and had them placed near to a retort on his chemical works, (for he had read in the papers that in Russia something of the kind had been done) and in a dried state he continued the consumption for his house use during the winter; and in the spring, finding a beginning of vegetation, he had them cut up and planted separately from other potatoes, but near thereto. The dried cuttings were rather backward in breaking the

earth, after which their growth was manifestly more rapid and luxuriant than the other plants. They were precisely treated the same in hoeing and weeding, and on the 25th July were gathered, and produced an abundant and equal-sized potato. The other crop from the common cuttings did by no means produce the like, and have already given signs of decay as before; but not so the produce of the dried cuttings. The soil in which both sorts were planted is of a rather stiff, stony, clayish compost. The spring was very damp, the summer, however, proved very dry, yet the verdure of the dried cuttings maintained their verdure, which faded and perished with the other kind. Mr. Fraugi has forwarded a similar sample of the potatoes unto the Marquis Rodolfi, President of the Tuscan Agricultural Committee, for his information, and he begs your lordship will excuse the liberty he takes in sending his sample, for he trusts your lordship will find an interest in this his experiment, by which the produce of a fine healthy fruit is so far secured to man. He begs a repetition of his method may be made in Great Britain, and he confides as favorable a result will ensue as here; thereby conserving the means of procuring an abundant crop for the following years of this most nourishing plant, and must be of great interest to the population of the United Kingdom. I most respectfully beg to inform your lordship that the sample-box is on its passage home in the British schooner Sprightly, of London, John Paul master, bound to Gainsborough from this port, with a cargo of oak-staves; to be forwarded on arrival.

"I have the honor to be, my lord,  
Your most obedient and humble servant,  
"CHARLES T. HILL, Vice-Consul."

## Horticulture.

### PRUNING ORCHARDS.

(From the *New England Farmer*.)

Trees properly planted require attention during the first few years to form a well balanced top, taking out some and shortening other limbs.—After this the pruning required is very trifling—in most trees none during the ordinary life of man. But in this wicked world we must take things as they are and not as they should be, or would have been, with proper early attention and culture, and as far as practicable, remedy evils already existing.

The most common error in pruning is thinning out the whole interior or central portion of a tree to "let in the sun," thus destroying one-half of the bearing branches, leaving long, naked limbs producing fruit only at the ends beyond the reach of anything larger than a raccoon, without the aid of long ladders, lessening the quantity of fruit and injuring the quality. Apples protected by leaves are much better, larger and fairer, (being grown as Nature designed) than when grown on the ends of long branches, exposed to the sun in July and August. In the cool, moist and cloudy

atmosphere of England, this course is not proper but necessary, some of our American apples even requiring the trees to be trained to wall to ripen their fruit, but the course practised and taught by the best English cultivators is their climate, not for ours. A tree properly trained for them in a few years may be ruined by the suns and cold winters of New England.

Trees require different training, depending on varieties. A course proper to perfect the Northern Spy or Newton Pippin is wrong for the Rhode Island Greening and northern varieties generally.

When old trees are grafted, a very different course of thinning out is necessary, and generally during the first few years it is necessary to cut out many of the grafts. It is of little use to top old trees standing on worn out soils (as is the case with most of our orchards) without first cultivating, manuring and supplying alkalis, of which the soil has become exhausted; but as this article is already quite too long, I shall say nothing of cultivation.

When a tree throws out sprouts on its branches it is a sure indication of disease, and the natural remedy is to leave the best to form new limbs and gradually remove the old branches. If this is done with the first sprouts, it will be necessary to leave very few, and cut out old branches accordingly. Old decayed trees which have been entirely neglected, when filled with vigorous shoots, can in a few years have entire tops by reserving the strongest in proper places and cutting out all the old limbs. These, every man understands, should be cut close to the growing limbs, and so as to heal well, and covered with some composition. The best I have ever tried is composed of tar thickened with bricks and applied when warm with a brush. Graft wax or Gum Shellac dissolved in Alcohol is likely to peel off on large limbs.

The time for general pruning in New England is in June or early in July, after the first growth. The sap is then rapidly formed, and descends from the leaves so that all fresh cuts commence closing immediately. Large dead and diseased limbs may be cut through the summer, September and October, if covered with composition. All winter pruning is bad. February, March and April are the worst three months in the year for pruning any trees. Sap soon after ascends from the fresh wounds made by cutting large limbs, poisoning and killing the bark, and if a general pruning is then done, it is very destructive.

I am aware that winter or early spring pruning is advocated by many very intelligent men, but in a country where every winter the thermometer falls from 10° to 30° below zero it is far better to let trees alone. If any one will notice an orchard so treated (and it is often done)—see it again in August with the black and dead bark on limbs and bodies caused by flow of sap, and mark progress a few years, he must be satisfied it can be as well to cut a tree at the roots and remove entire, as to cut off one-fourth of its top in winter or early spring.

C. GODDICH.

# RULES AND REGULATIONS

OF THE

EXHIBITION OF THE AGRICULTURAL ASSOCIATION OF U. C.,

TO BE HELD

IN THE TOWN OF LONDON, SEPTEMBER 26 TO 29, 1854,

WITH THE

## LIST OF PRIZES.

### OFFICERS—1854.

#### President :

C. P. Treadwell, Esq., L'Original.

#### 1st Vice-President :

David Christie, Esq., M.P.P., Brantford.

#### 2nd Vice-President :

William Niles, Esq., London.

#### Ex-Presidents :

E. W. Thomson, Esq., Toronto.

Hon. Adam Fergusson, Woodhill.

H. Ruttan, Esq., Cobourg.

J. B. Marks, Esq., Kingston.

T. C. Street, Esq., M.P.P., Niagara Falls.

Wm. Matthie, Esq., Brockville.

*Treasurer* : R. L. Denison, Esq., Toronto.

*Secretary* : George Buckland, Esq., Toronto.

*Consulting Chemist* : Professor Croft, of University College.

*Seedsman* : Mr. James Fleming, Toronto.

*Bankers* : Bank of Upper Canada.

### THE BOARD OF AGRICULTURE,

Consisting of the following Members, constitutes the Council of the Association between the Annual Meetings thereof :—

E. W. Thomson, Esq., *President*, Toronto.

Hon. John Rolph, Minister of Agriculture.

C. P. Treadwell, Esq., President of the Agricultural Association, L'Original.

Hon. Adam Fergusson, Woodhill.

Henry Ruttan, Esq., Cobourg.

R. L. Denison, Esq., Treasurer, Toronto.

David Christie, Esq., M.P.P., Brantford.

J. B. Marks, Esq., Kingston.

John Harland, Esq., Guelph.

George Ruckland, Esq., *Secretary*, Toronto.

### MEMBERS OF LOCAL COMMITTEE AT LONDON.

B. Askin, Esq., President Agricultural Society of Middlesex.

Mrs. C. Dixon, Esq., M.P.P., London.

John Scatcherd, Esq., Warden of Middlesex.

Marcus Holmes, Esq., Mayor of London.

J. B. Strathy, Esq.

T. Locker, Esq., Malahide, Warden of Elgin.

G. Alexander, Esq., President Agricultural Society, Oxford.

Wm. Balkwell, Esq., London Township.

John Styles, Esq. " "

Wm. Moore, Esq. " "

George Robson, Esq. " "

James Quarry, Esq., McGillivray.

Wm. Barker, Esq., Town of London.

Wm. J. Fuller, Esq. " "

John Curling, Esq. " "

John B. Askin, Esq., *Chairman*.

J. B. Strathy, *Secretary and Treasurer*.

### RULES AND REGULATIONS :

*Extract from the By-Laws of the Association :—*

"The Members of the Agricultural Societies of the several Townships within the County or United Counties wherein the Annual Exhibition may be held, and the members of the Society of the said County or United Counties, shall be also members of the Association for that year, and have badges accordingly; provided the Agricultural Societies of the said Townships, or the Society of the said County or United Counties, shall devote their whole funds for the year, including the Government Grant, in aid of the Association. The Office-bearers of all County Societies shall have badges of free entrance during the Show."

1. The payment of 5s. and upwards constitutes a person a member of THE AGRICULTURAL ASSOCIATION OF UPPER CANADA for one year; and £2 10s for life, when given for that specific object, and not as a contribution to the local funds.

2. No one but a member will be allowed to compete for prizes except in classes U. W. Y. and Z.

3. All stock and Articles intended for Exhibition must be entered in the Secretary's Books at London, before 8 o'clock on *Tuesday evening* the 26th of September; if by letter the postage must be paid, and the person entering must remit 5s., being the amount of subscription constituting a member.

*Blood Horses and Thorough-bred Cattle* must be entered, and have their full Pedigrees properly attested and sent to the Secretary in Toronto, *not later than Wednesday, September 20th*. No animal will be allowed to compete as *pure bred*, unless they possess regular Stud and Herd Book pedigrees, or satisfactory evidence be produced that they are directly descended from such stock.

Parties making entries by letter are requested to be particular in specifying the different articles they wish entered, that is, giving the class in which each is found in the Prize List, with the age of animals, the quantity or particular variety of other articles, &c. Entries will be taken at Toronto at any time up to the 20th of September. After the 21st they will be taken at London. If the applications for entries are received in sufficient time the cards will be forwarded to the address of the parties by mail; if not, they will be ready for them in London. Parties are requested to make their entries at as early a date as possible.

4. Badges from the Treasurer's Office will be furnished each Member, which will admit himself only free to every department of the Exhibition during the Show. Life Members admitted *free*.

5. Tickets of admission to those who are not members, 7½d. each time of admission. Carriages, including drivers 5s.; passengers to pay 7½d. each. Horsemen to pay 1s. 3d. each admission.

6. Every article exhibited for competition must be the growth, produce or manufacture of Canada, except Classes Y and Z. Live Stock for breeding must be the property of persons residing in Canada. All premiums for articles, except Stock, entered in competition, are to be awarded to the manufacturers or producers only.

7. Discretionary Premiums will be awarded for such articles as may be considered worthy by the Judges, although not enumerated in the list, and the Directors will determine the amount of premium.

8. In the absence of competition in any of the Classes, or if the Stock or Articles exhibited of inferior quality, the Judges will exercise the discretion as to the value of the premiums to recommend.

9. The Judges, Competitors, and Officers of the Association only will be permitted to enter the Show Grounds until 2 o'clock, P.M. of *Wednesday, September 27*, at which hour Members will be admitted. Non-members will be admitted on *Thursday and Friday mornings* at 8 o'clock.

10. No Articles or Stock exhibited will be allowed to be removed from the grounds till the awards are made, or without the permission of the President, under the penalty of losing the premiums. An Auctioneer will be on the spot after the premiums are announced, and every facility afforded for the transaction of business.

11. Delegates, Judges, and Members of the Press, are requested and expected to register themselves at the Secretary's Office immediately on their arrival.

12. The Judges to meet at the Secretary's Office on the Grounds, on *Wednesday morning* at 9 o'clock precisely, to make arrangements for entering immediately upon their duties.

13. It being essential to the satisfactory working of the Exhibition that all articles be entered and forwarded in reasonable time, all such articles arrive on *Wednesday morning*, and not previously entered, will be charged an entrance fee of 5s. each. *All entries will positively close Wednesday at 9 o'clock*. Articles arriving afterwards will be admitted into the Show Grounds but they will be entitled to compete only for *Discretionary Premiums*.

14. Arrangements will be made for Agricultural Lectures or Discussions during the evening of *Wednesday and Thursday* of the Show week.

15. The Treasurer will be prepared to commence paying the premiums immediately after the successful competitors have been declared and parties who shall have prizes awarded there are particularly requested to apply for them before leaving London, or leave a written order with some person to receive them—stating the articles for which prizes are claimed.

The Local Committee will make arrangements with Steamboat and Railway proprietors for the Show at reduced rates; also with the Hotel and Boarding House keepers for accommodating visitors at their ordinary fixed charges. For particulars will be published hereafter.

**PRIZE LIST.**

**HORSES.**

**CLASS A.—BLOOD HORSES.**

1 Best thorough bred Stallion	£7 10
2d do	5 0
3d do	2 10
2 Best thorough bred 3 year old Stallion	5 0
2d do	3 0
3d do	1 10
3 Best thorough bred 3 year old Filly	4 0
2d do	2 10
3d do	1 10
4 Best thorough bred 2 year old Filly	3 0
2d do	2 0
3d do	1 0
5 Best thorough bred Mare and Foal	5 0
2d do	3 0
3d do	1 0

Pedigree to be produced.

**CLASS B.—AGRICULTURAL HORSES.**

1 Best Stallion for Agricultural purposes	£7 10
2d do	5 0
3d do	2 10
2 Best Heavy Draught Stallion	7 10
2d do	5 0
3d do	2 10
3 Best 3 year old Stallion	5 0
2d do	3 0
3d do	1 10
4 Best 2 year old Stallion	3 0
2d do	2 0
3d do	1 0
5 Best 3 year old Filly	4 0
2d do	2 10
3d do	1 10
6 Best 2 year old Filly	3 0
2d do	2 0
3d do	1 0
7 Best span Matched Carriage Horses	4 0
2d do	3 0
3d do	1 10
8 Best Span of Draught Horses	4 0
2d do	3 0
3d do	1 10
9 Best Brood Mare and Foal, or evidence that the foal has been lost	5 0
2d do	3 0
3d do	1 10
10 Best Saddle Horse	2 0
2d do	1 10
3d do	1 0

**CATTLE.**

**CLASS C.—DURHAMS.**

1 Best Bull	10 0
2d do	6 0
3d do	4 0
4th do	2 0
2 Best 3 years old Bull	8 0
2d do	5 0
3d do	3 0
4th do	1 10
3 Best 2 years old Bull	6 0
2d do	4 0
3d do	2 5
4th do	1 5
4 Best 1 year old Bull	5 0
2d do	3 0
3d do	2 0
4th do	1 0

5 Best Bull Calf (under one year)	4 0
2d do	2 10
3d do	1 10
4d do	15
6 Best Cow	5 0
2d do	3 0
3d do	2 0
4th do	1 5
7 Best 3 years old Cow	4 0
2d do	2 10
3d do	1 10
4th do	1 0
8 Best 2 years old Heifer	3 0
2d do	2 0
3d do	1 5
4th do	0 15
9 Best 1 year old Heifer	2 10
2d do	1 10
3d do	1 0
4th do	0 10
10 Best Heifer Calf (under 1 year)	1 10
2d do	1 0
3d do	0 10
4th do	0 5

N.B.—A Certificate of HERD BOOK PEDIGREES will be required of all animals in the Durham Class. The Pedigrees of others should be as full and correct as possible.

**CLASS D.—DEVONS.**

1 Best Bull	£10 0
2d do	6 0
3d do	4 0
4th do	2 0
2 Best 3 years old Bull	8 0
2d do	5 0
3d do	3 0
4th do	1 10
3 Best 2 years old Bull	6 0
2d do	4 0
3d do	2 5
4th do	1 5
4 Best 1 year old Bull	5 0
2d do	3 0
3d do	2 0
4th do	2 0
5 Best Bull Calf (under one year)	4 0
2d do	2 10
3d do	1 10
4th do	15
6 Best Cow	5 0
2d do	3 0
3d do	2 0
4th do	1 5
7 Best 3 year old Cow	4 0
2d do	2 10
3d do	1 10
4th do	1 0
8 Best 2 years old Heifer	3 0
2d do	2 0
3d do	1 5
4th do	15
9 Best 1 year old Heifer	2 10
2d do	1 10
3d do	1 0
4th do	10
10 Best Heifer Calf (under one year)	1 10
2d do	1 0
3d do	10
4th do	5

CLASS E.—HEREFORDS.

1 Best Bull	£10 0
2d do	6 0
3d do	4 0
4th do	2 0
2 Best 3 year old Bull	8 0
2d do	5 0
3d do	3 0
4th do	1 10
3 Best 2 years old Bull	6 0
2d do	4 0
3d do	2 5
4th do	1 5
4 Best 1 year old Bull	5 0
2d do	3 0
3d do	2 0
4th do	1 0
5 Best Bull Calf (under 1 year)	4 0
2d do	2 10
3d do	1 10
4th do	0 15
6 Best Cow	5 0
2d do	3 0
3d do	2 0
4th do	1 5
7 Best 3 years old Cow	4 0
2d do	2 10
3d do	1 10
4th do	1 0
8 Best 2 years old Heifer	3 0
2d do	2 0
3d do	1 5
4th do	1 0
9 Best 1 year old Heifer	2 10
2d do	1 10
3d do	1 0
4th do	10
10 Best Heifer Calf (under 1 year)	1 10
2d do	1 0
3d do	10
4th do	5

For the Best Hereford Bull, of any age not exceeding 4 years, that has several cows in the Province this season. Prize offered by Baron de Longueil 10 0

CLASS F.—AYRSHIRES.

1 Best Bull	£10 0
2d do	6 0
3d do	4 0
4th do	2 0
2 Best 3 years old Bull	8 0
2d do	5 0
3d do	3 0
4th do	1 10
3 Best 2 years old Bull	6 0
2d do	4 0
3d do	2 5
4th do	1 5
4 Best 1 year old Bull	5 0
2d do	3 0
3d do	2 0
4th do	1 0
5 Best Bull Calf (under one year)	4 0
2d do	2 10
3d do	1 10
4th do	0 15
6 Best Cow	5 0
2d do	3 0
3d do	2 0
4th do	1 5

7 Best 3 years old Cow	4 0
2d do	2 10
3d do	1 10
4th do	1 0
8 Best 2 years old Heifer	3 0
2d do	2 0
3d do	1 5
4th do	15
9 Best 1 year old Heifer	2 10
2d do	1 10
3d do	1 0
4th do	10
10 Best Heifer Calf (under 1 year)	1 10
2d do	1 0
3d do	10
4th do	5

DIPLOMAS will be awarded to the *Breeders* or *Importers* of Bulls and Stallions which take *First Prizes*, when their names and residences are given.

The Judges shall ascertain, in deciding on Bull Calves in any of the foregoing classes whether the animal has been suckled or raised by pail and make allowance accordingly.

CLASS G.—GRADE CATTLE.

1 Best Cow	£5 0
2d do	3 0
3d do	2 0
4th do	1 5
2 Best 3 years old Cow	4 0
2d do	2 10
3d do	1 10
4th do	1 0
3 Best 2 years old Heifer	3 0
2d do	2 0
3d do	1 5
4th do	15
4 Best 1 year old Heifer	2 10
2d do	1 10
3d do	1 0
4th do	10
5 Best Heifer Calf (under one year)	1 10
2d do	1 0
3d do	10
4th do	5

A certificate to be produced to show the breeding of animals in Class G.

CLASS H.—FAT AND WORKING CATTLE, ANY BREED.

1 Best Ox or Steer	£7 10
2d do	5 0
3d do	3 0
2 Best Cow or Heifer	7 10
2d do	5 0
3d do	3 0
3 Best Yoke of Working Oxen	5 0
2d do	3 0
3d do	2 0
4 Best Team of Oxen, not less than 10 Yoke, from one Township, the property of any number of persons	10 0

Young cattle may compete, if the exhibitor thinks fit, in an older class than that to which they properly belong, but no animal will be allowed to compete in more than one of the foregoing classes.

CLASS I.—SHEEP.

*Leicesters.*

1 Best Ram, two shears and over	£4 9
2d do	2 10
3d do	1 0
2 Best shearing Ram	4 0
2d do	2 10
3d do	1 0
3 Best Ram Lamb	2 0
2d do	1 0
3d do	1 0
4 Best 2 Ewes, two shears and over	4 0
2d do	3 0
3d do	1 10
5 Best 2 shearing Ewes	3 0
2d do	2 0
3d do	1 0
6 Best 2 Ewe Lambs	1 10
2d do	1 0
3d do	10

*Southdowns.*

7 Best Ram, 2 shears and over	4 0
2d do	2 10
3d do	1 0
8 Best shearing Ram	4 0
2d do	2 10
3d do	1 0
9 Best Ram Lamb	2 0
2d do	1 0
3d do	10
10 Best 2 Ewes, two shears and over	4 0
2d do	3 0
3d do	1 10
11 Best 2 shearing Ewes	3 0
2d do	2 0
3d do	1 0
12 Best 2 Ewe Lambs	1 10
2d do	1 0
3d do	10

*Merinos and Saxons.*

13 Best Ram, two shears and over	4 0
2d do	2 10
3d do	1 0
14 Best shearing Ram	4 0
2d do	2 10
3d do	1 0
15 Best Ram Lamb	2 0
2d do	1 0
3d do	10
16 Best 2 Ewes, two shears and over	4 0
2d do	3 0
3d do	1 10
17 Best 2 shearing Ewes	3 0
2d do	2 0
3d do	1 0
18 Best 2 Ewe Lambs	1 10
2d do	1 0
3d do	10

*Fat Sheep.*

19 Best two Fat Wethers	3 0
2d do	2 0
3d do	1 0
20 Best 2 Fat Ewes	3 0
2d do	2 0
3d do	1 0

CLASS J.—FIGS.

*Large Breed.*

1 Best Boar, 1 year and over	£5 0
2d do	3 0
3d do	2 0

2 Best Breeding Sow, 1 year and over	3 0
2d do	2 0
3d do	1 0
3 Best Boar of 1854	3 0
2d do	2 0
3d do	1 0
4 Best Sow of 1854	2 0
2d do	1 10
3d do	1 0

*Small Breed.*

5 Best Boar, 1 year and over	5 0
2d do	3 0
3d do	2 0
6 Best Breeding Sow, 1 year and over	3 0
2d do	2 0
3d do	1 0
7 Best Boar of 1854	3 0
2d do	2 0
3d do	1 0
8 Best Sow of 1854	2 0
2d do	1 10
3d do	1 0

In this class the precise age of the animal is to be stated on the cards.

With the view of encouraging the importation of Improved Stock, double the amount of Premium offered in the list will be paid to the exhibitor of any male animal which shall receive the first Prize, and which shall have been imported since the last Provincial Exhibition.

CLASS L.—POULTRY.

1 Best pair of Dorkings	£1 0
2d do	10
2 Best pair of Polands	1 0
2d do	10
3 Best pair Large Breed Fowls	1 0
2d do	0 10
4 Best pair of Jersey Blues	1 0
2d do	0 10
5 Best Pair of Cochins China, Malay or Chittetong Fowls	1 0
2d do	0 10
6 Best pair of Bantams	1 0
2d do	0 10
7 Best pair of Turkeys [White and Colored]	1 0
2d do	0 10
8 Best pair large Geese	1 0
2d do	0 10
9 Best pair of Muscovy Ducks	1 0
2d do	0 10
10 Best pair Common Ducks	1 0
2d do	0 10
11 Best pair of Guinea Fowls	1 0
2d do	0 10
12 Best collection of Pigeons	1 0
2d do	0 10
13 Best lot of Poultry owned by Exhibitor	2 0

CLASS L.—AGRICULTURAL PRODUCTIONS.

*The Canada Company's Prize of £25 0*

1. For the best 25 Bushels of Fall Wheat, the produce of Canada West, being the growth of the year 1854. 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 this Association, for distribution to the County Societies, for seed.	
2d do [by the Association]	10 0
3d do	5 0

The winners of the 2d and 3rd premiums will retain the wheat. Exhibitors in this class will be required to state the nature of the soil, mode of preparation, time of sowing, amount of produce per acre, and the kind and quantity of manure applied. Exhibitors in this class will not be allowed to compete for premiums offered for wheat consisting of two bushels.

2	Best 2 bushels of Winter Wheat	£2 10
	2d do	1 15
	3d do	1 5
3	Best 2 bushels Spring Wheat	2 10
	2d do	1 15
	3d do	1 5
4	Best 2 bushels Barley (2 rowed)	1 10
	2d do	1 0
	3d do	0 10
5	Best 2 bushels (6 rowed)	1 10
	2d do	1 0
	3d do	0 10
6	Best 2 bushels Rye	1 10
	2d do	1 0
	3d do	0 10
7	Best 2 bushels of Oats (white)	1 10
	2d do	1 0
	3d do	0 10
8	Best do (black)	1 10
	2d do	1 0
	3d do	0 10
9	Best 2 bushels of Field Peas	1 10
	2d do	1 0
	3d do	0 10
10	Best 2 bushels of Marrowfat Peas	1 10
	2d do	1 0
	3d do	0 10
11	Best 2 bushels Indian Corn in the ear (white)	1 10
	2d do	1 0
	3d do	0 10
12	Best 2 do (yellow)	1 10
	2d do	1 0
	3d do	0 10
13	Best bushel of Timothy Seed	2 0
	2d do	1 10
	3d do	1 0
14	Best bushel of Clover Seed	2 0
	2d do	1 10
	3d do	1 0
15	Best Bushel Hemp Seed	1 10
	2d do	1 0
	3d do	0 10
16	Best bushel Flax Seed	1 10
	2d do	1 0
	3d do	0 10
17	Best bushel Mustard Seed	1 0
	2d do	0 15
	3d do	0 10
18	Best Swedish Turnip Seed, from transplanted bulbs, not less than 20 lbs.	1 10
	2d do	1 0
	3d do	0 10
19	Best bale of Hops, not less than 112 lbs.	5 0
	2d do	3 0
	3d do	2 0
20	Best Bushel Pinkeye Potatoes	0 15
	2d do	0 10
	3d do	0 5
21	Best bushel of any other sort	0 15
	2d do	0 10
	3d do	0 5
22	Best bushel Swede Turnips	0 15
	2d do	0 10
	3d do	0 5
23	Best bushel of White Globe Turnips	0 15
	2d do	0 10
	3d do	0 5

24	Best bushel of Aberdeen Yellow Turnips	0 15
	2d do	0 10
	3d do	0 5
25	Best 20 roots Red Carrots	0 15
	2d do	0 10
	3d do	0 5
26	Best 20 roots White or Belgian Carrots	0 15
	2d do	0 10
	3d do	0 5
27	Best 12 roots Mangel Wurzel (Long-red)	0 15
	2d do	0 10
	3d do	0 5
28	Best 12 roots Yellow Globe Mangel Wurzel	0 15
	2d do	0 10
	3d do	0 5
29	Best 12 roots of Khol Rabi	0 10
	2d do	0 5
30	Best 12 roots of Sugar Beet	0 15
	2d do	0 10
	3d do	0 5
31	Best 20 roots of Parsnips	0 15
	2d do	0 10
	2d do	0 5
32	Best 20 roots of Chicory	0 10
	2d do	7 6
	3d do	0 5
33	Best 4 large Squashes for Cattle	0 15
	2d do	0 10
	3d do	0 5
34	Best 20 lbs. Tobacco, growth of Canada West	1 0
	2d do	0 10
35	Best Broom Corn Brush, 28 lbs.	1 0
	2d do	0 15
	3d do	0 10
36	Best 2 Pumpkins (yellow field)	0 10
	2d do	7 6
	3d do	0 5
37	Best Peck of White Field Beans	0 15
	2d do	0 10
	3d do	0 5

*The Canada Company's Prize for Flax.*

38	Best 112 lbs. of Flax	£6 0
	2d do (by the Association)	4 0
	3d do	2 0

*The Canada Company's Prize for Hemp.*

39	Best 112 lbs. of Hemp	4 0
	2d do (by the Association)	3 0
	3d do	1 10

The roots in the above class to be of field, not garden culture.

CLASS M.—HORTICULTURAL PRODUCTS.

1	Best 20 varieties of Apples, named (six of each)	£0 15 0
	2d do	10 0
	2d do	5 0
2	Best 12 Table Apples, named (Fall sort)	10 0
	2d do	7 6
	3d do	5 0
3	Best 12 Table Apples, named (Winter sort)	10 0
	2d do	7 6
	3d do	5 0
4	Best 12 Baking Apples, named	10 0
	2d do	7 6
	3d do	5 0
5	Best 20 variety of Pears, named (3 of each)	15 0
	2d do	10 0
	3d do	5 0
6	Best 12 Table Pears, named (Fall sort)	10 0
	2d do	7 6
	3d do	5 0

7 Best 12 Table Pears, named (Winter sort)	10 0	31 Best 4 sorts Winter Cabbage, including	
2d do	7 6	Savoy	15 0
3d do	5 0	2d do	10 0
8 Best dozen Plums (Dessert) named	10 0	3d do	5 0
2d do	7 6	32 Best 12 Barrots for Table	10 0
3d do	5 0	2d do	7 6
9 Best 12 baking Plums, named	10 0	3d do	5 0
2d do	7 6	33 Best 12 early Horn Carrots	10 0
3d do	5 0	2d do	7 6
10 Best quart of Damsons (English)	10 0	3d do	5 0
2d do	7 6	34 Best 12 roots of White Celery	10 0
3d do	5 0	2d do	7 6
11 Best 12 Peaches, grown in hot house,	10 0	3d do	5 0
2d do	7 6	35 Best 12 roots of Red Celery	10 0
3d do	5 0	2d do	7 6
12 Best 12 Peaches grown in open air, named	10 0	3d do	5 0
2d do	7 6	36 Best dozen Capsicums	10 0
3d do	5 0	2d do	7 6
13 Best 20 varieties of Peaches grown in open		3d do	5 0
air (3 of each)	15 0	37 Best collection Capsicums	10 0
2d do	10 0	2d do	7 6
3d do	5 0	3d do	5 0
14 Best 12 Quinces	10 0	38 Best 6 Egg Plants, purple	10 0
2d do	7 6	2d do	7 6
3d do	5 0	3d do	5 0
15 Best 4 clusters of Grapes (hot house)	10 0	39 Best 12 Blood Beets	10 0
2d do	7 6	2d do	7 6
3d do	5 0	3d do	5 0
16 Best 4 clusters Black Hamburgh (hot house)	10 0	40 Best Peck of White Onions	10 0
2d do	7 6	2d do	7 6
3d do	5 0	3d do	5 0
17 Best 4 clusters Black Grapes, grown in		41 Best Peck of Yellow Onions	10 0
open air	10 0	2d do	7 6
2d do	7 6	3d do	5 0
3d do	5 0	42 Best Peck of Red Onions	10 0
18 Best 4 clusters white Grapes grown in		2d do	7 6
open air	10 0	3d do	5 0
2d do	7 6	43 Best 12 White Turnips, Table	10 0
3d do	5 0	2d do	7 6
19 Best 4 clusters Grapes, of any others sorts	10 0	3d do	5 0
2d do	7 6	44 Best Peck of Early Potatoes for seed	10 0
3d do	5 0	2d do	7 6
20 Best and heaviest 2 bunches of Grapes	10 0	3d do	5 0
2d do	7 6	45 Best and greatest variety of Early Potatoes	15 0
3d do	5 0	2d do	10 0
21 Best collection of Grapes, grown in open air	15 0	3d do	5 0
2d do	10 0	46 Best 4 Squashes, Table	10 0
3d do	5 0	2d do	7 6
22 Best Water Melon	10 0	3d do	5 0
2d do	7 6	47 Best and greatest variety of Vegetables	10 0
3d do	5 0	2d do	7 6
23 Best Musk Melon of any sort	10 0	3d do	5 0
2d do	7 6	48 Best dozen Dahlias, named	10 0
3d do	5 0	2d do	7 6
24 Best 12 Tomatoes	10 0	3d do	5 0
2d do	7 6	49 Best and largest and collection of Dahlias	1 0 0
3d do	5 0	2d do	10 0
25 Best assorted collection of Tomatoes	15 0	3d do	7 6
2d do	10 0	50 Best Bouquet of Cut Flowers	10 0
3d do	5 0	2d do	7 6
26 Best 12 roots of Salsify	10 0	3d do	5 0
2d do	7 6	51 Best Bouquet for Table	10 0
3d do	5 0	2d do	7 6
27 Best 4 heads Brocoli	10 0	3d do	5 0
2d do	7 6	52 Best collection of Green House Plants,	
3d do	5 0	not less than twelve specimens	1 0 0
28 Best 4 heads Cauliflower	10 0	2d do	15 0
2d do	7 6	3d do	10 0
3d do	5 0	53 Best and greatest variety of Green House	
29 Best 4 heads Cabbage (Summer)	10 0	Plants	1 0 0
2d do	7 6	2d do	10 0
3d do	5 0	3d do	7 6
30 Best 4 heads Cabbage (Winter)	10 0	54 Best collection of Annuals in bloom	10 0
2d do	7 6	2d do	7 6
3d do	5 0	3d do	5 0

55 Best 6 Coxcombs	10 0	4 Best pair of Harrows	1 0
2d do	7 6	2d do	1 0
3d do	5 0	3d do	0 10
56 Best Floral Ornament or Design	1 0 0	5 Best Fanning Mill	1 10
2d do	15 0	2d do	1 0
3d do	10 0	3d do	0 10
57 Best collection of Verbenas, not less than 12 varieties	15 0	6 Best horse-power Thrasher and Separator	5 0
2d do	10 0	2d do	3 0
3d do	5 0	3d do	2 0
58 Best collection of Native Plants, dried and named	1 10 0	7 Best Grain Drill	3 0
2d do	1 0 0	2d do	2 0
3d do	10 0	3d do	1 0
CLASS N.—DAIRY PRODUCTS, SUGAR, &C.			
1 Best Firkin of Butter, not less than 56 lbs.	£2 10	9 Best Straw Cutter	1 0
2d do	1 10	2d do	0 15
3d do	1 0	3d do	0 10
2 Best Cheese, not less than 30 lbs.	2 10	10 Best Smut Machine	1 10
2d do	1 10	2d do	0 15
3d do	1 0	11 Best Portable Grist Mill	3 0
3 Best 2 Stilton Cheese, not less than 14 lbs each	2 10	2d do	2 0
2d do	1 10	3d do	1 0
3d do	1 0	12 Best Grain Cracker	2 0
The Cheese in both cases to be the make of 1854.			
4 Best Butter, not less than 20 lbs., in Firkins, Crocks, or Tubs	1 10	2d do	1 10
2d do	1 0	3d do	1 0
3d do	0 10	13 Best Corn and Cob Crusher	1 0
5 Best 30 lbs. Maple Sugar	1 0	2d do	0 15
2d do	0 10	3d do	0 10
3d do	0 5	14 Best Machine for cutting Roots for Stock	1 0
6 Best 30 lbs. Beet Root Sugar	1 0	2d do	1 0
2d do	0 10	3d do	0 10
3d do	0 5	15 Best Clover Cutting Machine	2 0
7 Best 20 lbs. Corn Stalk Sugar	0 15	2d do	1 5
2d do	0 10	3d do	0 10
3d do	0 5	16 Best Clover Cleaning Machine	3 0
8 Best Sugar made by Indians	0 15	2d do	2 0
2d do	0 10	3d do	1 0
3d do	0 5	17 Best two-horse Waggon	3 0
9 Best Starch	0 15	2d do	2 0
2d do	0 10	3d do	1 0
10 Best Soaps [collection assorted]	0 15	18 Best Horse Cart	1 10
2d do	0 10	2d do	1 0
3d do	0 5	3d do	0 10
11 Best Candles [collection]	0 15	19 Best Horse Rake	1 0
2d do	0 10	2d do	0 10
3d do	0 5	3d do	0 10
12 Best collection of Bottled Fruits	0 15	20 Best Metal Roller	2 10
2d do	0 10	2d do	2 10
3d do	0 5	3d do	1 10
13 Best 6 kinds of Preserves	0 15	21 Best Wooden Roller	3 0
2d do	0 10	2d do	2 10
3d do	0 5	3d do	1 10
14 Best collection of Confectionery	1 10	22 Best Reaping Machine	5 0
2d do	1 0	2d do	3 0
3d do	0 10	3d do	2 10
15 Best 20 lbs. Chicory, manufactured from roots grown in the Province this Season	1 0	23 Best Stump Extractor	2 10
2d do	0 10	2d do	1 10
3d do	1 10	3d do	0 10
16 Best barrel of flour	1 0	24 Best Mowing Machine	5 0
2d do	1 0	2d do	3 10
CLASS O.—AGRICULTURAL IMPLEMENTS.			
1 Best Wooden Plough	£2 10	3d do	2 10
2d do	1 10	25 Best Potato Digger	0 10
3d do	1 0	2d do	0 10
2 Best Iron Plough	2 10	3d do	0 10
2d do	1 10	26 Best Thistle Extractor	0 10
3d do	1 0	2d do	0 10
3 Best Subsoil Plough	2 10	3d do	0 10
2d do	1 10	27 Best Farm Gate	0 10
3d do	1 0	2d do	0 10
CLASS P.—AGRICULTURAL IMPLEMENTS.			
1 Best Wooden Plough	£2 10	3d do	0 10
2d do	1 10	28 Best Cultivator	3 0
3d do	1 0	2d do	2 10
2 Best Iron Plough	2 10	3d do	1 10
2d do	1 10	29 Best Machine for making Drain Tiles	1 10
3d do	1 0	2d do	1 10
3 Best Subsoil Plough	2 10	30 Best Brick-making Machine	1 10
2d do	1 10	2d do	1 10
3d do	1 0		

31 Best half-dozen Hay Rakes	0 10
2d do	0 7
3d do	0 5
32 Best half-dozen Manure Forks	0 15
2d do	0 10
3d do	0 5
23 Best half-dozen Hay Forks	0 15
2d do	0 10
3d do	0 5
34 Best half-dozen Scythe Snaths	0 15
2d do	0 10
3d do	0 5
35 Best Ox Yoke and Bows	0 15
2d do	0 10
3d do	0 5
36 Best Grain Cradle	0 10
2d do	0 5
37 Best half-dozen Grain Shovels, wood	0 15
2d do	0 10
3d do	0 5
38 Best half-dozen Iron Shovels	0 15
2d do	0 10
3d do	0 5
39 Best half-dozen Spades	0 15
2d do	0 10
3d do	0 5

The names of Exhibitors and Prices of Implements to be inserted on the Cards.

CLASS P.—DOMESTIC MANUFACTURES  
*Leather and Furs.*

1 Best Saddle and Bridle	£1 0
2d do	0 15
3d do	0 15
2 Best Side Saddle	1 0
2d do	0 15
3d do	0 15
3 Best specimen of Whips and Whip Thongs (collection assorted)	1 10
2d do	0 15
3d do	0 10
4 Best 3 Hogskins	1 0
2d do	0 10
3d do	0 10
5 Best set of Farm Harness	1 10
2d do	1 0
3d do	0 10
6 Best set of Pleasure Harness	1 10
2d do	1 0
3d do	0 10
7 Best Travelling Trunk	1 10
2d do	0 15
3d do	0 5
8 Best Side of Sole Leather	0 15
2d do	0 10
3d do	0 5
9 Best side of Upper Leather	0 15
2d do	0 10
3d do	0 5
10 Best Skirting Leather	0 15
2d do	0 10
3d do	0 5
11 Best side of Harness Leather	0 15
2d do	0 10
3d do	0 5
12 Best Calf Skin, Dressed	0 15
2d do	0 10
3d do	0 5
13 Best Skin of Leather for Carriage Covers	1 0
2d do	0 10
3d do	0 10
14 Best Fur Hat	0 15
2d do	0 10
3d do	0 5
15 Best Fur Cap	0 15
2d do	0 10
3d do	0 5
16 Best Fur Sleigh Robe	0 15
2d do	0 10
3d do	0 5

17 Best Specimen Bootmaker's Work	0 15
2d do	0 10
3d do	0 5

CLASS Q.—MANUFACTURES IN METALS, &c.

1 Best Portable Steam Engine (open to foreign competition) Diploma and	£5 0
2 Best Model in metal of Engine, general millwright's work or machinery, Dip. and	2 0
2d do	1 0
3 Best specimen of Silversmith's work, Dip. and	2 0
4 " Do Ornamental Iron-work from the hammer, Diploma and	1 10
5 " Do Cast Ornamental Iron-work, Diploma and	1 10
6 " Do Coppersmith's work, Dip. and	1 0
7 " Do Locksmith's work, Dip. and	1 0
8 " Do Pumpmaker's work, Dip. and	1 0
9 Best Iron Fire-proof Vault Door (price considered) Dip. and	2 0
10 Best Iron Fire-proof Safe, (price considered) Dip. and	1 10
11 Best Refrigerator (price considered,) Dip. and	1 0
12 Best Hall Stove	1 0
2d do	0 10
3d do	0 5
13 Best Parlor Stove	1 0
2d do	0 10
3d do	0 5
14 Best Cooking Stove, with Furniture	1 10
2d do	1 0
3d do	0 10
15 Best system of Ventilating buildings, with model and description, and reducing the same to practical use, Diploma and	5 0
2d do	2 10
[The Judges on Stoves are especially requested to pay particular attention to the ventilation which may be secured by the stoves on Exhibition.]	
16 Best specimen of Iron Casting for Stoves and general Machinery, Diploma.	1 0
17 Best Balance Scales	0 15
2d do	0 5
3d do	0 5
18 Best Model Hot Air Apparatus	1 10
2d do	0 15
19 Best Steaming Apparatus for Feeding Stock	1 10
2d do	0 15
20 Best set of Cooper's Tools	0 15
2d do	0 10
21 Best set of Bench Planes	0 15
2d do	0 10
22 Best pair of Hames	0 10
2d do	0 5
23 Best Saddle tree	0 10
2d do	0 5
24 Best Weaver's Reeds	0 10
2d do	0 5
25 Best Augurs from $\frac{1}{2}$ to 2 inches	0 10
2d do	0 5
26 Best Earth Augur	0 10
5d do	0 5
27 Best specimen 20 lbs. Cut Nails	0 10
2d do	0 5
28 Best Blacksmith's Bellows	1 5
2d do	0 15
29 Best Rifle	0 15
2d do	0 10
30 Best half-dozen Narrow Axes	0 15
2d do	0 10
3d do	0 5

31	Best set of Horse Shoes	0 15
	2d do	0 10
	3d do	0 5
32	Best half-dozen Grass Scythes	0 15
	2d do	0 10
	3d do	0 5
33	Best half-dozen Cradle Scythes	0 15
	2d do	0 10
	3d do	0 5
34	Best assortment of Edge Tools, Diploma &	5 0

CLASS R.—CABINET WARE, CARRIAGES, &c.

1	Best Side Board, Diploma and	£3 0
	2d do	2 0
	3d do	1 0
2	Best Veneers from Canadian Wood, Dip. &	1 0
	2d do	0 15
	3d do	0 10
3	Best specimen of Sawed Pine	0 10
4	do Black Walnut	0 10
5	do Oak	0 10
6	do Curled Maple	0 10

In planks not less than six feet long, twelve inches wide and two inches thick, one side plain [not varnished,] the other rough.

7	Best specimen of Graining Wood, Dip., &	1 10
	2d do	1 0
	3d do	0 10
8	Centre Table, Diploma and	1 0
	2d do	0 15
	3d do	0 10
9	Best Dining Table, Diploma and	1 0
	2d do	0 15
	3d do	0 10
10	Best Easy Arm Chair	0 15
	2d do	0 10
	3d do	0 5
11	Best Sofa, Diploma and	3 0
	2d do	1 10
	3d do	1 0
12	Best 6 Dining Room Chairs	1 10
	2d do	1 0
	3d do	0 15
13	Best Ottoman	1 0
	2d do	0 15
	3d do	0 10
14	Best Work Box	0 10
	2d do	0 5
15	Best Writing Desk	0 10
	2d do	0 5
16	Best 1 Horse Pleasure Carriage, Diploma &	2 0
	2d do	1 10
	3d do	0 15
17	Best 2 Horse Pleasure Carriage, Diploma &	2 0
	2d do	1 10
	3d do	1 0
18	Best half-dozen Corn Brooms	0 10
	2d do	0 5
19	Best half-dozen Broom Handles, turned,	0 10
	2d do	0 5
20	Best Specimen of Willow Ware	0 10
	2d do	0 5
21	Best dozen flour barrels	1 0
	2d do	0 10
22	Best Wooden Pail	0 5
	2d do	£0 3 9
23	Best Wash Tub	0 7 6
	2d do	0 5
24	Best Washing Machine	0 10
	2d do	0 5
25	Best Board Rule	0 10
	2d do	0 5

26	Best Spinning Wheel	0 10
	2d do	0 5
27	Best dozen Wheel Heads	0 15
	2d do	0 10
28	Best Churn	0 15
	2d do	0 10
29	Best 4 or 6 Pannelled Dcor	0 15
	2d do	0 10
	3d do	0 5
30	Best Window Sash, 12 lights, hung in frame	0 15
	2d do	0 10
31	Best Model Beehive	0 10
	2d do	0 5
32	Best bundle of Shingles, sawed,	0 10
	2d do	0 5
33	Best do do split,	0 10
	3d do	0 5

CLASS S.—POTTERY.

1	Best specimen of Pottery	£1 0
	2d do	0 25
	3d do	0 10
2	Best specimen Draining Tile	2 10
	2d do	1 5
	3d do	0 10
3	Best dozen Bricks	0 10
	2d do	0 5
4	Best Walter Filter	0 15
	2d do	0 5

CLASS T.—WOOLLEN AND FLAX GOODS.

1	Best piece of no less than 12 yards of Woollen Carpet	£2 0
	2d do	1 0
	3d do	0 10
2	Best 12 yards, or over, Oil Cloth,	1 0
	2d do	0 10
	3d do	0 5
3	Best pair Woollen Blankets	2 0
	2d do	1 0
	3d do	0 10
4	Best Counterpane,	1 0
	2d do	0 10
	3d do	0 5
5	Best piece 12 yards Flannel,	1 0
	2d do	0 15
	3d do	0 10
6	Best piece of Satinet, 12 yards	1 0
	2d do	0 15
	3d do	0 10
7	Best piece Broad Cloth, from Canadian wool	2 0
	2d do	1 10
	3d do	1 0
8	Best piece Flannel, 10 yards, not Factory made,	0 10
	2d do	0 10
	3d do	0 5
9	Best piece Winter Tweed, 12 yards,	1 10
	2d do	0 15
	3d do	0 10
10	Best piece Fulled Cloth, 10 yards, not fac- tory made,	1 10
	2d do	1 10
	3d do	0 5
11	Best Shawls, not factory made,	1 10
	2d do	1 0
	3d do	0 10
12	Best piece Linen Goods	0 10
	2d do	0 5
	3d do	0 5
13	Best samples of Flax or Hemp Gordage, not less than 25lbs.	0 10
	2d do	0 5
	3d do	0 5

14 Best 12 Linen Bags, manufactured from Flax, growth of Canada,	1 0
2d do	0 15
3d do	0 10

CLASS U.—LADIES' DEPARTMENT.

1 Best specimen of Crochet Work	£1 0 0
2d do	15 0
3d do	10 0
2 Best specimen of Fancy Netting	15 0
2d do	10 0
3d do	7 6
3 Best specimen of Fancy Knitting	15 0
2d do	10 0
3d do	7 6
4 Best Embroidery, in Muslin,	15 0
2d do	10 0
3d do	7 6
5 Best Embroidery, in Silk,	15 0
2d do	10 0
3d do	7 6
6 Best Embroidery, in Worsted,	15 0
2d do	10 0
3d do	7 6
7 Best specimen of Worsted Work	15 0
2d do	10 0
3d do	7 6
8 Best specimen of Raised Worsted Work	15 0
2d do	10 0
3d do	7 6
9 Best specimen of Ornamental Needle Work	15 0
2d do	10 0
3d do	5 0
10 Best specimen of Quilts, in Crochet,	1 0 0
2d do	15 0
3d do	10 0
11 Ditto in Knitting	1 0 0
2d do	15 0
3d do	10 0
12 Ditto in Silk	1 0 0
2d do	15 0
3d do	10 0
13 Best Piece-Work Quilt	1 0 0
2d do	15 0
3d do	10 0
14 Best specimen in Tatting	15 0
2d do	10 0
3d do	7 6
15 Best specimen of Braiding	15 0
2d do	10 0
3d do	7 6
16 Best specimen of Wax Fruit,	15 0
2d do	10 0
3d do	5 0
17 Best specimen of Wax Flowers	15 0
2d do	10 0
3d do	5 0
18 Best Pair Woollen Socks	10 0
2d do	7 6
3d do	5 0
19 Best Pair Woollen Stockings	10 0
2d do	7 6
3d do	5 0
20 Best specimen of Gentlemen's shirts	15 0
2d do	10 0
3d do	5 0
21 Best Pair of Woollen Mittens	10 0
2d do	7 6
3d do	5 0
22 Best Pair of Woollen Gloves	10 0
2d do	7 6
3d do	5 0
23 Best Hat of Canadian Straw,	10 0
2d do	7 6
3d do	0 5

24 Best Bonnet of Canadian Straw	10 0
2d do	7 6
3d do	5 0

CLASS V.—FINE ARTS, &C.

Oil.

	Professional	Amateur
	List	List
1 Historical painting, Canadian sub- ject, Diploma and	£3 0	£2 10
2d best	2 0	2 0
2 Landscape, Canadian subject, Di- ploma and	3 0	2 10
2d best	2 10	1 10
3 Animals [grouped or single] Di- ploma and	3 0	2 10
2d best	2 0	1 10
4 Portrait—Diploma and	2 10	2 0
2d best	1 10	1 0

In Water Colors.

5 Landscape, Canadian subject, Di- ploma and	2 10	2 0
2d best	1 10	1 0
6 Portrait, Diploma and	2 0	1 10
2d best	1 0	1 0
7 Animals, [grouped or single] Di- ploma and	2 10	2 0
2d best	1 10	1 0
8 Miniature, Diploma and	2 0	1 10
2d best	1 10	1 0
9 Flowers, Diploma and	1 10	1 0
2d best	1 0	0 15

Pencil and Crayon.

10 Pencil Portrait, Diploma and	1 10	1 0
2d best	1 0	0 15
11 Crayon Portrait, Diploma and	1 10	1 0
2d best	1 0	0 15
12 Pencil Drawing, Diploma and	1 10	1 0
2d best	1 0	0 15
13 Crayon Drawing, Diploma and	1 10	1 0
2d best	1 0	0 15
14 Colored Crayon, Diploma and	1 10	1 0
2d best	1 0	0 15
15 Best specimen of Colored Geometrical draw- ing of Engine or Millwright work. Diplo- ma and		2 0
16 Daguerreotype, best collection, the Exhibitor to have operated in Canada for the last 12 months, Diploma and		1 10
2d best		1 0
17 Lithographic Drawing, Diploma and		1 10
2d best		1 0
18 Wood Engraving, Diploma and		1 10
2d best		1 0
19 Engraving on Copper, Diploma and		1 10
2d best		1 0
20 Engraving on Steel, Diploma and		1 10
2d best		1 0
21 Best specimen of Seal Engraving, Diploma and		2 0
22 Do do Carving in Wood, Diplo- ma and		2 0
23 Do do do Stone, Diplo- ma and		2 0
24 Do do Modelling in Plaster, Di- ploma and		2 0
25 Do do Ornamental Turning, Di- ploma and		1 0
26 Ornamental Writing, Diploma and		1 0
2d best		0 10
27 Stuffed Birds		1 0
2d best		0 10
28 Picture Frame, gilt		1 0
2d do		0 10

29 Picture Frame, veneered	1 0
2d do	0 10
30 Stucco Moulding	1 0
2d do	0 10
31 Stained Glass	1 0
2d do	0 10
32 Dentistry, Diploma and	1 0
2d do	0 10

All articles exhibited by *Ladies* to be admitted *free*.  
All articles entitled to premiums must have been executed since the last Exhibition of this Association.

#### CLASS W.—INDIAN PRIZES.

1 Best Bark Canoe	£1 10
2d do	0 10
2 Best 4 Paddles	0 15
2d do	0 5
3 Best Indian Cradle	0 15
2d do	0 0
4 Best pair of Snow Shoes, (common size)	0 15
2d do	0 10
5 Best pair of Snow Shoes, (8 inches long)	0 10
2d do	0 5
6 Best Tobacco Pouch worked with Porcupine Quills	0 5
7 Best pipe of Peace	0 15
2d do	0 10
8 Best Pipe of War	0 15
2d do	0 10
9 Best pair of Moccasins (plain)	0 5
2d do	0 3
10 Best pair Moccasins (worked with Porcupine Quills)	0 7
2d do	0 5
11 Best pair Moccasins (worked with Beads)	0 7
2d do	0 5
12 Best Fruit Basket	0 7
2d do	0 5
13 Best Clothes Basket	0 7
2d do	0 5
14 Best Hand Basket	0 7
2d do	0 5

All articles exhibited by Indians admitted free.

#### CLASS X—BOOKBINDING, PAPER &c.

1 Best specimen Bookbinding	£1 0
2d do	0 15
3d do	0 10
2 Best ream of Writing Paper	1 0
2d do	0 15
3d do	0 10
3 Best ream of Printing Paper	1 0
2d do	0 15
3d do	0 10
4 Best specimen Letter-Press Printing, executed since last Exhibition	2 10
2d do	1 10
3d do	1 0

#### CLASS Y.—FOREIGN STOCK.

Premiums for Stock and Implements belonging to persons residing out of *Canada*. Exhibitors of this class are admitted *free of any charge*.

1 Best Durham Bull over 5 years, Diploma and	£2 10
2d do	2 10
2 Best Durham Cow, Diploma and	1 10
2d do	1 10
3 Best Ayrshire Bull, Diploma and	2 10
2d do	2 10

4 Best Ayrshire Cow, Diploma and	1 10
2d do	1 10
5 Best Hereford Bull, Diploma and	2 10
2d do	2 10
6 Best Hereford Cow, Diploma and	1 10
2d do	1 10
7 Best Devon Bull, Diploma and	2 10
2d do	2 10
8 Best Devon Cow, Diploma and	1 10
2d do	1 10
9 Best Stallion for Agricultural purposes, Diploma and	3 0
2d do	3 0
10 Best Blood Stallion, Diploma and	3 0
2d do	3 0
11 Best Leicester Ram, Diploma and	1 10
2d do	1 10
12 Best 2 Leicester Ewes, Diploma and	1 10
2d do	1 0
13 Best Southdown Ram, Diploma and	1 10
2d do	1 0
14 Best 2 Southdown Ewes, Diploma and	1 10
2d do	1 0
15 Best Merino and Saxon Ram, Diploma and	1 10
2d do	1 0
16 Best 2 Merino or Saxon Ewes, Diploma and	1 10
2d do	1 0
17 Best Boar	1 0
2d do	1 0
18 Best Breeding Sow, Diploma and	1 10
2d do	1 0

#### CLASS Z.—FOREIGN AGRICULTURAL IMPLEMENTS.

1 Best Plough, Diploma and	£1 0
2 " Subsoil Plough, Diploma and	1 0
3 " Pair Harrows	1 0
4 " Fanning Mill, Diploma and	1 0
5 " Horse Power Thresher and Separator, Diploma and	2 10
6 " Seed Drill or Barrow, Diploma and	1 0
7 " Straw Cutter	1 0
8 " Smut Machine	1 0
9 " Portable Grist Mill, Diploma and	2 10
10 " Grain Cracker	1 10
11 " Machine for cutting Roots for Stock	1 0
12 " Corn and Cob Crusher	1 0
13 " Clover Machine, Diploma and	2 0
14 " Reaping Machine, Diploma and	2 10
15 " Cultivator, Diploma and	1 5
16 " Assortment of Agricultural Implements & Edge Tools, Diploma and	5 0

#### PREMIUMS FOR COUNTY REPORTS.

The Board of Agriculture will award a premium of the value of £15 for the best Report on the Agriculture of each of the following Counties, viz: *Carleton, Welland, and Prince Edward*. If such report be written by the Secretary of the County Society, the premium will be increased to £20.

The Reports must be sent in to the Secretary of the Board of Agriculture, Toronto, accompanied by a sealed note containing the name and address of the writer, on or before the 1st of June, 1854.

#### SALE OF STOCK.

Parties attending the Exhibition having Stock to dispose of, can have entries made of the same in the Books of the Society, free of charge, by applying at the Secretary's Office, where those desirous of becoming purchasers can inspect the list.

## Communications.

### ON THE MODERN SYSTEM OF DRAINAGE, AND ITS APPLICATION IN CANADA.

No. III.

If we may judge by the discussions and resolutions at several of the Farmers' Clubs throughout the Province, the question is not whether it would be profitable to drain,—for *that* is admitted by common consent,—but rather, how means are to be found for the operation. Now, the promoters of drainage extension in England had to contend with precisely the same apparent difficulty; and hence, in their advocacy of an improved system, they early found it desirable to recommend it as a secure and remunerative object for the application of collective capital, and so to enlist in the cause the commercial sympathies, and co-operation of the monied classes. The eminent success which has attended the establishment of Public Companies for the drainage and improvement of land, has already been alluded to; and since, with such an example before them, it may reasonably be expected that the good people of Canada will go and do likewise, we shall give a brief outline of the powers which have been conferred by the Imperial Parliament on "*The General Land Drainage and Improvement Company*," and their mode of conducting business.

The Company was incorporated in 1849 by an Act which, in its progress through Parliament, received the careful consideration of the Drainage Commissioners, the Board of Trade, and a Committee of the House of Lords. It supplies the defects of all former enactments in matters of detail, and by an inexpensive and simple process enables the owners of a limited and an exclusive interest in land to carry out every kind of permanent improvement thereon, either by the application of their own, or the Company's funds; and to secure the same by a charge upon the inheritance. The powers comprise the execution of all works of Drainage, (including the making of outfalls through adjoining properties, if needful), Irrigation, Reclamation, Inclosure, Road-making, &c.; the erection of Farm Homesteads, Tileries, and other buildings necessary for good farming; and they have also the power to undertake sewerage, and all other sanitary works, under contract with corporation and town authorities. They can also purchase lands that are capable of being improved, improve them by the necessary means, and resell them. In conducting their business, which has become very extensive, the Company, on request, supply the landowner with a blank form of application wherein to particularise the lands, and the nature of the works to be performed. If the application is entertained, an inspection and survey of the property is made by the Company's Engineer, and a plan and estimate of the contemplated improvement is prepared by him for the guidance of the Company, and for the approval and acceptance of the owner of the land. This agreed upon, the proprietor enters into a contract with the Company to execute the

work, in accordance with the plans, in an effectual and durable manner, for a fixed sum. On the completion of the work, the total amount of its cost, along with any reasonable sum for preliminary and incidental expenses, is made a mortgage charge to the Company on the land improved, for a prescribed number of years, with such an agreed annual payment as will redeem the principal and interest in the period. In the case of homestead, and other erections, the maximum term over which the repayment of the outlay can be spread in 31 years; and in the case of Drainage, and other works of a like nature, it can be extended over as far as fifty years. Of course in either case the owner has the option of making the period for repayment as short as he pleases. As evidencing the soundness of the principles upon which this Company is based, as well as the beneficial and profitable character of their operations, it might be sufficient simply to refer to the high standing of the parties composing the Board of Directors; but when we see amongst them the names of two of the most eminently practical and extensive contractors of the present day—Wm. Cubitt, Esq., and Samuel M. Peto, Esq., M. P.—we cannot hesitate to give a ready assent to the usefulness and advantages of such a Company.

Now, what is there in this that the enterprise of Canada cannot emulate? The benefits derived from the application of Joint Stock Capital are as fully recognised in this Province, in all other operations, as they are in the mother country: Banks, Canals, Railways, Insurance, and even industrial establishments, are successfully conducted with collective means; surely, then, the cultivators of the soil might hope for the same success. Indeed, in our judgment, the condition and circumstances of the country are such as to ensure, to a well conducted Company, a highly remunerative return; and to the land owners, such a reliable source for means and efficient workmanship as they can hardly hope to secure in any other way.

In seeking from the Provincial Legislature a special Act of Incorporation, it would be necessary, not only to provide for what may be regarded as ordinary operations of land improvement, such as Drainage, Irrigation, Fencing, Building, &c., but powers must be given, as in the English Act, to use, improve, and cut outfalls through adjoining lands, under suitable regulation; to sell and clear land of timber, and to make roads. And on this latter head we would suggest whether it might not be advantageous to the country generally to give such a Company powers to make, maintain, and receive tolls from all such public roads as they might be called upon to construct. We would also have conferred upon them powers to contract with City and Town authorities for the execution of sewerage, water, and other sanitary works; and also the power to purchase, reclaim, hold, and sell land. And, further, that under fitting limitations, they should have the power of issuing Notes or Debentures, bearing interest, and payable at such periods as should correspond with the periods of repayment over which the several Mortgage charges for com-

pleted works extended. These Debentures would, we apprehend, meet with public confidence, from the fact of being founded on a Mortgage landed security, which was every year increasing in value.

The great proportion of emigrants to this country turn their attention exclusively to the acquirement of land, and its cultivation; and yet the majority of these are usually not in a condition to command more funds than will barely suffice for ordinary wants. Would it not, then, be infinitely to their advantage if they could avail themselves of the powers and facilities of such a company, and have their locations at once cleared, fenced, drained, and roaded—with a suitable house and homestead—ready for profitable cultivation, instead of wasting half their life time and energies in the clearing of a comparatively small plot of ground, and the building of a miserable shanty-dwelling, and a still worse standing?—Depend upon it, there are very few who would not willingly pay an annual charge of even 20s. per acre, and upwards, for a few years, and cultivate their full extent of cleared and otherwise properly conditioned land, than contend, and that often single-handed, with the *enduring* and hopeless-looking task of preparing primeval forest for the plough.

As respects the sources, and extent of profit which might accrue to a Company engaged in such operations, it need hardly be remarked that they would not only be able to command the most effective and competent staff of officers; but that their power to provide, in the most perfect forms, all the mechanical appliances of the day,—such as portable engines, saw mills, tile machines, &c., &c.,—would at once place them in a position to execute their contracts effectively and advantageously.

Before discussing this portion of our subject it may not be uninteresting, and perhaps not unprofitable, to record one incident, amongst many, which occurred to the writer some years ago in reference to the matter in hand; and which exhibits forcibly the conviction which a good cause silently works on the minds of those who, from one reason or other, may be either lukewarm or absolute opponents. In prosecuting the first attempt which was made in England to establish a Drainage Company, the writer applied amongst other influential parties, to the present Lord Wharnccliffe [then the Hon. John Stewart Wortley, and one of the Members for the West Riding of Yorkshire] for his patronage and support, to which he replied by saying, he “had no direct interest in land; that he did not understand the full nature of the proposed undertaking, and consequently that he must decline giving any countenance to it.” This refusal was so unexpected, and, as we conceived, so unwarranted, that we could not refrain from repeating the request, and pointing out the fallacies by which the refusal was supported. No effect, however, was produced; and Mr. Wortley adhered to his refusal. Two years afterwards came the repeal of the Corn Laws, and the passing of the first general Drainage Act, with a grant of two millions sterling of the public money for the Drainage of Estates. Meanwhile

his father died, and Mr. Wortley came to the title; and amongst the earliest applicants for an advance of £10,000 for the drainage of his estate was the present Lord Wharnccliffe. The writer too had moved a step by being appointed one of the Assistant Commissioners under this first Drainage Act, and was in consequence sent by the Commissioners to make the preliminary inspection of the property, and report upon his Lordship’s application for an advance. Of course, in the interviews that ensued all allusion to his former refusal to countenance the very effort which had been instrumental in placing within his reach the means of improving an extensive estate, that otherwise, must have remained comparatively worthless, was scrupulously avoided, although we dare not affirm that the altered circumstances were not lost on either party. Since then Lord Wharnccliffe has written a somewhat elaborate article on Drainage, in the Journal of the Royal Agricultural Society of England.—“*Sic transit gloria mundi.*”

It is not within the scope of our design to tax the patience of the reader by entering into any prolix disquisition on these details in the execution of Drainage which come more especially within the province of the experienced professional Drainer; for, independently of some regard to self-interest, we have very good reason to know, from numberless examples of failures, that “every man his own Doctor” in Drainage is not only the most inefficient, but generally the most costly course that can be pursued. There are, however, some leading features with respect to materials, depth, distance, outfalls, and effects to be attained, of which we purpose to treat in the next article; and which will conclude the present series.

*To be continued.*

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#### ON THE EDUCATION OF FEMALES—No. IV.

*To the Editor of the Agriculturist :*

School education should not be allowed to clash with the claims of justice and honesty. This brings me to speak of that system of school education, *miscalled* free schools, *properly* called pauper schools, which some officials are very anxious to establish by a law of the Province, to which they wish to make every man to bow, and every man to pay whether he has any children to educate or not, or whether he approves of the education therein given or not. And as your paper is designed for the benefit of the farmers, in which they may state their grievances and advocate their interests, I hope it will not be considered inconsistent with these views, to allow me to say, that I think the free school system [so-called] is calculated to affect unfairly, our profession. We heartily concede in the first place, that the children of poor widows, or orphans who have lost both parents, and the children of such as are unavoidably poor, should be furnished with such education as their circumstances and prospects require; but we do sincerely think, that *nothing can* exceed the injustice of

compelling one man to pay another man's debts when that man is abundantly able to pay his own debts. We are told that it is very just, "that the property of all should be taxed for the education of all." If this be true, it is certainly equally just and more important that the property of all should be taxed to feed the whole, and to clothe the whole, and to provide religious instruction for all, for food, and raiment, and religion are more necessary than school education; and thus abolish all distinctions of property and right. Some persons seem to think that it is a sufficient justification of this measure, to tell us that the same plan is pursued in many of the American States.

Alas, for such an argument! Everything, good, bad, and indifferent, may be justified in the same way; for what can a person think of that is not practised in the States? Even that "sum of all villainies," that compound of injustice, cruelty, and tyranny called slavery, may be justified by the same rule. It is said, again, by way of justifying this measure, that parents cannot be induced to give their children a suitable education, unless the public will pay the expense. There is but little truth in such a statement. But supposing it true; if a man do not love his own children well enough to give them a suitable education, how can he expect that people on whom they have no just claim, will be willing to give them that education which he is well able to give, but which he is too stingy to afford. If a man were too stingy to afford his children food, or raiment, the law would soon find a way to compel him, and every man who is able ought to be compelled to educate his own children. But we are told that more children attend School when the public are obliged to pay the expense. This is, no doubt, true, but it is doing evil that good may come. One great objection against this system is that the greatest part of the expense falls, and *must* fall, on the farmer, for whatever laws may be made to equalize taxation they will be, to a great extent, inefficient, because all classes except the farmer, can, and do, and will, conceal the amount of their property from the assessor. As the law now stands, a number of Mechanics and others get together at the annual school meeting and vote for what they call a free school, and the farmers have to foot up the bill; and yet these very mechanics will charge a farmer 12 yolk shillings to three dollars per day, when they are scarcely willing to allow a farmer who works for them six yolk shilling a day. Notwithstanding all this difference in wages between the farmer and mechanic, if the farmer does not wish to educate his own children and theirs too, he is said to be stingy or factious, or indifferent to education. Although the farmer is expected to be willing to pay his own debts, and the debts of other people in regard to schools, he is not able to send his children to school with the same ease that others can, partly, because he wants his children to help him during summer, and partly because many of them live remote from the school house. Will you allow me here to say, that farmers, particularly backwoods-men, are not fairly treated by the present

division of the public school fund? For a while after that fund was first created, its proceeds were divided among the several school sections, according to the number of children of school age in each section. This was a fair rule of division, too fair it seems to last long, and another rule *very unfair* for the farmer and the backwoodsman, was substituted in its place; namely, to divide the public money among the different school sections, according to the average number of children that actually attend school, and that average to be taken for the whole year, so that if in any school section they are able to keep up school only for six months, and the average for that six months be thirty scholars, by taking the average for the whole year, the number will be reduced to fifteen scholars, and the public money also reduced one half. Now this is extremely unfair toward the backwoodsman, who needs help more than any man, and certainly deserves it as much as any man, for there is not a more useful class of men in the entire province. Persons in scattered settlements find it difficult to keep up school six months in the year, partly, because there are but few children, partly, because their parents are poor, and partly because qualified teachers cannot be got. Scattered settlements have to exert themselves *much more* to keep up school six months in the year, than others more favourably situated do to keep it up all the year, and yet, while they have to pay their full proportion of school tax, they are to receive by this new arrangement, almost nothing, while almost all the public money goes to cities, towns, and villages, and other popular places where it is not so much needed.

Fifth: School education should be so conducted as to cultivate the moral and religious sentiments in conjunction with the mental faculties. It seems to be taken for granted by certain writers, that education and good morals are so linked together, that where the former is found, the latter will follow as a matter of course. Right glad should we be if this were the case, but we are sorry to say, that we believe, that there is no ground whatever on which to rest such an assumption. The immoralities of educated society are different in kind, from those of the uneducated, but they are not less offensive to God, or destructive to man on that account. That species of deliberate and wilful murder, called duelling, is almost entirely confined to the educated classes of society, so also are forgeries and gambling; and then, how often do we read in the public prints of bankers' clerks, of merchants' clerks, and persons employed in the collection of Township, County, and State taxes, who have absconded with thousands of pounds of other men's money, while neither the educated nor uneducated can claim exemption from the degrading vice of drunkenness. To the uneducated, generally, belong petty thefts, and other low vices too numerous to mention. It is not the design of these remarks to undervalue mental cultivation, or what is sometimes called secular education, but to show that of itself it is not sufficient. Mere mental cultivation, or secular learning can never, of itself secure correct

moral department. We might as reasonably expect to "gather grapes of thorns, or figs of thistles;" and that education is lamentably deficient, is limited, partial and unfinished, that begins and ends with the cultivation of our mental faculties. Education, to be thorough and efficient, should have respect to our entire existence, both with regard to time and eternity. It should be the training up of a child in the way it should go. It should embrace, not only what he ought to know, but what he ought to do. It should be so conducted as to invigorate his physical energies, to develop his mental powers, to restrain his wayward passions and to direct and strengthen his moral and religious sentiments to a useful, holy life. In cultivating the moral sentiments it is not necessary that the pupil should wade through ponderous volumes of ethical philosophy, grounded on the reason and fitness of things. These, doubtless, have their use, and may be read with advantage if there is time, and may regulate human conduct in the stillness of the closet, where temptation has not power to operate, and where there is time to weigh all the reasons for and against every action, but when brought in close conflict with the prejudices, passions, and temptations of human life, they will be found nearly powerless. The pupil should be carefully instructed till an intelligent and durable conviction be produced in the great truths of revelation, such as the Being, Omnipotence, Omnipresence, and Omniscience of God, with the certainty that "God will bring every work into judgment, with every secret thing, whether it be good or whether it be evil." In connection with these truths, bring before the pupil our Saviour's short, but comprehensive rule of moral conduct; "Whatsoever ye would that men should do to you, do you even so to them." These considerations will have more efficacy in the production of correct moral deportment than all the treatises on moral philosophy, that ever were or can be written, because they include the power of law and the authority of a lawgiver, of which mere moral philosophy is destitute.

#### AN OLD FARMER.

Yarmouth, March 29th, 1851.

#### MELONS AND CUCUMBERS.

Melons and Cucumbers require similar treatment. The best way on all heavy soils is to dig out holes about 18 or 20 inches deep and wide. Fill these holes about two-thirds their depth with fresh manure, finishing with light or sandy soil, made rich by a mixture with well rotted manure and fine garden mould. The hills should be raised about six inches above the surface, and be six feet apart. Plant the seeds on these mounds; and as soon as they are large enough to be out of the way of insects, thin out to four in a hill.—Buist recommends that when the plants have made four or five rough leaves, the points of each shoot should be pinched off, as it will make them branch out and fruit earlier.

## Editorial, &c.

### HINTS FOR THE MONTH.

Nearly all field crops will, or at least should be in the ground before the close of May, but some of the root or drilled crops may still be sown with success, if the ground be well tilled and the season favourable. Potatoes frequently succeed well, planted in the first week in June, although more liable to be affected by the rot than if planted some weeks earlier. The earlier ripening varieties of Indian Corn may also succeed sown at the same time, if on rich well prepared ground, and the crop be frequently and carefully hoed afterwards. For carrots, parsnips, and mangel wurzel the season is rather late, but if circumstances have prevented the getting them in sooner, they may still be risked upon a small scale. To ensure the germination of mangel wurzel seed, it should be soaked in warm water for several days, or until it sprouts before planting. For Swedish Turnips, from the 1st to the 10th June, when the weather is warm, and genial, is perhaps as favorable a season as any. The success of this crop depends upon its making a vigorous growth from the very first. If checked at the beginning it does not so easily recover afterwards. There is frequently found to be less danger from the fly, when turnips are sown after the first week in June, than if sown earlier. As a specific against this insect, soaking the seed in whale oil 24 hours before sowing, and then drying it in plaster or dry sand for convenience of handling, has been tried with success. The quantity of seed sown to the acre should be about two pounds, though much less would be sufficient, if it all vegetated and escaped injury. But it is better to sow it so thick that a good number of plants will have a chance of getting into the rough leaf and out of danger, before the fly can destroy the whole. If the ground be in good condition, and of sufficient moisture for the seed to germinate at once, the plants will soon be beyond the destructive powers of the fly. The seed may be sown either in drills or broadcast, and covered not over one or two inches deep, with fine mould. White Turnips may be sown considerably later, even as late as the middle of July, on rich well

tilled land, and do well. The cultivation of root crops will be found alluded to at considerable length in the Report of the Guelph Farmers' Club, in another part of this number.

Weeds, unfortunately, grow as rapidly, sometimes more rapidly in June and July, than useful plants, so unless they be kept down by vigorous and frequent hoeing or ploughing, the labor and expense of sowing potatoes, corn, turnips, &c., will be little better than so much labor thrown away. Besides, the practice of frequently stirring the ground, even in the absence of weeds, is of the greatest advantage in aiding the growth of the crops. Turnips &c., must also be judiciously thinned, or they will be little better than if overgrown with weeds. Turnips and mangel-wurzel, if in drills, may be thinned from twelve to eighteen inches apart in the drills, if broadcast about eighteen inches, as near as may be, each way; carrots and parsnips if in drills 15 or 18 inches apart, may be thinned to about 9 inches apart in the drills.

Besides such work as above mentioned, and the repairing of fences and buildings, road making, draining operations, &c., the principal business of June, will be the preparation of the fallow for wheat sowing in September. And on the manner in which this is done will greatly depend the results to be obtained next year. The present high price of grain, in connection with passing political events in Europe, will probably lead to the preparation of a larger breadth of land than heretofore in Upper Canada to be sown with wheat in Autumn. If the first ploughing has to be performed in June, unless the weather be favorable, it will, on clay land, be hard work for both man and horse. If the first ploughing has been given in Autumn or Spring, the second in June will not be so laborious, and the farmer will find it to his advantage to keep his ploughshare sharp, and turn up a furrow to the air at least six or seven inches in depth. If the manure is to be laid on at this ploughing, it should not be left long evaporating in the field, but ploughed in as soon as possible after being drawn out from the yard. Experience has amply proved that Canada thistles, that disgrace and ruin to so many neighborhoods in this country

may be effectually eradicated, by a thoroughly and cleanly cultivated summer fallow, so that no farmer has occasion to despair of getting rid of this pest, if he will only apply himself heartily to the task.

Attention to all the above matters, and a few others which might be mentioned, will probably conduct us to the end of June, or beginning of July, when the hay crop, and soon after wheat and barley, will demand our attention, and there will be abundant opportunity for testing the good qualities of the mowing and reaping machines mentioned in another place.

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#### PREMIUMS FOR FARMS AND GARDENS IN THE COUNTY OF RUSSELL.

We have received the following communications from C. P. Treadwell, Esq., President of the Provincial Agricultural Association, on the subject of premiums for the best cultivated Farms and Gardens in the County of Russell. The Board of Agriculture, at its recent meeting, expressed its approval of the plan, and it is much to be desired that a similar movement should be made either by Societies or influential and patriotic individuals in each of our settled Counties. The encouragement of the cultivation of the various kinds of garden crops is of no small importance, and would tend, in connection with the culture of flowers to improve the taste and increase the comforts of many a household. We trust that, as the object is a good one, and most creditable to the projector, it will not be lost sight of in other quarters, but that many will be induced through the force of this example to go and do likewise.

Mr. Treadwell proposes to give the sum of £25 for the purpose, viz.,—£5 to each of the four Township Societies of the County for the best cultivated farm in each locality; and likewise, \$5 for the best managed garden within the jurisdiction of each of the four Societies. As the great object of these premiums is the encouragement of farmers and their families in those important arts on which the existence and happiness of nations so essentially depend, we again express our best wishes for the success of the principle in this particular application.

L'Original, April 13, 1854.

DEAR SIR,—I have great pleasure in enclosing for your insertion in the *Agriculturist* a letter recently received from the Rev. Andrew Bell, a scientific and practical gardener, to whom I mentioned the circumstance of my offering premiums on farms and gardens in our country.

This opinion should be adopted in preference to mine, as I neither claim practical nor theoretical knowledge; but I feel an anxious desire to advance that branch of domestic economy throughout the Province, and especially in our own country.

I am, my dear Sir,

Your most obt. servt.,

C. P. TREADWELL.

Geo. Buckland, Esq.,  
&c., &c., &c.,  
Toronto.

L'Original, April 13, 1854.

MY DEAR MR. TREADWELL—When you called on me to-day, you mentioned a proposal which had been made to offer premiums for the best gardens in Townships or Counties, and wished me to give you some suggestions, in writing, as to the conditions on which those prizes should be awarded. Having my mind occupied and perplexed about some other matters, I really cannot give the matter that consideration I could wish. I shall try, however, to throw out two or three hints.

I think the quantity of land you propose as a minimum in order to get a prize—being nearly half an acre—is entirely too much. Very few families in the whole country, even amongst the wealthy, have that amount enclosed and under cultivation as a garden; and, moreover, no family could do such an amount of land that justice, and give it that high cultivation, which a garden requires, except among the wealthy, who are able to keep professional gardeners, and if I understand you aright, that is not exactly the class you wish to encourage and induce to cultivate gardens. I think that about the fifth of an acre, two square chains, would be enough; and further, I think this might be left indefinite. It might very safely be included under the head shortly to be mentioned.

If I mistake not, you also spoke of the greater variety of crops—another condition. I scarcely think that would answer the end in view. It might be no difficult matter to procure such a variety of seeds and roots that a garden might present a most wonderful display in this respect: a little of this and a little of that, to the extent of a hundred or more varieties, but I am afraid that the comfort of a family would be very little promoted thereby. The great thing that ought to be aimed at, in my estimation, is, to encourage every family in the land to cultivate a garden of *such extent as may be managed by themselves*, or with as little hired labour as possible merely for the rougner and more laborious operations,—a *useful and tasteful* garden, one that would yield both *profit and pleasure* to a family, instead of being a piece of expensive and useless ostentation. To come up to my idea of the thing, the garden should contain *such kinds of vegetables—*

*in such quantity—in such variety, and of such excellence and perfection, and accompanied by such taste, in the laying out and the ornamentation of it with flowers, as would not only contribute to the support of a family, but, all things considered, would, in the estimation of the judges, as sensible and discreet men, minister the most to the health, the comfort, the enjoyment and the pleasure of a family, all the year round.*

Another ground of awarding the prize might be the superior excellence of the garden produce of whatever kind—large, healthy, thriving, &c., &c., as indicating the best cultivation, and giving promise of the largest amount of produce for the least extent of ground.

Other grounds might be the care bestowed on the garden, the order and neatness in which it was kept, its entire freedom from weeds &c., &c.

And last but not least the *taste* displayed in laying out a garden, arranging the crops and ornamenting the garden with flowers. To bring the whole to a point: I would advise leaving out the extent of the garden. That I think might be safely included among the "*All things considered*" which must still be left to the discretion of the judges.

The prize might go to the garden which—I. Contained *such kind of vegetables in such quantity*—and in *such variety*, and of *such excellence* as would minister the most towards the *support, the health, the comfort, the enjoyment* and the pleasure of a family *all the year round*, and which, II. Contained the *best crops of their kind*, and III. Showed the *greatest freedom from weeds*, the greatest care and neatness,—and IV. displayed the greatest amount of *good taste* in laying out and the ornamenting of it with flowers.

I hold that the cultivation of a pure, refined, elevated taste in a family circle by the floral decoration of their garden done by themselves, and studied and watched by them, is an element and by no means the smallest one in the usefulness of the garden.

And now having made such suggestions as occur to me at the moment, in regard to what should constitute the best garden, to which a prize is to be awarded, I would make another suggestion, that something more is needed, than offering a trifling prize of a few dollars for the best garden, in order to induce a larger number of the people to cultivate such gardens as will conduce substantially to the support, health, comfort, &c., of their families. Their ignorance and their prejudices must be removed in regard to the usefulness of it, and the time, labour, and expense necessary. They must be instructed in short as to how it is to be done, and done to the best advantage.

Offer then a good prize, as large as any that have been offered for other essays, for a good essay on gardening. I do not mean a mere mechanical thing, such as is printed on seed papers and in almanacs to guide a novice, as to the breadth of drills and the times of sowing; but a deeper and more philosophical thing, showing in what a good garden consists and how it may be formed, the extent of it, how it should lie, the kind of soil, how deep, how drained, how enclosed—

ed, how laid out, how arranged, how manured, how cultivated, the different kinds of crops, the quantity and proportion of each, the rotation, and in these days of science, it should have a smack of Agricultural Chemistry, the science of fitting the elements of the soil to the requirements of the crop. If such an essay were what I think it should be, it would be almost every word of it just as applicable to Agriculture on a large scale by the farmer as to Agriculture on a small scale by the gardener.

Yours truly,

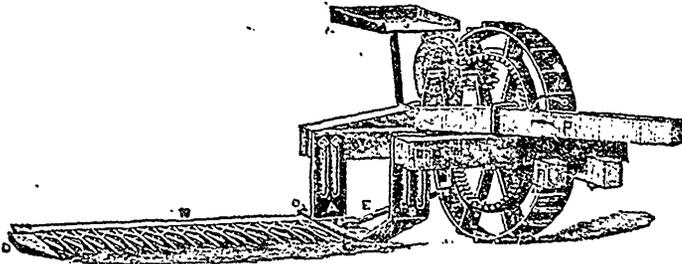
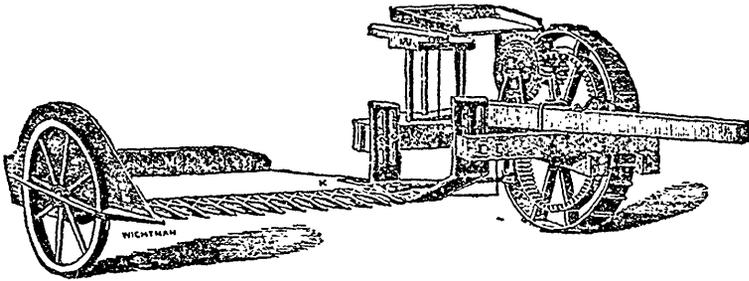
(Signed) ANDREW BELL.

C. P. Treadwell, Esq.

REAPING AND MOWING MACHINE.

As the season for grass cutting is near at hand, and as laborers are unusually scarce, and wages high, the farmer is obliged to look about him for such helps and substitutes as may be available. We consider it part of our duty to examine and point out to our readers such new improvements in agricultural machinery as may fall under our notice, especially where they promise a great saving of time and expense in the important operations of the farm. The Reaper has become "a great fact," in England as well as in America. Whenever the ground is sufficiently

level, and the crop in an upright condition, the Reaper is undoubtedly a labour-saving machine. The "Mower" is perhaps not so generally known, but in our opinion, in its present improved form, it is quite as important to the farmer, who needs its assistance, as its more famous relative.— Several attempts have been made to combine these machines, or in other words, to make a machine that would both reap and mow. Until last year these attempts, so far as we can learn, have not been very successful. The difficulty in the United States was increased by conflicting patents, the inventors of one improvement not being allowed to avail themselves of those of their neighbors. A Company at Buffalo has now, it appears, by purchase or agreement, combined these improvements in such a way, as to make a machine for \$130, which, they allege, is equal to Hussey's machine as a Reaper, and Ketchum's as a Mower. We have seen this machine, and so far as an inspection enables us to judge of its merits, we are disposed to regard it favorably. We hope soon to witness its performance in the field, when we shall be able to speak more confidently. Below are cuts of the machine, showing its appearance as a Reaper, and as a Mower :



FORBUSH'S IMPROVED REAPING AND MOWING MACHINE.

We subjoin the following extract from the Company's Circular :

"The Company have the most satisfactory

estimonials, that it will accomplish all that is claimed for it, and are satisfied after a thorough investigation of the relative merits of the different Mowing and Reaping Machines, now before

the public, that *the above is the best in the world!*

Every Machine sold, will be *warranted* to be made in a *workmanlike* manner, and of the *best* materials, and capable of cutting from ten to fifteen acres of grass or grain per day, with one span of horses and driver, and in all respects to do the work as well and as easy for the horse, as any other Machine in the country. The following particulars may be mentioned as points of *superiority*:

1. The Machine is compact, simple, durable, conveniently arranged, and easily managed.

2. The bolts are all accessible, and in sight of the driver when on his seat.

3. There is *no side draft*, and the horses can work all day on the machine, as easily as they can plow.

4. The grass is spread evenly over the ground.

5. The Raker's seat is so arranged that the grain may be raked off at the side, away from the track of the wheel, or in the rear as may be preferred.

6. The platform to receive the grain is so constructed, that it requires but a few moments to attach or detach it from the machine, and when on, it is perfectly substantial.

7. The platform, finger-bar and knives may be raised or lowered, and secured at any point, so as to cut the grass at any height desired.

8. The clamp which holds the finger-bar is so constructed that no bolts are required to pass through the finger-bar and so that the same connecting rod, finger-bar and knives are used, for grain and grass.

9. The guard-fingers are so constructed that they mutually brace and support each other, and effectually prevent the knives from choking or clogging in any kind of grass.

10. The machine is not likely to get out of repair, but if a guard or knife should break, another can be put on in the field without going to a machine shop.

## Literary and Miscellaneous.

### FAMILIAR CHEMISTRY.

BY MRS. M. F. H. THOMAS.

#### CHAPTER III.

The Earths proper, consist of the *rust of metals*; or the union of Oxygen and metals, and are called Oxides. They are clay—oxide of Aluminum; sand—oxide of Silicium; lime—oxide of Calcium; and magnesia—oxide of Magnesium. They are mingled with a large proportion of organic matter—the decayed remains of vegetables and animals. These last constitute the real fertility of the soil. They furnish the Ammonia, and the greater part of the Phosphate of lime; which, with gases from the atmosphere, form the pabulum of vegetable life, and enter so largely into organic structures. The other com-

ponent parts of the soil, furnish merely a mechanical support; a convenient medium for the transmission of nourishment; or at most, contribute very slightly to their sustenance. The experiment of growing an oak in a quantity of earth, (which had been previously weighed) contained in a vessel; showed, that in a number of years, it lost no appreciable bulk or weight, though the tree attained considerable size. The soil, in this case, consisted, probably, for the most part, of the earths proper; and the plant must have been nourished by the atmosphere, and organic remains contained in the water. If, however, a plant in the same circumstances, be watered with distilled water, it will droop and die. A proper admixture of the coarser materials of the pure earth, with the finely divided organic matter, is necessary to regulate the moisture of the soil; which depends, chiefly, upon its capillary attraction. By capillary attraction is meant the force which raises fluids above their level, in minute tubes and porous bodies. Pour water upon a piece of loose sandstone; or a heap of fine sand, and instead of passing directly through, it will remain suspended in its substance, until the whole is saturated. Water poured into the saucer of a flower jar, also, will rise, and moisten every part of the contained earth. It is by this law of capillary attraction, that soils retain their moisture. The rain which falls upon the surface, instead of sinking directly through, is retained in the interstices of the soil, more or less, according to its attractive capabilities; the surplus sinking down, until meeting a stratum of rock, or impenetrable clay, it forms little subterranean rivulets, which cutting, form larger streams, called veins; which bursting out on lower grounds, constitute our springs. Now upon the strength of the capillary attraction of the soil, which depends upon the number and size of its pores, (if too large, the attraction is weakened, hence coarse sand suffers more from drought, than fine,) depends the water-retaining capability of the soil; also its power of attracting moisture from the atmosphere. The vapors held by heat in the higher regions of the atmosphere, during the day, at night, condensed by cold, sink down, (hence the dampness of night air) to the stratum next the earth; which, if thirsty or dry, sucks it in, in proportion to its attractive power. Hence the difference which can be observed, in times of drought, between two fields, equally exposed to wind and heat.

Water in its natural state, is always mingled more or less, with foreign ingredients. Expose a glass of the purest spring water, to heat and light; and, in a short time, a green film will be observed to cover the surface. This film has been proved to be a real vegetation; and as no organized structure can originate without a germ, it must be the offspring of organic remains in the water. This is proved by the fact, that on distilled water similarly exposed, no such phenomenon occurs. Rain water is the purest of natural waters; as it contains no saline, or earthy ingredients. Evaporation and distillation, are analogous processes. Place, for instance, a shallow dish of brine; or any saline solution, in

the heat and wind. In a short time the water will disappear, leaving the salt crystalized upon the dish. In the same manner, the great mass of water, which falls in the form of rain, hail and snow, is raised from the briny ocean, to fall purified and refreshing; not only to water the thirsty earth, but to form a wholesome drink for man. Wonderful are the works and ways of the God of nature. Hard waters are those which contain earthy matters, in a state of solution; usually Phosphate, or Bicarbonate of lime dissolved by the passage of the water through the earth. Springs of soft water are, therefore, seldom found in lime-stone districts. Hard water is easily detected, by its curdling when mixed with soap, instead of forming a suds. This is also a chemical process. Soap is a chemical composition of oil and water, through the neutralizing influence of an alkali; which unites with both. Now waters called hard, in addition to a neutral salt, contain a quantity of surplus acid, by which the salt is held in solution, and the alkali of the soap having a stronger affinity for the acid than the oil and water, deserts its old union, to form a new one with the acid, leaving the oil to rise to the surface. When hard water is boiled, the surplus acid is expelled, causing a deposition of the carbonate of lime, (which is insoluble in water,) in scales on the kettle. Soft water is by many, considered insipid; but that this depends upon an artificial taste, created by stimulating foods and drinks, is proved by the fact, that animals prefer drinking from turbid pools of soft; rather than the most transparent hard water. All water which contains any important admixture of substances, not adapted to nourish the body; whether the much vaunted mineral waters, or the miasma-breathing marsh, is injurious; and their common use as a beverage, is the cause of many chronic and epidemic diseases; such as dysenteries, which are often caused by Phosphate of lime—Intermittent, and Remittent fevers—calcareous concretions in the intestines, &c., &c.

But here, as in every thing else, FASHION reigns omnipotent. Waters mingled with impurities of every description; *Iron—earthy salts—deadly Iodine and Bromine*; and last, and worst, that most disgusting and fatal of all gases,  *sulphuretted Hydrogen*; a few bubbles of which, when evolved by decaying animal remains, condensed breeds pestilence and death, are transmitted by this most potent magician, to unfailing panaceas for all complaints, from the gouty eye of the *gourmande* to the overtaxed brain of the student; while the pure fluid, which God distils from Heaven, like holy manna of old, is cast aside, as fit only to cleanse the impurities of the external man; *for which purpose their favorite beverages answer very poorly*. Did it never occur to such people, that the internal source of the body; which is but a continuation of the external, might need cleansing too, *and that hard water is no more efficacious in one case as the other!*

Brooklin, April 1st, 1854.

TO CORRESPONDENTS AND READERS,

A number of interesting articles and original communications are unavoidably crowded out of this number, owing to the length of the Prize List and Rules and Regulations for the Provincial Exhibition.

AGRICULTURAL REPORTS.

Reports have been received at the office of the Board of Agriculture, to the present date, from the following County Societies :—Addington, Bruce, Carleton, Dundas, Du ham, Elgin, Essex, Frontenac, Glengarry, Grey, Haldimand, Hutton, Hastings, Huron, Kent, Lambton, Leeds and Grenville, Lennox, Lincoln, Middlesex, Norfolk, Northumberland, Ontario, Oxford, Peel, Perth, Peterboro', Prescott, Prince Edward, Russell, Simcoe, Stormont, Victoria, Waterloo, Welland, Wellington, Wentworth.

We have to acknowledge the receipt of the Schedule of Premiums, to be Awarded at the Exhibitions of the Brockville Horticultural Society, the first show to take place on the 29th of June, and the second or Annual Show, on the 14th of September. There are liberal prizes offered for Flowers, Fruits, Vegetables, Seeds, and Poultry. Also £2 10s. for the best Cultivated Garden; £1 10s. for the best design of a Green-house, and £1 5s. for the best specimen of Rustic Work.

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BUREAU OF AGRICULTURE  
QUEBEC, May 8th, 1854.

THE following Gentlemen are re-appointed members of the Board of Agriculture for Upper Canada, for the current year, viz. :—

- R. L. DENISON, of Toronto,
- E. W. THOMPSON, do.
- HENRY RUTTEN, of Cobourg.
- JOHN HARLAND, of Guelph.

JOHN ROLPH,  
Minister of Agriculture.

**CHALLENGE.****\$1,000 to \$4,000 a Side!**

Or in Friendly Competition.

**IMPORTED "YOUNG LION"** Within one Month after his Steeple is over (due notice being given), to offer to  
**WALK OR TROT 5 MILES AND UPWARDS.**

Against any Stallion, Gelding or Mare, of his weight or more in Canada or in the United States, imported or otherwise, and as a few Horses can be found to weigh with him any Horse weighing within 250 lbs. of his weight will be allowed to compete.

--ALSO--

At the same time, he will be open to Trot his Mile in less than **FOUR MINUTES**, in or out of harness.

--ALSO--

At the same time, he will be open to draw any weight from **Two Tons and upwards**, from 5 Miles to 10 in a duration to be in the shortest space of time, against any Stallion, Gelding or Mare, of any class, size or weight, either in Canada or the United States, imported or otherwise.

--ALSO--

For Superiority of Action against any Horse of his Class wherever he can be found.

The Judge to be chosen from among the veterinaries of New York, one from Montreal and one from Toronto, whose services are to be paid for by the Winner.

The Trials to take place in the vicinity of Toronto, and all travelling expenses to be allowed to the Owner of any Horse that may compete coming from a distance.

**W. B. CREW.**

Toronto, May 27th, 1851.

6-6-in.

IMPORTANT TO

**DAIRYMEN & BREEDERS**

OF

**SHORT HORNS!**

IN consequence of the ill state of health of Mrs. Parsons, and she being recommended by her Physician to visit the Old Country, together with other family arrangements, the Subscriber has resolved upon discontinuing his Dairy altogether, and there will consequently be offered **FOR SALE BY AUCTION**, on Thursday, 27th JUNE next, at his residence, Cuddeale Farm near Guelph, C.W., the **WHOLE** of his **VALUABLE HERD** comprising, Thorough-Bred Short Horn Cows, Heifers, and Heifer Calves, a two year's old, and Yearling Bull and Bull Calves, with a number of choice grade Durham Cows, Heifers with Calves, and two year's old Heifers, all nearly thoroughbred and selected with skill and care for years past for his own intended use, from the deepest markets in his land.

The Farmers of Canada, therefore, will now have an opportunity, to obtain offered to supply themselves with a foundation of a well-bred Milking Herd.

The Subscriber thinks it desirable to state that, he at first anticipated selling only a part of his Herd, but has decided otherwise, that it may not be said he had reserved the choicest of his Herd for his own use hereafter, and therefore will be sold without reserve to the highest bidder. A credit of nine months will be given.

To make the Sale more attractive, the Subscriber has concluded on offering some of his thoroughbred Leicester Sheep, chiefly young and part of them by Mr. John Wilson's imported best ram. A number of his improved small breed of pure (Laid Radnor's and Lord Ducie's blood) not to be equalled for symmetry and quality.

Also a powerful Yoke of good Working Oxen.

**H. PARSONS.**

April 20th, 1851.

Cuddeale Farm, near Guelph, C.W.

**N.B.**—The fat-tailed Bates' Duchess blood is infused more or less throughout the Herd, from the celebrated Stock of George Vint, Esq. of Troy, N. Y., and likewise the blood of the Herds of the Hon. Adam Fergusson, of Woodhill, and of John Howitt, Esq., of Guelph. Any comment upon the Stock of either gentlemen would be superfluous here.

Candidates, with further particulars and Pedigrees, will be shortly out.

**DURHAM BULL CALVES.**

**THE** Subscriber does not intend to rear any Bull Calves for sale this Season, unless to Order.

Five thoroughbred Cows, Duchess or Bates blood, are now expected to Calve.

**ADAM FERGUSSON.**

Woodhill, Waterdown,

**PURE BRED STOCK  
FOR PRIVATE SALE AT****MOUNT FORDHAM, WESTCHESTER CO.,****NEW YORK,***Eleven Miles from City Hall, N. Y., By Harlem R. R. Cars,*

**H**AVING met with more success than I anticipated the past year, with the Catalogue of male animals at Private Sale, is the reason for offering this lot of animals **AND MY JUNE SALE BY AUCTION, WILL NOT TAKE PLACE.** A full descriptive Catalogue with prices attached, will be published on the fifteenth of April, and I intend to be at home myself to see any who may call. I will sell at Private Sale, about 18 Short-Horns, 6 of which are young Bulls and Bull Calves. The Cows and Heifers old enough, will be in Calf, to the Celebrate 1 Imported Bull "BALCO" (3918,) or Imported "ROMEO," winner of the First Prize at Saratoga in 1844; and also at the American Institute the same year.

The young Bulls and Bull Calves are some of them from Imported Cows, and sired in England; the others are sired by the Imported "MARQUIS OF CARRABAS," (11789,) winner of the First Prize at Saratoga, the past year, as a two year old.

Also, about 10 head of Devons, consisting of a yearling Bull, sired by "MAJOR," and 5 Bull Calves, sired by my Imported First Prize Bull, "FRANK QUARTLY," and several of them from Imported Cows. The Cows and Heifers old enough, will be in Calf to "FRANK QUARTLY." Also 6 or 8 Suffolk Sows; and several young Suffolk and Essex Boars. Also 2 Southdown Rams, imported direct from Jonas Webb, and 6 Yearling Rams, all bred by me from Stock on both sides, imported from Jonas Webb Catalogues will be forwarded by Mail if desired.

All animals delivered on Sunboards, or Rail Cars in the City of New York, free of expense to the purchaser. The Devons are at my Herdsdale Farm, 11 miles north, to which place I will take persons both to and from.

**MY FRIEND MR. N. J. BECAR,** who is interested, in several of my importations, will also sell about 11 head of Short-Horns, consisting of 4 young Bulls and 5 or 6 Females. His young Bulls are also several of them from Imported Cows, and sired by the "LORD OF ERYHOLMNE," (12205,) and the celebrated First Prize Imported Bull "ROMEO." Mr. Becar's Cows and Heifers are in Calf to the Imported Bull, "MARQUIS OF CARRABAS," (11789.) Mr. Becar can be seen at his Store, No. 187 Broadway, New York, at which place he will make arrangements to go to his Farm, at Smithtown, Long Island. His animals will be entered in the same Catalogue with mine, which can be obtained by address him at his Store, or to me at Mount Fordham. His animals will be delivered in the same manner. Our importations have been in almost all cases made at the same time, and are of equal merit except that I have more in number.

**TERMS,** Cash on delivery.**L. G. MORRIS**

March 16th, 1854.

THE

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