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Halifax, 17th October, 1866.

We beg to call the special attention of the officers of Agricultural Societies and agriculturists in general, to the extensive sale of pure stock about to take place at Halifax.

The animals have been imported by the Board of Agriculture at great labour and expense. It was proposed to keep a portion of them over winter and dispose of them in the spring; but circumstances have determined the Board to dispose of all the cattle and sheep at once. Agricultural Societies will have to make their purchases at this sale, as there will be no sale next season.

Catalogues may be had on application to Mr. ALLAN, Auctioneer, Bedford Row.

**MUCKLE CRY AND LITTLE WOOL.**

After watching with interest, from adjoining Provinces, the operations of the great Republic, we have arrived at the conclusion that no people on the face of the earth have displayed a more fortunate combination of energy, perseverance,

skill and practical wisdom, than the people of the United States of America, and that no people have been more successful in bringing about in so short a time great practical improvements in agriculture, manufactures and commerce. We admire their enterprise and their sagacity, and we feel that they have not merely attained, but have merited their success, and that their example has stirred up the rest of the world to increased activity. It is with sincere regret then that we see, now and again, a spirit of political jealousy rising up, tending to blind them to the true interests of their vocation—the development of the resources of their great country.

The per capita consumption of wool in the United States has increased within the last few years to six pounds per annum. The scarcity of cotton has driven the people of the north into an increased consumption of wool. Now a sensitive man will sometimes rather bear the cold than borrow a cloak from his neighbor. But the prospect of a bare back is not remarkably agreeable even to a thin skinned people. It is not to be very much wondered at then if some of the political economists of the United States have been using their best energies to

improve the occasion and to pull the wool over the eyes of their people, and have drawn out fine spun elastic threads of logic to prove that the exclusion of all foreign wool is the only true method by which the backs of the natives may be covered and the manufacture of wool encouraged.

The Hon. Isaac Newton, in his monthly Report for July of the Agricultural Department at Washington, (an interesting and highly valuable publication), provides several ample courses of figures, (in themselves not very palatable to an American stomach), to show that "an average supply, in time of peace, of all needed wools can very soon be attained if wool of the United States is not displaced by low priced foreign wools."

The facts upon which this conclusion is founded are such as the following:—

In 1865 (year ending June) eight million dollars worth of wool was imported into the United States, exclusive of wool on the skin and shoddy.

There were of wools imported into the United States during the same year twenty millions of dollars worth.

Against these imports there is not half a million of exports of wool and woollens. Manufacturers in the States have of

late years made great advances in woollen manufactures,—this industry has in fact been rapidly developed. The raw material has been supplied from without, and the operation of the Reciprocity Treaty enabled them to obtain no inconsiderable portion of it from their neighbours in the British provinces, among whom the manufacturing ambition had not yet so fully developed itself. It is now proposed effectually to “stamp out” all foreign wool as if it were a plague or pestilence. Great Bo-peep having frightened away his British American sheep has put up a fence to prevent them coming back again, and is now going upon the losing principle of pinching himself and raising a stock of his own in order that he may clothe himself, however dearly, with his own wool. Great Bo-peep is just repeating what other great statesmen have done before him,—fighting against the laws of nature for an impossible absolute independence, trying to grow sugar, cotton, tea, and tobacco in cold countries, and turnips, oats and gooseberries in hot ones.

Now it is no business of ours to interfere with the internal concerns of another country, and we do not propose to follow up the subject in that direction; but it has so many bearings on our own industry that we feel called upon thus to allude to the Report of the Agricultural Commissioner, which we know is liberally distributed throughout our Province.

In a paper which we published in June last it was shown that the manufacture of worsteds in the States, now so extensive, owed its origin to the Reciprocity Treaty, that the British Provinces supplied the the States with from three to five millions of pounds of combing wool for that manufacture, and that the American production of combing wool was not sufficient to supply one mill. Let us repeat then, in contrast to Mr. Newton's conclusion, the opinion of John L. Hayes, the Secretary of the National Association of Wool Manufacturers of the United States:—“*A duty on Canada wool would crush an industry which has already assumed a truly national importance, and has advanced with a rapidity unexampled in any branch of our textile manufactures.*”

The American experiment is a highly dangerous one. It may encourage American farmers to raise a little more wool, but it will in the meantime shut up the factories and scatter the skilled labour which alone make wool-growing permanently profitable.

This crusade against all the wool growers of the world is commenced in the usual style of a desperate enterprise by nailing the colours to the mast. The war of independence in wool is begun by closing up the wool factories, just as the Helvetii prepared for their intended conquest of Gaul, by setting fire to all their own towns, villages and dwellings, and

burning up all the corn except what they intended to carry with them.

There is one obvious conclusion of the whole matter. Let every Nova Scotian reflect upon it. If we send our wool to the States we thereby aid in building up American manufactures. We have had hitherto no objection to do that so long as we found the market otherwise profitable. But if, from necessity or choice, we keep our wools at home, and apply capital to their fabrication, we shall rear in our midst a manufacture of a most profitable and otherwise desirable kind, well adapted to the resources and wants of our own country.

#### UNREFINED CRUELTY—A REMEDY AT LAST.

We beg to call the attention of our readers to a Society that has originated in Halifax, under the most favorable auspices, for the prevention of cruelty to animals. It will be seen that the Hon. the Chief Justice is President, and the other office-bearers have been selected from our chief citizens.

Many benevolent persons who are asked to join this society will be ready to reply that their sympathy is with their suffering fellow-creatures rather than with the lower animals, and that they would rather give their subscription to a Cholera Hospital than to a refuge for diseased dogs and cats. They are perfectly right. Whatever our sympathy may be with the lower animals, we have no sympathy whatever with that feeling which prompts to the harbouring of mangy curs, toothless horses, consumptive monkeys and bald parrots. The sooner all such are permanently relieved of their misery the better.

Other persons who have thought more fully over the matter will be apt to reply, —“We have heard eloquent sermons on cruelty to animals, and they have often been mere tirades against vivisection.—We do not approve of them.” Neither do we. If it be legitimate to cause acute pain in the human subject by drawing a tooth, or cutting out a carbuncle, or extracting a cancer, or amputating a limb, in order to prolong life or lessen distress, it is equally allowable to subject the lower animals as the servants of man, to all experiments that may be necessary, directly or indirectly, for the acquisition of the requisite knowledge.

Here the objections to the society end, or ought to end. We do not know further than is indicated in the published

prospectus what are the real objects of the society, nor do we know in what way its objects are proposed to be carried out; but we sincerely hope that it will meet with support and success. There are two kinds of societies: one class sentimental, or as they are sometimes called dilettanti societies; another class practical, vigorous in prosecuting whatever they find to do. From the names of the office-bearers we judge that the society is of the latter class, designed for use rather than ornament, for work rather than play. It has before it a wide field of usefulness, and it has not been formed before it was wanted in the city and county of Halifax. We have had the lower animals given for our use, and whether we use them as beasts of burden, or their flesh as food, it is incumbent upon us while controlling their actions, to provide all their necessary wants and free them from all unnecessary pain. That this duty is daily violated must be patent to every attentive observer.

But we hope that one great object of the society will be to save the citizens from the moral and physical dangers attending the abuse of our domestic animals. We hope that the bull-dog fights that are so frequent at Richmond will be put down, and the promoters suitably punished. We hope that provision will be made whereby horses with communicable diseases will be effectually prevented from entering public stables in Halifax. We hope that an old horse dragging an excessive load of coals up Round Church Hill, will become a less frequent exhibition. We hope that such instances of barbarity as the chopping of a horse with an axe, while grazing in a field, (as happened the other day at Beaver Bank), will cease to occur. We hope that due regard will be had to slaughtering animals for our own markets and shipping them for others. And above all we hope that the continuous stream of traffic in the streets of Halifax will be so regulated as to ensure more comfort and safety alike to passengers and horses; for, whether in summer or sleighing time, there is a constant succession of reckless drivers wheeling round the street corners, endangering life and limb to every passer-by. We allude particularly to the careless street driving, as it is so glaring as to be remarked by every visitor to the city. Any young boy not fit for anything else, is thought good enough to drive a horse; and not one man in fifty slackens his pace in rounding the corners.

If there is a reasonable prospect of all or any of the results contemplated in these remarks being brought about by the “Halifax Branch of the Royal Society for the prevention of cruelty to Animals,” it will well deserve the hearty support of well-disposed citizens. To their consideration, therefore, we cordially commend the programme of the society printed in the September number of the *Agri. Journal*.

## CULTIVATION OF FLAX.

BY J. A. DONALDSON.

*Government Emigration Agent, Toronto.*

The importance of the cultivation of this valuable plant in Canada has, of late years, occupied a large share of my attention, more especially since the failure of the Wheat crop, which has unfortunately become so general. It will be acknowledged by all that agriculture and home commerce are the pillars of national prosperity; and when success attends the plough, the labourer and the artisan are employed. In proportion as agriculture is depressed, all the dependent branches of trade suffer; and Canada being entirely an agricultural country, and labouring at present under great depression, universally acknowledged to be from the general failure of the wheat crop, it behoves, not only the farmer, but every member of the community, to apply himself and see if some remedy cannot be found, that may in some measure meet this serious evil. The farmer is recommended to try many other descriptions of crops. Among these, hemp and tobacco present themselves.—Both, no doubt, can be cultivated to great advantage, but flax has already been introduced to a very considerable extent, and for the benefit of those who may not have given this valuable crop a share of their attention, it may be as well to state, as an inducement to others to follow the example, that not less than from eight to ten thousand acres were devoted to this crop in Upper Canada last year, and a number of enterprising parties have embarked not only in its cultivation, but in manufacturing the raw material into manufactured goods fit for consumption in our own country.

The Messrs. Perine Bros. & Co., of Doon, whose operations extend nearly throughout the County of Waterloo, distributed seed to the farmers for sowing to the extent of nearly three thousand acres last year. Colonel Mitchell of Norval, County of Halton, also furnished seed to a large number of farmers in his neighbourhood. Parties desirous of going into the cultivation or manufacture of this product, would do well to visit one or other of these establishments. At St. Mary's, St. Thomas, Elora, Stratford, London, Woodstock, Goderich, Weston, Whitby, Uxbridge, Cobourg, Belleville, Kingston, Brockville, Mirrickville, Newcastle, Matilda, and many other places, a good beginning has been made. Linen manufactories are also springing up. This branch of enterprise is certainly the greatest boon of all to this country, converting as it does, the raw material into manufactured goods of a description so much in common use in Canada, such as linen for bagging, brown holland, drills, toweling, bed ticking, shoe threads, saddlers' threads, wrapping twine,

and cordage of every description. All these articles have hitherto been largely imported, and we have been paying upon them a duty of twenty per cent.

Cottonizing the fibre is also engaging the attention of the skillful artisan. This process may be seen at the Doon mills. A two-fold benefit will arise from the production of this new class of goods. First, it will take the place of cotton batting, which, like all articles of that class, is at war prices. Secondly the farmer will be relieved of the most objectionable part of the labour which attends flax,—that of pulling, as it can be cottonized when taken from the field in any shape, without regard to its being made into sheaves, as is required if used for scutching, and producing a fibre fit for spinning into yarn.

While endeavouring as briefly as possible to point out the most economical and profitable mode of cultivation and after treatment of the flax crop, it is necessary to caution parties intending to give the new product a trial, not to expect too much at least for the first year. In order to success, the directions about to be given must be carefully observed. If they cannot in all cases be followed to the letter, beginners should keep as near them as possible. At the same time, there can be little doubt that experience from year to year will enable the farmer to make many improvements on the rules herein laid down. This has been the case in all flax growing countries, and Canada will hardly prove an exception.

I will now proceed to point out the description of soil best calculated for a crop of flax. All parties that have written on this subject are of opinion that a good clay subsoil, with a friable deep loam, is the best for this plant; but I have seen it grown in Ireland on almost every description of land. My belief is that in every county in Canada there are large tracts well adapted for flax. All the valleys along the rivers are admirably suited to its growth. Mr. Beck of Baden, County of Waterloo, where a scutching mill has long been established, sowed flax three successive years on a piece of rich flat near his mill, and the crop produced the last year was the best of the three.—In order however to succeed in getting a good crop on any land, parties must not imagine for a moment that they can dispense with careful attention and thorough cultivation. The land should be well ploughed in the fall, twice if necessary, taking care in every case to pick off all the weeds or roots that may in any way obstruct the growth of the plant. After a preparation of this kind, when the land is in good tilth, many prefer sowing on the winter face, but at any rate a light ploughing will answer in the spring, or the application of the cultivator. Before sowing you require to harrow well with a heavy harrow; next the surface should be rolled;

then pass a light harrow on the land; and lastly roll again. Let the ridges be as wide as possible, with as few furrows as can be made, since the flax is likely to be of unequal lengths when there are many furrows. With regard to the time for sowing, about the tenth of May is the best time ordinarily, but this is a point to be determined by the season and the state the land is in. Weeds are among the the worst enemies we have to contend with in the culture of this crop, but we do not suffer so much in Canada in this respect as do cultivators in many other flax growing countries. Vegetation is so much quicker with us, that if the crop is got in in good season, the flax plant comes on so rapidly that it outgrows the weeds, chokes them down, and renders them of such a delicate nature as not to injure the fibre to any extent when prepared for scutching.

It is often asked, Will it do to seed down with flax? This has often been done to great advantage, and some of the most experienced agriculturists prefer it, as they maintain the clover plant is moulded by the pulling of the flax. Those who have not tried it have fears that the young clover plant will be pulled with the flax.—This is not the case, however, for, as all farmers are aware, clover has a very long root, and is difficult to pull out of the ground. This is a matter for the agriculturist to experiment on for himself, and settle to his own satisfaction. In Ireland, land is considered best for a flax crop when it has been many years either in meadow or grass. It is usual, after breaking up, first to take off a crop of oats, and then sow flax. This will be found to answer well in this country, but it must not be forgotten that flax must not be sown the same year land has been heavily manured. After turnips, potatoes, or any root crop, the best crop of flax is likely to be had; or when a crop of fall wheat has been killed by the frost early in the spring, with careful cultivation, if the land is clean, a good crop of flax may be expected.

Before leaving this part of the subject, I would venture a suggestion from a fact that came under my notice last year.—While passing a field of Mr. Howland's, near Dundas street, which had been sown with turnips, I observed that the crop looked remarkably well, except about two acres which had been so completely destroyed by the army worm, that not a leaf was to be seen. This was about the latter end of June or beginning of July. It occurred to me whether a crop of flax could not be had on this ground. It might be worth a trial in such cases. If a crop of fibre could not be had, half a crop of seed might be obtained. As flax only requires from eighty to ninety days in the ground to come to perfection, it might be worth a trial under such circumstances.

We now come to the pulling, the great bugbear with most of the farmers. I only

wish some of our ingenious young Canadians would put themselves to work, and invent an implement that would get me over this difficulty, and the farmers too. And yet it is not so bad, especially if the younger branches of the family could be enlisted to take their share of this part of the labour. This might be encouraged by giving them a direct interest in the share of the crop. In the German settlements a great deal of this part of the labour is done by the daughters of the farmers, and in a short time they become more expert at it than men at high wages. Four hands are allowed to pull an acre per diem, and at the worst it will only cost three dollars more than cutting an acre of wheat. Whether it be pulled by men or boys, great care should be taken to keep the root ends as even as possible, and in every case when it is pulled before the seed is ripe, which is invariably the rule in Ireland, in order to procure the best quality of fibre. It should be taken immediately after pulling and put into the cesspool or vat, when it is intended to be steeped. This is however seldom done in Canada, dew-retting being the method usually adopted. When flax is allowed to stand in the stock with the seed on, it is necessary to turn the beets or sheaves, to prevent the action of the sun from injuring the fibre.

#### THE EXHIBITION.

The people of Upper Canada may well be congratulated upon the results of the Exhibition, which has just closed. It has been a great success in the widest sense of the term. It was not merely that the Association succeeded in bringing together an immense variety of animals and articles to compete for the prizes offered, nor that the people flocked by tens of thousands to see them. In those respects there may have been much to rejoice over; but it is only when we look more closely at the merits of the collection, and compare the Exhibition of this year with its predecessors, that we fully appreciate the triumphs which our farmers, and indeed our whole people have won. Comparing the recent Exhibition with previous ones those best able to judge declare it to have been on the whole, the best ever held in Upper Canada, inasmuch as it gave abundant evidence of the gratifying progress which the country is making in very many respects. It furnished now evidence not only of the superiority of Upper Canada as an agricultural country, and of the increasing intelligence and enterprise of her farmers, but of the rapid advancement we are making in nearly all the branches of industry of which the varied prize list takes cognizance.

The show of Stock was better than ever before. Horses, cattle, sheep, pigs,

and poultry, were all in advance of former years. It is not so much that particular animals were shown which have never before been equalled—as that the average was better than on any previous occasion. Almost without exception the animals shown were excellent. The points of good animals are becoming so well known to our farmers, that scarcely any one now makes the mistake of bringing an inferior beast to the Provincial Show.

The progress which our agriculturists are making in the introduction of improved breeds of horses, cattle and sheep, is of the greatest advantage to the country. As the Exhibition from year to year gathers together the most intelligent farmers from all parts of the province, the advantages of having the best kinds of farm stock are impressed upon a greater number of farmers; and every year thorough-bred animals are bought and taken away from the Exhibition to be introduced into farm-yards where they were never seen before. By this means the stock of the country is being steadily and rapidly improved.

In machinery and manufactures the Exhibition was exceedingly good. It is only by carefully looking through these departments and remembering how meagre they were a dozen years ago, that we can appreciate the advances which Canadian manufactures have made. The excellence of the articles exhibited is quite as gratifying a feature as the variety. In many descriptions of Canadian-made goods, our manufactures have attained a degree of excellence not surpassed in any country.

The show of roots and vegetables was better probably than on any previous occasion. In grain, our farmers have so long excelled that they could hardly improve much upon the high reputation which Upper Canada wheat and barley already holds. The excellence of the show of fruits and grapes, was especially gratifying. One gentleman exhibited no less than thirty-eight varieties of out-door grapes grown by him. It was also shown that by the aid of glass without heat, some of the choicest foreign grapes can be brought to great perfection in our climate. After the glass structure has been provided, there is no more trouble than in growing out-door grapes. We have long felt that Upper Canada is capable of becoming a great fruit growing country. It used to be pretended that the soil and climate of this Province were not favourable to the growth of fruit. But this fallacy is now entirely exploded. The profits of fruit growing are as much within the reach of our farmers as of any in the world. In much the same way it used so be alleged that bees would not thrive well in Canada. The exhibition in that department this year must be accepted as conclusive proof of the con-

trary. Not only was the show of bees, bee-hives and honey better, but the interest excited by the bee-exhibitors was one of the leading features of the Show. Like the big cheese, the bees were constantly a centre of attraction to large crowds, many of whom not only examined the bees, hives and honey, but determined to become bee-keepers themselves.

Another branch of agricultural industry which this Exhibition shows to be rapidly rising into importance is that of cheese-making. The dairy produce was all good, but especially satisfactory was the show of factory-made cheese. This is comparatively a new thing in Canada; but the rapidity with which it is being introduced is most gratifying. A few years ago we imported nearly all the cheese used in Canada from the United States; but our farmers have learned that they can make an equally good article for themselves, and reap larger profits from it than by growing grain.

These things show how greatly the farmers of the country are widening the scope of their operations. Nothing can contribute more to the prosperity and independence of both the individual farmer and the community than the development of all branches of the farmer's calling. Formerly, when a farm ceased to produce good wheat crops, the owner thought himself ruined and his farm almost worthless. Now, every intelligent farmer understands that in such a case he has several resources left him. A year ago, gloomy prophets told us that, when the American Government put tax upon our grain, we should be ruined. But grain-rising is only one of many resources which our farmers enjoy, and they are surprised to find how little injury we are likely to suffer from the American tariff. The Exhibition of 1866 must be of inestimable value in increasing the confidence of our farming community in the variety of their resources, and in strengthening the feeling of sturdy independence and self-reliance which is beginning more than ever to pervade all classes of our countrymen. By cultivating a diversity of crops, and turning out a variety of products, we of necessity lessen the evil effects of failure in any one direction, and it is on the basis of a mixed and varied husbandry that the fabrics of commerce and manufacture must be built, if we are to become a thoroughly self-contained and thrifty people.—*Canada Farmer.*

WASTE OF TIME.—“Our lives are spent either in doing nothing at all, or in doing nothing to the purpose, or in doing nothing that we ought to do. We are always complaining our days are few, and acting as though there would be no end of them.”—*Seneca.*

**Arts and Manufactures.****ON SODIUM AND ITS MANUFACTURE.**

By William Beatson. (From the "Chemist.")

Having for some years given considerable attention to the production of the alkaline metals, I have succeeded in obtaining them (particularly sodium) in such quantities as to show that it only needed the demand to be created, and they could be supplied in such a way as would greatly promote the application and extension of science and the chemical arts, and it was only because that demand did not appear to exist that the subject was allowed to remain in comparative abeyance. Now that such interest has been excited in the enlarged application of Mr. Wohler's process for preparing aluminium by means of sodium, chiefly through the exertions of M. St. Clair Deville, it may not be uninteresting to indicate the means by which this latter metal, sodium, may be extracted by enlarged and improved processes, which I have been led to employ for some time past.

The retorts, in which the mixture of carb. soda and coke has been heated, have been chiefly of malleable iron; but as it is difficult to obtain these of a large size, retorts of earthenware or fire clay have been used with success, and probably a fire-clay retort, with a lining or trough of malleable iron, will be found to be the best form of distilling apparatus, though with great care cast iron retorts may yet be employed with advantage. The principle improvement which I have effected, and which is now engaging the attention of M. Deville, consists in making the process continuous; so that the retort is maintained at nearly a uniform temperature, and only requires the introduction of a fresh charge when the previous one has been worked off. If the materials are properly proportioned, the retort becomes nearly empty at the termination of each distillation; or, if an excess of carbon remains in the retort, it is available in the following operation, so that in this way one retort has been kept in full action for a week, and sometimes for nearly a second week without interruption. As soon as one distillation is completed and the condenser removed, a fresh charge of soda and carbon is introduced into the retort through the same tube as emits the sodium, means of a long semi-circular scoop, and the retort being nearly filled the new distillation commences in a short time and proceeds with the greatest regularity and success; the sodium which I have sent to the Paris Exhibition was prepared in this way, and, as before stated, it was only because there seemed to be no demand for the metal, that it was not pre-

pared on an industrial and extensive scale; perhaps, as in some other instances, the supply may create or excite the demand. In addition to the sodium, it is well known that a large quantity of croconates and other compounds of soda distil over and are found mixed with the sodium, and as their separation is tedious in small quantities, I have constructed a large iron cylinder, in which the sodium and its impure admixtures are heated to fusion below the surface of naphtha or camphine, and a piston or plunger being then forced down by a powerful screw or hydraulic press, the pure metal is found in a mass above, and the impurities in the bottom of the cylinder. [A diagram of the apparatus may be seen in the Laboratory of Dalhousie College.]

**Communications.****CROPS IN KEMPT, CO. OF QUEENS.**

Kempt, 20th Sept., 1866.

Respecting the crops, Hay was an average crop, but on account of the wet weather somewhat injured in making; our low meadows adjacent to the lakes and rivers in this locality are overflowed, and will be principally lost.

Wheat, when sown early, has done well, some slight attack by the weevil.

Oats and Barley have grown very luxuriantly, but were very much beaten down and injured by the heavy rains.

Potatoes are a middling crop but are rotting very badly.

Garden vegetables of all kinds have grown well but have been much injured by the wet weather.

Fruit a small crop.

EDWARD P. FREEMAN, Sec'y.

**LEICESTER RAMS AT THE NORTH SHORE, ST. ANN'S.**

I have the pleasure of acquainting the Central Board of Agriculture, through you, that I have purchased fourteen Ram Lambs of the Leicester breed from E. Calkins, Esq., West Cornwallis, for the use of the society here. Price, when delivered in Halifax, five dollars each.

ANGUS MCKAY.

North Shore, Sept. 19th, 1866.

**THE CROPS, &c., ABOUT AMHERST.**

Our society, as you will perceive, is larger than it was last year, but still nothing like what it should be in a rich and largely agricultural community. We have been blessed with splendid crops; hay, grain and roots all abundant. But, as in other parts of the country, we have had a very poor harvest. Grain has been very seriously damaged; hay the same, and on meadows, low marsh and intervalles, will not be secured at all, owing to the

extraordinary height of fresh water streams; potatoes on damp lands are rotting considerably. Altogether the crops will be secured in very bad condition, and the incessant heavy rains of the early fall will cause immense loss to the country.

J. H. BLACK,

Secretary Amherst Agr. Society.

**REMARKABLE GROWTH.**

My Dear Mr. Journal.—Being a lover of horticultural and agricultural pursuits, (though, unfortunately, not in a position to practise either,) I often take a peep into the gardens of my neighbours.—Frequently I see something altogether new to me, and perhaps the recital may not be uninteresting to your numerous readers, although it may not, for aught I know, go beyond their own experience. Last week, I saw what I consider a remarkable bed of peas. On measuring them with a foot rule, they were found to stand nine feet eight inches high, notwithstanding the fact that a recent storm of wind had flattened them considerably on the top of the supports. They would certainly measure 10 feet if standing upright. These peas bore steadily all the summer, and have now quite a profusion of fresh blooms. They were planted late in May, and are the property of Mr. Hepburn. If any of your readers can furnish a more remarkable statement about pea-culture, it will be something peculiar.

Another fact which arrested my attention was in connection with the raising of fruit. Mr. Francis Beattie has a small orchard, which contains a number of quite young trees, of astonishing growth. His grafts of the Magnum Bonum are most noted. Several grafts of the Magnum Bonum on the common plum have attained three, four, five, and six feet, but one has grown, this present season, over seven feet! There is also to be found, in Mr. Beattie's garden, an apple tree two feet high, about three years old, bearing two very fine specimens of that fruit. It may not be amiss to add that the latter gentleman's property has been cultivated only about six years, and that only at spare intervals from his daily labour, but possesses the nucleus of a very fine establishment,—containing as it does, such a large collection of young fruit trees just about ready for setting out. P.

Pictou, Sept. 19th, 1866.

**CULTURE OF STRAWBERRIES IN POTS.**

Persons who have the command of a greenhouse, or a hothouse, can have strawberries for desert early in the season, by growing them in pots. Three inch pots filled with light rich soil should be got ready as soon as the young runners



can be procured. Lay the young plant in the pot, and either peg it down or lay a small stone on it to keep it in its place, pull the point out of the runner with the forefinger and thumb, to throw all the strength into the young plant. In a fortnight or three weeks they will have filled the pots with roots, cut the runners from the parent plant and shift them into their fruiting pots at once, viz., six inch pots. The soil most suitable is one-half good turfy loam, the other half thoroughly rotten manure, well mixed together. In preparing the pots for the plants use clean ones, placing one potsherd over the hole in the bottom with a few more added so as to ensure an efficient drainage, or what is better put an oyster shell over the hole in the bottom, and use rough bone-dust for drainage, next add a handful of coal soot to prevent the ingress of worms, then place a few lumpy pieces of the loam over the drainage, and put a little of the compost into the pots. Turn the plant out of the small pot and place it in the larger, keeping the crown of the plant rather high in the centre of the pot, and press the soil firmly round the plants for they require to be potted very hard. Give them a good soaking of water through a rose waterpot, and place them on raised boards in front of a south wall, keep them a little apart so that they will have the full benefit of the sun and air to ripen their crowns, keep the pots free from weeds and runners till frosty weather sets in when they are to be placed in a cool cellar. In the spring introduce them into the house in succession, the earliest first and so on, take the surface soil off and top-dress with a compost the same as the plants were potted in, pressing it firmly down with the fingers. Stand them in saucers in the house and give them at all times a liberal supply of water, with the addition of weak liquid manure twice or three times a week. When in flower give abundance of air to make them set properly, when set more heat can be given them till the colouring process begins, when less water and more air will be requisite to give colour and flavour to the fruit. Black Prince should be introduced first, next Keen's Seedling, and lastly British Queen; these three will form a good succession till they begin to ripen in the open ground.

JOHN JOHNSTON,  
Gardener, Ellershouse.

## Vegetable & Flower Garden.

### PRESERVATION OF VEGETABLES IN WINTER.

The following timely article is a chapter from Mr. Henderson's (South Bergen, N. J.) forthcoming work on Gardening: "Our manner of preserving vegetable roots in winter is, I think, peculiar to this

district, and is very simple and safe.—After taking up such crops as beets, carrots, horse-radish, parsnips, turnips, potatoes, etc., in fall, they are put in temporary oblong heaps, on the surface of the ground on which they have been growing, and covered up with 5 or 6 inches of soil, which will keep off such slight frosts as are likely to occur until time can be spared to put them in permanent winter quarters, this is done in this section usually during the first part of December, in the following manner: A piece of ground is chosen as dry as possible; if not naturally dry, provision must be made to carry off the water, lower than the bottom of the pit. The pit is dug out from three to four feet deep, about six feet wide, and of the length required; the roots are then packed in sections of about two feet wide across the pit, and only to the height of the ground level. Between the sections, a space of half a foot is left, which is filled up with the soil level to the top; this leaves the pit filled up two feet wide in roots, and half a foot of soil, and so on until the whole is finished. The advantage of this plan is, that it is merely a series of small pits, holding from three to five barrels of roots, which can be taken out for market without exposing the next section, as it is closed off by the six inches of soil between. Also that we find that roots of all kinds keep safer when in small bulk, than when large numbers are thrown into one pit together. In covering, the top is rounded so as to throw off water, with a layer of from 18 inches to 2 feet of soil. The way of preserving roots, with perhaps the exception of potatoes, is much preferable to keeping them in a cellar or root house, as they not only keep fresher, retaining more of their natural flavor and color, but far fewer of them are lost by decay than when exposed to the air and varying temperature of a cellar. Unmatured heads of cauliflower or broccoli, however, are best matured in a light cellar or cold frame, by being planted in close together; in this way good heads may be had to January. Cabbages are preserved very simply; they are left out as late as they can be pulled up by the roots, in this section about the end of November, they are then pulled up and turned up side down—the roots up packed close together, in beds six feet wide, with six feet alleys between, care being taken to have the ground levelled where the cabbages are placed, so that they pack nicely. They are left in this way for two or three weeks, or as long as the ground can be dug between the alleys, the soil from which is thrown in on the beds of cabbage, so that when finished they have a covering of four or six inches of soil. This is not enough to cover the root however, which is left partly exposed, but this is in no way injurious. Some prefer to cover them up at once by

plowing a furrow, shoveling it out wide enough to receive the heads of the cabbages, then turning the soil in on the heads, and so continuing until beds of six or eight feet are thus formed. This plan is rather more expeditious than the former, but it has the disadvantage of compelling them to be covered up at once by soil, while the other plan delays it two or three weeks later, and it is of the utmost importance in preserving vegetables that the operation (particularly the final covering) be delayed as late in the season as frost will permit. Generally more is lost by beginning too soon than delaying too late. Onions, we find, are best preserved in a barn or stable loft, in layers of from 8 to 10 inches deep, covered up with about a foot of hay or straw on the approach of severe frosts. The great point to be attained is a low temperature and a dry atmosphere; they will bear 20 degrees of frost without injury, provided they are not moved while frozen, but they will not stand a reduction of temperature much lower than this without injury.—*American Agriculturist.*

**BORAGE.**—Borage is a rough plant with fusiform roots, oblong or lanceolate leaves, and blue paniced or drooping flowers. The plant came originally from Aleppo, but is now naturalised in most parts of Europe and America. It is frequently found on dunghills and heaps of rubbish. Parkinson, who died about 1640, states that it grew plentifully in Kent, in his day. Borage was formerly in great request, being reckoned one of the four cordial flowers. "Very light," says an ingenious author, "were those sorrows which could be driven away by borage." Yet borage flowers are at least innocent, which is more than can be said of many other general remedies for care. The whole herb is very succulent, and very mucilaginous, having a peculiar faint smell when bruised. The plant is now seldom taken inwardly. The young tender leaves may be used as salad, or as a pot herb. The flowers are one of the chief constituents in the composition of a cool tankard.

Borage is a pretty annual, and is raised from seeds, and in order to have it young all the year, it should be sown in spring, summer, and autumn, either in drills or broadcast, from March to May. When the plants come up thick, they must be thinned to nine inches asunder. They will not bear transplanting, in consequence of the length of their tap roots; at all events if the operation be attempted, it must be done when the plants are very young. It sows itself in autumn, and likes a dry soil. Borage ought to be cultivated in the vicinity of every apiary, as it is a plant to which the bees resort with great avidity, it being excessively rich in honey.

## Board of Agriculture of Nova Scotia.

## CATALOGUE

OF

IMPORTED AND PURE BRED

## BULLS AND HEIFERS,

SHORT HORNED DURHAMS, HEREFORDS, AYRSHIRES &amp; DEVONS,

AND OF

Goswold, Leicester, Southdown, and Hampshire Down

## RAMS AND EWES,

AND

## THOROUGH BRED HORSES AND MARES,

To be sold by PUBLIC AUCTION, at the Railway Depot,  
Richmond, Halifax, on

FRIDAY, 2nd November, 1866.

AT 12 O'CLOCK, NOON.

These animals have been imported from Canada at the expense of the Board of Agriculture, and will be sold under the restriction that they are not to be sent out of the Province.

W. M. ALLAN, Auctioneer.

TERMS:—Cash on delivery; purchasers must take delivery of their animals immediately after sale.

Agricultural Societies purchasing at this sale, and not having funds in hand, may, if they so desire, have the amount of their purchases deducted from their annual grants payable in November, 1866, by communicating with PROFESSOR LAWSON, the Secretary of the Board.

## BULLS AND BULL CALVES.

Lot. SHORT HORN DURHAMS.

1.—*Lobo Lad*, red and white, calved 9th November, 1865; bred by Thomas Douglas, Lobo, Co. Middlesex, C. W., entered in Upper Canada Stock Register, No. [2008]; got by Baron Renfrew, [1227].

Dam Miss Maude, [353], by Belted Will the 6th, 68, bought from John Snell.

g. d. Red Rose, 265, by Young Briton, 275.

g. g. d. Lady Jane, (imported) by Sir Walter, (2639).

g. g. g. d.—by a son of W. Booth's Jerry, (4097).

g. g. g. g. d.—by Young Star, (5319).

g. g. g. g. g. d.—by Roseberry, (567).

g. g. g. g. g. g. d. by a son of Comet, (155), &c.

2.—*The Yeoman*, white, calved 5th June, 1864; bred by Fredk. Wm. Stone, Moreton Lodge, Guelph, C. W.; got by Twelfth Duke of Northumberland, 4744.

Dam Isabella 6th by Windsor, 4484.

g. d. Isabella 3rd by (imported) Friar John, (12905.)

g. g. d. Isabella 2nd (imported) by Buccaneer, (11217).

g. g. g. d. Isabella Howard by the Yeoman, (12220).

g. g. g. g. d. Idalia by Lord Marlboro', (7166).

g. g. g. g. g. d. Isabel by Belshazzar, (1703).

g. g. g. g. g. g. d. Imogene by Argus, (759).

g. g. g. g. g. g. g. d. sister to Isabel by Pilot, (496).

g. g. g. g. g. g. g. g. d.—by Agamemnon, (9).

g. g. g. g. g. g. g. g. g. d.—by Mr. Burrell's Bull of Burdon, (1769).

3.—*Sir William*, red and white, over one year old, bred by S. Beattie, Markham, and entered in Canada Stock Register; pedigree will be supplied on day of sale.

4.—*Lord Derby*, white, calved about end of March, 1866, bred by S. Beattie, Markham, got by Marion Duke of Airdrie; full pedigree on day of sale.

5.—*Duke of Edinburgh*, white, calved about end of March, 1866, bred by S. Beattie, Markham, got by Marion Duke of Airdrie; full pedigree on day of sale.

6.—*Cato*, red and white, calved 31st January, 1866, bred by Thomas Arkell, Little Farnham Farm, near Guelph, C. W.; got by Yeoman.

Dam Flora the third by King of the West.

g. d. Flora by John O'Gaunt 2d, (13089).

g. g. d. Snowdrop by Durham, 1488.

g. g. g. d. Flora by Wellington, 183.

g. g. g. g. d. Victoria by Agricola *alias* Sir Walter, (1614).

g. g. g. g. g. d. Beauty by Snowball, (2647).

g. g. g. g. g. g. d.—by Lawnsleeves, (365).

g. g. g. g. g. g. g. d.—by Mr. Mason's Charles, (127).

7.—*Nobleman*, red and white, calved 12th Feb'y, 1866; bred by Thomas Arkell, Little Farnham Farm, near Guelph, C. W.; got by F. W. Stone's Moreton Duke.

Dam Flora, by John O'Gaunt 2nd, (13089).

g. d. Snowdrop by Durham, 1488.

g. g. d. Flora by Wellington, 183.

g. g. g. d. Victoria by Agricola *alias* Sir Walter, (1614).

g. g. g. g. d. Beauty by Snowball, (2647).

g. g. g. g. g. d.—by Lawnsleeves, (365).

g. g. g. g. g. g. d.—by Mr. Mason's Charles, (127).

8.—A young Durham Bull imported from Canada last year, and which has been under care of the Pictou Agricultural Society during the summer.

## HEREFORDS.

9.—*The Moreton Chief*, red with white face, calved 31st October, 1865; bred by Fredk. W. Stone, Moreton Lodge, Guelph, C. W.; got by Guelph, (2023).

Dam Gentle 3rd by (imported) Patriot, (2150).

g. d. Gentle (imported) by Carlisle, (923).

g. g. d. Lady by the Knight, (185).

g. g. g. d.—by Monarch, (504).

g. g. g. g. d.—bred by late Mr. Turner of Noke Court.

10.—*Sir William*, red with white face, calved 27th October, 1865; bred by Fredk. Wm. Stone, Moreton Lodge, Guelph, C. W.; got by Guelph, (2023).

Dam Vanquish, by (imported) Patriot, (2150).

g. d. Verbena (imported) by Carlisle, (923).

g. g. d. Flower by Radnor.

g. g. g. d. Old Fancy, bred by late Mr. Galliers, of Shobdon.

## AYRSHIRES.

11.—A two year old Ayrshire Bull, out of Beauty; bred by R. L. Dennison by Carrick Farmer. This animal was purchased from Edward Fawcett, Scarborough, C. W., and gained the FIRST PRIZE in the Ayrshire class at the Upper Canada Provincial Exhibition, Sept. 1866.

12.—An Ayrshire Bull, under two years, bought from Mr. James Lawrie, Scarborough, C. W.; out of an imported cow, Agnes, by bull Carrick Farmer, imported by S. Beattie from Lanarkshire, to which has been awarded the first prize in his class at the U. C. Exhibition, Sept. 1866, and diploma of the Association as the best bull of any age.

## DEVON.

13.—*Duke*, calved January 14th, 1866; bred by Michael Perdue, Campbell's Cross, Co. of Peel, Canada West.

Sire Jeff. Davis, [248]. He by Duke of Devonshire, [34].

Dam Maud, 58. Ditto by Rory O'Moore.

g. d. Maria, 35, by Frederic Jerome, 23.

g. g. d. Duchess of Kent 2nd by Dibble, 176.



g. g. d. Cleopatra, (bred by Mr. Garbritt, Wheatland, Monroe Co., New York, from the King and Pateron importations).

#### SHORT HORN COWS AND HEIFERS.

- 14.**—*Nelly the Third*, two year old Short Horn Heifer, red and white, raised in Ohio; pedigree on day of sale; in calf to Bell Duke of Oxford, a red bull that cost \$500 when nine months old.
- 15.**—A two year old Short Horn Heifer; bred in Kentucky by Mr. Clay; pedigree on day of sale. In calf to Bell Duke of Oxford.
- 16.**—Grade (Durham) Heifer, over two years old, by imported Bull Balco raised by S. Beattie, Markham; her dam who is by imported Prince of Wales, got the first prize this year in Grade Cows at the Upper Canada Provincial Exhibition. She was by imported bull Prince of Wales, which at one of the Provincial Exhibitions gained the Prince of Wales Prize of \$60, together with the gold medal for the best bull of any age or breed, the first prize for the best Durham bull of any age, and many other prizes. The heifer is in calf to a young Kentucky bull belonging to Mr. Alexander of Woodlawn, Ky., called Bell Duke of Oxford.

## R A M S.

#### COTSWOLDS.

- 17.**—One Shearling Cotswold Ram, from the stock of George and John Miller, Markham, C. W.\*
- 18.**—One Shearling Cotswold Ram, from same stock.
- 19.**—One do. do. do.
- 20.**—One do. do. do.
- 21.**—One do. do. do.
- 22.**—One do. do. do.
- 23.**—One do. do. do.
- 24.**—One do. do. do.
- 25.**—One Cotswold Lamb from the same flock.
- 26.**—One do. do. do.
- 27.**—One do. do. do.

#### LEICESTERS.

- 28.**—One Two Shear Leicester Ram, from Messrs. Miller's flock.
- 29.**—One do. do. do.
- 30.**—One Ram Lamb from the same flock.
- 31.**—One do. do. do.
- 32.**—One Shearling Leicester Ram from the same flock.
- 33.**—One do. do. do.
- 34.**—One do. do. do.
- 35.**—One do. do. do.
- 36.**—One do. do. do.
- 37.**—One do. do. do.
- 38.**—One do. do. do.

#### SHROPSHIRE DOWN.

- 39.**—One Shearling Shropshire Down Ram, bred by George Miller, Markham.

#### SOUTHDOWN.

- 40.**—One Shearling Southdown Ram, from the flock of Nehemiah Bethel, St. Catherine's, C.W.

## E W E S.

- 41.**—One Shearling Cotswold Ewe, from Messrs. Miller's flock.
- 42.**—One do. do. do.
- 43.**—One Shearling Leicester Ewe from the same flock.
- 44.**—One do. do. do.
- 45.**—One two-shear Southdown Ewe, from the flock of Thos. A. Milne, Markham.

\* Messrs. Miller's flock has been carefully kept up by almost yearly importations of Rams from England for the last 30 years.

## HORSES AND MARES.

The following Horses and Mares will be offered, the Board of Agriculture reserving power to withdraw such of them as may be arranged at the half-yearly meeting of the Board, to be held on 31st October:

**46.**—*Lassitude*, a chestnut horse bred by Mr. Blenkiron. Dam, *Emui*; Sire, *Horror*; Foaled in 1863. General Stud Book, vol. x, page 105.

*Emui* (the dam of *Lassitude*) was bred by Lord G. Bentinck, in 1843, was got by Bay Middleton, her dam *Bludevils* by *Velocipedo* out of *Care* by *Woful*, (*Emui* is dam of *Saunterer*, *Loiterer*, &c).

*Horror* (*Lassitude*'s sire) was bred by Mr. J. Eyke, got by *Wild Dayrell* (1857), his dam *Sally* by *Ithuriel*, her dam by *Partisan* out of *Pomono* by *Vespasian*.

During the season of 1865 *Lassitude* ran in the Hinching-broke Stakes at Huntingdon of fifteen sovereigns each, and had engagements as follows:—

Lavant Stakes, at Goodwood, of fifty sovereigns each; in the Priory Stakes, at Lewes of fifteen sovereigns each; in the St. James' Palace Stakes of one hundred sovereigns each; in the Cleveland Stakes at Stockton of 5 sovereigns; in the Hardwicke Stakes at Stockton of 10 sovereigns; in the Lambton plate at Stockton of 25 sovereigns each; and in the Leger at Stockton of 10 sovereigns each. He was further engaged this year in the Derby, at Epsom, of 50 sovereigns each; in the Prince of Wales Stakes of 50 sovereigns each; and in the St. Leger of Doncaster of 25 sovereigns each.—He had likewise several engagements in England for 1867.

**47.**—*Aracan*, a brown Horse bred by Lord Eaton. Dam *Ava*; Sire, *Ambrose*; Foaled in 1860. General Stud Book, vol. x, page 21.

*Ava* (the dam of *Aracan*) was bred by Lord Exeter, in 1851 got by *Lanercost*, her dam *Mecca* by *Sultan*, out of *Miss Catley* by *Stamford*. Was the property of Lord *Stamford* and ran several times.

**48.**—*Somersault* a brown Horse bred by Mr. Milne in 1858. Dam *Golconda*; Sire *Voltigeur*. General Stud Book, vol. x, page 136.

*Golconda* (the dam of *Somersault*) was bred by Lord *Zetland*, in 1849, got by *Irish Birdcatcher*, her dam *Co-heiress* by *Inheritor*, out of *Hygeia* by *Physician*.

**49.**—*Annfield*, a brown Horse bred by Mr. M. Hewetson, in 1860. Dam, *Eugenie*; Sire, *The Confessor*. General Stud Book, vol. x, page 407.

*Eugenie* (*Annfield*'s dam) was bred by Lord *Waterford*, in 1856, got by *Barbarian*, her dam *Allegretti*, by *St. Luke* out of *Alba*, by *Dandy*.

*Annfield* is described in *Tattersall's* list as "likely to make a good stallion."

*Annfield* ran at *Goodwood* Stakes two years ago, and was beat by *Blackdown*, a short head; he won at *Newmarket*, where he ran four or five times.

**50.**—*Lurline*, a brown Mare bred by Sir J. Newman, England, in 1860. Dam, *Repartee*, Sire, *Gemma di Vergy*. General Stud Book, vol. x, page 431.

*Repartee* (dam of *Lurline*) was foaled in 1842, got by *Pantaloon*, out of *Retort*.

**51.**—*Overcast*, a bay Mare, bred by Mr. Farrow, in 1861. Dam, *Falstaff*; Sire, *Tudmor*. General Stud Book, vol. x, page 112.

*Falstaff* mare (*Overcast*'s dam) is dam of *Merry Sunshine*, and was bred by Mr. *Thompson*, in 1849, her dam, sister to *Pompey*, (foaled in 1848) by *Emilius*, out of *Variation*.

*Overcast* has won at *Lewes*, twice at *Reiding*, *Berks*, and several times elsewhere.

**52.**—*Attraction*, a bay Mare bred by Mr. J. Johnstone in 1861. Dam, *Helen Faucit*; Sire, *Newminster*.