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THE  
CANADIAN AGRICULTURIST,  
AND JOURNAL OF TRANSACTIONS

OF THE

BOARD OF AGRICULTURE, AGRICULTURAL ASSOCIATION, &c.

VOL. VII.

TORONTO, APRIL, 1855.

No. 4.

Agriculture, &c.

TOWNSHIP OF HAMILTON FARMERS' CLUB.

AGRICULTURAL SOCIETIES—THEIR BENEFITS.

At a meeting of the Township of Hamilton Farmer's Club held on Saturday the 3rd Feb. 1855. Charles Bourn Esq., President in the Chair.

The subject for discussion being "The advantages that Agricultural Societies have been to this Province." The opening address was delivered by John Wade, Esq., as follows :

MR. CHAIRMAN AND GENTLEMEN :

It is universally admitted that Agriculture has made more rapid strides in advancement the last fifty years, than it did in the previous five hundred. Various causes have contributed thereto; the principle cause however, has been Education, cultivated minds applying scientific knowledge to the plodding routine practices of our ancestors, discarding what was useless and superstitious and drawing in what was useful, and all that would in any way conduce to raise it from what it was universally considered, the lowest drudgery of life, only fit for clowns and serfs to pursue, to a liberal profession requiring as much enlightened skill and knowledge as any other calling.

Modern Agriculture is indebted to the liberal sciences, such as Geology, Chemistry, Physiology, and others, for much of the extraordinary progress it has made during the last quarter of a century (for it is little more than that time since attention has been turned to these things,) establishing it upon a certain basis, by putting cause before effect. Ancient Farmers knew that a certain routine of practice would produce certain results, but the causes were totally unknown and would have remained so, if Geology had not shewn how soils were formed, if Chemistry had not analysed them to shew what elements they contained, and in combination with Physiology, shewn the reason why food given to Animals produced certain effects, and why certain breeds of Animals, would return from a given amount of food much more than others.

But however Agriculture may be indebted to the Sciences for much of her rapid progress, much less

would have been attained, if the combining influence of Societies and Association had not been brought to bear upon it by making results known, breaking down prejudices and making men consent, however reluctantly, that they must either progress or retrograde.

Man by Nature is a gregarious animal, living and acting in communities, unable individually to accomplish but little more than many of the lower orders of creation, simply a subsistence, while in combination with his fellows, his powers are next to unlimited, both morally and physically. Necessity as well as inclination compels mutual protection, mutual instruction and all the blessings of social life proceed from it, and more than all, the great interests of religion can only be carried out, and enjoyed to perfection in the same way, as it is enjoined upon us in the Book of Life, not to forsake the assembling of ourselves together; and on these premises I come to the conclusion, after giving the sciences due credit for all their contributions, that little in comparison would have been attained in Agricultural improvement, if the uniting and amalgamating power had not been contributed by Associations and Societies. Various measures have been employed by Agricultural Societies to obtain the desired results of improvement, the principle however, has been offering premiums in money or medals, or other awards of merit, sometimes by employing their funds in the purchase of superior stock; but in what ever way it is done the best results have always followed.

I am not prepared, neither would it be of much profit on this occasion, to enter statistically into the History of those Societies any farther than to state, I know of none earlier than the Highland and Agricultural Society of Scotland, established about the beginning of the present Century. The Royal Society of Great Britain and Ireland is of much more recent establishment, but though some may have been in operation for 30 or 40 years their effects have only been felt in full force for the last 10 years, in Great Britain and Ireland, during which time they have spread universally, not only as Societies for awarding prizes, but clubs for discussing the various subjects connected with rural affairs, are in active operation in every part of the Kingdom.

Twenty-five years is as far back as any successful attempt to establish a Society can be traced in our Province. In our own County the first attempt was

made about the year 1825, but after two or three years' trial failed another attempt was made in 1830, or 31, and partially succeeded. This was made before Legislative aid was afforded, the subscription was £1 per member. A small importation was made from New York State of Devon Bulls and one Durham, not probably producing much direct benefit, but indirectly paving the way for more successful attempts.

Our present County Agricultural Society was commenced in 1837, through the united efforts of the late G. Manners, Esq., our worthy Sheriff H. Ruttan, Esq., and a few others, and after plodding through many discouragements, and difficulties is still alive and prospering. Since Legislative aid has been furnished it has been much easier to keep them going, our townships have also most of them availed themselves of the act of Parliament and formed themselves into Societies, and Clubs for discussion.—But however much has been done by the County and Township Societies the thing would not have been complete without the Provincial Association. It forms a centre, to which the others connect themselves, and from the peculiar formation of our Province being a narrow strip of Country—in the widest part not extending more than 100 miles—while in length it is 700 or 800, something of this kind is required to bring the inhabitants of the various Counties together, and since this institution has been commenced great improvement both in Stock, Implements of Husbandry, Labour, Saving Machinery and indeed in every department connected with Agriculture, has taken place.

And now gentlemen having in a very imperfect manner, endeavoured to introduce this most important and momentous subject to your notice, I will leave it in your hands, knowing well the deep interest you all take in it, and also your ability to make up what I have left short, and as we are about to enter upon the preparation for holding the Grand Provincial Fair in our own County, I think a subject more appropos to the occasion could not have been chosen.

Mr. P. R. WRIGHT said that Agricultural Societies have done good there can be no question, but that they have accomplished that amount of good which some enthusiasts claim for them, is in my opinion very doubtful. The intentions of our Societies are certainly praiseworthy and philanthropic but I can hardly believe that the amount of good they have accomplished is proportionate to their combined exertions. There are two things which materially affect the success of any undertaking, calculated to effect a change in the general usages of communities, viz: the remedy and its mode of application, and the susceptibility of the parties subjected to its operation. The question then arises, to which of these can we attribute the partial failure which has attended the efforts of Agricultural Societies, to advance the interests and stimulate the exertions of Agriculturists generally.

Let us examine briefly the career of the parent of all our Agricultural Societies—"The Highland Agricultural Society of Scotland." since its establishment in 1781. The members of this Society at its outset and even yet are principally landowners—the Nobility and Gentry of the Country, and consequently possess an influence, independent of pecuniary means, which few other Societies can command. They have combated prejudice, with every possible weapon, examples, the aids of Science. Honors and rewards: have been each and all brought into the field, and the war carried on for upwards of seventy years by skilful and experienced Generals, but at this day, and even in Scotland will any one have the temerity to assert that an enlightened system of Agriculture is the rule and not the exception, or

charge the Society with a misdirection of its energy or misapplication of its resources. It is only (as Mr. Wade has said) within a short period that Societies are beginning to influence the Agricultural Community generally, and why? because that body is beginning to feel the necessity for a more liberal Education and acquaintance with the Sciences which so materially affect the successful cultivation of the Soil. There must be something radically wrong when it is found necessary to hold out premiums to induce a set of men to throw aside a bad management and adopt a better. Do those who offer the premiums wish to participate in the advantages which they think will be the result of a change, and do those to whom the premiums are offered think this is the case, or are the Farmers so ignorant or so prejudiced to old customs, that they are blinded to their own self interest? It is evident that those who offer the premiums expect that they will have considerable effect in directing the mind of the Farmer, to inquire into, and probably adopt such a line of practice for the future as may secure the advantages which may be naturally calculated on. Self interest is the moving principle of every man's conduct, and has a much greater influence on him than any premiums; he will only compete for them, if he feels that it will be more to his advantage by doing so, than by not doing it.

There have been no premiums held out to Manufacturers, and yet the wonderful results, which have followed the improvement in all the manufactures that have been made during the last fifty years, is the fruit of a conviction that each of the new inventions will pay all those liberally, who use them; but how different with agriculture. A continual succession of premiums have been awarded to Farmers during the last twenty years, and yet, how very little has the Agriculture of the Country been benefited by it. This shows clearly that there is something wrong in the mode of trying to improve Agriculture, or that there is some other thing which hinders the Farmer from adopting the improvements; it may be partially owing to both. If prizes were offered for the whole of the Farmer's stock, or for the management of the whole farm, instead of for the best bullock, the best sheep, or the best dozen turnips, so that no prize be awarded but to that which on the whole shows the greatest profit, it might be an improvement on the present principle of giving prizes, and if the science of Agriculture held a more prominent place in our schools and colleges, the next generation of Farmers, would, in all probability, be an improvement on the present. On the whole, I think, that if the benefits we have derived from Societies, Clubs, and patriotic and enlightened individuals, have not been commensurate to their exertions, the fault rests mainly with the Farmers themselves. A little more philanthropy, a little less jealousy, and a little more liberality would greatly conduce to perfect the working of our Agricultural institutions, which are now fairly on the road to accomplish a complete renovation of Canada, so far as Agriculture is concerned. We, as Farmers, ought not to rest satisfied with giving to these institutions merely a pecuniary support, by paying as many unworthy members do, one dollar to speculate on the chance of gaining ten; but show we are really desirous of improving our condition, by heartily co-operating in every scheme which has a tendency to eradicate error, and supporting every man who labours for our improvement. It is now generally admitted that great good has arisen from our Agricultural Clubs; a liberal and enlightened Press has been the chief instrument in effecting this, for if publicity were not given to the proceedings of a few spirited individuals who attend the meetings, their

influence would be sadly curtailed, and I would just remark in conclusion, if Farmers now a days are satisfied with the improvement of their farms, horses, sheep and pigs, &c., and at the same time neglect their own, such men will soon find themselves lost in the race, and the post of honor occupied.

Mr. ALCORN said, it is my opinion that Agricultural Societies have been of great benefit to this country, from their commencement to the present day. I have now been twenty years in this country during which period I have always supported these Associations, and shall continue to do them all the good I possibly can by endeavouring to induce others to become members of our Society, and if spared to see another twenty years I hope to see Agriculture improve in the same ratio as it has done for the last five years. Our having the Provincial Show here this year, I trust will be the means of bringing out a great many new members, and thereby infusing fresh blood into all our Associations.

Mr. RIDDELL said, he did not rise to make a speech but merely to correct a small error that his friends Messrs. Wade and Wright had fallen into, by saying that the first Society formed was the Highland and Agricultural Association, as he found the following in "McIntosh's History of Scotland,"—that "in 1723 some enterprising proprietors, who had introduced the culture of clover and turnips upon their personal farms, formed themselves into an Association under the title of 'The Society of Improvers.'" In the knowledge of Agriculture in Scotland, this Society existed for upwards of twenty years. In 1784, the Highland Society was established, and procured a Royal Charter of incorporation three years after."

Mr. PRATT heartily concurred in what had been said by the former speakers, as to the benefit of Agricultural Societies, and from experience had felt some of the jealousy alluded to by Mr. Wright, and which he thought had done him no harm, as it had spurred him on to put a better class of stock in his barnyard.

Mr. BLACK had not been long a member of the Agricultural Society, but so thoroughly convinced was he of their usefulness, that he intended canvassing more amongst his neighbours for new members than ever, although some have even said that it was surely a profitable business to him, but so far from that, he had been at considerable loss of time, and expense both; still as he thought the Society was doing good, he would do all he could for them.

Mr. CASTLE perfectly agreed with Mr. Pratt, that a little jealousy was the means in many instances, of putting better stock on our own and neighbouring Farms.

Mr. WRIGHT rose for explanation—the jealousy spoken of by Messrs. Pratt and Castles—is not jealousy at all, but emulation which was highly commendable;—what he meant was the jealousy which prevented so many of the neighbouring farmers from becoming members of our Society, and saying there is no use in our doing so, as the Messrs. Wades and others along the front road, had been members so long, that they made up the premium lists and divided it amongst themselves.

Mr. BOURN said, I find there is only one opinion in this meeting as to the great benefits Agricultural Associations are to the Farmer, and through them to the Country; we find they have been so in England, Scotland, and Ireland, and if carried out in their proper spirit will be so here in Canada. And now, Gentlemen, seeing, that we are to have the Grand Provincial Show in this Township, next fall, I hope we shall all put our shoulders to the wheel, and carry out the object of such meetings to the fullest extent.

It was then moved by Mr Riddell, and seconded by Mr. Alcorn, that the meeting do adjourn to the first Saturday in March, to meet at Dixon's Hotel, Court House, at 1 o'clock, and that G. E. Castle, Esq., be requested to introduce the subject of "Constructing Farm Buildings, in regard to comfort and convenience."

WILLIAM RICHARDSON,  
Secretary.

#### MR. McDUGALL'S REPORT TO THE BUREAU OF AGRICULTURE.

Among the Documents submitted to Parliament by the Bureau of Agriculture, and ordered to be printed, we find the Report of Mr. McDougall, the proprietor of this journal, on the subject of importing Machines, Implements, &c., into this country at the public expense. It was not without reluctance that Mr. McDougall undertook the mission confided to him by the Minister of Agriculture, inasmuch as he doubted the expediency of making the Bureau or Boards of Agriculture, *importing agencies*, except in a few rare cases. But, as the Bureau was a new department, and as Mr. McD. had taken an active part in its establishment (having drawn up the various Agricultural Acts of the last Parliament,) he was very anxious that it should meet the expectations of its friends, and prove useful to the country. To dissuade from foolish or extravagant projects, is sometimes as necessary as to suggest useful ones. That the Bureau *could* be made a most valuable aid to Agricultural improvement without interfering with private enterprise, and without excessive drafts upon the public purse, no one can doubt. Its operations thus far have not been very systematic, or very promising. But it is too soon to decide against the Bureau, as it has not yet been properly organized. Let us hope that it may find proper a *head* at the next turn of the wheel. Its *first Clerk* should be a competent man, holding his office during good behaviour; and he should *do the work*. A mere politician is out of place as manager in such a department.

The friends of Agricultural improvement will see in the following report some of the suggestions and recommendations made to the Bureau by the proprietor of this journal, and can judge of their utility.

For the information of those who may fancy they detect a "job" in this report, we beg to say, that Mr. McD. has not been paid the *expenses* of his mission; and that he never expected, and would not accept anything beyond a fair allowance for that item.

REPORT OF MR. WM. McDUGALL TO THE MINISTER OF  
AGRICULTURE.

To the Honorable John Rolph,  
Minister of Agriculture, &c., &c., &c.

Sir,—I received the following communication shortly after the day on which it bears date :

Bureau of Agriculture,  
Quebec, 24th March, 1853.

Sir,—As I desire to make the Bureau of Agriculture useful to Canada at as early a day as possible, and to keep up that spirit of improvement which has evidently been awakened, I have taken various means to obtain information, and I now desire your services for a short time for the same purpose.

I therefore authorise you to proceed to New York, Boston, Philadelphia, and other cities of the United States, where such information is likely to be obtained, and to examine and report to me upon the various implements that have been introduced and deemed worthy of Patent; and also upon any new variety of seeds and vegetables, of which you can obtain any information, and which you may consider adapted to Canada; and generally to report upon such other articles as you may deem useful to Canadian Agriculture, with a view to action by this Department, and the Boards of Agriculture, in promoting their introduction into this Province.

I have the honour to be, Sir,  
Your most obedient Servant,  
(Signed) MALCOLM CAMERON,  
Minister of Agriculture.

Wm. McDougal, Esquire,  
Proprietor of the Canadian Agriculturist.

I have now the honour to state for your information, that upon the receipt of the above, from the late Minister of Agriculture, I proceeded to make the necessary arrangements to perform the service required of me. The New York exhibition of the Industry of all Nations, was expected to open in the month of May; and believing that I should there find all the important new inventions in Agricultural Mechanics, not yet introduced into this Province, as well as other objects to which it might be desirable to direct the attention of the Minister of Agriculture, I determined to postpone my departure for a few weeks.

I afterwards learned from the Honorable Malcolm Cameron, that it was his wish to meet me at the Crystal Palace, on the subject of my mission, and other matters pertaining to the Bureau of Agriculture. The opening of the Exhibition was delayed some weeks beyond the appointed time, and when finally opened it was understood to present for examination a portion only of those articles for which space had been appropriated. After a considerable delay from the causes mentioned, and learning from the Honorable M. Cameron that he would not be able to visit the Exhibition as he had intended, I proceeded, on the 9th of August, to execute the mission with which that gentleman had honored me.

Looking at the terms of Mr. Cameron's letter, I found that I was authorised to "examine and report upon such Implements, Seeds, Vegetables, and other articles, as I might deem useful to Canadian Agriculture, with a view to their introduction into this Province," through the agency of the Bureau and Boards of Agriculture.

Assuming that the interference, or assistance of Government, was intended to be confined to those cases in which private enterprise would not be likely to achieve the end desired, except perhaps after long

delay and consequent loss to the Agriculture of the Province, I felt bound to limit this branch of my enquiries, to a comparatively small class of objects. Boston and Philadelphia were suggested as cities which might be visited with advantage, and it would have given me, personally, great pleasure to have acted upon the suggestion; but I could not learn that information on the subjects contemplated in my instructions was likely to be obtained in either of those cities, which was not equally accessible in Albany, the Crystal Palace, or other sources in New York. I did not therefore extend my investigations over so wide a territory or protract them for so long a period as the general terms of my commission might be held to warrant.

The Agricultural machines and implements of recent invention, that came under my notice, or of which I could obtain reliable information, were neither very numerous, nor, in an economic point of view, very important. The number of those which I felt warranted in recommending for importation at the public expense, is small indeed; and if my report were limited to a mere description of this class of objects it would comprise but a few pages. My observations will, therefore, be more diffuse and suggestive than I had expected to make them.

The progressive increase in the wages of labour; the rapid exhaustion of the soil, under a rude and wasteful culture, which has prevailed over this continent, and is probably incidental to all new countries; the certainty of sale for all his productions; the better price and the "quick returns" which a dense population at home, and never-glutted markets abroad, secure to the farmer, have rendered necessary as well as profitable the employment of machinery in Agriculture, of a more complicated and expensive kind than has ever been practicable at any former period. In Great Britain the same necessity has grown up, though from somewhat different causes.

The astonishment created among the farmers of that country by the successful operation of the American Reaper at the World's Fair, in 1851, which was in no degree lessened by the discovery, that this identical Reaper was the invention of Mr. Ogle, of Rennington, near Alnwick, as far back as 1822,\* while it showed the existence of a blind unreasoning prejudice in the Agricultural mind, against the most valuable offerings of mechanical ingenuity, indicated also that this prejudice was fast melting away before the convincing logic of necessity. The same instinctive hostility to new inventions and new processes in agriculture prevails in Canada among a large class of farmers. But every year extends the conquest of innovation, and though we are still behind our inventive and enterprising neighbours in the use of Agricultural Machinery, I firmly believe we shall soon overtake them—nay that we shall surpass them in the superior construction, and more economical use of such implements and machines as are adapted to our wants.

During the last two or three years, manufactories of farmer's tools and implements have been established in all the principal towns and cities of Upper Canada. So great is the demand for improved machinery that even American manufacturers have set up branch establishments in Canada, with very profitable results.

Labour and materials being much cheaper here than in the adjoining States, enterprise seems all that is necessary to produce, at home, every implement that is required. This favourable movement in the mechanics of Agriculture, (I speak more particularly of Upper Canada) is undoubtedly attributa-

ble to the influence of the Societies, Associations, and Boards of Agriculture, which the Legislature has so wisely encouraged, and so liberally aided. The provisions of the consolidated Bill of last session, to prevent abuse in the expenditure of the public grants, and to secure the collection and publication of the Agricultural statistics of the country, in an authentic form, will, as experience already proves, produce the desired result and leave but little for the direct interference of the Government beyond the executive administration of the law.

With such views of the present condition of our Agriculture, and the efficiency of the means already provided for ensuring its progressive improvement you will not expect me to recommend a competition between the Bureau, or Boards of Agriculture, and private individuals, in the importation of implements, seeds and animals, from other countries. That there are a few cases in which the special and direct aid of the Government may be legitimately and usefully interposed, is admitted, but as the result of my enquiries, I can only mention two or three which at present seem to me to deserve your attention as belonging to this class

*Flax machinery &c.* The introduction of improved machinery for dressing and preparing flax is necessary, if its cultivation is to be extended. This is one of the cases which is thought to need the aid of the Bureau, and I shall therefore offer a few remarks upon it.

It may well be doubted, if the culture of flax is as important to Canada, in an economic view, as it is fashionable to represent it. As a general rule, farmers will cultivate those crops suited to their soil and circumstances. At all events, it is not to be supposed that the intelligent and wealthy class, now not a small one, will long neglect those crops which, upon the whole, will yield the most profitable returns. There are in this country no legal restrictions, or impediments to be removed, no obstacles to be overcome, except those which nature has imposed. The Canadian farmer may freely choose from the world's seed store; he may range over the whole vegetable kingdom and make his selections without let or hindrance. For what purpose then should Government interfere? Not to divert farmers from the cultivation of those crops which they have found adapted to their soil, climate, and market facilities, and to build up, by means of bounties, or premiums, an artificial, hot-house system. Such interference would in my opinion, be injurious to the best interests of our farmers and the country. To encourage, to stimulate, to diffuse information, and by means of societies and Boards of Agriculture among the farmers themselves, to promote general improvement, is the duty of Government. But special action must be limited to a very few cases, and such as lie beyond the reach of common means, or injury, and not benefit may be the result.

The more general cultivation of flax might not be productive of injury to the soil or pocket of the Canadian farmer; but it may safely be affirmed that neither the one nor the other, has received much benefit hitherto from its cultivation for textile purposes. The experiment has not been confined to a few cases, nor to a single township. I have published, an Agricultural Journal for the last six or seven years in Upper Canada, and during that period, as well as previously, heard and read and published many statements and opinions on this subject. But I am not aware that it has ever been demonstrated by actual experiment in Upper Canada, that flax, as a field crop is more beneficial or more profitable than the poorest

of those which form the common rotation. In several cases coming under my observation, its cultivation, except for seed, and mere domestic purposes, has been abandoned after a short trial. But it is said that the unprofitableness of the flax crop arises from the small quantity grown in any one locality, and the want of suitable machinery to prepare it for market. The first reason may be merged in the second. If the machinery for steeping or steaming and dressing the straw as it comes from the field, were set up in any county, and a sufficient price offered for the raw material, producers in abundance would undoubtedly be found. It is true that farmers, generally, are not friendly to this crop, on account of its supposed deteriorating effect upon the soil. Science has recently endeavoured to show that this is a mistaken notion—a prejudice; but when the conclusions of chemical analysis, and of two thousand years experience, conflict on a point of this kind, we ought rather, I think, to suspect some blunder in the laboratory than in the field. The experience of Roman cultivators, nineteen hundred years ago, taught them that flax “burned the land” (*Virgil's Georgics l. 77*). A distinguished modern writer on Agriculture informs us, that—“The Premiums given by the Legislature of England to force the cultivation of flax, have had very little effect, it being one of the most *exhausting* crops, when allowed to ripen its seed, and its culture being found to be much less profitable than corn.” (*Farmers' Encyclopedia*, article, *Flax*.) But as all crops and especially cereals “exhaust” the land, and compel the cultivator to return in the shape of manure the exhausted elements, if he wishes to prevent deterioration, this objection to flax is not peculiar or insuperable; it resolves itself, after all, into the question—Will it pay?

Let it be shown that the expense of growing flax and keeping up the fertility of the soil will be met by the profits, and that the margin of profits will be larger than in the case of wheat, oats or pease, and it will soon take its place in rotation with these crops. We may therefore enquire into the alleged cause of its present unprofitableness, without stopping to reconcile the conflicting testimony of chemistry and experience.

Professor Wilson, the English Commissioner to the New York Exhibition, whose acquaintance I had the good fortune to make at the Crystal Palace, informed me that England alone imported 100,000 tons of the raw material. He expressed a very confident belief, that flax could be grown profitably in the United States and Canada, for exportation to England; but his data were somewhat vague and unsatisfactory. (†) He very kindly presented me some recent publications on the subject. The information derived from these sources, though interesting and useful, is not so conclusive or satisfactory in its bearing upon the question I wish to submit for your consideration, as to warrant its introduction at any length in this report.

If it be admitted that there is a *market* in Great Britain for all the flax fibre we are likely, under any circumstances, to produce for exportation, and that the only obstacle to the cultivation of flax for such a purpose is the want of suitable machinery for pulling, dressing, and preparing it on a large scale, the question arises—can such machinery be had, and ought Government to aid in procuring it?

Your predecessor, the Honorable M. Cameron, having sent a commissioner to Europe for the purpose of making special enquiries on the subject, I am bound to treat the second branch of the question, as already answered, in the affirmative. The doubts suggested

as to the importance of flax culture *at all* in this country, are also partly set aside by the same fact; but as these doubts hinge on the single question of profit, the discovery of efficient machinery by which the fibre can be prepared for market at such a cost as to leave an ample profit to the producer will, of course, show them to be unfounded. Nevertheless, I beg most respectfully to call your attention to the economic view of the question, before you decide upon more active measures, or a larger expenditure.

In England, and especially in Ireland, every branch of flax manufacture has been made the subject of scientific investigation, with a view to its improvement; and we may therefore presume that the most economic processes, and the best machinery will be found in use there. Mr. Kirkwood has no doubt obtained the latest and most reliable information from that quarter; but as the Crystal Palace contains some newly invented machinery for dressing flax, which may not have been seen by him, it is proper that I should submit for your information a short account of it.

*Chichester's Flax Machines.*—These were the only flax machines in the Exhibition, at the period of my visit. The machine Arcade was still unfinished, and many articles for which space had been secured, had not reached the Palace. Clemmon's Flax machine, or dresser, is a new machine highly spoken of by some but it was not in the Exhibition, nor was I able to learn much respecting it. Chichester's Machines consist of a Puller, a Brake, and a Dresser. The former, said to be ingeniously constructed, was not in the Exhibition. Professor Wilson, however, had seen it, and entertained a very sanguine opinion of its efficiency. One great obstacle to the growth of flax on a large scale, is the expense of pulling or harvesting. At present the pulling is done by hand, and unless machinery can be substituted for hand labour in the field, as well as in the manufactory, this expense will subtract largely from the farmer's profit. It has been suggested that the common (as it may now be designated) mowing machine will answer this purpose. If so, an important point is gained; or, if Mr. Chichester's Puller be found, upon trial, to fulfil the requisite conditions (and many persons believe it will) the difficulty will be overcome. His Brake is not unlike a common Fanning Mill in appearance. Its machinery consists of two horizontal, corrugated cylinders, about twenty inches in diameter, and working together. Their surfaces are composed of ribs or plates of iron, every alternate plate being adjusted on spiral springs so as to yield to pressure, while the others are fixed firmly on the cylinder. As they revolve, each yielding rib in one cylinder is opposed to the fixed rib in the other. The flax is fed end-wise, at the side of the machine, and passes between the cylinders, being broken by the pressure of their ribbed surfaces.

The wood is thus broken and separated from the fibre, the former falling down, and the latter passing out at the other side of the machine, in a fit state to be subjected to the Dresser.

The Dresser is similar in appearance to the Brake, but its cylinders are of a conical shape, and composed of wood. Each cylinder is composed of four large spiral blades of wood, the blades of one being opposite the spaces between the blades of the other. The fibre from the Brake is drawn in by these revolving cones. The blades strike it first on one side and then on the other, breaking out the remaining wood or shives, and deliver the fibre, unbroken and free from impurities. A specimen of flax, dressed by these machines, presenting a long, fine, white fibre, was stated to be worth \$400 to \$500 per ton in New York

market. The two machines cost about £150, and may be drawn by two horses. Four men are required to attend them. It is said they will dress a ton of rotted or steeped straw, per day, which will yield from 400 to 500 lbs. of fibre.

Some of these figures are evidently exaggerated, for if Professor Wilson be a good authority, the value of the fibre in England, prepared by the latest and most approved process, does not exceed, for the best quality, £70 sterling per ton (see his lecture on Flax, delivered before the New York State Agricultural Society September, 1853, page 38,) and he gives the ordinary price at £40 per ton, (page 47). If, as alleged, flax fibre be worth \$500 per ton in New York, (see N.Y. *Tribune* of September the 28th, 1853,) Professor Wilson will hardly persuade the American producer to send it to the English market for \$200 per ton. The question of profit and loss to the Canadian producer cannot be satisfactorily determined, unless we obtain correct data, on three points at least, viz., the cost of growing and pulling the crop; the cost of steeping and dressing the fibre, and the market value of the product. Mr. Kirkwood, I presume, has obtained accurate information on these points, especially the two last. I need not, therefore, attempt to reconcile the apparently conflicting statements above mentioned.

The cost of working Chichester's machine in the State of New York is thus stated by a New York journal: "The two machines—Brake and Dresser—will dress one ton per day of the rotted or steeped stalk or straw, yielding 375 to 400 lbs. according to the quality of the material, of soft and very serviceable line or fibre. This, supposing the ton of rotted or steeped straw to be worth \$12, the labour \$4, the power \$1, the use and wear of machinery &c., \$3 more, and \$5 per day for contingencies, would give \$25 as the net cost of say 400 lbs of line or dressed flax, worth certainly not less than \$50, giving a profit of \$25 per day to the runner or owner."

Buchanan's improved apparatus for steeping the straw, is according to Professor Wilson, the best hitherto employed in Great Britain, and I believe it is not claimed that any better plan has been discovered, or put into operation on this side of the Atlantic.

If you should determine to introduce, or to aid the introduction into Canada, of Buchanan's, or any other improved steeping apparatus, additional machinery will, I apprehend, be necessary to effect the mechanical separation of the fibre from the other parts of the plant. It may be that Chichester's Brake and Dresser are the best yet contrived for that purpose. I therefore respectfully submit the foregoing statements and suggestions for your consideration.

*Drain Tile Machines.*—There may be reason to doubt the advantages to the Agriculture of this Province, of a more extended culture of flax; but it would be difficult to suggest a reasonable objection to the more general adoption of thorough drainage.

It is somewhat singular that so few farmers, even of those recently from the "Old Country" where its benefits have been so thoroughly tested, have attempted thorough draining in Canada. It seems to be a common opinion that in this country, *surface* draining is sufficient, and that the expense of under-draining would be altogether disproportioned to its advantages. But if the principles on which the operation is based have been correctly explained, there is no reason to suppose that under-draining will prove less advantageous to the soil, or less remunerative to the pockets of Canadian Farmers, than to those of their neighbours in the State of New York. Under-draining on the English system is now extensively prac-

ticed in the neighbourhood of Geneva, Albany, and in New York, and according to the testimony of farmers with whom I conversed personally, the results have fully justified the expenditure. Professor Johnson, of Durham College, England, in a work entitled the Elements of Agricultural Chemistry and Geology, a new edition of which has just been issued from the press, thus sums up the advantages of thorough drainage:—

1. Stiff soils are more easily and more cheaply worked.
2. Lime and manure have more effect and go further.
3. Seed time and harvest are earlier and more sure.
4. Larger crops are reaped and are of a better quality.
5. Valuable crops of wheat and turnips are made to grow where scanty crops of oats were formerly the chief return.
6. Naked fallows are rendered less necessary, and more profitable rotations can be introduced.
7. The climate is improved, and rendered not only more suited to the growth of crops, but more favorable to the health of man and other animals.

A system capable of conferring such advantages as these, obviously merits the attention of every Agriculturalist, and ought not to be overlooked even by Government. It does not appear that these advantages are limited to any particular district, soil, or country. They depend upon conditions common to all. It is true that the under-draining is more needed and will produce greater results on some soils than on others. The question may therefore be asked, whether the soils on which it produces its greatest effects are to be found in Canada. I believe both theory and practice answer in the affirmative, and that the largest and, agriculturally speaking, the best portion of Upper Canada is composed of such soils. The stiff tenacious clays of some districts in England, are not found in Canada. The climate of the Agricultural parts of the British Islands is also more equable and moist than ours, and for these and other reasons it has been thought that under-draining was not so necessary here. But there are some evils to which the Canadian Farmer is exposed, for which under-draining is the only remedy yet discovered, that the English farmer is in a great degree exempt from.

Our growing season is shorter and droughts are more frequent and more severe. In many parts of Upper Canada, and especially on low lands, the weather of last spring proved fatal to the farmer's hopes. His crops could not be sown at the proper period, nor for weeks after it, and as dry weather succeeded wet, his harvest completely failed. Now, if under-draining will free the land of surplus water and fit it for the plough much earlier than would be practicable by any other means, the evil of a wet spring, so common in Canada, could be greatly mitigated; and, secondly, if the effect of the drain be to create a deeper seed-bed, thereby allowing the roots of plants to descend in search of food and moisture beyond the evaporating influence of the sun, much of the loss occasioned by excessive droughts of summer would undoubtedly be prevented. And thirdly, it has been found in the State of New York, that fall and spring frosts, so injurious to wheat, are comparatively innocuous on well drained lands. In that State upon soils similar to ours, the benefits of drainage have been very thoroughly tested. It was supposed, before trial, that however beneficial the system might be for the stiff clays, and under the moist atmosphere of England, it would prove of little value in that

State under ordinary circumstances. But experience has established a different conclusion. The circumstances of the farmer in New York State, as respects soil, climate, taxation, markets, &c., are so similar to those of his Canadian neighbour, that I shall assume their identity for all the purposes of this question.

What has been found good for one in a case like this, can hardly prove hurtful to the other.

The question of cost meets us on the threshold of this improvement, as on that of every other. Indeed, in this enquiry, it is almost the only one that requires to be considered. It involves the chief difficulty.

Every intelligent farmer in the Province, either is or may be convinced that under-draining would ameliorate his soil, and increase his productions; but he asks, Will it pay? Unless a cheap system can be devised, cheaper than any now within the farmer's reach, this question for some time to come, must remain without a satisfactory answer. It has been found in Great Britain and the United States, that *Pipe Drain Tiles* are the cheapest and best material for the construction of under-drains; and there seems no reason to doubt, that if suitable machines were introduced, and the manufacture conducted on a proper scale, they would also be found the best and cheapest for Canada.

The Upper Canada Board of Agriculture, as you are aware, have already had the subject of Drain Tile manufacture under their consideration, and have offered a premium to the person, who shall first put into successful operation in Upper Canada, a good Tile Machine.†

At the suggestion of Professor Buckland, Secretary of the Board, I called upon J. Delafield, Esq., of Geneva, New York, the gentleman, who first introduced an efficient Tile Machine into that State, and obtained from him much useful information on that and other subjects. Mr. Delafield is President of the Agricultural College recently chartered by the New York State Legislature, which is about to commence its operations under most favourable auspices. In 1848 Mr. Delafield imported from England, at his own expense, one of Scragg's Tile Machines, and placed it in the hands of a Potter near Geneva, upon such terms as induced him to undertake the manufacture of drain tiles at a reasonable price. Mr. Delafield himself became a customer for a large quantity, and thus set an example to his neighbours. I saw this machine in operation, and was informed by the proprietor, that although attempts had been made to copy and improve it, yet he preferred the imported machine, and had ordered a new one to be constructed exactly like it.

The machine costs about £50, is very simple in its construction, and not liable to get out of order. The clay is the same as that ordinarily used by common potters, and is prepared by a Pug Mill in the usual way. It is then put into the machine, and by the motion of a crank, turned by one man, is forced through moulds, which give the desired shape to the tiles. With ordinary attendance, about 3,000 two inch pipe tiles are turned out daily. The machine is capable of producing a much larger quantity, but 3,000 is the limit, as it is now worked. I visited a tile factory at Albany, in which a machine constructed on a different plan, (also imported from England) is used. But judging from the appearance of the tiles, and from the opinions of gentlemen who had taken an interest in the subject, I believe the machine at Waterloo, near Geneva, is to be preferred.

Professor Wilson gave me the names of the principal machines now used in England, and he mentions Scragg's as one of the best.



[The engraving of Scragg's Tile Machine, and description of its operation, which appears in the Parliamentary documents, was published in the last volume of the *Agriculturist*. It is not necessary to repeat it here.]

Before the introduction of this machine. Drain Tiles cost Mr. Delafield and others in Seneca County from \$20 to \$25 per thousand. They are now produced for \$9 per thousand. I obtained the following particulars of the expense of under draining in the neighbourhood of Geneva, both before and after the introduction of the Tile Machine.

Before the Tile Machine was put in operation, the cost of thorough draining per acre, with drains 33 feet apart, which would require 91 rods of drain, was stated by Mr. Delafield, in an elaborate Report to the State Agricultural Society, as follows:—

Tile, small size, 20 cents per rod. . . .	\$18.20
Cutting trench, laying, &c., 18 cents. . . .	16.38

Cost per acre. . . . .	\$34.58
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Or about 38 cents per rod.

The cost of making a common stone drain, the stone being on the field to be drained, he stated as follows:—

Man and team per day, hauling enough for about five rods. . . . .	\$1.50
Cost of laying, at 6 cents per rod. . . . .	30
Cost of trench, at 18 cents " . . . . .	90

Cost of 5 rods stone drain. . . . .	\$2.70
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Or 54 cents per rod, shewing a difference of 16 cents per rod in favour of the tiles, even when manufactured by hand. An acre with drains 33 feet apart, requires about 1,320 twelve inch (in length) tiles.

The present cost, Mr. Delafield informed me, is about 30 cents per rod; the tiles costing \$9 per thousand at the manufactory. Mr. John Johnston, an intelligent Scotch farmer, whose land adjoins Mr. Delafield's, has laid down upwards of 16 miles of tile drainage. He was the first to introduce the system practically into the State, and it was at his suggestion, and in consequence of his success, Mr. Delafield took up the subject with so much zeal and liberality. In 1-51, Mr Johnston presented a most interesting Report of his experiments to the State Agricultural Society. I shall copy a few sentences on the points of most importance.

**COST.**—"I find that drains constructed with two-inch tiles can be finished complete for 30 cents a rod." His farm is five miles distant from the manufactory.

**DEPTH OF DRAIN.**—"The rule adopted by me is first to select a good outlet for the water, then to dig a ditch so deep as to find a hard bottom on which to lay the tile. On my farm this is generally found at two-and-a-half to three feet in depth."

**DISTANCE APART.**—"The distance between the drains is regulated by the character of the soil. If it is open or porous, drains three or four rods apart may drain it, while on tenacious soils two rods apart may be needed." Mr. Delafield expressed his opinion that Mr. Johnston had laid his drains unnecessarily close. He thought that about 4 rods was a proper distance on such soils as Mr. Johnston's and his own. This, at 30 cents per rod, would make the cost of drainage about \$13.50 per acre.

**ADVANTAGES.**—"About six years ago I began to drain a field on the boundary line between Mr. Delafield and myself. The field contained about 20 acres, of which six were then subject to drainage. The 6 acres had seldom given a remunerative crop,

even of grass. After draining the 6 acres, the whole field was ploughed and prepared for corn, 2 acres being reserved for potatoes.

"The usual care was given to the cultivation of the whole crop, which, during its growth, shewed a marked difference between the drained and the undrained portions of the field. The yield of this field proved to be the largest ever raised, I believe, in the country—the product being eighty-three bushels and over per acre. This field attracted much attention from my neighbours, and others from more distant places. It was examined at the time of draining, and after ploughing both the first and second seasons, the parties being able to walk on the drained parts without any undue moisture, while all the other land in the neighbourhood was muddy, and as before stated, the corn was found to be far more vigorous in the plant and abundant in the grain.

"In the following season I cropped it with barley, and found the drained land produced altogether the finest plant and the best yield of grain. When the barley was harvested I prepared the field and cropped it with wheat.

"The difference again was so striking and distinct in favour of the drained land, that I felt the propriety of thoroughly draining the whole field, which was completed without loss of time, at a cost of \$22 per acre for the whole field. I then ploughed and sowed with barley, and seeded with clover. Of the latter I cut a very large crop last summer, and not one square foot of the clover froze out; and now I can rely on a good crop of anything I may sow or plant. Encouraged by a considerable increase of product derived from draining, I determined to extend the system as rapidly as convenience and circumstances would permit." After detailing the results in other fields, he says:—"I have forty acres of wheat now growing on thorough drained land. The improvements in my fields and crops have been great and satisfactory, giving me fine crops of wheat where formerly it froze out. So well satisfied am I of the advantages derived from the system, that I have drained six acres this fall, and shall continue to drain while I have a wet spot on my farm."

**REMARKS ON THE COST OF DRAINING.**—Mr. Johnston gives some figures as to the cost of land, expense of draining, &c., and concludes with this important statement:—"On such land as I have, if I get two crops of wheat from my drained land, I am paid by the excess of crop so as to cover all costs of draining, and sometimes more than paid by one crop, that is by the excess of crop beyond what it would have been had the land remained undrained."

I should observe that the land in question is a rich clay ridge. The soil of the locality rests upon a fossiliferous blue slate, called the Marcellus slate, which overlies the Seneca limestone. This slate is readily decomposed, and forms a tenacious clay. The soil of the county of Seneca generally, according to the State survey, is a drift deposit.

The physical character of the diluvium, and the direction of the drift, lead to the inference that the soil is not derived from the wear or disintegration of the rocks that underlie it, but from the gypseous group which occupy the counties to the north and bordering Lake Ontario.

The Geological Survey of Upper Canada has, thus far been too general and desultory to afford much aid to the Agriculturist in determining accurately the origin and character of his soils; but their similarity to those on which draining has been found profitable in the United States, may be assumed from qualities

and characteristics sufficiently obvious for common apprehension.

In the Geological Report of 1850, the soil of Western Canada is spoken of in general terms as a deposit of loose detrital material, consisting of clay, sand, gravel, &c., which covers to a great depth the old strata, except in a few places.

\* See the London "Mechanic's Magazine" for November, 1825, which contains an exact description of McCormick's Reaper in all essential points.

† Since this was written, Professor Wilson delivered a lecture on flax before the Agricultural Association of Lower Canada. The published report contains much interesting information but no figures by which the expense of growing and preparing flax for exportation can be calculated with any certainty, nor is the commercial value of the fibre, in England definitely stated. In his Lecture before the New York State Agricultural Society, at Saratoga, (published by Saxton, New York), he mentions three pieces. "The samples produced by Watt's method," he tells us, "varied from £56 to £70 per ton." The value of the dressed fibre imported into England is stated in another part of his Lecture, at £41 per ton.—Dontan's Prospectus of 1832 and other authorities state the value of the fibre at £32 per ton.

‡ At the late meeting of the Agricultural Association at Hamilton, a Mr. Charneck exhibited the model of a new machine, which he claims to have invented, but it has not yet been tested in Canada.

§ I have heard with much regret, that this gentleman, whose enterprise and intelligence placed him in the first rank of his profession, died shortly after my visit.

(To be continued.)

#### SHEEP HUSBANDRY—BEST AUTHORS.

Our attention has been called to the subject of SHEEP, by a correspondent and subscriber, who is about to engage "more extensively in the wool-growing business," and who desires to be "informed of the best authorities on the management of sheep, especially the two principal English breeds—New Leicesters and South Downs." He also suggests that we should "devote more space in the *Agriculturist* to sheep, the most profitable stock the Canadian Farmer can raise."

We thank our friend for his suggestion; and assure him it will not be lost upon us. In our last volume, we gave a very full history of the various breeds of Cattle; and intended to give a similar account of the HORSE, in the present volume. We have not been able as yet to procure the necessary illustrations; but have ordered them from New York. In the meantime, we shall turn attention to that other equally useful, if not equally "noble" animal, the SHEEP.

To point out the the "best authorities" on sheep husbandry, when there are so many, would be rather a difficult task. The English authors are the most scientific; and in regard to the management of the English breeds, probably the most reliable. But the climate, seasons, pastures, &c., of this country, differ so greatly from those of the British Isles, that English works must be read and followed with some

caution. American authors are, for the most part mere compilers. They borrow largely, often without acknowledgement, from English and other European writers; but as the climate and other conditions in the United States, especially the more Northern, are very similar to ours, these compilations, when judiciously made, are best adapted to the wants of the Canadian wool-grower. "Youatt, on Sheep," is a standard English work. It has been reprinted by Saxton, N.Y., with additions on management of Sheep in the United States, (price 75c.)

Morrell's "American Shepherd," is a very good compilation of Youatt, Blacklock, Spooner, and other European authorities. The compiler's remarks are also valuable, as he is a practical man, and a large flock-master in the State of New York. Randall's "Sheep Husbandry," (price \$1.25) "Canfield on Sheep," (price \$1), "The Shepherd's Own Book," (price \$2), are recent publications by Saxton, New York. The latter is perhaps the best book for all purposes containing the substance of Youatt and Randall, with Notes by Skinner. Any of these books can be ordered through us, or of the publisher direct.

#### THE SHEEP—SOUTH DOWN—No. 1

[We expected to have given an engraving of Col. L. G. Morris' South Down Ram, "Young York," at the head of this article, but it did not arrive in time. It will appear in our next.]

At the suggestion of a correspondent, we shall give in successive numbers short papers on Sheep husbandry, compiled from standard authorities, and a history of the principal breeds which have been found most profitable in this country.

We begin our series of papers by a brief notice of the South Down:—

The Sheep of Great Britain for a long time have been classed into *middle-wooled*, and *long-wooled*. The *short-wools*, properly speaking, now employed in English cloth manufactures, are of foreign growth.

The middle-wooled breeds comprise the South Down, Norfolk, Dorset, Cheviot, and some others, which are inferior, however, to these.

Confessedly, on all hands, at the head of the middle-wooled varieties, stands the South Down. It already occupies a large share of the attention of American and Canadian breeders.

The original as well as present location of a large proportion of this breed is on the South Downs (from whence the name of the breed is derived), a long range of chalky hills, diverging from the great chalky stratum which intersects the kingdom from Norfolk to Dorchester. They may be considered as occupying a space of more than sixty miles in length, and about five or six in breadth, consisting

of a succession of open downs, with very few enclosures. On these downs a certain breed of sheep has been cultivated for many centuries, in greater perfection than elsewhere; and hence have sprung those successive colonies, which have found their way to every part of the kingdom, and materially benefitted the breed of short-wooled sheep wherever they have gone.

The perfection of carcase which the South Down at present exhibits, is owing to the skill of that distinguished sheep-breeder, Mr. John Ellman. He says, "This breed was formerly of a small size, and far from possessing a good shape, being long and thin in the neck, high on the shoulders, low behind, high on the loins, down on the rumps, the tail set on very low, perpendicular from the hip bones, sharp on the back, the ribs flat, not bowing, narrow in the fore-quarters, but good in the leg, although having big bone."

The improvement effected by Mr. Ellman, was not from any admixture of foreign blood, "for even the cross with the Leicester," says Youatt, "was a failure, and the promised advantages to be derived from the Merinos were delusive." It resulted, mainly, from the practice of the true principles of breeding: a system of choice selection from male and female. The introduction of turnip husbandry was another very important agent, which essentially promoted thrift and size, and an early development of form. "They are now," says Mr. Ellman, "much improved both in shape and constitution. They are smaller in bone, equally hardy, with a greater disposition to fatten, and much heavier in carcase when fat. They used seldom to fatten until they were four years old; but it would now be a rare sight to see a pen of South Down wethers at market more than two years old, and many are killed before they reach that age."

The following description of a perfect South Down, from the pen of Mr. Ellman, will be valuable to the Canadian breeder, as well as guard the ignorant from imposition:—

"The head small and hornless; the face speckled or grey, and neither too long nor too short. The lips thin, and the space between the nose and the eyes narrow. The underjaw, or chap, fine and thin; the ears tolerably wide, and the forehead well covered with wool, and the whole space between the ears also.

"The eye full and bright, but not prominent. The orbits of the eye, the eye-cap, or bone, not too projecting.

"The neck of a medium length, thin towards the head, but enlarging towards the shoulders where it should be broad and high, and straight in its whole course above and below. The breast should be wide, deep, and projecting forwards between the forelegs, indicating a good constitution, and a disposition to thrive. Corresponding with this, the shoulders should be on a level with the back, and not too wide above; they should bow outward from the top to the breast, indicating a springing rib beneath, and leaving room for it.

"The ribs coming out horizontally from the spine, and extending far backward, and the last rib projecting more than the others; the back flat from the

shoulders to the setting on of the tail; the loin broad and flat; the rump long and broad, and the tail set on high and nearly on a level with the spine. The hips wide; the space between them and the last rib on either side as narrow as possible, and the ribs, generally, presenting a circular form like a barrel.

"The belly as straight as the back.

"The legs neither too long nor too short. The fore-legs straight from the breast to the foot; not bending inward at the knee, and standing far apart both before and behind; the hocks having a direction rather outward, and the twist, or the meeting of the thighs behind, being particularly full; the bones fine, yet having no appearance of weakness, and of a speckled or dark colour.

"The belly well defended with wool, and the wool coming down before and behind to the knee, and to the hock; the wool short, close, curled, and fine, and free from spiry projecting fibres."

This breed will sustain themselves with occasional short keep, and endure hard stocking equal to any other; and their early maturity is but little inferior to the new Leicesters, the flesh finely grained, and of peculiarly good flavour. Blacklock says "it is unadapted for bleak situations, but sufficiently hardy and active for a low country."

The average weight is from 15 to 18 lbs. a quarter; but on the authority of Mr. Youatt, Mr. Grantham exhibited a pen of three sheep at Smithfield in 1834, one of them weighing 283 lbs.; the second 286 lbs.; and the third 294 lbs.

The average weight of the fleece was, in 1800, 2 lbs.; and the staple at that time very short: it has now increased to 3 lbs.; and the lowland South Down, from better keep, shears from 3½ to 4 lbs. The staple has increased from 1½ to 2 inches in length to from 3 to 4 inches. A picklock fibre is the 1-600th part of an inch in diameter, and the serrations 2080 to an inch.

A serious objection has always existed against English South Down wools, from the brittleness of the fibre, originating in the chalky nature of the soil, on which a large proportion of this breed are kept. Formerly much of this wool was employed in the manufacture of army cloths; but its changed character, within a few years, has also changed its uses, and it is now converted into flannels, waizes, and worsted goods of almost all descriptions. The paucity of serrations will prevent its uses beyond combing purposes, for which it is now highly prized.

There are no sheep more healthy than the South Downs. They seldom suffer from the hydatid on the brain, nor are they as much exposed to rot as the sheep in many other districts. Their general health is supposed to be much connected with frequent change of food, and their daily journeys to and from the fold.

The South Downs have borne witness to a mania for their possession, like the Merinos and Saxons in the United States. In 1800, two of Mr. Ellman's rams were sold to the Emperor of Russia, in order to try the effect of a cross on the Northern sheep, for one hundred and fifty guineas each. When Mr. Ellman retired from public life, in 1829, his flock

wassold by auction at the following rates: 770 ewes \$13.64 each; 320 lambs, \$7.92 each; 36 rams, \$112.50 each; and his best ram for \$292.50. This valuable breed continue to sustain the high character they acquired through Mr. Ellman's efforts, and amongst the purest and best flocks, very high prices are demanded and obtained for breeders.

They have been found to thrive well in Canada; and by many are preferred to the Leicesters. We shall notice the latter breed in our next number.

#### PARTURITION, OR LAMBING.

As the lambing season will soon be at hand, it may be of advantage to some of our readers to offer a few practical suggestions on this subject in the present number.

The usual period of gestation with the ewe is five months, or an average of 152 days.

The proper time for parturition must be determined by circumstances, of which climate and locality are the most prominent, and these the flock-master must steadily keep in view. The month generally selected in the Northern and Middle States is May. In Canada we frequently see lambs in April; but the vicissitudes of the climate forbid an earlier period than May, unless in instances where buildings are provided for shelter, the expense of which is greater than the majority of farmers are willing to incur.

The ewes during pregnancy should be disturbed as little as possible, and every attention paid to the quantity and quality of their food. Ewes, however, should not be kept *fat* at this stage; indeed it is injurious, as it predisposes them sometimes to abortion; but what is usually termed "good store condition" should be maintained through the whole period of gestation. Neither should ewes be exposed to storms and cold during the winter and early spring months, but thoroughly protected from both. We cannot expect from any domestic animal a healthy offspring, in our rigorous climate, if the dam has been permitted to suffer the hardships of cold and starvation; therefore it will be wise if the sheep husbandman always hold up to view the apothegm, "so the dam, so the offspring."

The field chosen for the ewes to fold should be dry, free from stumps, open ditches, and possess as level a surface as possible. In little hollows ewes are liable to be cast, which is caused by lazily stretching themselves in sunny weather, when in a lying posture. In this situation they will often be found flat on their backs, and violently kicking the air without the power of recovery, until aided; and, if unseen by the shepherd, death will follow sometimes in a few hours. But perhaps, no field affords

that smoothness of surface to prevent these too often fatal occurrences, and therefore the duty devolves upon the shepherd of passing leisurely over every part of the field, several times during the day, to guard against them. But this duty must not be delayed until some of the ewes have dropped their lambs—he must commence his career of watchfulness at least ten days before, for it is very common with ewes that are in overgood condition to be found in this perilous situation some days before their time.

Other duties obligatory upon the shepherd are lucidly set forth by Mr. Youatt, as follows:—

"The lamber should have with him his lamb-crook; a bottle of milk—ewes' milk if possible, and carried in his bosom or in an inside pocket, that it may be kept warm; some cords to tie the legs of the ewes that he may have occasion to assist or examine; a little pot of grease or oil, to lubricate his hand, if he should have occasion to introduce it into the womb of any of the ewes; a sharp knife, with a round or rather curved extremity, should it be necessary to remove the lamb piece-meal from the mother; a piece of stout polished iron rod, of the size of a goose quill, twelve inches in length, and rounded at one end, somewhat like a button hook, in order to remove from the womb a dead or divided fetus; a small quantity of cordial, consisting of equal parts of brandy and sweet spirit of nitre; and a strong infusion of ergot of rye.

"The period of lambing having commenced, the attention of the lamber should be increased. He should carefully observe every ewe that appears to be in labour. While she walks about and does not exhibit any extraordinary degree of suffering, he should not interfere; nor should he do so if she rises when he approaches, and walks away, unless her labour has been protracted twenty hours or more. He should not be in haste to render his assistance, although she should be continually lying down and getting up again, and showing more impatience or irritability than actual pain; but if her strength appears to be declining, his immediate aid is required. If he has to drive her to the fold or pound, it should be as gently as possible, or he should drive some others with her, in order that she may not be frightened by being alone selected. The early interference of the lamber is always prejudicial, and very frequently fatal. Nature, in the course of twenty or twenty-four hours, will, in the great majority of cases, accomplish that which cannot be hurried on by art without extreme danger.

"The state of the weather will cause a very considerable difference in the duration of the labour. When the weather is cold and dry, and especially if the situation is somewhat exposed, the progress of the labour will be slow—the throes will be comparatively weak and ineffectual, and the ewe may and should be left a considerable time before mechanical assistance is rendered. When, however, the weather is warm, and especially if at the same time, it is moist, the throes will be violent, and the strength of the sufferer will be very rapidly wasted; there will

be a dangerous tendency to inflammation, and the aid of the lamber is speedily required. Except under these circumstances, no motive of curiosity, no desire to know how the affair is going on, should induce the lamber to interfere while the throes are natural and the strength continues, unless it is evident, without handling the ewe, that a false presentation, or some mechanical cause, prevents the expulsion of the foetus. When the ewe is nearly exhausted she will often suffer the lamber to kneel beside her and successfully afford the requisite assistance. If there is a violent struggle between the patient and the lamber, the foetus will often be destroyed; but his help, when she quietly submits to him, will rarely fail to preserve the mother and her offspring. Let it be supposed that, from certain circumstances, she is driven to the pound, or that she is lying quietly by the lamber in the field. He should first endeavour to ascertain the nature of the presentation. Is the lamb coming in the right way, with its muzzle first, and a fore-foot on each side of it? If the tongue is not protruding from the mouth and becoming almost black, and her strength is not quite wasted, a table spoonful of his cordial, with double this quantity of the infusion, will probably increase or recall the pains; and the lamb will soon be born. If this is not effected in a quarter of an hour, a second dose of the infusion should be given; and, that being followed by no good result, he should try what mechanical assistance will do. He should draw down first one leg and then the other, endeavouring with his finger to solicit or coax the head onward at the same time. If he cannot readily get at the legs, he should push the head of the lamb a little backwards and downwards, when he will probably be able to grasp them. If he does not now succeed, the cause of the obstruction will be sufficiently plain, namely, the too great largeness of the head, which cannot pass the arch of the pubis; and, therefore, either tying the legs of the ewe, or an assistant keeping her down on her right side, the lamber should grasp the two fore-legs in one hand, and with one or two fingers of the other, urge it forward with as much force as is consistent with the safety of the lamb. The young one will rarely fail to be extracted by these means, except the head very much exceeds the common size."

The above directions are especially intended for the large flockmaster, in whose case, from the greater number of sheep, accidents are more likely to happen. But they may be read with profit by the small flockmaster, who, when difficulty *does* occur, will be better prepared to overcome it. We conclude with the following extract from an American writer:—

"When mechanical aid is employed, it is always accompanied with considerable fright to the ewe; and if she is permitted to escape immediately after the birth of her lamb, will often refuse to own it; therefore, should it be alive, let it be placed at once before her, and by its form and scent, she will, in most cases, recognise it as her offspring. On the whole, the surest way is, to secure the ewe in a small pound or shed, and there leave her for the day; for, if she has a supply of milk, rarely further trouble need be apprehended. Should she, how-

ever, under these circumstances, or any other, refuse to suckle, she must be held, and a teat placed in the mouth of the lamb. This alternative seldom fails to conquer all difficulty."

### STEAM-PLOUGHS.

#### DIFFICULTIES AND PECULIARITIES.

We find some pertinent remarks, by Professor Wilson (who recently paid a visit to Canada), on the subject of ploughs and ploughing, in a lecture lately delivered before "the Highland and Agricultural Society." In the concluding portion of this lecture the Professor discusses the subject of *steam power*, as applied to cultivation. Two Canadians (by residence), Mr. Romaine, of Peterboro, and Mr. Cowan, of Toronto, having called public attention to this subject by plans and models of machines which, in their opinion, will accomplish the great *desideratum*, and one of them having obtained public aid to complete his invention, will, no doubt, make the subject interesting to our readers. It will be seen that a steam-plough according to Professor Wilson, must be something more than a copy of the common implement. This idea will not give much encouragement to one of the gentlemen above-named:—

"Although the necessities of man," says Professor W., "compel him to use the plough in preference to the spade, it is admitted by all that the work done by the two implements is of a very different character, the plough leaving the soil in a condition far less suited to the purposes of vegetation than the spade. This is more prominent on heavy soils than light. If we follow the operations of the two implements, this may be readily understood. The spade, a thin smooth blade, is driven down into the soil by the weight of the labourer, the handle is then forced back in a horizontal line, and the shoulder of the spade, acting as a fulcrum, a slice of soil is displaced equal to the depth of the cut. This is thrown forward in an inverted position, the original surface with its weeds and exhausted mould being buried, and fresh surfaces exposed. Now to the plough—here we have a tool of a rougher nature—a wedge is forcibly dragged through the soil to a certain depth, lifting up that which is *above it*, at the expense of that which is *below it*, this latter receiving virtually the whole of force required for the separation. The consequence is, that more or less, according to the soil, this lower surface is compressed to such a degree as to leave a dense and compact surface, through which the roots of plants have great difficulty to penetrate. The furrow slice, too, instead of being completely inverted, is not turned over to more than half or third of the way, the surface weeds are less perfectly buried, and the soil is not changed to the same extent as by the spade. The great *desideratum* of the day is, therefore, to obtain an implement that shall have, like the plough, the capability of doing a large amount of work, and, like the spade, of doing it in such a manner as to satisfy those conditions which we consider desirable for the purposes of successful cultivation.

"The advantages of animal over manual labour were shewn thousands of years ago, but it has been reserved for our own day to displace the animal by the introduction of another agent, steam—a power of far higher value, and which is, I trust, destined to play as important a part in the operations of the field, as it now does in the internal economy of the modern farm.

"Many implements and machines have been constructed, and much skill and ingenuity from time to time expended in the endeavour to realize this great desideratum; hitherto, however, the results have not been very satisfactory.

"To those who have watched the progress of steam as a substitute for manual or animal power in various processes even of the most complicated and delicate nature, and have recognised the beneficial results attending it, it must seem surprising that, although several attempts have been made to render it subservient to tillage purposes, they have hitherto all failed. The idea of a steam-plough is by no means new. Its successful realization, I hope, is not far distant.

"Without attempting to offer any speculations of my own as to the possibilities or probabilities of such a desirable end, I will conclude by giving you the opinions of a recent writer who always expresses himself with no less force than elegance. He observes, 'that it is worth while to ask what is the specific impediment that forbids the banns between the steam-engine and the ploughshare? What is it that prevents the versatility—that peculiarly marked attribute of steam-power—which can drive a vessel of a thousand tons across the Atlantic against a tide-wind and sea, or spin the finest thread with a touch more delicate than that of the fairest fingers—what prevents it from being applied to the clumsy performance of the plough? Because it is a clumsy performance, and that noble power will have nothing to do with it.'


"It is a law of which the annals of invention have given repeated proofs, that late discovered powers of nature will not "gear on" to those means and appliances which they have antiquated. They refuse to waste themselves. From the natural sympathy—so to speak—which exists between the "best of its kind" in every department of matter, may be deduced the perception of a corresponding law of antipathy between things separate and incongruous in their nature and degrees of excellence, and remote in the order of invention. It is not the inapplicability of steam power, but the incongruity with it of the plough—an implement employed for the purpose of applying animal power to the art of cultivation, and belonging only to that secondary class of powers—that forbids the union. The plough does not *cultivate*; other implements are required—the roller, the harrows, the scarifier—to complete the work, which, after all, is not so well done as is one by operation of the s.<sub>ad</sub>c.

"What we want is, not ploughing, so much as cultivation, that process which the farmer, by necessity, performs in three, four, or five acts, not nearly so effectually as the gardener performs in one.

"As well might we expect to apply successfully the boiler and cylinder of a locomotive to the pole of a four-horse coach, or the shafts of a waggon, or the lever-handle of a pump, or the distaff or spindle of the old spinning-wheel, as attempt to gear on steam to the elaborate clumsiness of a plough. In every case where steam has superseded animal labour (as it is its mission to do), it has to be harnessed to the

work with a harness of its own; it has rejected old-fashioned tools and their appliances, and has seized, at once, the shortest means to its object. Instead of the leverage of the horse's legs pulling at the axle-tree, it seizes at once on the wheels, and drives it round, and instantly (by that law of occult affinities just alluded to) a demand is raised for the most perfect surface to run upon; the iron rail is supplied, and Mr. M'Adam, though a very good dog in his day, is discarded. So again, instead of working at the pump-handle, it seizes at once upon the sucker-rod and drives it up and down. Instead of wasting time and labour on the oar, it drives along the vessel by the continuous stroke of the paddle-wheel, or by the simpler motion of the screw. These instances I might multiply, but they are sufficient to illustrate the principles that should be regarded in our attempts to render steam power subservient to tillage purposes.

"Although I am quite aware of the extreme difficulty of introducing new machines that should necessitate new practices, no less from the inherent disinclination of farmers to give up old ones, than from the opposition of the various interests involved, still I am much inclined to believe that the agricultural intelligence of the country is sufficiently advanced to hail with gratitude the advent of a mechanical agent which would relieve the farmer from the anxieties of mind and animal wear and tear accompanying the present system of tillage by ploughs; and in common with every farmer throughout the length and breadth of the land, for all are deeply interested in its results, I feel that our warmest acknowledgments are due to the fostering care of this society for already having come forward to assist in its development."

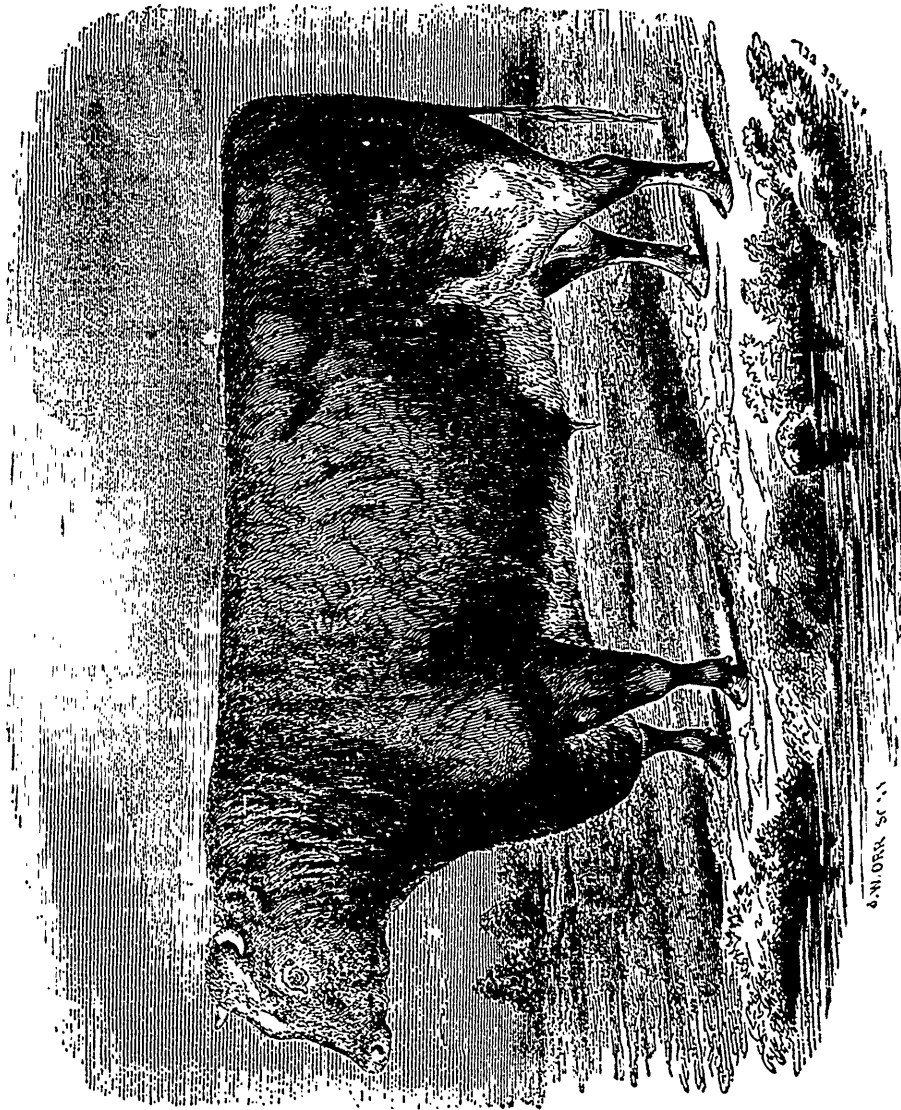
—————  
  
 VISIT TO MOUNT FORDHAM, N.Y.

While recently at New York, the writer made a short visit to the farm of Col. L. G. Morris, near Mount Fordham, about ten miles from New York, by the Harlem Railway. Col. Morris has acquired much celebrity as an importer of the best Short horns to be found in England. Being a man of considerable wealth, intelligent and enthusiastic in his profession, he has many advantages over small breeders. Competing with noblemen with their £100,000 rent-rolls, for the purchase of the gems of the most celebrated English herds, Mr. Morris felt that he had rather a "hard row to hoe;" but by a little Yankee ingenuity he was able to carry off the prizes even from such rivals. Mr. Morris persuaded Mr. Becar, a wealthy New York merchant, who happened to be a fellow-passenger with him to England, to join in his purchases of a few superior animals. They attended Lord Ducie's sale; and for one cow, which we saw at Mount Fordham, paid the highest price ever known to have been given for a Cow since the world began. This animal was bid off at 700 guineas! She is not a very remarkable animal to look at; but the blood is the best in England. It was this that made her so great a prize in the estimation of breeders.

But the real "gem" of the herd was the "Duke of Glo'ster," a young Bull of the best blood, and almost perfect in his points. The English breeders were enthusiastic in his praise; and there was great competition among the bidders to secure him. He was also knocked down to Messrs. Morris & Co for 500 guineas! An English breeder had been associated with the two enterprising Americans in the contest for him; and they were determined to have him at any thing under 1000 guineas!! The Englishman kept him for one year; and he then became the property of Mr. Morris and his friend. He is certainly a splendid animal—the best un-

doubtedly to be found on this continent, and perhaps in England. When we say "best," we speak of course with reference to his *blood* and *points*, as they are regarded by the short-horn breeder. Mr. Morris is about to have his likeness engraved; and promised to send us a plate. We hope, therefore, to present him to our readers in a future number.

We give below an excellent portrait of "Balco," (English Herd Book, 9918,) a bull which Mr. Morris now offers for sale. He won the first prize at the New York State Fair last year. We should be glad to see this animal brought to Canada. None better can be imported from England.



BALCO,  
Imported by L. G. Morris, Esq., winner of the 1st prize in the imported class of three-year old Bulls and upwards, at the  
New York State Fair for 1864.

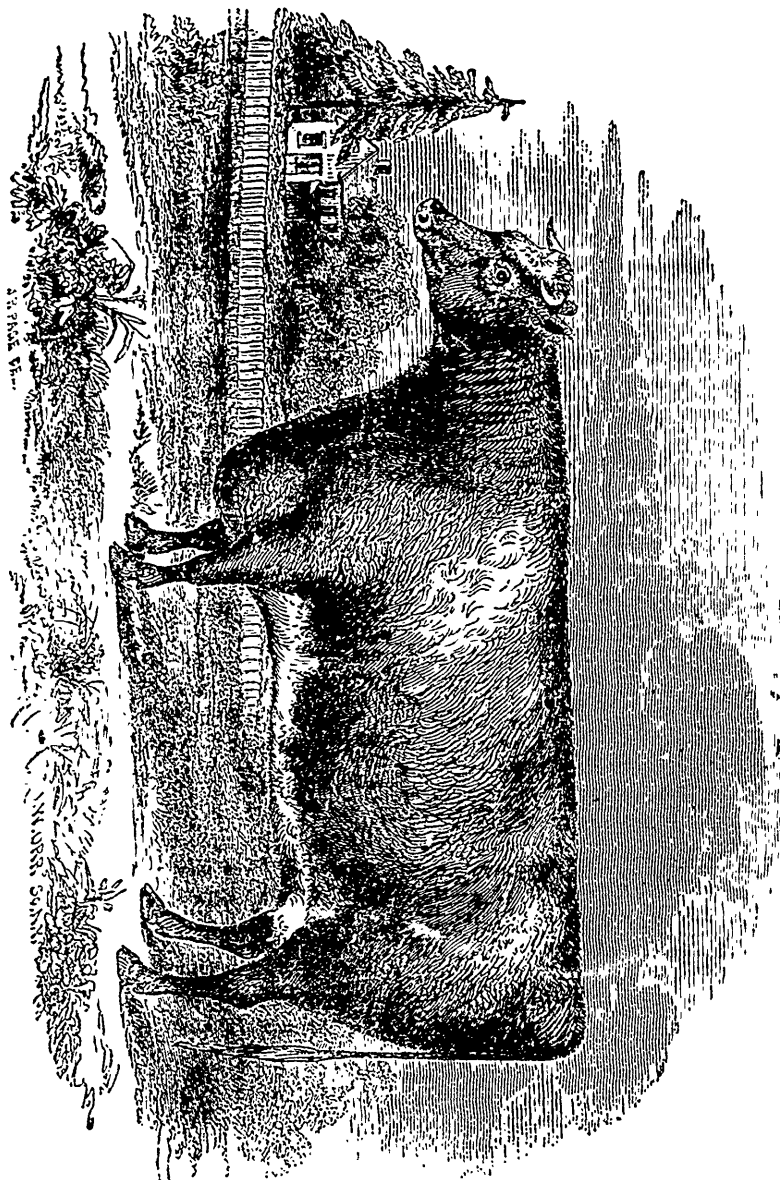
Colonel Morris informed us that he had sold "Balco," for \$1200 to a farmer in one of the interior counties, but as the purchaser had failed to comply with some of the conditions of the sale, he was still in the market. Having used him for the last two years it became necessary to make a change; and

on the arrival of the "Duke of Glo'ster," Col. Morris was able to part with "Balco," who is regarded as one of the best bulls in the United States.

Among the cows of Col. Morris's herd "Bloom," whose portrait is given below, is certainly the "gem." She also was purchased at Lord Ducie's sale; and is as perfect in her "points" as the Duke of Glo'ster. Indeed, to our eye, she is less

faulty. The Duke is a little flat-sided. We noticed this defect; but Col. M. thought it was owing more to his condition, which was low, than to physical conformation. But he certainly has not so round a barrel as Balco. The "authorities" have pronounced him A 1, and it would be presumption in us to cavil at their decision. "Bloom," however, is even more perfect than her picture, a thing by no

Was sired by "Sir Leonard" (10,827) ; Dam, "Elvira," by "Eolus" (3,733)—winner of the 1st prize in her class at New York State Fair, 1854.



means uncommon. She possesses the most highly prized strain of blood, and does no discredit to her pedigree.

We shall notice other animals that we saw at Mt. Fordham in our next issue.

We were mistaken in supposing that Col. Morris intended to have a *public* sale this year. He will hereafter only sell to individual purchasers, privately. He has a large stock of Devons as well as Durhams. His horses, sheep, and pigs, are all of the best



breeds. We found Col. M. to be, not a scheming Yankee, without education or refinement, but a good specimen of the American gentleman—frank, courteous, hospitable, and well-informed, with English notions of honour in matters of business. He is a descendant of Robt. Morris, of revolutionary fame who was one of the signers of the Declaration.

We regretted to find, that in some of his dealings, with Canadian breeders Col. M.'s good nature has been imposed upon. We hope for the credit of our country, the parties in question will yet make good their engagements.

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 THE MONTHS—APRIL.  
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“Come, gentle *Spring*, ethereal mildness, come,  
 And from the bosom of yon drooping cloud,  
 While music wakes around, veil'd in a shower  
 Of shadowing roses, on our plains descend.”

THOMPSON. .

We have now entered upon the most interesting period of the year; a season of joy and hope, demanding the incessant attention and labour of the husbandman, whose important avocations must be prosecuted with vigour. The name of the month,—*April*,—is derived from a Latin word, signifying *to open*; as in these northern climates the agricultural year may be considered as opening, or commencing in early spring. Old winter has passed away with its frosts and storms, and with the increase of light and heat both the animal and vegetable worlds are awakening to active life and vigorous development. April, however, has always been regarded as a fickle month; it has its bright soft, balmy days, which are so peculiarly exhilarating and pleasant to the feelings after the cold and dreary season that has passed; but it has likewise its days of wintry rigour and of chilling showers, which are often felt by contrast as doubly unpleasant. In this country the heat of mid-day is often considerable, but as the nights are usually cold, vegetation makes but slow progress. The swelling buds and reappearance of birds, insects, and a few early flowers, are among the pleasing and unmistakeable indications of the advent of spring.

A very extensive, and in many respects, reprehensible practice has existed from, it is supposed, a remote antiquity—the making of “fools” on the first of April, thence called “*All Fools Day*.” The origin and significance of this custom are, like most matters of this sort, involved in considerable obscurity. It has long and extensively existed both

in Europe and Asia, and likewise in many places on our own continent.

“’Twas on the morn when April doth appear,  
 And wets the primrose with its maiden tear;  
 ’Twas on the morn when laughing Folly rules,  
 And calls her sons around, and dubs them Fools;  
 Bids them be bold, some untried path explore,  
 And do such deeds as Fools ne'er did before.”

It is not improbable that the present custom is nothing more than a corruption of some ancient practice of a civil or religious nature in its original institution. Several rites that at first were unobjectionable, have, in the lapse of time, become so perverted, as to exhibit few or no traces of their original purport or significancy. The habit of uttering falsehoods, although it be only for sport, can admit of no defence, either on the grounds of morality or expediency, and the sooner this foolish custom is abandoned the better.

*Maundy Thursday* immediately precedes Good Friday. Some doubt exists as to the origin and primary application of this term. We are told, however, on good authority, that *Maundy Thursday* was so named from the *maunds*, wherein were formerly contained gifts, which English kings were accustomed to distribute among indigent people at Whitehall. *Maund* arises from the Saxon word *maud*, signifying basket; and by consequence for any gift or offering contained in the basket.

It was the practice not only of the monarchs of England to distribute gifts, consisting of food, clothing, and money on this day, but likewise of persons of high estate, and abbots of religious houses. In addition to these gifts, it was customary for persons of the highest rank to wash the feet of a certain number of poor persons, in imitation of our Saviour washing the feet of his disciples. Queen Elizabeth, in 1572, she being then in the thirty ninth year of her age, after bestowing her *Maundy*, washed and kissed the feet of as many poor men and women as she was herself years old. This was done at Greenwich—the queen kneeling while performing the ceremony, which was connected with religious observances. King James the Second was the last of our kings who washed the feet of the poor people in person; William the Third being the first sovereign who deputed the performance of this ceremony to his almoner. From the Earl of Northumberland's *Household Book*, begun in 1512, we find that he kept his *Maundy*, if at home, for as many poor men as he was years old. Wolsey also, in 1530, performed the same ceremony at the Abby of Peterborough, while on his

journey to the north. "Upon Palme Sunday," says Cavendish, "he bore his palme, and went in procession with the monks, setting forth the divine service right honourably, with such singing men as he then had there of his own. And upon Maundy Thursday he had his Maundy there, in our Lady's Chapel, having *fifty-nine* poor men whose feet he washed and kissed; and after he had wiped them, he gave every one of the said poor men twelve pence in money, three ells of good canvass to make them shirts, a pair of shoes, a cask of red herrings, and three white herrings; and one of them had two shillings."

This ancient practice of performing Maundy is still retained by the sovereigns of England—silver pennies and other coins being cast for the special purpose. Times and the outward modes of customs may change; and in such matters it is unjust and unphilosophical to try one age by the standard of another, while the spirit and fruits of genuine benevolence remain immutable.

*Good Friday* being one of the most solemn fasts of the Church, is indicative of an event of the most awful character and deepest mystery, pregnant with consequences of infinite importance to the race through all coming time. In a secular article we can only allude to this momentous subject, while treating of the seasons, merely remarking that there seems a peculiar fitness and adaptation to the nature and condition of man in associating in harmonious order the great events of our Lord's most holy life, which have now for eighteen hundred years inspired alike the rich and the poor, the philosopher and the peasant with the hope of immortality and endless progress, with the course of the natural year. In this way our ordinary and daily duties and experience become associated with the commemoration of those great events characteristic of the introduction of Christianity, which imparted such an astonishing impetus to the progress of human improvement, and a higher and ever-expanding form of social civilisation.

Hot cross-buns have come down to us from an early age, and yet remain the most popular symbol amidst the differing and conflicting religious opinions of the more ancient customs of Christianity that the Reformation has left to us. These buns were in ancient times bestowed by the priest in the church as alms, and to those who from any impediment could not receive the consecrated elements of the Eucharist. They bore then as now the sacred impress of the cross, and were considered on

that account the most fitting food on the day of the crucifixion.

*Easter Day*, or the Sunday following Good Friday, is among the grandest festivals of the ecclesiastical year, commemorative of the glorious event of the Resurrection. It was anciently called the "Great Day;" the "Feast of Feasts;" and the "Sunday of Joy." It is the most important, in secular transactions, of the moveable feasts, inasmuch as the day on which Easter falls regulates all the rest. The first Sunday *after* the full moon immediately following the 21st of March, is ordained to be kept as Easter Sunday. Easter Day cannot fall earlier than the 22nd of March, nor later than the 25th of April in any year, and hence these two days have obtained the appellation of *Easter Limits*.

A very ancient custom exists in many countries of making presents of eggs at this season of the year, having reference, no doubt to the great event of the Resurrection. In process of time the religious character of presenting Easter eggs became, in a great measure, lost sight of, and they were considered merely as marks of friendship, or a token of affection from one young person to another. This practice still survives in a few parts of England, particularly in the north, where the greatest number of eggs are distributed among the young folks by kind grandmothers and aunts. These eggs are coloured by boiling them in some coloured solution, and names and ornaments are depicted on the shell. In Cheshire, children go round the village and beg for "an egg, bun, cheese, or an apple, or any good thing to make us merry," and ending with, "and I pray you, good dame, an Easter egg."

The remains of a former extensive custom are yet to be found in a few parts of England, called *Heaving* or *Lifting*, on Easter Monday and Tuesday. A decorated chair was provided in which the person to be lifted was placed, when the chair was hoisted three several times from the ground. The person lifted was expected to pay a fee to the lifters after receiving a salute from each of them. On Easter Monday, between the hours of nine and twelve, the men performed this ceremony towards the women; on Tuesday the women did the same for the men. The ceremony was sometimes performed without the chair, often, no doubt, to the annoyance of the females. Edward the First is said to have submitted to this custom, and was hoisted by a party of ladies of honour. This practice, absurd as it may now appear, was do doubt

in its origination connected with the idea of the Resurrection. Indeed, many of the most important events and teachings of early Christianity were periodically illustrated in the churches by dramatic representations. Plays were got up and performed by grave ecclesiastics for the edification of the people, and the scenery, dresses, and performance generally were often of a grand and imposing character, adapted to the peculiar wants of the age. It were sheer folly and ignorance of human nature and progress to rail against these primitive usages which were, no doubt, suited to the requirements of the people, characterised by simplicity of manners and a large faith. We owe infinitely more to our earnest and simple-minded forefathers, in what constitutes much of our physical comforts as well as moral wellbeing, than modern mammonism and self-sufficiency are wont to acknowledge. The great error of modern times appears to be the indiscriminate laudation of the present at the expense of the past.

*St. George's Day* which falls on the 23rd of this month, is the only remaining festival of note that calls for remark here. Many ridiculous legends and incredible stories have been told of England's Patron Saint, so much so as to needlessly occasion, or strengthen doubts in persons of a naturally sceptical turn of mind even as to his existence. "Divested of all this extraneous matter, however, the ancient and well-authenticated history of *St. George of Cappadocia*, called by the Greeks the *Great Martyr*, appears to be, that he was born of respectable, but, though not wealthy, Christian parents; that he afterwards acquired a large estate in Palestine, and entered into the service of Dioclesian the Tyrant, who, in ignorance of his being a Christian gave him the command of a legion, and a seat in the Council. On a breaking out of a persecution against the Christians, St. George quitted the Emperor's service, and openly distributed his whole fortune in their support and assistance. Dioclesian would have recalled him, but finding that neither offers of aggrandizement or the threats of death could move him to abandon his faith, at length, after putting him several times to the torture, carried him to be ignominiously dragged through the streets of the city of Lydda, and finally, beheaded on the 23rd of April, 290. St. George is also the patron of the most noble order of the Garter, the most ancient and distinguished of the British orders of knighthood, which was founded by King Edward III. in 1349. All the installations and festivals of the order are held on this day."

April is one of the busiest months of the year to the farmer, especially in this country, where the season for active preparation and sowing does not commence till the beginning, and sometimes the middle or latter end of the month. At the time we are now writing (March 27th) the ground is thickly covered with snow, with few indications, except the lengthening of the day, of the near advent of spring. A sudden change, however, may take place, and agricultural operations may not, after all, be seriously retarded. Every thing should, ere this, be got in readiness by the thrifty farmer, so as to commence operations effectually the first opportunity.

Nothing, however, is gained, but, on the contrary, much loss is sometimes sustained, by an impatient anxiety to commit the seed to the ground at some fixed and early period. The seasons being variable, the prudent and skilful husbandman will adapt the time of performing his work to the character and actual necessities of each year. No absolute rule of universal application can be laid down for the performance of these things. It may be safely said, notwithstanding, that the proper time for sowing is when the soil is sufficiently prepared, and the atmospherical conditions in regard to heat and moisture are favourable to vegetation. The nature of the soil ought also to be considered, and its adaptation to particular kinds of plants; for what might be necessary and beneficial on one variety and condition of soil might be quite unsuitable to another. Nothing short of careful observation and experience can impart to the farmer this practical and most essential kind of knowledge. He must acquire it in the field rather than from books. Virgil, the prince of Latin poets, and a close observer of nature, has well said:—

"To know the culture, habit of the grounds,  
What this refuses, and in what abounds;  
Nature on each her nursing care bestows,  
Here springs the corn, there the rich vineyard glows;  
While fruit-trees bud to deck another place,  
And grasses flourish with unbidden grace."

Such as underdrained and furrowed their land in the fall will begin to experience the advantage of such permanent improvement this month. The melting snows and rains will speedily find an egress to the drains, the ground will rapidly dry, and, as a consequence, the important operations of ploughing, harrowing, and sowing will be done both earlier and better; thus securing the conditions necessary to an abundant crop. We observed during the partial thaw of last week some underground drains made last year, copiously discharging water, al-

though the ground, below a few inches from the surface, was still frozen. Under-drains, however, are not in full action till the frost is quite out of the ground, and they are, consequently, of the most service during autumn and the latter part of spring.

After depositing his seed in the ground, how carefully does the farmer mark appearances and watch the wonderful effects produced upon his fields by a few days or weeks of bright sunshine, accompanied by congenial vernal showers:—

"The work is done, no more to man is given,  
The grateful Farmer trusts the rest to Heaven  
Yet oft with anxious heart he looks around,  
And marks the first green blade that breaks the ground ;  
In fancy sees his trembling oats uprun,  
His tufted barley yellow with the sun ;  
Sees clouds propitious shed their timely store,  
And all his harvest gathered round his door."

FARMER'S BOY.

—B.

#### OF THE DIFFERENT KINDS OF MANURE AND THEIR APPLICATION.

(From "Outlines of Flemish Husbandry".\*)

The collection and application of manure is the greatest secret of Flemish husbandry. Upon their poor, light soils nothing could be raised without an abundance of manure. It is, consequently, an object of minute attention to the Flemish farmer to collect as much as possible, and to apply it in the most advantageous manner. For this purpose the dung of the different domestic animals is generally, kept separate, especially that of cows, from horses the former being thought better for dry sandy soils, the latter for colder loams and clays. They look upon pigs' dung as cold and inferior, adopting, in this respect, the opinion of the ancients. We think differently; but this may be easily accounted for. The Flemish store pigs are fed in the most miserable manner, and merely kept alive on weeds taken from the fields or by very scanty grazing in rough pastures. We need not be surprised, therefore, that their dung is poor. The cows are better fed, and their dung is, consequently, richer. Cow dung is thought to last longer in the soil, and its effects on the second crop are more conspicuous than that of horse dung, which stimulates more and is sooner

effete. Sheep, which are so important to the light-land farmer in England and Scotland for their manures, are not kept in sufficient quantities in Flanders, nor well enough fed to do much good to the land. They are commonly housed every night, and driven about in the day to gain a scanty subsistence along the roads and sides of hills. The manure collected in the sheepfold is carried out on the land, and its effects are daily appreciated. A flock is occasionally folded on a clover ley before it is ploughed up, but never on the turnips, which are always given to the cows. This is owing to the small extent of the farms, which do not allow of a considerable flock of sheep being kept by any one farmer; but a flock is made up of different lots of sheep belonging to several proprietors, or put under care of a common shepherd, or it is sometimes the property of the shepherd, who occupies no land, but lets out the sheep to fold, or sells the manure.

But the great auxiliary of the Flemish farmer is the *urine tank*, wherein are collected not only the urine of cows and horses, but also the drainings of the dung-hills. The urine tanks are generally sunk below the level of the ground, and have the sides built of brick and the bottom paved; they are of various dimensions, according to the number of cows and horses on the farm. Attached to the distilleries, where many beasts are constantly kept to consume the refuse wash, there are very large urine tanks of an oblong shape, divided by partitions into different chambers, so that the liquor may be of the proper age when it is used, which some farmers think ought to be six months. Each chamber is about eight feet square and six or eight feet deep; they are sometimes vaulted over, but frequently only covered with loose boards. As urine and the emptyings of privies are sold wholesale and retail, there are many large tanks near the rivers and canals, where the dealers have sometimes large quantities in store. Some of these consist of many square pits, like tan-pits, bricked round, and the inside covered with a cement, which prevents loss by filtration. There is generally in a corner of each pit a graduated scale, by which the number of barrels or tons of liquid in the tank may be ascertained by observing the height of the surface. These tanks are gradually filled by boat loads brought from the large towns; and when the season arrives for sowing (in spring and autumn), the farmers come with their carts and tubs and purchase as much as they may want. The price varies from three to five francs (2s. 6d to 4s.) per hogshead, according to the quality. In a small farm of

\* We are indebted to the polite attention of Wm. HUTTON, Esq., Secretary of the Bureau of Agriculture, for this interesting chapter from a small Flemish work on Agriculture which he is about translating into French for the benefit of Lower Canadian farmers. Much that it contains will be found more or less applicable to this Western portion of the Province; and he hopes to be able to lay before our readers more of his useful publication in subsequent numbers.

thirty to forty acres, the tank is generally about twenty feet long, twelve wide, and six deep, with a partition in the middle, and arched over, leaving an opening for the pump, and another sufficient to allow a man to go in to empty out the earthy deposit which falls to the bottom. A trap-door shuts over this aperture to prevent accidents. Sometimes the tank is round like a well, with a domed top, and so deep in the ground that it has a foot or two of the earth over it. The situation of the tank is either in the farm-yard near the entrance of the cow-house, or immediately behind it; sometimes it is like a cellar under the building, but this is apt to cause a disagreeable smell in the cow-house. We here describe those which we consider the most convenient. The form and capacity of the tanks vary greatly according to the means and notions of the proprietors of the farms; *but a tank of some kind or other is considered as indispensable an appendage to a farm as a barn or a cow-house.* The farmer would as soon think of dispensing with his plough as with his tank; and no expense or trouble is spared to keep this well supplied. The numerous towns and villages in Flanders afford great help in the way of manure. The thrifty housewife and her active substitute the maid, know the value of what in our households is thrown away or wasted and lost. A small tank or a tub sunk in the ground in some corner contains all the liquid which can in any way be useful; soap-suds, washing of dishes, &c., are carefully kept in this reservoir, until, once a week, the farmer or contractor calls with his tub on a cart; and this, mixed with the contents of privies, which are frequently emptied, he keeps in large cisterns for use or sale.\*

But this supply is not always adequate to the wants of the farmer, and then he has recourse to rape-cakes dissolved in water or in the tank, which is expensive, and can only be profitable where flax bears a good price—this being the crop for which rape-cakes are chiefly used as manure. Every means, therefore, of augmenting the supply of urine is had recourse to, and the most efficacious is the establishment of distilleries. These answer the double purpose of consuming produce and increasing manure by the number of beasts which are fattened on the refuse wash. It is calculated that every beast produces at the rate of ten or twelve

\* In Ghent we were informed that the sum paid to the servants for the liquids collected, and which is their perquisites, often amounts to as much as they receive for wages; and as, consequently, the wages are proportionally lower, it is, in fact, the masters and mistresses who benefit by it.

tons of dung and twenty-six hogsheads of urine in the year. A moderate distillery has fifty or sixty head of cattle constantly stalled. There, then, is supply of manure for several hundred acres of land every year. Formerly there were a great many distilleries in Flanders, but the duty on spirits and the interference of the government has much reduced their number, so that the farmers complain of the loss of this manure, and the consequent deficiency of their crops.

The dung of pigeons and domestic fowls, where it can be collected in any quantities, is highly valued. The mode of using it is either in a dry or powdered state, to which it is reduced by thrashing with a flail, when it is sown with the seeds of leguminous plants, or else dissolved in the urine tank, and thus spread over the land. This manure is chiefly reserved for kitchen gardens—it promotes the growth of vegetables and produces no weeds.

The solid dung, from which the liquid has been allowed to run off into the tank, must be carefully attended to, that it may not be too dry and become *foxy*, as it is called, or burn. It is therefore mixed up with earth and any useless vegetable matter which can be collected into a heap or compost; and when it appears too dry some of the liquid from the tank is poured over it to excite fermentation and accelerate decomposition, or it is merely watered when there is sufficient strength in it to produce heat.

In order to increase as much as possible the quantity of solid manure, there is in most farms a place for the general reception of every kind of vegetable matter which can be collected. This is a shallow excavation of a square or oblong form, of which the bottom has a gentle slope towards one end. It is generally lined on three sides with a wall of brick to keep the earth from falling in, and this wall sometimes rises a foot or more above the level of the ground. In this pit are collected pavings of grass sods from the sides of roads and ditches, weeds taken out of the fields or canals, and every kind of refuse from the gardens;—all this is occasionally moistened with the washings of the stables or any other rich liquids; a small portion of dung and urine are added, if necessary, and when it has been accumulating for some time, it is taken out; a portion of lime is added, and the whole is well mixed together: thus it forms the beginning of a heap, which rises gradually, and in due time gives a very good supply of rich vegetable mould or compost well adapted to every purpose to which manure is

applied. The place where this accumulation is made is called, in French, a *coupe-soir*, and in Flemish or Dutch, *smoorhoop*, which may be translated *smothering heap*.

Besides this manure which is collected on the farm,\* the *vidanges*, or emptyings of privies obtained from the towns and the sweepings of streets, a large quantity of peat ashes imported from Holland are used, principally as a dressing for clover. These are the ashes of the common fuel in use in Holland, and are sold in Flanders by the bushel, as the Newbury ashes are in Berkshire. Mr. Radcliffe has given an analysis of these as follows:—

Silicious earth, - - - -	32
Sulphate of lime, - - - -	12
Sulphate and muriate of soda, - - - -	6
Carbonate of lime, - - - -	40
Oxide of iron, - - - -	3
Loss, - - - -	7
	100

The effect of these ashes seems to be very similar to that of the Newbury ashes, and by comparing the analysis of the two, we may be led to the ingredients on which the result chiefly depends. Newbury ashes, according to Davy, are composed of:—

Oxide of iron, - - - -	48
Gypsum (sulphate of lime), - - - -	32
Muriate of sulphate of potash, - - - -	20
	100

It appears therefore probable, that the effect depends upon the combination of the lime, or the alkalis with sulphuric or muriatic acid, and that the silica in the Dutch ashes, and the iron in those from Newbury, have little or no effect on vegetation. This accords with the experiments made with gypsum. The great effect of the ashes in Flanders may arise from the total absence of calcareous earth in the light soils on which they are chiefly used. In the polders or low lands they are thought of so little value that the ashes produced by the burning of weeds are often collected and carried in boats to be sold for manuring the lighter soils of the up-

\* Since the above was written, the subject of liquid manure has been very ably brought to the notice of agriculturists in a small work by Mr. Cuthbert Johnson, and also by a paper of Mr. Kimberly, in which he announces an important discovery, made by himself, in the management and acceleration of the putrefactive fermentation in vegetable substances. The great activity of manure applied in a liquid state, especially in very light soils, is well known to the Flemish farmers; but they know also that it is rapidly exhausted, and requires to be repeated annually unless solid dung be used at the same time.

lands. But these are not so valuable as the peat ashes.

Wood ashes, after the greater part of the alkali has been abstracted for bleaching, are still considered as of great use to the land. Soapers' ashes are in great request for cold heavy soils; and sugar scum from the refiners, if it could be procured in sufficient quantity, would be an excellent manure for every kind of soil. Where it can be obtained, they usually throw it into the urine tank; and the mixture is then considered as almost equal to the *vidanges*, which are looked upon as the *ne plus ultra* of manures. Soot is used as a top-dressing for wheat, or clover in spring, as it is with us. It is thought to destroy insects and hasten vegetation.

The weeds, which grow abundantly in all ponds, canals, and ditches in this level country, where the current is never rapid, are mown in spring, and used in their green state as manure for potatoes. They are laid in the furrows, and the sets placed over them; the furrow is then filled up by the plough and the weeds decomposing very rapidly, greatly assist the growth of the potato plant. So rapidly do these weeds ferment, that much of their value is dissipated if they are left only forty-eight hours in heaps before they are put into the earth.

We have already noticed rape cake dissolved in water as a substitute for urine. It is also used in powder, either as a top-dressing or sown with the seed. The practice of sowing in drills, and putting in dry manures in contact with the seed by means of drilling machines, has never been adopted in Flanders; nor has the use of ground bones been hitherto introduced to any extent. There is perhaps no modern invention which would be so applicable to the Flemish sands, or so advantageous.\*

The manner in which manure is applied to the land for different crops will be explained as these are separately treated of; but the general principle which pervades the whole system of manuring is worthy of attention. Two great objects are always kept in view. The first is to obtain the most abundant crop of whatever is sown; the next is to impregnate the soil with an increasing power of production, if possible, or, at least, to maintain that which has been obtained. In consequence of this, almost every crop has a certain portion of manure

\* Since writing the above, we understand that the Belgian Government having ascertained the great advantage of bones for manure, and also in making animal charcoal for the refining of sugar, has laid a heavy duty on the exportation of them.

applied to it, which varies according to the nature of the crop to be raised, and that which has preceded, experience having taught that some crops exhaust the soil more than others.

But it is not the mere surface that they desire to manure. They well know that the deeper the soil is fertilized the greater will be the profit and the less the labour. They are not satisfied with enriching the land to receive the seed, they furnish food for the growing plant in different stages of its growth if they think it necessary. There is, in consequence, no fluctuation in the growth—no check at a time when the plants require support. The seed is made to vegetate rapidly by being in contact with the rich juices of the manure, and hence a much smaller proportion of seed is required. The young blade is invigorated by a judicious watering, and is sooner out of danger of the attacks of insects.

Liquid manure is carried to the fields in common water-carts, which consist of two wheels and shafts, carrying a cask containing from sixty to one hundred and twenty gallons of liquid. The cask has in the under part a hole, two or three inches in diameter, secured inside by a valve: under this is a board, a little slanting, to spread the liquid as it flows out of the cask. A man usually rides on the horse which draws the cask, and opens the valve when required. There is an advantage in riding on the horse, as it does not add to the weight of the load on the wheels, which in light soils would be apt to sink deep. In a momentary exertion it assists the horse by the weight on his back; and the heavy Flanders horses are well able to carry a man and draw a light load at the same time. When the cask is empty, the horse trots home for another load, and no time is lost. It is astonishing what advantage there is in accustoming horses to trot when they have no load—it actually fatigues them less than the continued sleepy walk. Who would suppose that the Flemish and Dutch farmers surpassed us in activity? but whoever has been in the Netherlands in hay time or harvest must acknowledge it.

The dung, which is carried in a solid state, is generally used at a time when it is in active fermentation, as it is supposed to have the best effect. To insure this in some districts, as the Waes country, where the minutest attention is paid to every circumstance which can increase fertility, the dung is laid on the field in moderate heaps, and on each heap a certain quantity of urine is poured to excite fermentation. When it becomes sensibly

heated, the dung is spread out and immediately ploughed in. After ploughing in the manure, the land is left for some time, and then a second deep ploughing is given to incorporate the decomposed dung with the soil, but so as not to bring any to the surface. A short time before sowing, the liquid manure is poured over; and this enriches the surface to make the seed germinate sooner.

Lime is not much used on the light soils, but commonly in the cold and stiff. As it is generally brought from a distance, it is dear; and this prevents any extensive application of it. Marl is found in a few spots, and serves to improve the poorer lands within reach of it.

(From the Mark Lane Express.)

DEAR SIR,—In your paper for this week I find a letter from Mr. Forbes of Windsor Forest, on the advantages of supplying sheep with salt, as a preservative from the foot rot; but as your respected correspondent has not pointed out the *rationale* of the practice, and the manner in which it produces its beneficial effect, I will endeavour, with your permission, to supply the deficiency of his letter; and for the benefit of such of your readers as have not paid attention to the subject, point out the sovereign virtues of common salt [or muriate of soda,] and the absolute necessity of its use, *by all animals*, for the preservation of health.

The outward application of salt to dead animal flesh for antiseptic purposes is too well known to require a single remark; but that the same qualities which render it so necessary in the preservation of dead meat has an equally beneficial effect upon the living animal, is not so generally understood. It is nevertheless a fact, that common salt prevents that tendency to putrescence of the nutritious portion of food in the stomach, which when they are conveyed into the blood, produce fever, boils, sores, and a variety of other dangerous or troublesome disorders. Medical men, however, are well acquainted with the fact that the prevalence of these evils amongst the poor is, in a great measure, ascribable to their not using salt with their food; and that the offensive smell so frequently perceptible in the dwellings and near the persons of many of the poor arises from the same cause, much more than from their want of cleanliness. It is, in fact, impossible for a person or a family to sustain health long together without the free use of this *simple* and *cheap* condiment.

Salt acts upon the juices of the stomach as a corrective of that tendency to acidity which is the basis of putrescence, and in a proper quantity, renders the blood healthy and active. It promotes insensible perspiration by preserving the pores of the skin from being clogged up by those unctuous matters, which without it would be passed from the stomach into the system in an impure state. Any person who habitually eats his food whether animal or vegetable, without salt, will soon find himself subject to diseases which [although he may ward them off by medicine] will not fail to return upon him from time to time, as long as he neglects it; nay his *very breath* will betray that neglect. But they who constantly use salt, though not absolutely exempt from disease, has at least ten chances to one in favour of the preservation of their health.

The same principle is as applicable to the inferior animals as to man, for, in this respect, their constitutions are precisely similar. No stronger proof, in fact, of the worth of this assertion can be adduced than the eagerness with which all animals seek for it. Horses, horned cattle, sheep and pigs will almost pull their keepers to pieces, if they find they have salt about them, in order to get at it; and all fare the better for it, from the same cause. The freedom of Mr. Forbes' flock from the foot-rot was undoubtedly produced by the antiseptic qualities of the salt, which by correcting the juices of the body, and purifying the blood, prevented that tendency to putrescence which in the three rigs settled in the feet; the dampness of the meadow being the exciting cause, which the salt would have neutralized.

I have reason to believe, too, that the use of salt would prove efficacious in preventing that fatal disease to which very fat sheep are liable when at turnips towards the spring, and which is equivalent to apoplexy in the human frame. I have sometimes seen three or four fat wethers in a flock of two or three hundred "drop" in a day. From perfect health, and whilst quietly feeding they suddenly fell, and were dead before I could get up to them. This same disease arises from the grossness of the fluids, and especially the blood, produced by the same tendency to putrescence which clogs the current and prevents the free flow of the juices so essential to health.

I would therefore recommend all your agricultural readers to supply with salt, not only their sheep, but every animal on their farms, and they will certainly find their account in it. The expense now is not worth a thought, when compared with the benefit they would derive from it. The best and cheapest mode of its application is by using the rock salt, a lump of which being put in the manger for horses, and trough for other animals (protected from the rain,) and they will soon find it out. Their natural instinct tells them that it is beneficial to their health, and they will look for it as anxiously as for their food.

Perhaps it is one of the most remarkable illustrations of the principle I have been endeavouring to elucidate, that the vast accumulation of the fossil bones of those extinct animals—the mammoth, &c.—discovered in America, are found at a place called, in the quaint phraseology of that country, "*Big bone-lick*." It is, in fact, a salt spring, the subsoil of which is a clayey quagmire. And the probability, according to all human appearance, is, that these huge animals when resorting thither to partake of the salt, quarrelled about it, and in their struggles sunk and perished in the mud. I should add, that the discovery was made by observing the deer and other animals resorting thither to lick up the salt.

Yours truly,

AN OLD NORFOLK FARMER.

London 28th Dec., 1854.

P. S.—If your correspondent "*Enquirer*" would supply his cattle freely with salt, he would find it beneficial in preventing, in a great measure, the "*Black quarter*," or, as it is called in Norfolk, "*Black-water*."

**USEFUL DISCOVERY.**—It is not generally known that soap and water rubbed upon a hone, as a substitute for oil, is peculiarly effective, and gives a much smoother and finer edge to a razor than can be produced by oil. It is suggested that this is also a better material than oil for setting surgical instruments.

PRESENTATION OF TESTIMONIAL TO JOHN HARTLAND, Esq.

On the afternoon of the 1st of March, a number of the County Officials, and the leading Agriculturists of Guelph, Puslinch, Eramosa, and Nichol, assembled in the "British Hotel," for the purpose of presenting John Harland, Esq., the Secretary of the County Agricultural Society, with several articles of Plate, the produce of a subscription among the agriculturists of the vicinity and gentlemen of the town of Guelph, in testimony of their appreciation of his services during many years as Secretary of the County Society, and otherwise in the promotion of the interests of the agricultural community of the locality.

A SILVER SALVER,

beautifully and chastely ornamented with figures of horses in harness, oxen in yoke, sheep, and other animals, the produce of the Province, engraved in alto relievo in panels around the interior surface, and bearing in the centre, the following inscription:—

PRESENTED

To John Harland, Esq.,

AS A TOKEN OF RESPECT FOR HIS VALUABLE SERVICES TO THE AGRICULTURAL INTEREST OF THE COUNTY OF WELLINGTON,

Canada West.

1855.

Upon the Salvar was placed

A SILVER CUP,

bearing on one side of the pedestal, a sheaf of wheat in a horizontal position, on the opposite side a sheaf of oats; the heads of the grain in each being most beautifully and correctly represented, erect or drooping towards the hand. The other sides of the pedestal bore shields resting against the stems of trees, supported by cornucopias, and surmounted and surrounded by agricultural implements—spade, axe, scythe, sickle, grain rake, fork, &c., the one bearing the same inscription as the Salver, the other showing agricultural stock in the compartments. The brim of the Cup was tastefully entwined with vine leaves and clusters.

The third article was

A SILVER SNUFF BOX

of large dimensions, elaborately ornamented, and bearing the above inscription on the lid.

The testimonial was manufactured by Mr. J. G. Joseph, of Toronto, and evidenced the correct taste and artistic skill of the maker.

John McCrea, Esq., President of the County Agricultural Society, presented the testimonial by reading the following address:—

SIR:—On behalf of the Committee and Subscribers to the above testimonial, I have the honor to congratulate you on the very flattering manner in which all have cordially joined to honor you on the present occasion, and to express their warm approbation of your general affable bearing towards your friends and acquaintance, and the very skilful manner in which you have conducted the affairs of the Agricultural Society of this County.

Your general knowledge of agriculture, the first and most noblest employment given to man, pointed you out as the most fit and proper person to organize the Agricultural Society for this fine county, of which you have been and are so distinguished a member, in the success of which you have been so devo-



ted an advocate. To you the continued progress of the Society, and the advantages thereof brought before the public, must in the main be attributed, for although you may have been directed and encouraged by the body of the Directors, yet without your constant aid and advice, the various Presidents and Directors never would have brought the Society into successful working order.

Again, as a member of the Board of Agriculture, and by your essay on the capabilities of our County, you brought your name before the public and made known to the Province the fitness of the soil of our county to bring all the cereal productions of the earth to perfection, as well as the capabilities to raise the finest stock in Canada, encouraging the industrious emigrant to make a settlement among us.

Your long tried and valuable services as Secretary and Treasurer of the County Agricultural Society for so many years, has gathered around you a circle of friends and admirers, who have now invited you with feelings of esteem, respect, and sincerity, to this social meeting in order that they may join in the pleasure of presenting you with the three articles of Plate now before the Company, as a small token of that friendship and regard which your public character and private worth have called forth,

Mr Harland, who was evidently much affected by the complimentary style of the address, replied as follows:—

In the course of the many years during which I have had the honor to hold the office of Secretary to the Agricultural Society of this County, it has been my fortune to receive from its members so many acts of courtesy and kindness, that I have very frequently been at a loss to find words sufficiently strong to express my appreciation of them.

You will, I am sure, gentlemen, readily imagine that if it was difficult for me to express my gratitude for the favors shown me on ordinary occasions, I must, at this moment be placed in a most perplexing situation.

The eloquent eulogium which has just been pronounced upon me, and in appreciation of my poor services, was of itself sufficiently bewildering; but accompanied, as it has been, by the elegant, the valuable, the enduring testimonial of your regard and esteem so handsomely bestowed upon me, the effect has been most intoxicating.

Gentlemen,—I thank you with my whole heart. I shall ever treasure up a sense of your kindness and generosity in my memory. These three beautiful articles of plate shall, while I live, be constantly before me—they will, I am certain, have the effect of stimulating me to renewed and still greater exertions to deserve the good opinion and kind wishes of my neighbours; and when I die, they shall be divided amongst my three sons, with the strongest injunctions that they may be preserved heir-looms of the family, so that as long as there is one of the name of Harland in existence, he may be reminded of the liberal and highly valued friends of his progenitor, who was secretary to the Agricultural Society of the County of Wellington about the middle of the nineteenth century. (Applause).

The presentation over, about 30 gentlemen present sat down to a cold collation handsomely got up by Mr. P. Moran, the new host of the "Old British," Mr McCrea and Col Saunders occupying the head and foot of the table; on the conclusion of which, the different articles composing the testimonial were, to us a Scotch term abundantly expressive to a majority of our readers, *handseled*, and so ended the cere-

mony of the presentation of a testimonial alike creditable to the intelligence and energy of the recipient and the gratitude and liberality of the donors.

#### WHEN OUGHT LIME TO BE APPLIED?

Prof. Johnson says:—"In regard to the period of the year and of the rotation, there are three principals by which the procedure of the practical mar. ought chiefly to be directed.

"1. *That lime takes some time to produce its known effects upon the soil.*—It ought, therefore, to be applied as long as possible before the crop is sown. For spring corn, it should be applied in early autumn; on naked fallow where the land is allowed to be at rest for a year. or on grass fields before breaking up, where pasture is to be immediately succeeded by corn.

"2. *That quick-lime expels ammonia from decomposed and fermenting manure.*—It should therefore, not be brought into immediate contact with such manures. It is for this reason, as well as for the first stated, that lime is applied to the naked fallow, to the grass before breaking up, or along with the winter wheat after a green crop, which has been aided by fermented manure. When ploughed into the fallow, or spread upon the grass, it has had time to be almost completely converted into the mild state, (that of carbonate,) before the manure is laid on. In this mild state it has no sensible effect in expelling the ammonia of decomposing manure.

"3. *That quick-lime hastens or revives decomposition of inert inorganic matter.*—This fact also indicates the propriety of allowing the lime as much time as possible to operate before a crop is taken from land in which organic matter already abounds. Or where fermenting manure is added, it advises the farmer to wait until spontaneous decomposition becomes languid, when the addition of lime will bring it again into action, and thus maintain a more equitable fertility. It should not be forgotten that the above remarks refer to *quicklime*, the state in which, in England, it is so extensively used."

#### FAMILY JARS.

Jars of jelly, jars of jam,  
Jars of potted beef and ham,  
Jars of early gooseberries nice,  
Jars of mince-meat, jars of spice,  
Jars of orange marmalade,  
Jars of pickles, all home-made,  
Jars of cordial elder wine,  
Jars of honey, superfine,  
Would the only jars were these,  
Which occur in families!

THE OLDEST TREE IN THE WORLD.—Perhaps the oldest tree on record is the cypress of Somma, in Lombardy; it is supposed to have been planted in year of the birth of Christ and on that account is looked on with reverence by the inhabitants; but an ancient chronicle at Milan is said to prove that it was a tree in the time of Julius Caesar, B.C.42. It is 123 feet high, and 20 feet in circumference at one foot from the ground. Napoleon, when laying down the plan for his great road over the Simplon, diverged from a straight line to avoid injuring this tree.

## Horticulture.

### HINTS FOR THOSE WHO NEED THEM.

"Gardening," says Socrates, "is the source of health, strength, plenty, and honest pleasures."

April, the first of the Spring months in this latitude, is of the greatest importance to the gardener. Many processes must be performed, if the weather permit, and not a few vegetables may be put into the earth. The amount of labour to be performed will vary, of course, as the season is more or less forward; but in any event, he who would have his garden produce plentifully in the coming months must be diligent during this. The following hints may be found useful:—

#### KITCHEN GARDEN.

**ASPARAGUS.**—Supposing the beds to have been made in a previous year, there is work for the gardener. The chief is to loosen the earth about the plants. Care must be had that in performing this, the roots are not wounded or disturbed. The gardener should provide himself with a fork, prongs to be one inch wide, with blunt points. A common dung fork will answer. Thus provided, pass over the beds, forking them well, so as to loosen the soil to the depth of several inches, and moving the manure with the soil. A few radish and lettuce may be sown upon the bed after the forking is done and before the raking. If too many be not put in, no injury will ensue to the asparagus.

**Beets.**—To have these early requires a very rich soil. Sow the seed in drills opened from 10 to 15 inches apart and one inch in depth. After they come up the plants should be thinned out, leaving a space of five inches between each plant. Mangel wurzel and sugar beet should be put in drills 18 inches to two feet apart and twelve inches in the rows.

**Beans.**—Those desiring to have early snap-beans may sow a few in the latter part of the month, but not even then unless they can select a spot exposed to the sun and secure from the cold winds which often prevail in April.

**Celery** will flourish best in a deep, moist soil, friable, and inclining to lightness, and withal very rich. It should be sown early. The earth should be prepared very thoroughly. It flourishes best in a deep moist, rich, friable, soil. It is of prime importance that the spot selected be free from weeds, as the plants when young are very delicate and easily destroyed. The seeds are put in broadcast and scattered thinly.

**Cabbage Plants** which are growing in the hot beds should be cautiously introduced to the outer air, to render them hardy and fit for transportation. This process may be performed about the last of the month, if the weather is favourable.

**Egg Plant.**—If sown this month should be in a hotbed, with a view to forward them. When from five to six inches high the plants should be pricked

up and planted in the bed, to prepare them for final removal to the open ground.

**Lettuce** should be sown without delay where they will have a warm southern exposure, and should be transplanted at the earliest possible period.

**Parsley** should be sown this month. It makes a very pretty border if sown in single rows on the edge of the square. This is the most economical method, and while it economizes space it ornaments the garden.

**Peas.**—This delightful vegetable requires careful cultivation. To have them early, sow without delay, in ground well prepared for the reception of the seed. Continue to sow every two weeks, and thus a constant supply may be secured throughout the season, for as one set of vines cease to bear another will begin. About the last of the month the soil should be drawn up to the plant to shield and protect it and afford nutriment. When the plants have attained the height of six inches let them be supplied with sticks. The best method of sticking peas is to form a species of lattice work, by putting the sticks into the earth.

**Potatoes.**—Plant without delay.

**Peppers, Red,** may be sown on a warm border. When the plants have attained a sufficient size, they should be removed and planted out in rows about twelve inches apart.

**Radish.**—Sow at this season, where there is a warm, sunny exposure, and if it be desirable to have a constant supply, let the sowing be repeated every ten days.

**Radish, Horse.**—The best method of cultivating this is as follows: dig a deep trench eight to nine inches deep and fill the bottom with manure; cut the roots into small pieces about four inches long and drop them eight or ten inches apart. In five or six weeks the plants will make their appearance.

**Salsify** should be sown the last of the month in drills about an inch deep and twelve inches distant between the drills.

**Tomatoes.**—At this period sow in a hotbed, to forward the plants. When the plants have attained five or six inches height, they should be pricked up and set out in the bed, to prepare them for final transplanting to the open ground. They should be placed about six inches apart, and so soon as the weather becomes settled the plants should be removed to the position they are to occupy in the garden.

The time proper for the several operations above mentioned, will, of course, depend upon the season, as well as the place. The month of March, this year, has been unusually severe, and we may expect a late Spring.

The readers of the *Agriculturist* are spread over 7 degrees of latitude by 22 of longitude (from Sandwich to Cape Breton), and cultivate every variety of soil, under the most diversified conditions as to local position, exposure, &c. It is thus impossible to give

specific directions, especially as to *time*, which will be applicable to every case. Due allowances must be made on this account by the reader.

#### WORK IN THE ORCHARD.

A practical Gardener says:—All kinds of fruit trees should be pruned early. In doing this, remove all the inside shoots, as these absorb sap to no profit. The outer branches are the only ones that produce, and they will absorb all the juices which are drawn up from the roots of the tree. Whatever there is consumed by these useless appendages of the trees tend only to impoverish the fruit bearing branches. Judicious pruning not only improves the fruit, but causes the tree to bear earlier and prolongs its life and the period of fruitfulness. Thus a tree kept well pruned will bear double as long as one that is neglected. In pruning, the branches to be removed should be cut off close to the body of the tree, and the cut should be made smooth by a very sharp knife. This should never be neglected where the branches are more than one inch thick. Be careful to have the branches, so that one shall not cross another, and all with the extremities pointing upward. It is desirable in most cases that the scar made by the pruning-knife be covered with a composition, made of equal parts of beeswax and tallow or lard. This causes it to heal more readily.

**Gooseberries.**—The method generally pursued with gooseberries prevents anything like success in cultivating this delightful berry. The grand mistake is in the manner of propagation. Let any gardener follow the directions here submitted, and he will be astonished at the result. Gooseberries should be propagated from cuttings. Select wood of the growth of the last year. Make cuttings from six to eight inches long. Carefully pinch off all the eyes or buds from the bottom to within two inches of the top. Insert the cutting thus prepared in the earth, burying it up to the point to which the eyes were removed. Roots will put out wherever there was an eye, and the stocks will grow up clean and comely like a tree. It will not be troubled with suckers, and while much more ornamental than gooseberry bushes usually are, will produce much finer fruit. Those who adopt this plan will find the produce of their gooseberry nurseries very much improved. It remains to add, that gooseberries should be placed where they will have plenty of sunshine. They do not thrive well in the shade.

**Currants.**—The remarks concerning the propagation and cultivation of gooseberries are equally applicable to currants. They should be treated in precisely the same manner and have the like freedom of access to the rays of the sun.

**Strawberries.**—The beds should be well cleaned during this month from all litter and weeds, and the earth well loosened with the hoe. After this has been done the plant should be slightly covered over with wheat straw. The object of thus covering the strawberry plant is to keep the fruit from contact with the soil. Some persons erroneously suppose that litter is spread for the purpose of protection. Nothing of the kind is needed and the only good purpose subserved is that noted.

#### SPENT TAN FOR MULCHING TREES.

A correspondent of the *Plough, Loom, and Anvil*, says:—

"It may not be uninteresting to your readers to learn that spent tan spread on the surface of the ground, under a tree which has been recently transplanted, is one of the greatest protectors from drought. In the spring of 1853, we set a quantity of fruit trees in a gentleman's garden and fruit grounds. The soil was very dry and gravelly, and it was the common opinion that they would all die from the drought.

The ground was prepared for setting in our usual way, with the addition of loam to set the roots in. After setting the trees, the ground was covered to the distance of two feet from the tree with common sawdust. There was not one fruit tree that suffered from the drought; and last season many of them bore and ripened fruit.

We set on the same grounds, also, about fifteen rods of arbor vitæ hedge. We mulched them also, with sawdust, and there was not one failure.

Last June I set a quantity of arbor vitæ on a bank, close to a wall. I put about two shovels full of spent tan around each tree; and although they were set just as the dry season had commenced, not one of them died, although we did not water them.

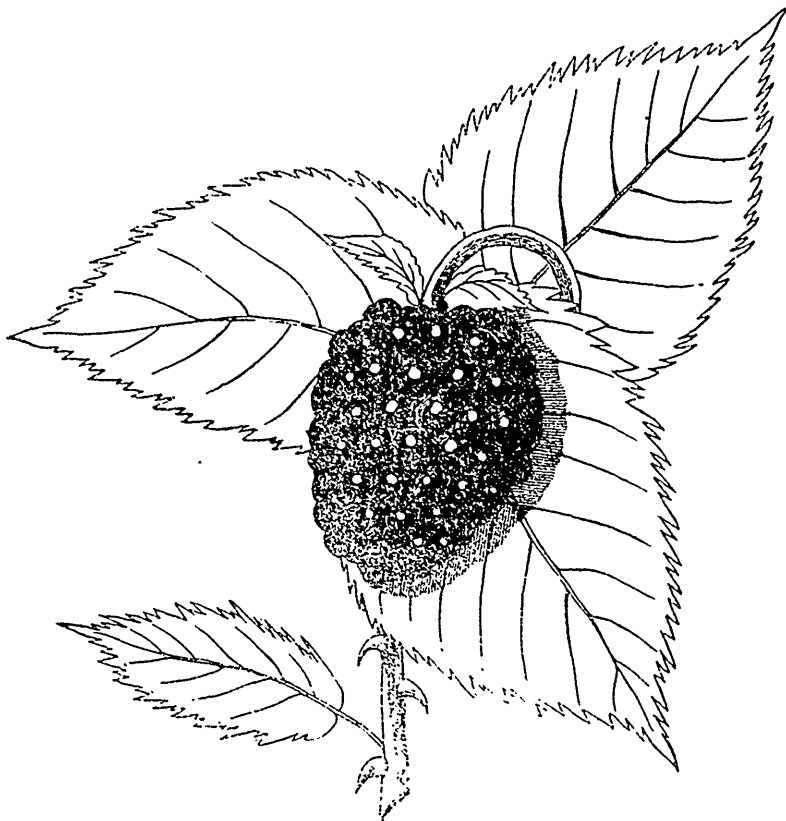
Villages are frequently built on alluvial soil, and then it is often extremely difficult to make trees flourish. Those who wish to ornament their gardens will find that a liberal supply of sawdust or spent tan added to the soil, either by mixing with it, or as a top dressing is very advantageous.

Either of the above substances, which are usually considered worthless, and can be had in abundance near all our villages, will many times pay the expense of hauling and applying. Adopt this treatment, and those trees which usually appear sickly at mid-summer, will be of a darker hue, and their broad leaves will shelter you from the scorching rays of a summer sun.

#### GRATING ROOTS FOR STOCK.

All modern experiments tend to prove that a much more economical use may be made of our root crops than has hitherto been generally practised. The first step has been the cutting up the roots by machines for feeding both cattle and sheep; and in the saving of food and the stock form the improved practice has been very great. More recently, machines for grating or reducing to a sort of pulp all the roots given to cattle have been introduced, and are rapidly coming into use. We have one at present employed, and the saving of roots is great. The plan we adopt is that described by the *North British Agriculturist* as in use in France and Belgium. It says:—

In France, we found that a practice lately adopted there and in Belgium, was coming rapidly into favor, viz., the grating down roots such as beet, and mixing them with cut straw and hay, and allowing the whole to set up an incipient fermentation for two or three days. The animals receiving such food make much greater progress than when the same proportion of food, and cut in the same manner, is given fresh to feeding stock. It is found advantageous to exclude the air as much as possible from the mass after it is mixed. The change which the grated roots and the straw and hay undergo is believed to be chemical, the saccharine principle being partially developed by the fermentation. If this French and Belgian practice is ascertained by experiments here to be founded on a sound basis, it will go to modify the Scottish system of feeding, in giving turnips with straw *ad libitum*.



#### THE LAWTON BLACKBERRY.

During the last two years we have seen in American journals frequent notices of a *new variety* of the Blackberry, which is said to have been found at New Rochelle, a town not far from New York, originally settled by the Huguenots. Mr. Lawton, a Wall Street Broker, claims the credit of bringing this new variety of the Blackberry into notice. He cultivates it somewhat extensively at his farm near New Rochelle, and is quite enthusiastic in its praise. The writer visited New York, a few days since, and had the pleasure of making Mr. Lawton's acquaintance. We found him at his office in Wall Street; but even amid the excitements of the Stock market he loved to talk of his Blackberry. He promised to send us a dozen plants as soon as they could be raised from the earth; and we hope to have the pleasure of introducing this new variety into Canada.

Mr. Downing, the distinguished Horticulturist, whose untimely loss in the *Henry Clay* will long be deplored by all lovers of the Garden and the Orchard, pronounced the Lawton Blackberry a valuable new fruit, one of the few he had seen that came fully up to the description given of it.

The following is Mr. Lawton's description of his Blackberry, and the proper mode of cultivating it:—

"This variety of the Blackberry is entirely new, differing in shape, size and quality, from any of which we have an account. As far as my experience extends, it will endure our severest winters without protection, and requires no particular care in the cultivation. The fruit is delicious, having few seeds in proportion to its size;—and in any locality, in good soil, the flower, leaf, stalk and fruit will grow of mammoth proportions; and in addition to all, is an abundant bearer.

**NATURE OF THE PLANT.**—It delights in moist soil and shade, and in such situation will continue longest in bearing. Like the raspberry, it produces from the roots, during the summer, a plentiful supply of shoots for bearing the ensuing season; while the old shoots, as the season advances, gradually cease to elaborate the sap and die, frequently before all the fruit upon them is matured. The fruiting season continues from five to eight weeks.

**MANAGEMENT IN THE SPRING.**—Vigorous upright shoots with numerous laterals will be found mingled with the dead,—remove the latter as early as possible, and shorten the leading shoots one-quarter or one-third their length, and where the laterals are too long clip them also. If judiciously pruned they will require no support, and not being entangled they can be better approached to gather the fruit.

**PLANTING.**—They may be planted in the Spring

or Fall, four or five feet apart, in rows, and for the convenience of gathering the fruit the rows must be ten or twelve feet apart.

When the Plants are ordered, the ground should be prepared for their reception, so as to put them out as soon as possible after they are received; for if the roots are exposed to the air, so as to be dried or chilled they will perish. If received in the Autumn, a covering of light litter to the roots will retard the effect of the frost, and prove beneficial."

Mr. Lawton's price for plants is \$10 per dozen, carefully packed and forwarded from New York. Orders may be left at this office.

## Miscellaneous.

### A REMEDY FOR SCROFULA.

Having lately seen with our own eyes the application and effect of a newly found remedy for that terrible disease, CANCER, we are not disposed to dismiss every "cure" emanating from unprofessional sources with the ever-ready but not very logical objection—"quack."

We know that some of the most infallible remedies,—probably the majority of those known to and used by the profession,—have been discovered by non-professional persons, *i.e.* by "quacks." But let it not be supposed we underrate medical science, or favour *quackery*. Skill is better than ignorance in every art as well as in every science. But when a remedy *has been* discovered, no matter how or by whom, let not the professional man, in the fulness of his self-sufficiency, reject it without inquiry and without test.

Four or five summers ago we published in the *Agriculturist* a remedy for the fatal diarrhoea which then prevailed, and we had the satisfaction to receive several letters thanking us for the recipe, and declaring that it had saved several lives despaired of by the attendant physician.

We find the following in one of our most respectable agricultural exchanges. The remarks of the Editor (F. G. Ruffin, Esq., of the *Southern Planter*) in publishing Mr. Longworth's recipe, are sufficiently cautious. We do not advise any one to apply this "burning" cure rashly; but if they have been "attended for months" by the "best physicians without benefit" they will, perhaps, thank us for complying with Mr. Longworth's request:—

A CURE FOR SCROFULA.—Our friends of the faculty will bear witness that we rarely trespass on their domain by publishing "infallible recipes." We are afraid to do it. We know too well how *little* we know to tamper with life and health and feeling by such a course. Believing, religiously, in what a friend of ours calls "triumphs of medicine," AND in good nursing we generally pass by the ten thousand "cures" we see in the papers, sorry for those that cut

them out, and grieving for the patients they are to be tried on. But scrofula is a privileged question, that is to say, any one is privileged to "discuss" it if he can.

Like the watch of the portly gentleman in the Pickwick Papers, at which every pickpocket in London had had a pull, thousands have tried their hands, ineffectually, on scrofula, and it has resisted with equal stubbornness the assaults of the quack and the triumphs of medicine." Whether it is left for Mr. Longworth and Captain Harkness to extract it from the system by a final "cure," we, of course, cannot say.—*South. Planter*.

A CERTAIN CURE FOR SCROFULA.—Nicholas Longworth, the famous Millionaire and wine grower of Cincinnati, publishes the following cure for scrofula:

Put two ounces of aquafortis on a plate, on which you have two copper cents. Let it remain from 18 to 24 hours. Then add four ounces of clear strong vinegar. Put cents and all in a large mouthed bottle, and keep it corked. Begin by putting four drops in a teaspoonful of rain water, and apply it to the sore. Make the application three times a day, with a soft hair pencil, or made of rags. If very painful put in more water. As the sore heals apply it weaker.

I request editors in all parts of the Union, and abroad, to copy this, and to republish it quarterly, as it may save many lives.

N. LONGWORTH.

Cincinnati, Ohio, Nov. 18, 1854.

P. S. Captain Harkness, of our city, the first person cured by this remedy, applied it without water, and he informed me that he thought it would burn his leg off; but the next day it was cured. His was a small sore, and had been attended for months by one of the best physicians, without any benefit.

VALUE OF PRINTING.—In 1274 the price of a small Bible neatly translated, was £30, a sum equal to at least £300 of our money. A good and clear printed Bible may now be had for two or three shillings. It is related that the building the two arches of London bridge cost only £15, which is £5 less than what a copy of the Bible sold for many years afterwards. These facts afford a curious commentary on the changes and advantages produced by the extraordinary invention of printing, which has done so much to alter all the institutions of the world wherever the press has appeared.

FLOWER-POTS FOR ROOMS.—Fill a pot with coarse moss of any kind, in the same manner as it would be filled with earth, and place a cutting or seed in this moss; it will succeed admirably, especially with plants destined to ornament a drawing-room. In such a situation, plants grown in moss will thrive better than garden mould, and possess the very great advantage of not causing dirt by the water washing out of them when watered. Moss rammed into a pot, and subject to continual watering, is soon brought into a state of decomposition, when it becomes a very pure vegetable mould; and it is well known that very pure vegetable mould is the most proper of all materials for the growth of almost all kinds of plants. The moss would also not retain more moisture than precisely the quantity best adapted to the absorbent powers of the root, a condition which can scarcely be obtained with any certainty by the use of earth.

INVISIBLE CEMENT.—Isinglass, boiled in spirits of wine, will produce a fine, transparent cement, which will unite broken glass so as to render the fracture almost imperceptible and perfectly secure.

## Editorial Notices.

**EXPLANATORY.**—In consequence of certain arrangements, by which the proprietor of this Journal will be able to devote more attention to its management than heretofore, 't may be advisable, in order that no misunderstanding should occur in any quarter, to distinguish the contributions of Professor Buckland from those by other hands. His articles, therefore, will hereafter be known by the signature B.

**RECIPROCITY.**—We are glad to announce the final settlement of this long pending negotiation. The farmers of this country have now the *right* to sell their productions in the best markets they can find, or in the United States, as well as in their own country, without a deduction of 20 per cent. at the custom House. This will be found a considerable advantage, though we think it has been overrated. The price of land as well as its products, will no doubt be relatively higher, in consequence of this treaty, but extravagant anticipations should not be indulged, for they will not be realized. We shall have something further to say on this subject next month.

### BUREAU OF AGRICULTURE.

We learn that the Minister of Agriculture, Sir A. McNab, has determined on improving and extending the operations of the Bureau; and with that view has appointed Wm Hutton, Esq., to the chief management. A better selection would be difficult to have made. Mr. Hutton has for some time ably discharged the duty of Secretary to the Board of statics, which is incorporated with the Bureau of Agriculture. His able reports have already favourably impressed the public mind at home in favour of Canada, and his long, practical acquaintance with both British and Canadian Agriculture must eminently qualify him for his new and important position. From Mr. Hutton's industry and literary ability, we have no doubt but he will frequently employ the press, as a means of disseminating valuable information.—B.

DOCUMENTS SUBMITTED BY THE BUREAU OF AGRICULTURE TO THE LEGISLATURE OF CANADA. Quebec, 1855.

This Blue Book contains a number of interesting and valuable reports, several of which we would like to consider in detail, did time and space permit. We fully intended to review Mr. Kirkwood's Report on Flax, but have been necessarily prevented. It is a clearly arranged document, abounding in valuable practical information, and will repay a careful perusal. The illustration-cuts materially assist the reader in comprehending more accurately the verbal descriptions of preparing this important article for the market.

By the way, as Mr. Kirkwood has given most ample proof of his qualifications for dealing practically with the Flax and Hemp questions, which have now occupied some share of the attention of the public in Canada, for several years; but we would like to see him placed in a position for effecting some tangible result. All know that flax and hemp are necessary things in Canada, and we pay annually a large sum for their importation. What we now particularly require is, that some competent person would make a beginning in showing us *how to grow and prepare for market these articles ourselves*. Mr. Kirkwood, we think, might thus be much more agreeably employed to himself, and far more beneficially to the public, than by occupying a subordinate situation in the Crown Land office. We hope the Bureau and Boards of Agriculture will shortly see to this.

The Hon. Malcolm Cameron's report is a short but valuable document, bearing sufficient internal evidence that the author was in earnest in the discharge of his duties, during the short period in which he presided over this new department. We think that we see indications of improvement in conducting the business, both of the Bureau and Boards of Agriculture, and that their joint action will yet be made more efficient in promoting those important objects which they severally contemplate.

We shall return to these Reports the earliest opportunity.—B.

### SHORT-HORN STOCK.

We call the attention of our readers to Mr. Stone's advertisement in another page. The perseverance of that gentleman, under most discouraging circumstances at the commencement of his importations, is creditable to him, and worthy of the important work in which he is engaged. We earnestly trust that his praise-worthy enterprise will not fail in the end to be highly remunerative. We subjoin a letter which we have just received from John Harland Esq. who is capable in every respect of forming a correct judgement on the merits of Mr. Stone's services and of his herds:—

The Poplars, Guelph, March 22, 1855.

My Dear Sir,

I wrote some months ago to give you the particulars of the loss which my neighbour Mr. Stone, about that time sustained, by having a number of valuable cattle washed over board, in a violent gale of wind, whilst on the passage out from England.

I now write to inform you, and through your instrumentality, the public, that far from being discouraged by the disaster, Mr. Stone promptly sets about repairing it by making fresh importations, and has so far succeeded as to possess himself of about twenty purely bred 'short horns,' consisting of bulls, cows,

and heifers, amongst which may be found a combination of perfect symmetry with the most favourite blood that England can produce.

The introduction of this herd will prove a vast benefit to the Province, as it will afford a refreshing fountain from which to draw in cases of need: it would be a treat to most breeders to see it.

It will not I think be out of place to add here that Mr. Stone has long been celebrated for importing wine, brandy, ale and porter of highly approved brands.

I am, my dear Sir, truly yours,

JOHN HARLAND.

To Prof. Buckland, &c., &c.

**DRAIN-PIPE MACHINE.**

Mr. Charnock informs us that he has now succeeded in making arrangements with a mechanic in Hamilton for making his machines in efficiency and strength equal to what they are in England. Hitherto he has had to contend with great practical difficulties in these respects; but these difficulties appear now to have been overcome. The castings for the new iron machines are complete, and of sufficient strength to mould the very stiffest clay. Mr. Charnock says that he has received recently several enquiries about his machines from parties who are desirous of purchasing and that he has determined to make his terms as easy as possible. The want of good Drain-tile machines, manufactured in the Province, on reasonable terms, is unquestionably one of the greatest desiderata of our agriculture; and Mr. Charnock will richly deserve the liberal patronage of all who are interested in agricultural improvements, if he succeeds in supplying machines suited to public requirements.—B.

For particulars see advertisements.

AGRICULTURAL SEEDS, &c.—We call the attention of our readers to Mr. Fleming's advertisement. His stock is extensive and carefully selected from the most respectable houses in England and Scotland; so that purchasers may rely on having a genuine article. Mr. Fleming is in the habit of testing his seeds as to their vitality before offering them for sale.—B.

**Market Review.**

CANADIAN, AMERICAN, ENGLISH, &c.

**TORONTO MARKETS.**

During the past month the markets in this city have fluctuated considerably. The English news was looked for with much anxiety; both buyers and sellers anticipating a fall, in case peace should be declared, or seem probable. The news of the death of the Czar brought the market to a stand-still for one day. Wheat was offered, but would not be taken at

any reasonable price. In several cases farmers returned home with their loads. But next day prices nearly recovered their old position. The final settlement of the Reciprocity question has brought American buyers into our markets, who are willing to approach the New York rates more closely than usual.

The following are the Toronto quotations:—

March 31st, 1855.

	s	d	s	d
Flour—Best per bbl.....	40	0	a	41 3
Barley, per bushel.....	4	2	a	4 8
Oats, per bushel of 34lbs.....	2	9	a	3 0
Pease, per bushel of 60lbs.....	4	4	a	5 0
Timothy seed per bushel of 48lbs	8	9	a	15 0
Clover seed per bushel of 60lbs..	35	0	a	40 0
Hay per ton.....	70	0	a	140 0
Straw per ton.....	50	0	a	67 6
Firewood per cord.....	20	0	a	37 3
Beef per 100lbs.....	37	6	a	42 6
Pork per 100lbs.....	40	0		
Bacon per 100lbs.....	40	0	a	45 0
Potatoes per bushel.....	3	4	a	4 0
Turnips per bushel.....	1	6	a	2 0
Onions per bushel.....	6	3	a	7 6

**NEW YORK MARKETS.**

March, 31st.

Flour market firmer with good demand, sales 3,800 bbls at \$9 12½ a 9 92½ for common to straight, and choice state at \$8 50 a 9 94 for common to good Ohio and Michigan and Indiana; \$11 50 a 13 for Genesee. Canadian, \$9 50 a 10 75. Wheat firmer, sales 600 white southern at \$2 35. Rye held at 135 a 137c; corn firm—sales 14,000, 99 a 100c for southern mixed white and yellow, and 100 for western mixed. Provisions—Pork firmer, sales 800 bbls at \$14 50 a 14 62 for old, and \$16 50 for new mess; \$14 37 for new prime. Beef firm. Butter and cheese no change.

**ENGLISH.**

Our advices from England are as late as the 10th of March.

The Grain market continued to tend downwards, and very little business had been transacted in any of the markets. At Mark Lane, prices of Wheat declined 3s. to 4s; Hull, 5s; Leeds, 2s to 3s, and Newcastle 3s to 4s per quarter, and other towns in proportion. At Liverpool Wheat met only a limited enquiry, at a decline of 6d per 70lbs; Flour, 2s to 3s per barrel and sack; Indian Corn 1s 6d per quarter; Beans 1s per quarter, and Irish Oats 1d to 2d per bushel.

Provisions were dull, the arrivals of beef and pork being three times as great as at the same period last year. Holders were therefore looking for purchasers and prices were giving way.

The following are the Liverpool quotations of the 9th for Foreign grain and Flour. To make a comparison with prices here, convert the amount into pollars and cents at 24 cents to the shilling, and subtract a 7th.

	s	d	s	d
WHEAT, per 70lbs.				
Canadian, mixed and red.....	10	8	11	4
white.....	11	6	12	0
United States, red.....	11	2	11	9
white.....	11	10	12	4
Danzig, high mixed.....	12	3	12	8
Pomranian and Mecklenberg...10	3	11	6	
Stettin and Silesian, red.....10	0	10	6	
white.....	11	0	11	6

Danish, Holland and Friesland.	10	6	11	2
Hamburg.	10	8	11	2
Odessa, Polish, red	10	0	10	6
common	9	10	10	2
Egyptian	7	8	8	4
BARLEY, 60lbs.	3	10	4	8
OATS, Russian, per 45lbs.	3	5	3	7
BEANS, European, per qr.	38	0	42	0
Egyptian, per 480lbs.	36	0	37	0
PEAS, Baltic &c., white per qr.	47	0	50	0
Canadian	42	0	47	0
INDIAN CORN, pr 480lb American wht.	42	0	43	0
yellow	41	0	41	6
INDIAN MEAL, per 196lbs.	19	0	20	0
FLOUR, per barrel 196lbs Canadian,				
sweet	41	0	43	0
Western Canal, sweet.	37	0	42	0
Prime Vir. and fancy brands.	43	6	44	6
Ohio	43	6	44	6

LATER.—The steamer *Asia*, with dates to the 17th, —one week later,—arrived just before going to press. Breadstuffs were firm and prices had slightly advanced. Western Canal flour is quoted at 42s. per barrel.

LARGE SALE OF VERY SUPERIOR YOUNG HORSES AND CATTLE.

THE Subscriber has been instructed by GEO. P. DICKSON, Elgin Mills, Yonge Street, 17 Miles from Toronto, to offer by Public Auction without any reserve, on FRIDAY, the 13th day of APRIL next, the Superior Stock of Stud Horses, Brood Mares, Geldings Colts and Cattle, viz :

HORSES.

1. Young *Pcelo*, 7 yrs. old, 16½ hands high.
2. Young *Champion*, 3 yrs. old, 16 hands high—Dark Bay, was got by Old *Champion*, Dam by imported *Rainbow*.
3. A Dark Brown entire Colt, 2 yrs. old, by *Champion*, Dam a superior fast trotting Farm Mare.
4. A Dark Brown Gelding, 16½ hands high, 3 yrs. old his sire a Young *Sovereign*, Dam same as No. 3 and an excellent match.
5. A Bay Gelding, 3 yrs. old, 16½ hands high, Dam a fine *Rainbow* Mare.
6. A Bay Filly, 2 yrs. old, sired by *Champion*, Dam same as No. 5, and an excellent match.
7. A Chesnut Gelding, 3 yrs. old, very compact.
8. A Roan Brood Mare, 4 yrs. old, 16 hands high, in foal to *Governor*, was sired by *Champion*.
9. A Grey Filley, 3 yrs. old, 16 hands high, in foal to imported Young *Lion*, she was sired by *Champion*, and from a *Messenger* Mare.
10. A Grey Gelding, 5 yrs. old, 16½ hands high, heavy and active.
11. An Iron Grey Mare, 4 yrs. old, 16½ hands high, mate to No. 10.
12. A Dapple Grey Brood Mare, 8 yrs. old, in foal to *Governor*.
13. A Dark Iron Grey Filley, 3 yrs. old sire a Young *Sovereign*.
14. A Brood Mare, Bright Bay, 10 yrs. old, in foal by *Governor*, supposed to be sired by imported *Rainbow*.
15. A Chestnut Mare in foal to *Champion*.

CATTLE.

16. A pure-bred Durham Bull, *Admiral*, 2 yrs. old, sired by Mr. Jno. Dew's celebrated Bull.
17. A large Roan Durham Cow, 5 yrs. old, sired by Captain Boyd's, Bull and now in Calf by Young *Admiral*.

18. A large Red and White grade Durham Cow, 4 yrs. old, got by Mr. N. Davis' pure-bred Bull.
19. A Red grade Devon Heifer, 3 yrs. old, in Calf.
20. A Red and White Spotted Heifer, 2 yrs. old, in calf by *Admiral*.
21. A White Durham Heifer, 2 yrs. old, in Calf by *Admiral*.
22. A Roan Durham Steer, 4 yrs. old,
23. A Roan do do: will make a strong and useful yoke of Cattle.
24. A Black and White Steer, 2 yrs. old.
25. V Red and White Steer, 2 yrs. old.

SALE TO COMMENCE AT TEN O'CLOCK FORENOON PRECISELY.

The above valuable Stock of Horses, having been raised by Mr. Dickson, (with one or two exceptions,) can be confidently recommended, as promising to be useful, hardy Horses, of all-work. All those over 2 years old have been in harness, and so far are kind and tractable. The Cattle are all excellent of their respective Breeds. The whole of which will be sold to make room for other young stock on hand and to arrive.

Terms.—For 'Pcelo' and Young 'Champion,' one-fourth down, balance in 12 months, with interest, on approved Joint Notes: the remainder of the Stock 9 months Credit, on Joint Notes, to be approved of by the auctioneer and owner. Also immediately after the above are sold, will be offered between 50 and 60 excellent Ewes, the property of H. G. Bernard.

W. B. CREW,  
Auctioneer.

Elgin Mills, Richmond Hill, March 22, 1855.

DURHAM BULLS.

THE SUBSCRIBER has several yearling Durham or Short-horn Bulls for sale from the most renowned breeds ever imported in this country. Parties wishing to purchase will please call.

P. FISHER.

Nelson, 25th Jan., 1855.

2-3

TO FARMERS, &c.

WANTED, A situation on a Farm, by an intelligent young man (whose desire it is to improve his health). Would have no objection to accept any healthy *out-door* occupation, or engagement on a Steamer or Railway, or to travel. Has no objection to go to any part of the country.

Address "VENO," *Agriculturist* office, Toronto.

March 31, 1855.

4-14

LAKE-VIEW NURSERY.

THE Subscriber offers for sale the present Spring, a very choice assortment, of Fruit and ornamental Trees, Flowering Shrubs, Roses, Dahlias, Green House, and bedding-out Plants, Fruit Tree Stocks, Hedge Plants, and a general assortment of Nursery Stuff. His Stock of Dwarf Fruit Trees, will be found very complete, bearing Trees of which can be furnished to order. Orders respectfully solicited.

Descriptive Catalogues can be had on application.

JOHN GRAY

Lake-view Nurseries, Toronto, 1855.

ENGLISH CATTLE, SHEEP, SWINE.

SHORT Horns, Devons, Herefords, Ayrshire, Alderney Cows, South Down Sheep, Cotswold, Leicester, Hampshire South Down Sheep, selected and imported on commission to any part of America, by Messrs THOS. BETTS & Co., Liverpool and Herts, England. Circulars, containing the prices of all kinds of Stock, and the expenses to America, also giving the weight and quantity of wool of all kinds of Sheep, can be received by applying personally or by letter to our agent J. M. Miller, 81, Maiden Lane, New York City.

N.B.—A Model of a Patent which, for future will prevent all accidents occurring to Cattle, can be seen at 81, Maiden Lane, N.Y. and at Liverpool.



**Fresh Garden, Field and Flower SEEDS!**

THE subscriber beg to inform his numerous friends and the public generally, that his stock of FRESH SEEDS for spring sowing is now complete The Stock of

**AGRICULTURAL AND GARDEN SEEDS**

is well selected and extensive, and the purity and vitality of each sort is fully tested before offering them for sale, so that the public may safely calculate on being well served

Agricultural Societies, Merchants, and Others can be supplied with complete assortments, neatly put up in papers or by weight, at very moderate prices

Catalogues of the Agricultural, Garden and Flower Seeds, with directions for preparing the ground and sowing the Seeds, can be had on application.

TWENTY packets of choice Flower Seeds will be sent free by post to any part of the Province, to the address of any party remitting \$1, free of postage.

The subscriber would call the attention of his Agricultural friends to a portion of his stock, comprising—

- |                         |                           |
|-------------------------|---------------------------|
| Purple Top Swede Turnip | Spring Rape               |
| Yellow Aberdeen do      | Red & lover               |
| Do Altringham do        | White do                  |
| White Belgian arrot     | Orchard and other grasses |
| Long Orange do          | Timothy (pure Seed)       |
| Do Red Altringham do    | White Marrowfat Peas      |
| Do Red Mangel Wurtzel   | Early and Late Field do   |
| Yellow Globe do do      | Seed Barley               |
| Red do do do            | Spring Wheat              |
| White Sugar Beet        | Common Oats               |
| Field Parsnip           | Spring Tares, &c.         |

Also, a fine lot of EARLY FINE POTATOES, Early Shaw do, Early Gold Penders, and several other varieties.

**JAMES FLEMING,**

Seedsman to the Agricultural Association Upper Canada.

Toronto, March 27, 1855.

4-15

**IMPORTED, THOROUGH-BRED, SHORT HORN BULL.**

MR. STONE, having one Bull more than the necessities of his own herd require, wishes to sell him He is four years old, is a good colour, possesses an un tarnished pedigree, and is in every respect an unexceptionable animal

Guelph, March 20th, 1855.

**UPPER CANADA STOCK REGISTRY.**

To Owners and Breeders of Thorough Bred Horses and Cattle.

THE BOARD OF AGRICULTURE FOR UPPER CANADA, having determined to open a REGISTER, at their Office, in this city, for thorough Bred Horses and Cattle, Notice is hereby given, that any person desiring to avail himself of such register, can do so under the restrictions herein mentioned, furnishing duly certified particulars to this office; and can obtain a certificate of the same, which shall be held as officially correct in all future transactions relating to the stock so registered.

No Animal shall be registered, unless a clear and distinct connection be established, to the satisfaction of the Board, both on Sire and Dam, with the British or American Stud and Herd Books.

Where the Animal to be registered has been purchased by the person desiring to register, or has been imported for breeding purposes, a correct statement must be given of all particulars before a certificate can be issued.

It is desirable, in order facilitate the taking of entries for the Provincial Exhibition at Cobourg in October next, that persons desiring to register stock should do so at an early date, as all animals for which Register certificates shall have been given will be entered without further inquiry. Owners of stock are recommended to keep Duplicates of Pedigrees.

G. BUCKLAND. Secretary.

Office of the Board of Agriculture }  
Toronto, March, 1855. }

**SHORT-HORN BULLS.**

R. WADE, Junior, of Cobourg has Five Young DURHAM BULLS for sale, and would be glad of a call from parties wishing to purchase.

Cobourg, January 1 1855.

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**DRAINAGE AND SEWERAGE PIPE MACHINE**

CHARNOCK'S PATENT.

BY this Machine, Drainage and Sewerage Pipes of all descriptions, as well as perforated and other Brick, Flooring Tiles &c., are molded with the greatest facility and precision

A man and three boys can turn out from 5,000 to 10,000 feet of pipes per day, according to sizes; and if worked by horse, steam or water power, a proportionate increase will be obtained.

This Machine is in extensive operation in England, where, in addition to the testimony of numerous Tile Makers, as well as that of the first Machinists of the day, the following Prizes have been awarded to it.

- By the Yorkshire Agricultural Society, at its annual meeting, 1843, as the first Tile Machine with a continuous motion, ----- £5 0 0
- By the same Society, the following year as the best Machine of the day, ----- 10 0 0
- By the Lancashire Agricultural Society, at its annual meeting, 1845, ----- Silver Medal
- By the Highland Agricultural Society, at its annual meeting in 1846, as the best machine ----- 5 0 0

At the meeting of the New York State Agricultural Society, at Saratoga (1853), a working model of this Machine was awarded the Silver Medal and Diploma; and at the Fall Exhibition the same year of Lower and Upper Canada, held respectively at Montreal and Hamilton, the same Model was awarded a Diploma from each Society. It was awarded the First Prize and Diploma at the recent Exhibition in London Canada West.

The price of the Machine is £30, (half cash and remainder at six months), with five Dies for Pipes. Brick and other Dies at a moderate charge.

The Patentee guarantees the effective working of the Machine.

All orders to be addressed to

**JOHN H CHARNOCK,**

Drainage Engineer, Hamilton, C. W., the Patentee.

Hamilton, March, 1855.

**PURE-BRED ANIMALS.**

AT PRIVATE SALE,

Mount Fordham Westchester Co., 11 miles from City Hall, New York, by Harlem Railroad.

HAVING completed the sale of animals, as advertised in Catalogue of 1854, (excepting Short Horned bull "Balco" 9918), at prices highly remunerative, for which patronage I feel grateful, not only to the public of almost every State in our Union, but to the Canadas, Cuba, and the Sandwich Islands; I will issue about the 1st of April a Catalogue for 1855, of Short Horned Bulls, and Calves (some of which belong to my friend, and part associate Mr. N. J. Bear) North Devon Bulls and Bull Calves, Southdown Rams, Suffolk, Berkshire, and Essex Swine, of almost all ages, and of both sex, now ready for delivery. This catalogue will be illustrated with portraits of my Prize Animals. Most of the original animals of my breeding establishment were selected by me in England in person, and strictly in reference to quality, in my judgment, best adapted for the use of this country.

January 30th 1855.

L G MORRIS

**FRUIT TREES, EVERGREENS, &c.**

T. C. MAXWELL & BROS., ask attention of those wishing Trees and Nursery Articles the coming spring, to a few Thousands each of Apple, Cherry Standard and dwarf Pear Trees and a good assortment of Peach Plum Apricot and Quince Trees, and the smaller fruits. All very thrifty and HEALTHY.

25,000 Am Arbor Vite, two years in Nursery, fine plants for Hedges,

- 50,000 " " " " nicely rooted.
- 1,000 Balsam Fir, 1 to 5 feet high.
- 30,000 Norway spruce, 1 to 2 feet high.
- 1,000 Hemlock, Red Cedar, &c.
- 2,000 Wet ash large and cheap, and large Horse Chesnut, &c.

The above and many other articles usually grown in the Nurseries, we offer in lots to suit purchasers CHEAP. Digging and packing done in the best manner.

T. C. MAXWELL & BROS.

Old Castle Nurseries, }  
Geneva, Ontario Co, N.Y. }

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