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THE

Canadian Agriculturist,

AND

JOURNAL OF THE BOARD OF AGRICULTURE

OF UPPER CANADA.

VOL. XII. TORONTO, MAY 1, 1860. No. 9.

HINTS FOR MAY.

This is a busy month to the Canadian farmer, as all the important spring operations on which mainly depends the future harvest, should now be completed. Peas, oats, and barley, if not sown before, should now be put in without delay. And the earlier spring wheat is committed to the ground the better, provided the soil is in a suitable condition. The *Fife* variety, however, admits of later sowing, and many farmers cultivate largely this sort, which they sow up to the middle, or even end of the month; chiefly with a view to escape the attacks of the midge. This variety is very hardy, and is seldom injured by rust. Those who have land not yet put in with a crop, if it be in a proper state for wheat, may yet sow it with this kind with a good prospect of success.

Root crops are yearly growing into importance in this country, and their value can scarcely be overrated. They should all be planted in rows, thereby allowing the use of the hand or horse-hoe. Cultivating the ground during the period of growth increases the weight of the crop and keeps the land porous and free of weeds. Carrots and parsnips, if not sown already, should be proceeded with immediately, as it is an advantage to get these crops fairly under weigh previous to the setting in of dry, hot weather. For a field crop the white or Belgian carrot affords much larger produce than any other variety, and it is now well known to be excellent food for horses, cows, sheep and swine. As there is too much reason to fear that the late severe frosts have materially injured young clover, as well as fall wheat, in many localities, and that hay will probably be scarce and dear this year, farmers should embrace the present opportunity of mitigating the contemplated evil by sowing a greater breadth of carrots, parsnips, turnips, mangels, &c. With a good supply of these productions and straw, stock may be carried through the winter and spring with a small amount of hay. The application of the roller to such fields of wheat and clover as have a moderate quantity of plant alive, will, in most cases, be found highly advantageous. It is surprising what wheat will sometimes do, although apparently dead, provided the soil is good and the growing season propitious.

Land intended for turnips should now be got into a finished state of preparation; thoroughly and deeply worked, with the

manure, where farm-yard dung is used broadcast, perfectly incorporated with the soil. Mangel-wurzel requires a similar preparation to turnips, and should be sown in drills not less than 30 inches apart as soon as possible. In good, deep soils the long red variety will yield the heaviest returns; but upon poorer and shallow lands the yellow globe is to be preferred. Mangels are far preferable for milch cows to turnips. They impart to the milk and butter no unpleasant taste, and by careful storing may be kept in a fresh condition till late in the spring. They are, too, a more certain crop than the turnip, easily cultivated if the land is well prepared, and but little affected by insects or disease. The principal thing is to get a healthy state of growth, before the hot, dry weather sets in. Ground for potatoes ought now to be got into a prepared state, and the earlier sorts planted. This crop must at the best be considered precarious; but by planting good sound seed, (especially if brought from different soils at a distance,) on dry, well cultivated land, containing a sensible amount of the carbonate and sulphate of lime, either naturally or artificially, a remunerative return may be reasonably anticipated.

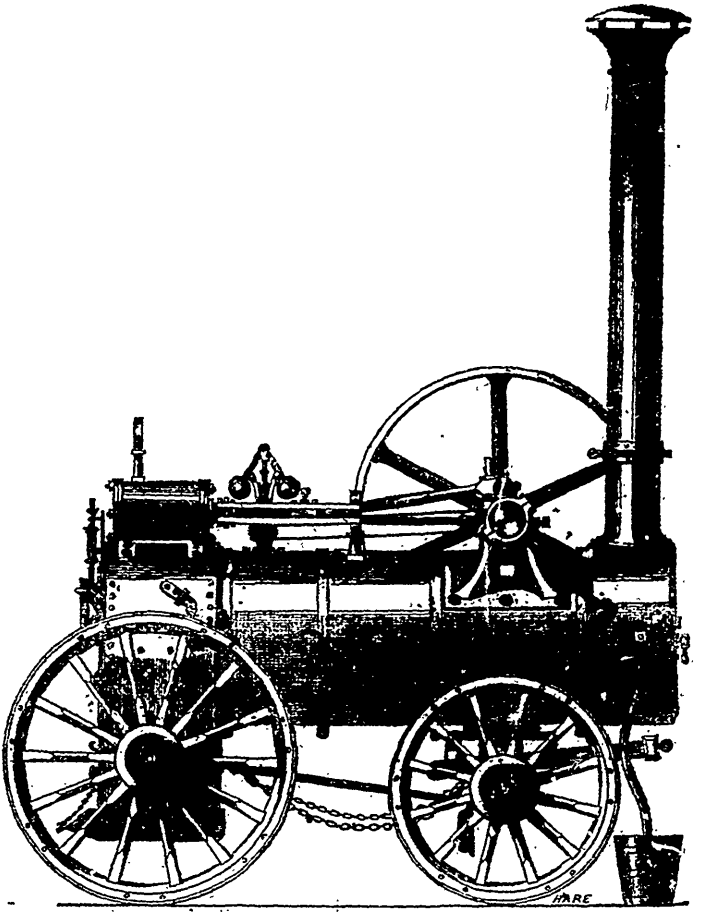
Ewes and lambs, and live stock generally, still require the closest attention of the farmer. The present cold weather keeps back vegetation, and it will yet be some time before the grass will afford a good bite. Hay in many places is used up, and sheep and cattle have to depend upon other sorts of food, and it is surprising how the pinching days of early spring may be got over, by cooked provisions, such as roots, linseed, bran, &c. Cattle, if possible, should be in a thriving state when turned out to grass, and newly lambed ewes, if not given extra care, will become weak and sickly; and peculiarly liable, with their progeny, to the attacks of fatal disease.

PORTABLE STEAM ENGINES.

The progress of agricultural mechanics of late years has been astonishingly great; producing changes and improvements in the art of tillage almost as great as those which were accomplished at the latter end of the last century and the beginning of the present, by the inventive genius of Watt and Arkwright, in British textile manufactures. Steam, as a motive force, is not now confined to the workshop and manufactory, but it may be seen ploughing and cultivating the fields, threshing the crops and preparing them for market, slicing and cooking roots, and cutting hay and straw, as food for cattle. It is evidently distined to do for the farm and homestead, what it has already so fully accomplished in other branches of industry, to abridge or displace animal power, to lighten and elevate manual labor, and to increase and cheapen the primary necessaries of human life. It must therefore be regarded as a general blessing to the race.

We present our readers in the accompanying engraving, a representation of one of CLAYTON, SHUTTLEWORTH & Co.'s outside cylinder Portable Steam Engines, as seen in its position when working. Portable Engines are those in which all the parts are self-contained, requiring no fixed or permanent location, but can be easily moved from one place to another. They are now extensively used in the British Islands, and it is now quite common for even small farmers to hire them for threshing grain, as was formerly the case with the ordinary threshing mills, moved by horse power.

In the engine, which the engraving illustrates, the cylinder and all the working parts are, as shewn, on the outside or top of the boiler, and can be seen and got at by the person in charge at a moment's notice. This is very important, as sometimes most serious accidents occur to Portable Steam Engines when the working parts are wholly or partially excluded from the eye of the driver. It will be seen by reference to the drawing, that these Engines are fitted with governor, glass water guage, guage cocks, blow off cocks, and all appen-



dages necessary to render them complete. It has a crank shaft which is much superior to the old over nick crank, and admits of the fly wheel being placed on either side of the boiler, or a pulley being placed on the opposite side to the fly-wheel of dimensions suitable for working any additional machinery.

The boilers of these Engines are made on the most approved construction, the result of long continued experiment, since fully confirmed by experience. The cylinder, as well as the boiler, is clothed with hair felt, then lagged with wood, which is again covered with sheet iron, giving to the whole a very neat appearance, and adding very materially to the economy of working as well as facility for cleaning.

In selecting and comparing the effectiveness and prices of portable steam engines, it is of the utmost importance to ascertain *the size of the cylinder*, in which lies the *real* power of the Engine. It is only by obtaining this information that one can accurately judge of its power and capability; for stating an engine to be so many horses' power is very indefinite, and has long since been abandoned by Locomotive and most Marine Engineers, and, if used at all, is only spoken of as nominal.

A waterpoof cover of ample dimensions for covering up and excluding the engine

from weather or dirt, and all the necessary tools and apparatus are provided without extra charge. When travelling the chimney is lowered into the crutch. The following are the prices in sterling money, subject however to slight variations, according to the market price of iron, &c.:

	Diameter of Cylinder.	Price.
4 horse power....	6¼ inches..	£165
5 "	7 "	180
6 "	7¾ "	200
7 "	8½ "	215
8 "	9 "	230
8 two cylinders...	6¼ in. each.	250
10 one cylinder....	10 inches..	270
10 two cylinders...	7 in. each.	290

Messrs. Clayton, Shuttleworth & Co. are distinguished for the superior quality and finish of their Engines, and have obtained the gold medals, and first class prizes, of the National British Societies, and those of several countries on the European continent. Up to 1858 they had manufactured nearly three thousand of these portable engines expressly for farm purposes. Their manufactory is at Lincoln; and a stock of all their various engines, machines, &c., may be seen at 78 Lombard Street, London; and also at the stand No. 8, of the Agricultural Department of the Crystal Palace, at Sydenham.

THE UPPER CANADA PROVINCIAL EXHIBITION.

We learn that permanent grounds have at length been secured within the city limits of Hamilton, and that a large and convenient Exhibition Building, that will have no inconsiderable amount of architectural and picturesque beauty, is about to be commenced forthwith. The site selected is the dry and elevated ground that was occupied by the Provincial Exhibition when last held in Hamilton; it is very conveniently situated, and commands extensive and beautiful views. The area will comprise, we understand, upwards of 15 acres. The City Corporation, aided, we presume, by grants from the County Council and Agricultural Societies, have undertaken the erection and preparations.

The precise time of holding the Exhibition is not yet determined. As there is a high degree of probability that His Royal Highness the Prince of Wales and suite will be in this section of the Province in September, the Board of Directors will endeavour to arrange the time, so as to meet that event, if practicable.

Hamilton is a most convenient locality for getting up a large exhibition, both of visitors and materials, and from the known enterprise and force of character of its citizens, we may safely conclude that nothing will be wanting on their part towards securing success. We trust that our farmers, mechanics, and all classes of contributors, will nobly exert themselves to shew the future Sovereign of our Empire, the results of their skill and industry, and the immense capabilities and resources, comparatively undeveloped though they be, of this extensive Province. A Grand Exhibition has been determined on at Montreal, which must mainly consist of manufacturing, mechanical, and artistic productions, and to which the Government have recommended a grant of $20,000. We hope that our Upper Canadian mechanics and manufacturers will do what they can to send contributions to Montreal. And let us in Upper Canada shew the Prince what we can do *in Agriculture and the Mechanical Arts*. The Government will no doubt render assistance worthy the occasion. We trust, therefore, that all Agricultural Societies, Mechanics' Institutes, manufacturers and in short every influential individual who has the honor and welfare of his country at heart, will at once set about putting means into active operation in their respective localities, with a view of making our next annual gathering in September far to surpass any thing that has gone before. *Not a day should be lost in preparing for this great national event, throughout the country.* Such another

opportunity cannot again occur for very many years, and we should do all we can, united as one man, to make the most of it.

It is satisfactory to know that the financial condition of the Province is so far improved that the Government has felt itself justified in recommending to Parliament the full amount of aid allowed by the law to Agricultural Societies for the present year, placing them upon the same footing as in 1858. This information will be received with unmingled satisfaction throughout the whole extent of the Province.

THE TURNIP ROT.

Complaints of the decay in Turnips, including Swedes, appear to have much increased of late in England, so as to cause serious apprehension in the agricultural mind, relative to the future destiny of this invaluable crop; which a high authority has pronounced to be "The British Farmer's Sheet Anchor." Turnips, both white and yellow, including the different kinds of hybrids and the hitherto hardy and invulnerable swede, have, of late, become extensively diseased, being effected in a manner somewhat similar to the potato, inducing decomposition either before they are taken from the ground, or after they have been pitted. The late winter has been unusually severe in the British Islands, and both turnips and mangels have suffered severely by exposure and the effects of decay. A large amount, we understand, of selected bulbs intended to bear seed, and which are planted out in the fall, has been destroyed, so that turnip seed is likely to be of a high price next year; we learn indeed that it is already advancing. Various theories are proposed to account for the failure in turnips, some ascribing it to the repeated application of artificial manures; but from careful examination of numerous instances, such would not appear to have been the case. We strongly suspect that the frequent bringing of turnips into a fourth or fifth year rotation, which has now been for half a century extensively practised in the old country, involves causes that may ultimately be found sufficient to account for the disastrous result. Twenty years ago, or more, serious complaints were made in Norfolk that their turnip crop was diminishing, and many were induced to extend their rotation from a four to a five years course. Even in Canada we know some old settlers, who say that they find it far more difficult to raise turnips now than formerly, when their land was in a fresher state. The following extract from a letter of a correspondent, published in a recent number of *Bell's Weekly Messenger*, will be read on this side the Atlantic with interest:—

"This question is destined at no very distant period to make a revolution in the present four-course system of growing turnips. I venture to predict that before the year 1870 arrives, white turnips will cease to be grown on three-fourths of the arable land in this district without being previously prepared, by either marling or liming. It is only a question of time; some fields will grow two or three more crops; other fields (and they are not a few) have grown their last healthy crop of white turnips. My experience goes to prove, that each year adds to the difficulty, not only of growing a large crop, but of growing a crop at all, such as will stand the winter, and are worth eating off with sheep at this time of the year. Ten or twelve years since my farm began to show symptoms of disease, and each year since has added to the number of acres, till at the present time I have not an acre of land on the farm that I consider safe for turnips, that has not been either marled or limed. I look upon the surface soil as about exhausted, and until such soil gets a sensible dressing of from 50 to 100 cubic yards per acre, of marl, clay, or chalk, or its equivalent, we shall make no permanent improvement in the soil, and such a "tender annual" as the turnip is at present will every year become more and more subject to premature decay. We must turn our attention to a hardier plant than the turnip if we begrudge the expense, or any other circumstance forbids us laying out so much money per acre as a dressing with marl requires. The cultivation of a substitute for the turnip is a subject well worth the careful attention of farmers, and landlords

would do well to come forward and assist tenants in this matter, instead of binding them down by agreements to the ruinous four-course system. Turnips showed very evident signs of disease during the latter part of last summer, previous to any injury being done to them by frosts, and I take to myself the credit of seeing, and saying at the time, that they would rot very seriously, if the winter were at all severe. They were predisposed to disease, hence the decay amongst them at present. I hold Liebeg's opinion, that we are exhausting the land of its most valuable constituents, by our system of farming; but I differ from him, in believing that sewage is the *only* source from whence to regain those valuable constituents, as I believe the bowels of the earth contain an unlimited supply, and think my experience with marl, clay, &c., has proved the soundness of this opinion.

S. ED GRAIN.

We find in a recent number of *Bell's Weekly Messenger*, a reference to a subject that was much discussed some years since on the tendency of seed grain of the highest quality to degenerate by cultivation. It was maintained that having formed a judgment on the average weight of grain which particular soils produced, grain intended for cultivating on such soils should be of lighter weight, as in that case it would naturally tend to improve. Whereas if the heaviest and most perfect seed was sown, it would not only not improve, but would in most instances actually deteriorate. This was asserted to be a natural law, applicable to the animal, as well as the vegetable kingdom. The question does not at all relate to the *purity* of the seed, but simply to its weight, or as it was termed, its perfected development. It must, we think, be evident that this is by no means so simple a question as this theory would seem to assume; for climate, soils, modes of culture, manuring, and differences of seasons, must be also regarded as important elements in the result.

We give below an extract from Mr. Cowan's paper, which originally appeared in the *British Farmers' Quarterly Magazine*, conducted by the late Rev. Henry Berry, the well known breeder of short-horn cattle, and who energetically opposed Mr. Cowan's theory in reference to the breeding of animals:

"There appears to be a limit set by climate, cultivation, situation, and local circumstances, to the quality of the produce of the soil. All cultivated vegetables have a tendency to degenerate, but this tendency is more than counteracted by the cultivation bestowed, until they arrive at a degree of perfection beyond which it does not appear possible by any cultivation to push them; and if this is attempted, a recoil is induced, and a degree of degeneracy and inferiority in the produce appears to be inevitable. This is perhaps particularly the case in annual and biennial plants. Suppose a very prime sample of wheat is presented to us, such as might induce a farmer or corn factor to pronounce it one of the best he had ever seen, the presumption is, that this fine grain grew on land of the best quality, which was prepared in the best possible manner for it; that the circumstances attending its growth, ripening, harvesting, &c., had been particularly favorable; and that it had, in fact, arrived at the utmost perfection which it was capable of attaining. Now, if this fine grain is used as seed what will be the result?—of what quality will be the produce? Will it not be found to have degenerated—to be much inferior to the seed used? Improve it cannot; that it will remain stationary is just possible, but that it will 'go back' is almost certain. When grain is used which has reached the maximum—wheat weighing, say 66 lb. per bush., barley weighing 58 lb. per bush, oats weighing 48 lb. per bush.—is the produce reaped equal in quality to the seed sown, or is it not always a few pounds, and often a considerable number of pounds, lighter? The plants appear to be constitutionally incapable of producing an equal to that grain from which they sprung, because it had attained that degree of perfection beyond which it could not possibly go, and, therefore, retrograde it must for a season; but having done so it will advance again the following season, if climate, soil, and circumstances, are favorable; should these be unfavorable, it will continue to retrograde. If this doctrine is correct, it follows, that to raise a first-rate article as produce, we must use an article of lower quality as seed. Agricultural societies offer premiums for the best sam-

ples of 'seed wheat.' Many competitors come forward with splendid samples; bright, heavy, plump, and beautiful. The superlative best—if I may so speak—are selected for the prizes. The superiority in point of quality being thus settled, it is resolved, before awarding the premiums, to test the productiveness of the selected sorts; and for this purpose several agriculturists receive a portion of the seed, to sow on their respective farms. It is sown, reaped, harvested, and thrashed; and by-and-bye, out comes the judges' report, in something like the terms following:—'We find the quantity and quality so inferior that we cannot recommend the wheats for the Society's premiums'—just what was to have been expected. Grain of the weights I have mentioned, or approaching them, is about the limit fixed by our climate for their attainment; and if we sow them with a view of raising a better, or even so good, we shall find to our mortification, that instead of going forward, we have been going backward. Change of soil and situation have no doubt an invigorating influence on plants subjected to them; but no change of soil or situation can add improvement to a production which has already attained perfection, and those who have been attentive observers will be led to conclude that when vegetables, animals, or even the mental powers of man, attain an extraordinary degree of perfection, degeneracy in those particulars in which they have been superior seems invariably to await their offspring."

DESTRUCTION OF SHEEP BY DOGS.

We learn from a correspondent of the *Wellington Mercury* that great havoc among sheep has of late been made by dogs in the neighborhood of Guelph. Among the sufferers are Mr. McCrea, who lost nearly a score of valuable animals. Mr. Pipe had a choice flock of pure Leicesters, the original importation cost him $800, and we regret to learn that only two animals have escaped. Mr. Chipchase's flock has also suffered, and Mr. Brown, the veterinary surgeon of Guelph, had four or five sheep worried to death about the same time. The neighborhood of Guelph seems to have to have been peculiarly unfortunate in this respect, but it is too common to hear of the destruction of sheep from the same cause from various points of the Province, and the United States. It is high time that some effectual check to this enormous evil were applied. To individuals it is sometimes all but ruinous, and the prospective loss to the country is almost beyond calculation. The *people* should take up this question as one of common interest, and call upon the legislature and public bodies to institute a remedy; taking care to assist in carrying out the object by prompt and hearty *individual influence.* We cordially agree with the subjoined remarks of the correspondent of the *Mercury*, and consider it to be a duty to give them, or rather the cause they advocate, the benefit of our circulation:

Now, Mr. Editor, I fancy you and others, will think with me, that it is high time something were done, if possible, to stay the nocturnal marauding propensities of these sheep-worrying dogs. Cannot the County Council pass a by-law, or suggest, at its next meeting, an expedient to meet, in some measure, so important a case as this, in which the whole community, directly or indirectly, is concerned?

Who, let me ask, be his enterprise what it may, will for the future, feel even the slightest inclination to throw away time and money, and suffer also the trouble, anxiety and risk, (known only to myself and other importers) in bringing to this country improved breeds of sheep to be worried by dogs when he gets them home?

How is Mr. Pipe, more especially, to be compensated for his severe loss? Had that gentleman been fortunate enough to have secured the female produce of those valuable ewes and their offspring for the space of eight or ten years, what a little fortune would it not have been for him!—But to the agricultural community the benefit would have been much greater.

There is no denying that a dog, under proper control and for useful purposes, is a very valuable animal, but this is no reason why innumerable worthless curs should be allowed to roam the country at large, night and day, to the manifest injury of those who have no concern in them, and who can claim no remuneration for damages sustained through such trespasses.

If a wolf gets into your fold, and you can secure his scalp, you have a claim upon the government. But even, were you lucky

enough to obtain a dog's scalp, which hardly ever is the case, unless you happen to know its owner, what get you for that? Nothing! The incongruity is somewhat displeasing; let us, however, solicit and hope for a remedy.

From what I hear, in two of the cases named, Mr. McCrea and Mr. Pipe, the dogs tried to burrow under the stone foundation of the building that contained the sheep, but being there thwarted of their prey, they gnawed their way through the boards, and that in *both cases* a small dog, accompanied by a large one, was the aggressor!

If I had the power, Mr. Editor, I would pass a law that a man, finding a dog upon his farm or premises by day or by night, *unless he could give a good and satisfactory account of his intentions*, should be at liberty to shoot the same, without the intervention of Judge or Jury! This, I fancy, would induce *owners of dogs* of any value to keep them in a secure place, and the sooner all others are shot the better for the community at large.

I trust our worthy and enterprising friend, Mr. Stone, will be lucky enough to steer clear of the grievances herein alluded to, with his valuable flock of Cotswolds! But such even may be his lot, since neither stone, masonry, nor boarded barns appear impervious to these merciless and blood thirsty dogs!

Agricultural Intelligence.

TURNIP CULTURE.

At a recent meeting of the York Township Agricultural Society, Mr. Philip Armstrong read the following paper upon turnip culture:

Mr. Chairman and Gentleman,—After several requests, as the successful competitor in the last turnip match, under the auspices of the Etobicoke Agricultural Society, I have prepared a paper on the culture of turnips, which I shall now read. The reproach which is every day made to the husbandman, of his indifference towards new modes of culture, appears to me not to be well founded. He wishes first to see and compare them with the methods to which he has been accustomed; he has neither the knowledge nor the means of forming beforehand a just estimate of the advantages which they offer him; he has no alternative but to persevere in his old course till some neighbour, richer and more enlightened than himself, is able to present to him, by the new mode, results more advantageous than he has obtained from his own. Example is the only lesson profitable to a husbandman, and when his eyes and his reason are convinced of its goodness, he is not slow to follow it, and by no other means can improved methods of agriculture be introduced and propagated. A good agriculturist will, in the first place, make himself acquainted with the nature of his soil, in order to know the kind of plants best adapted to it, and as in each locality the soil presents shades of difference, more or less marked, according to the exposure, composition, depth, &c., the proprietor ought so to vary his crops, as to give to each portion of the land the plants for which it is best adapted, and thus establish a particular rotation of crops upon the several divisions of his estate. And now we come to the point in question, namely —the Swede turnip—a most valuable root either for domestic or animal use.

It requires no argument to convince a man of the real value of a good root crop after so many disappointments, owing to the ravages of the fly and other causes, I have devoted much time and attention to the cultivation of roots, and especially that of turnips, and by the blessing of Providence, for the last sixteen years, without intermission, I have been successful. And now the question may be asked, what is a good crop, and the mode of your cultivation? A good crop will range from eight to thirteen hundred bushels per acre; and the mode of cultivation is as follows:—Commence your preparations in the fall of the year, by giving a good manuring, spread it well and plough it in, very shallow, and then in the spring cross plough it as deep as possible; then give a light harrowing; allow it to remain in this state until you have finished your spring cropping. Then turn to your turnip land and plough and harrow as often as time and circumstances will admit, as there is no danger of too high a state of cultivation for this crop. The seed should be sown on the same day your land is made ready, if possible, either in drills or broadcast; if in drills, twenty-four inches apart at least, and two pounds of seed per acre; drills decidedly preferable. The time for sowing, from the first to the twentieth of June, but, as a general rule, I prefer finishing on or about the tenth, weather permitting. The land best adapted for the Swede turnip is either a clayey loam, or a light loam with a clayey subsoil; the former will yield invariably a better crop. And now we come to the fly, which of all things is most dreaded, and

many of my neighbors have got it into their heads that I have a something they know not of, as a preventive, and that something every farmer in Canada may have if he adopts the principle laid down, that is to say: a thorough good tillage and due attention until the plant is matured. Apply your cultivator and hoe freely, and that in good time. I cannot pass, however, without adverting to the old system of turnip sowing. The land was prepared, and perhaps laid several days waiting for rain or a good season to sow, as they would term it; then, if in drills, a deep opening made on the top of the drills, and the seed scattered in such a depth that it would be several days before the seed could germinate and the plants appear, and that in such an irregular manner and weak state that the fly would consume them as fast as they appeared. Hence, in many instances, the conclusion would be, the seed was bad. But on a careful examination of the drills, there would have been found a puny white stem, with the seed leaf nipped off by the fly. But within the last year or two seed drills have been introduced, and our farmers have been more successful. There is another great 'efect which I shall now point out, and allow me to invite you to the field, in order that I may show why I have recommended such a process of culture; for be it remembered we are only speaking with regard to our own soil and climate. As we enter the field we see a piece of ground, well prepared to all appearance, and very systematic; plants abundant, healthy, and strong, and even long after the bulbs are formed. But all at once we discover a change; first, a flagging of the leaf, then the leaves begin to decay, turn yellow and fall off, the turnips a very bad shape, and instead of a top like that of a turnip, a thick coarse stem; and if you examine them you will find they are affected at the heart, and before the time of gathering there will only remain the outside shell, and that of hard woody fibre. And now let us enquire into the cause. As you pass through the turnip patch thus affected, you will find in all cases the highest and lowest parts of the fields the worst; hence we discover the cause at once, and attribute it to too shallow a tillage; the roots in search of food have entered upon a harsh, stern subsoil, and this is the effect always produced, not only among the tender but even among the more hardy plants. And even our fruit trees in many instances are suffering very materially from the careless and indifferent manner in which they have been planted. The cause here spoken of may be produced as follows:—either by too shallow a tillage, or large masses of dry manure put on in the spring, and the low places may be suffering partly from wet, either from surface or under water; hence in the latter case drainage is necessary. With regard to the cost (I speak here of my own) and the price of turnips, what are they worth on the ground. Allowing, then, for my team at the rate of twelve and sixpence per day, labouring men at three and ninepence, women or boys at one and tenpence-halfpenny per day, the whole of the expenses from the preparing of the land until the turnips are carefully put away, and made safe for the winter, amount to six pounds five shillings per acre; then take the lowest average I have mentioned, eight hundred bushels per acre, at the rate of tenpence per bushel, amounts to £33 6d. 8d., then deduct the expenses, £6 5s., leaves a balance of £27 1s. 8d. per acre. But if the distance be great from a market I should only rate them at six pence per bushel, but might take a larger average than eight hundred bushels. Some may say how many loads of manure do you put on for the acre, and what do you value it at? Such questions as these we leave with the farmer, but the inquiries may be answered in this manner; it depends entirely upon the state of the land, and kind of soil; while some land would be in such a state as to produce a crop without manure, others might require twenty or thirty waggon loads. But I do not see why the turnip crop should be taxed for manure, as the successive crops will receive equal benefit The turnip land is best adapted for barley or spring wheat, and may be seeded down, and thus you have at least four crops in succession. And now, gentlemen, let me say in conclusion, as this subject is intended for discussion, I have omitted much that might have been introduced, such as the nature of earths or soil, and their action upon vegetation, and also the nature and action of manures, and the influence and action of the atmosphere upon the plants.

BOARD OF AGRICULTURE OF NEW BRUNSWICK.

We have been favored by Professor Robb, the Secretary of the Board, with a copy of abstract of proceedings of the first annual session, held at Fredericton, in February last. A large amount of preliminary business was got through.

A great Provincial Exhibition was appointed to be held at Sussex Vale on the 2nd, 3rd and 4th October, 1861. It was agreed to memorialise the Legislature to allow a grant of £2,500, for the purpose of importing stock, consisting of Horses, Cattle, Sheep and Swine, with a view of improving the breeds of these animals in the Province. The Board offers three prizes of £15, £10 and £5 respectively for the 1st, 2nd and 3rd best Essays upon the Agricultural history and condition of any one or more of the counties of the Province. An extensive series of questions had been prepared and circulated among societies and influential individuals relating to the agricultural and industrial condition of the Province, with a view of obtaining useful and interesting matter for publication. Each member of the Board also agreed to prepare an essay or report upon some specific branch of agricultural practice, so that in due course we hope to see a useful and suggestive volume of Transactions. The Board is fortunate in securing the able services of Dr. Robb as their secretary, whose practical and scientific knowledge of agriculture, and the great zeal which he has for many years evinced in its improvement are well known and appreciated. His concluding remarks will not be uninteresting to our readers:—

"The task of tracing the gradual progress of each County from the state of hunting grounds to that of smiling fields and well tilled farms, is a most interesting one, and if the present generation pass away without engaging in it, the thread of the narrative may be broken, and the story pass into oblivion.

No battles are more full of interest than those of man with nature; no triumphs more noble than those which are won by civilization over barbarism; and no monuments seem more praiseworthy than those which are dedicated to the cause of Agriculture.

Each man may in his own sphere contribute something to the general result; and with a little effort and industry, the history of local progress among us may yet be recovered from oblivion. If the difficulties of the past have been overcome by the strong arms and patient endurance of the early settlers of this Province, there are surely no obstacles before *us* now which can be considered more serious than those which *they* encountered and subdued; let us therefore not prove degenerate, but by the example of their efforts, and by the aid of the foundations laid by them, press ever forward, until the products of our fields sustain and clothe the population of the country, and those of the forest and the mine, the factory, the sea, and the shipyard, become our proper sources of wealth rather than the means of mere subsistence.

We have attained to a high position already, and one which we conceive to be at least equal to that attained by any other people in the same time, acting under similar natural conditions. The Province is politically free, commercially progressive, and agriculturally prosperous. Let us hope that even these good things only indicate the dawn before the day."

Discorea Batatas in England.—A paper has recently been published in the *Irish Agricultural Review*, by Professor Buckman, of the Royal Agricultural College, Cirencester, England, giving his experience with this Chinese yam in England. As it formed a subject of considerable notoriety in our own country about three years ago, the information we are about to give respecting it (condensed from our cotemporary) will be of interest to our farmers.

This plant was introduced into England some years ago, with the avowed object of supplying the place of the potato, and at a time when the extinction of the latter appeared very probable. The *discorea batatas* belongs to an order of plants quite distinct from the potato. The method of cultivation adopted for it, at the garden of the Royal Agricultural College, was by deep digging first; then the ground was laid out in high ridges, and treated with the best barn-yard manure. From one cutting planted in the deeply-cultivated and highly-fertilized soil, one poor yam was grown, which was one foot eight inches long, four inches thick at the greatest girt, and it weighed only eight ounces; it was mostly all spindle. The following are the conclusions of Professor Buckman in regard to its cultivation:—"1st. The deep digging is necessitated for a plant which has a direct downward growth of from 18 inches to more than 2 feet; this, then, requires a deeper soil than is usually found to rest upon, at least, the calcareous rocks. The preparation for this crop, then, is more expensive than for any other, and as labo

of this kind cannot be done with the plow, this fact alone would militate against its taking the place of the potato in field cultivation. 2nd. This curiously deep growth involves immense labor in getting-up the crop, in our own experiments, certainly more than the result is worth. 3rd. The shortness of our summer for root heat—without which this plant makes but very slow progress—will ever prevent the potato yam from being successfully grown in this country, unless in a few favored spots. 4th. The peculiar growth of the bine or flexible stems, like its cognomen, the black briory, points to the necessity of some support, in order that the leaves or plant lung may be fully developed, without which little root can be expected. 5th. Under the ordinary circumstances of soil and climate of the British Isles, I cannot imagine that its yield will be sufficient, or its flavor so surpassing, as to entitle it to a much higher place than such old garden esculents as *schorzonera*, salsify; or especially the common artichoke, which, indeed, is not unlike the potato yam in this particular, but with a far greater power of fecundity, and much more easy of cultivation."

These remarks, then, point to the general conclusion that the potato yam can never be relied on, to greatly aid the common potato in supplying a vegetable food for the mass of the people; still less can it ever supply the place of, or supersede the widely-spread, easily-cultivated potato. —*Scientific American.*

AGRICULTURE AT YALE COLLEGE.—To see Yale College stepping out from among the mists of antiquity and the graves of dead languages, and "taking up the shovel and the hoe," is certainly one of the signs of the times. She made her *debut* on this new stage on the 1st day of February, having secured the services of 25 leading agriculturists to sustain her in this first effort. These gentlemen are to take up all possible subjects connected with agriculture for the benefit of farmers and gardeners, young and old, and for their own material enlightenment. There are to be three lectures a day for the space of a month, each lecture to be followed by questions and a discussion. The list of names, in which we find Marshall P. Wilder, late president of the National Agricultural Society, Cassius M. Clay, of Kentucky, Lewis F. Allen, Esq., of New York, and other eminent men, beside Professors Silliman, Porter and Johnson, of Yale College, give the highest character to the undertaking. The advantages of this course are offered so cheaply ($10 for a course ticket) that it will draw together large numbers. The idea involved in this enterprise, namely, getting together educational capital by small contributions of knowledge from large numbers, is an important discovery. We do not see why it is not susceptible of very extensive and varied application.—*Scientific American.*

WHAT GOOD FARMING WILL YIELD.

To the Editor of the Thorold Gazette.

FONTHILL, March 27, 1860.

SIR,—In order to fulfil the promise I made some time since to furnish you with a statement of the products of my small farm (25 acres,) for the year 1859, I now beg to forward you the following statement for publication in the columns of your valuable paper:—

24 tons of Hay at $8 per ton....	$192 00
158 bushels of Barley at 60c per bus	95 00
194 do Corn in the ear at 30c.	49 20
3 tons of well-cured Corn stalks.	15 00
150 bushels Carrots at 25c per bus	37 00
140 do Potatoes at 25c per bus	35 00
1 Beef Cow sold off the farm..	29 00
400 lbs of Butter from 3 cows at 12½ cents per lb.....	50 00
450 lbs Pork fattened at $5 per cwt.	22 50
100 Poultry, the produce of.....	25 00
Fruit from garden.....	22 00
	$575 20
Product of garden not included above.	
The expense attending the working of my farm were.....	200 00
Leaving a nett profit of	$375 20

My object in furnishing the above statement for publication is—at the request of many of my most valued friends engaged in agricultural pursuits,—to show the amount of produce that can, by proper tillage, be grown on a small piece of land. Farmers, as a general thing, are complaining that owing to the failure of the wheat crop, caused by the ravages of the midge, their occupation, in the estimation of many of them, is nearly gone. In this I beg to differ with them, though I admit the wheat crop has been considered the staple product of this country, and for the past two or three years has failed to a certain extent. Yet I am not willing, from my own experience in farming, to attribute the failure, as many do, solely to the ravages of the

midge. There are other causes to which may be attributed the failure of wheat culture, which causes I have frequently observed in travelling through our own country. For instance, improper tillage of the land, and a neglect in the opening of proper ditches and drains in order to take away the surface water, which, by being allowed to remain until it dries up by the heat of the sun or is absorbed by the soil, in either case materially injures the land and renders it unproductive. I really hope that all our farmers (for they are the bone and sinew of our country) will shake off that lethargy under which they seem to be laboring, and try such experiments as are recommended through the various agricultural periodical of the day, and my word for it, from my own experience, many of them who now appear to be in a state of despondency, will in a short time find out the advantages arising fromthe suggestions made from time to time through these papers, and that farming will soon assume a much more healthy aspect, and the apathy which at present prevails will disappear as the mists before the morning sun.

Mr. Editor, although only engaged in a very limited way in farming, I shall be most happy at all times to communicate my experience through the columns of a newspaper, o· in any other way that will prove most advantageous to all concerned in these laudable pursuits.

I am sir, your ob't servant,

ROBERT HOBSON.

APPLYING MANURE TO CORN.—A correspondent of the *New England Farmer*, who uses manure from a barn cellar, without any admixture of straw, thus gives his method of applying it to sward land for corn. He spreads it in spring upon the ground plowed the previous fall, at the rate of fifteen to eighteen cords per acre, and then gives it a thorough harrowing, so as to mix it with the surface soil. Then, just before planting, he plows the ground to a depth of from three to five inches, harrows it and plants the corn. In this way he has raised on an average from sixty to seventy bushels of corn per acre.

HEN MANURE.—In answer to an inquiry, it may be said that a good use of hen manure is to compost it with muck two or three weeks before it is wanted. In the proportions of three parts of muck to one of manure it is excellent to give Indian cord a start by putting it in the hill at planting time. Do not put ashes or lime with it, as they tend to liberate the ammonia. Plaster will not fix the ammonia unless it is in solution, and it requires about seven hundred times its weight in water to dissolve it. In a dry state, plaster will liberate ammonia, according to experiments of Mr. Pusey and others, which have been published.—*Boston Cultivator.*

WOOD ASHES FROM AIR-TIGHT STOVES.—From the peculiar construction of these stoves, the ashes are continually being reduced in bulk, the lighter portion being carried by the draft into the chimney, together with all the volatile matter, and thus the less volatile portions, composed chiefly of potash, are aggregated in the ashes left in the stove. Indeed, most of the air-tight stoves do not necessarily call for the removal of any ashes during the whole season, at the end of which, the ashes is nearly pure potash. We believe that ashes from such stoves are frequently worth a dollar a bushel for agricultural purposes. It should not be carried directly to the land, however, but should find its way there through the compost heap, and if this mass of manure is supplied with a drainage cistern, the lye continually being formed is so fully charged with potash, that when pumped back on the heap it has the power of decomposing the woody fibre, and developing most perfectly all the inorganic materials of value it contains; even the silex is rendered soluble by the presence of potash. Such ashes should never be sold, but should always be used by the farmer.

The amount of phosphates found in many ashes is very great. Thus hemlock spruce contains nearly 17 per cent. of phosphate of lime, and nearly 10 per cent. of phosphate of magnesia. American chestnut 17 per cent. of phosphate of lime, and white elm 14½ per cent. of phosphate of lime and magnesia; white hickory 11½. Black birch contains 16½ per cent. of phosphate of lime. Black cherry 13 per cent., and red beech over 17 per cent. Thus it will readily be perceived, that these ashes have a high value. Prof. Emmons claims, that of the phosphates, of per oxyd of iron, of lime, and of magnesia, the American white oak, in its ash, yields as follows: the sap-wood, 32½ per cent., the heart-wood 13⅓, the twigs 23 6-10, the bark 10 per cent., and the bark of the twigs 23 per cent.—*Working Farmer.*

ASHES OF ANTHRACITE COAL.—We are often asked if the ashes of Anthracite coal have any value as manure, and have as frequently answered that their greatest

value consisted in their ability to prevent the adhesiveness of clay soils, for eighty-eight per cent. of these ashes is entirely insoluble in the strongest acids, and consequently not capable of furnishing food even to the lowest class of plants; the soluble silica is immaterial in amount, the alumina, which varies from three to four per cent., cannot be of any value; the iron which varies from four to six per cent. is of no value, as most soils contain all that is required. The lime in the ashes of the white ash coal, is about two per cent.; in that of the red ash, but sixteen-hundredths of one per cent.; the magnesia is not called for, while the soda is but one-fifth of one per cent., and the potash even of less quantity; indeed, we believe this to arise from the wood used in kindling the fires, rather than from the coal itself. The greatest value of coal ashes is in the phosphoric acid, being the fifth of one per cent., and of the sulphuric acid, which varies from a half to to three-fourths of one per cent.; beyond these the ashes have no value, and the phosphoric and sulphuric acids contained in a ton is not worth ten cents. Therefore, coal ashes, except when required as a divisor for very tight clay soils, cannot be worth the cartage. In addition to the small quantity of inorganic matter capable of being used by plants, it is proper to state that it is not in a very progressed form, and, therefore, still smaller proportions than those noted can be appropriated by the higher class of plants.—*Working Farmer.*

AYRSHIRES AS MILKERS.—The *Springfield Republican* says Mr. Birnie, of Hampden, Mass., keeps a large herd of Shorthorn and Ayrshire cows, and gives a decided preference to the latter as milkers. In proportion to the food they eat, he says no breed can surpass them in yield of milk. He has one Ayrshire cow weighing about 800 lbs., that has averaged more than her weight per month in milk since April last, and a two-year-old heifer, the daughter of the above cow, that is now in milk, and gives 20 lbs. per day,—*Genessee Farmer.*

ORIGIN OF PLANTS.—Should the following record interest our readers as it has us, it will fully repay the space it occupies in our columns.—*Porter's Spirit.*

Madder came from the East.
Celery originated in Germany.
The chestnut came from Italy.
The onion originated in Egypt.
Tobacco is a native of Virginia.
The nettle is a native of Europe.
The citron is a native of Greece.
The pine is a native of America.
The poppy originated in the East.
Oats originated in North Africa.
Rye came originally from Siberia.
Parsley was first known in Sardinia.
The pear and apple are from Europe.
Spinach was first cultivated in Arabia.
The Sunflower was brought from Peru.
The mulberry tree originated in Persia.
The gourd is probably an eastern plant.
The walnut and peach came from Persia.
The horse-chestnut is a native of Thibet.
The cucumber came from the East Indies.
The quince came from the Island of Crete.
The radish is a native of China and Japan.
Peas are supposed to be of Egyptian origin.
The garden beans came from the East Indies.
The garden cress is from Egypt and the East.
Horseradish came from the South of Europe.
The Zealand flax shows its origin by its name.
The coriander grows wild near the Mediterranean.
The dyer's weed is peculiar to Southern Germany.
The Jerusalem artichoke is a Brazilian product.
Hemp is a native of Persia and the East Indies.
The cranberry is a native of Europe and America.
The parsnip is supposed to be a native of Arabia.
The potato is a well-known native of Peru and Mexico.
The currant and gooseberry came from Southern Europe.
Rape seed and cabbage grow wild in Sicily and Naples.
Buchwheat came originally from Siberia and Tartary.
Barley was found in the mountains of Himalaya.
Millet was first known in India and Abyssinia.

ORIGIN OF THE BERKSHIRE HOG.—Benjamin F. Johnson of West Urbana, Illinois, in the Illinois *Farmer* gives the following sketch of the origin of the Berkshire swine:

"The Berkshire is a native of the South Sea Islands, where the population instead of pressing on the means of subsistence, the means of subsistence presses on the population. Vegetation is so luxuriantly vigorous and fruits and vegetables so extraordinarily abundant, says an authority: 'The South Sea Islands on their discovery, by Europeans, were found to be well stocked

with a small, short legged, black hog, and the traditionary belief of the human natives bore, that they were as anciently descended as themselves. The hog in fact, in these Islands, is the principal quadruped, and is, of all others the most carefully cultivated. The fruit of the bread fruit tree, either in the form of a sour paste or in its natural condition constitutes its favorite food, and its additional choice of yams, eddoes, and other nutritive vegetables, renders its flesh most juicy and delicious; its fat though rich, being at the same time, not less delicate and agreeable than the finest butter." In these Islands, besides the hog, the only indigenous quadrupeds were the rat and a small dog. Therefore being the largest and strongest animal, and having no occasion for defensive operation, the hog of the Islands of the South Seas, has lost his tusks to a great extent, and under the most favorable circumstances for the development of his nature, he has become the small-boned, short-legged, round bodied, thrifty, hardy, prolific creature we find him. No other breed seems to have the vital force of this, and no animal more uniformly, certainly, and distinctly, marks his offspring than the Berkshire. He is among hogs, what the Devon is among breeds of cattle. He has the strongest originai constitution.

EUROPEAN AGRICULTURAL EXHIBITIONS.

The great French National Agricultural Exhibition will be held this year in Paris, June 17th to 23rd.

The Royal Agricultural Society of England, at Canterbury, July 9th to 12th.

The Royal Agricultural Improvement Society of Ireland, at Cork, July 25th to 27th.

The Highland and Agricultural Society of Scotland, at Dumfries, August 1st to 3rd.

Our excellent cotemporary, the *Farmer's Gazette*, remarks in reference to the Irish Show, that to such of our American friends as may be desirous of procuring stock, Cork is very conveniently situated, Queenstown being now the point of departure and arrival of a weekly line of steamers to and from America." The Irish Exhibition is expected to be very large, and will well repay a visit. Canadians can now leave Quebec in their own line of steamers, and be landed at Queenston, close to Cork, in ten or twelve days.

JERUSALEM ARTICHOKES.—What are Jerusalem Artichokes good for? is a question which I hear asked very often; and I propose to tell the Ohio *Cultivator* folks why I raise them, and what I think they are good for. They are most excellent winter food for all kinds of stock, being worth nearly as much as potatoes, while they can be kept with little or no trouble, as freezing does not injure them, and they are not apt to rot. They are very productive, mine yielding from 800 to 1100 bushels per acre, while the cost of cultivating an acre is not more than the cost of raising half an acre of corn. They are good to plant in an orchard where the ground needs stirring deeper than it would be well to plow; as hogs will thoroughly stir up the ground without injury to the roots of the trees, and at the same time fatten on the artichokes. They do not exhaust the soil much, as their nourishment is mostly obtained from the air.—*E. E. Smith in Ohio Cultivator.*

Horticultural.

GARDEN MEMORANDA FOR MAY.

"'Tis sweet to throw yourself at noon
Loose on MAY flow'rs, and placidly repose,
Whilst twine o'erhead in many a fair festoon
The gadding woodbine and the sweet briar rose:
But sweeter far, as airy music flows
From Grove's orchestra above, around,
In the open sky to wake. He only knows
How laughs the sun, and on the grassy ground
What chequ'ring shadows lie, and what bright tints abound."

This is a busy month with the gardener, in which the principal crops of the year are sown. If the season be warm and the ground dry, several crops, such as early peas, parsnips, carrots, &c., may be sown in April; but it often happens in our climate that the soil is not sufficiently warm and dry for the reception of the seed of the staple crops of the kitchen garden till the beginning of May. And till the air and soil get into a suitable state to support vegetation, but little is practically gained by sowing earlier. The prudent gardener, however, will always endeavor to keep ahead of his work, in the way of preparation, &c., and seize every favorable opportunity for facilitating his operations. Cucumbers, squashes, tomatoes, egg plants, &c., do best and come earlier by being sown in a frame, with a moderate amount of heat, and when of sufficient size transferred to the open air. Plants of this kind in a hot bed should gradually be exposed to the air; for if suddenly taken from a state of artificial heat and protec-

tion, and exposed to the sudden chills and changes which often characterise this month, they will be apt to perish, or at least receive such a severe check, as to permanently injure them. This remark applies to flowers and all kinds of plants raised under glass. Cabbages, cauliflowers, &c., will make much better and hardier plants if transplanted thickly into beds after they are taken from the frames, previous to their being finally put out. This, however, involves an amount of trouble and expense which people generally are not willing to incur on a large scale; but in private gardens it is quite practicable, and would be found highly advantageous. Early potatoes, such as the ash leaf kidney, Junes, &c., should be planted the beginning of the month, if not done earlier, allowing sufficient room between the rows for hoeing up weeds and the free circulation of air. The healthy and early ripening of potatoes, will very much depend upon the mechanical condition of the soil, and their subsequent treatment.

Dwarf beans may be planted as soon as night frosts are not likely to recur; they should not be closer than two inches, and must not be buried too deep. In order to have peas ready for table throughout the season, they should be sown at regular intervals, say two weeks, in succession, commencing with the earlier varieties. There are several excellent kinds in common use, and others of an improved later description may be obtained of seedsmen. Harrison's Glory, Flack's Victory, and the Champion of England are among well established sorts. As a general thing those that require short sticks are most approved; but where sticks of six or seven feet can be readily obtained, the General Wyndham and Leviathan and some others will be found to answer.

Early cabbage may be set out this month, as soon as the conditions of soil and air are suitable. The raising of Summer Cabbage in this climate is not unfrequently difficult and vexatious, arising from sudden changes of temperature, want of moisture, attacks of insects, &c. It is a good plan to fill up the hole made by the dibble with water, or diluted liquid manure, before putting in the plant, and to solicit a moist, cloudy day for the operation; otherwise the young, tender plants will require artificial shading, till they strike root. A little extra attention to such matters will often save the crop from being destroyed. Lettuce, Cape Brocoli, and autumn Cauliflower should now be sown; and every effort made as quickly as possible to get the principal crops into the ground, under the most favorable circumstances. Asparagus that has been manured and forked will soon be ready for use; care should be taken not to cut too close, especially young beds, but allow a few heads from the first to grow up, which will strengthen the plants for next year. In Canada, where early vegetables are in the ordinary way almost unattainable, Asparagus comes most opportunely, and is highly nutritious, and generally relished.

The flower garden will now require great attention, as much of its future beauty will depend upon the manner and time of doing the different kinds of work. In gardening it is an essential rule that the soil should not be meddled with till dry: and an occasional intermixture of *fresh soil* is highly beneficial, especially for flowers. Bedding plants may now be set out, taking care to water and press the earth against the roots, when they will be almost certain to strike. Avoid, however, sudden transition and exposure, and let the plants have plenty of air before they are removed into the open ground. Annuals form most indispensible materials for decorating a garden, and by exercising care in selecting and disposing of new varieties, in accordance with taste and convenience, a flower garden may assume to a certain extent, new and graceful features every year. In this respect, ladies can excercise their taste to great advantage. In sowing small seeds, take great care not to cover them too deep, which is a principal cause why so many perish. A light fine surface, with the seed just covered, are all that is required. In dry weather, give each other day a slight watering through a fine rose water pot; taking care not to apply cold well water to any kinds of plants.

Deciduous trees should have been mostly planted last month; but with extra care they may succeed now. If the weather be dry, water and mulch the roots. In this latitude, from the end of April to near the middle of May, is upon the whole the best time for planting Evergreens, when they are beginning to push their buds. The operation should be performed during a calm, cloudy day, and the warmer and moister the better. The chief cause of failure in planting Evergreens arises from the mutilation of their roots in taking them up and exposing them to a cold, dry atmosphere; an hour of such expesure will sometimes prevent their growing at all. Evergreens cannot be safely transplanted a distance without having their roots well secured and moistened; conditions indeed

indispensible with the generality of fruit and deciduous trees. People are too apt to attribute their want of success in raising flowers and garden crops and planting trees to badness of seed or unhealthy plants, rather than to their own want of skill and attention to the essential conditions imposed by Nature. J. F.

STRAWBERRY CULTURE.

From the Port Hope Guide.

There is no reason, why any person who owns a garden or even a door yard, should not be abundantly supplied with this fruit every year. From a plot of ground seventeen feet square, it is said that more than two bushels have been gathered in a single season, which is a great deal more than most families require for their own consumption. But this can only be accomplished, by selecting the very best varieties, and adopting the most thorough system of cultivation. They will grow upon almost any soil, although a moderately rich gravelly loam is considered the most favorable. The ground should be dug or trenched, to the depth of two or three feet,—the deeper the better,—and the subsoil should be enriched, by a liberal application of black earth, or *swamp muck*, with a moderate dressing of leached ashes, slacked lime and old tan bark. The best mode of preparing a plot of ground for the purpose, is to commence by digging up the surface soil, to the depth of a foot or more, across one side of the intended bed, and carrying it by wheelbarrow to the opposite side of the plot, thus leaving or forming a trench four feet wide and exposing the subsoil. Then apply the muck, ashes, &c., to the trench, digging as deep as possible and mixing it thoroughly with a fork. Then take the surface soil from the adjoining four feet of the bed, and throw it back upon, and cover the trench. This will form a second trench which is to be treated as before, repeating the operation until the opposite side of the plot is reached, when the surface soil, removed from the first trench, will fill up the last. Then apply a dressing of lime, ashes, and muck, to the whole surface, working it well in with a fork, and pulverising the soil as thoroughly as possible. The bed is now ready to receive the plants. For early fruit, the land should face or slope towards the East or South; for late fruit, towards the West or North, although this will to some extent be influenced by the varieties selected.

The best season for transplanting is either in the Spring or the Fall,—from the middle of April to the middle of May, and from the 20th of August to the 20th of September. It is not prudent in this climate to plant them any later than the latter date. The beds should be kept clean and free from weeds of every description. Nothing but strawberries should be allowed to grow in strawberry beds. If the season should be dry they should be frequently and liberally watered. In fruiting season, the whole surface of the beds should be covered with cut straw, or newly mown grass, to keep the fruit clean and the ground moist; and in the Fall they should be covered with a mulching of straw, dead leaves, or light barn yard litter, to protect them from the severity of the frost, and from sudden changes in the weather, by which the vigor and fruitfulness of the plants would otherwise be injured.

The varieties that appear to be most in favor at present *for our climate*, and promise to succeed best with us, are *Hovey's Seedling*, *Hooker's New Seedling*, *Wilson's Albany*, and *Triomphe de Gand*. They all produce exceedingly large and beautiful fruit. The Hooker, Wilson, and Triomphe are hermaphrodites, producing blossoms, perfect in themselves, and requiring no other fertilizer. The Hovey's seedling, which is of the pistillate variety, producing only female blossoms, requires the presence of a staminate or male variety, and for this purpose, that old standard fruit the *Early Scarlet* is generally preferred. There are at present, some hundreds of different varieties offered for sale, by the fruit-growers and gardeners in the States. Any person desirous of growing the fruit on an extensive scale, would of course select for experiment, a great many more than those I have enumerated. In fact it is advisable for every person who intends to cultivate them, to try several different kinds, and when he has discovered the variety best suited to his soil and location, to reject all others. It is constantly found that a variety that succeeds admirably in one soil or situation, fails entirely in another: The Wilson's Albany, which is now admitted to be generally the most productive, has been known to fail entirely in some situations, although every care and attention has been bestowed upon it.

In setting out the plants, they should be placed in rows two feet apart, and from one foot to eighteen inches apart in the rows. The roots should be allowed to take their original direction and position as nearly as possible, and not thrust to-

gether into a small hole, as is too often the case. The soil in which they are planted, should be pulverized as finely as possible. Until after fruiting is over; the runners should be kept back, which is best effected by pincing them off, and afterwards unless plants are required for forming new beds, the runners should be cut off frequently and not allowed to cover the ground. This promotes the growth of the plant, preserves its vigor, and improves its power of fruitfulness in the succeeding year. They will yield a sparse crop only, the first season after transplanting, but they will be in full bearing and productiveness the second year.

The most experienced and most extensive cultivators are agreed in the opinion, that the use of stable manure, as a fertilizer of the soil, is more injurious than beneficial in the culture of the strawberry. It tends to produce too great luxuriance of growth in the *plant*, causing it to throw out numerous runners, and thereby diminishing its fruitfulness. The object of deep cultivation is to enable the roots to penetrate the earth in quest of moisture without which the plant cannot thrive. Instances are given where the roots have been traced to a depth of four feet. It is also found that by deep cultivation the size of the fruit is greatly improved—in fact large fruit cannot be obtained without it, but of course when the soil is naturally of a great depth and of sufficient fertility the labour of trenching will be unnecessary. A chemical analysis of the berry has shown that it is composed principally of potash, lime and carbonic acid, these three elements furnishing about 70 per cent of the substance of the fruit. It is with the view of producing a supply of those essential elements, where they do not already exist in sufficient quantity in the soil, that the dressing of ashes, lime, &c., is recommended. If the surface soil is not considered rich enough in itself, its condition may be best improved by a compost of swamp muck, decayed leaves, saw dust and sods, *but no animal manure should be used.* In summing up his advice for the treatment of the plant, Mr. Peabody, an eminent horticulturist of Georgia, and the originator of the variety which bears his name, says: "Let the cultivators remember the four grand requisites for a profitable strawberry bed, viz: deep cultivation, vegetable manures, shade to the ground (the covering of straw or newly mown grass), and water, water, water."

AMATEUR.

Port Hope, 16th April, 1860.

Scientific.

"HORSE-POWER" AS A MEASURE OF FORCE—The phrase or term "horse-power" is continually occurring whenever there is occasion to speak or write of the force of steam-engines. It is met with almost daily in the reading of newspapers, and of books or periodicals relating to science and art. Is there one reader in ten who understands what is meant by this term, or who attaches any accurate idea of the amount of power intended to this oft-recurring phraseology? We very much doubt it, and think, therefore, that a brief explanation of this term, gleaned from Encyclopedias and scientific works, may be both interesting and useful to the generality of ordinary readers. The term "horse-power," then, is used as the unit of force in the description of steam-engines. Instead of saying that an engine has a power of lifting or propelling so many pounds, it is said to be of so much "horse-power." The power exerted by a horse is taken to be equal to the pr or lift of 33,000 lbs., at the rate of one foot per minute, as this has been found to be about the mean of a good many observations and experiments. It has been found, for example, that a pair of horses will draw a plow along with an average pull of 300 lbs., as shown by a dynamometer like common spring steelyards, at an average rate of $2\frac{1}{2}$ miles per hour, or 220 ft. per minute. Now this is the same as if those 300 lbs. were pulled over a pulley, or lifted that height in that time; and 300 lbs. lifted 220 feet per minute, is just the same as 66,000 lbs. lifted one foot high per minute. The half of this performance of a pair of horses gives us 33,000 lbs. as the force of a single horse, and with this meaning it is used by engineers.—*Country Gentleman.*

Veterinary.

TREATMENT OF SPAVIN.—I have a horse that has a bone spavin. Is there any cure for it that you are aware of? I am advised by some to let it alone—by others to fire it, and do not know what course I better take. L.

Confirmed spavin is probably never radically cured. Firing and blistering are the old remedies, and sometimes produce apparent relief, but they are now discarded by careful practitioners. Dr. Dadd recommends rest during the inflammatory stage, and the application of cooling lotions to the parts. He uses a mixture of 4 ounces of muriatic acid, and six ounces of tincture

of bloodroot, in two quarts of water, and apply this daily by means of a sponge. Or, another remedy, equally good, is a mixture of 4 ounces of very strong vinegar, 2 ounces of proof spirit, and 3 ounces of common salt, dissolved in a quart of water. The following is his mode of application:

Take a piece of sponge, slightly concave, corresponding as near as possible to the form and size of the hock; by means of a few stitches, affix two pieces of tape or linen, so as to form an X; each piece must be long enough to encircle the joint two or three times; after dipping the sponge in the mixture, it must be applied to the inside of the hock, and there secured, and afterwards kept constantly moist. By a faithful application of the above the inflammatory symptoms (which are not confined to the joints alone, but prevail in the surrounding tissues) will soon subside, and anchylosis progresses in a slow, yet favorable manner, without the usual pain and irritation.—*Country Gentleman.*

Walking Horses.—A correspondent of the *Country Gentleman* suggests the offering of premiums at annual county fairs for fast walking as well as fast trotting horses. He says he knew a man who kept from two to four teams at work on the road, and never allowed them to trot at all; yet he made the distance in quicker time than his neighbors who made their horses trot at every convenient place. He said that when a horse walked after trotting, he walked much slower than his common gait, if kept continually on the walk, and thus lost more than he gained by the trotting.

Arts and Manufactures.

Home Manufactures.—We are glad to hear that a branch of manufacturing not before introduced into Canada, has been commenced in Niagara by our enterprising fellow-townsman, Charles Pierson, Esq., viz:—The construction of Ericsson's Caloric Engines. Wishing to see the working of this new motor (heated air instead of steam), we visited, a few day's since, the Niagara Foundry, where they are being manufactured, and witnessed one of these engines in operation. It is truly wonderful—here was an engine having a furnace about as large as an ordinary cooking stove, consuming scarcely a perceptible amount of fuel, working away with regularity and power, and even after the fuel was entirely consumed continuing to do its work for hours, or so long as the brick or iron composing the furnace, held in any degree the heat. The engine that we saw in operation is said to be about a four horse power.—*Niagara Mail.*

New Gun.—Colonel Colt has invented a revolving shot gun. It is said that upon a late trial of this valuable gun, at a distance of 30 yards, it put 175 pellets in a circle of 12 inches diameter, penetrating 75 sheets of ordinary brown paper, the shot used being No. 6 shot, 1¼ ounces and 2 drachms of powder to each charge. The gun is a five-shooter.—*New York Tribune.*

American Files cut by machinery at Ballard Vale, Mass., are coming into use among machinists, and are reported to be equal in quality to those made by hand.

Large Stick.—The Victoria County Agricultural Society, in their annual report, state that the largest stick of timber ever manufactured in the province has this winter been cut in Fenelon. It measured (Calper measurement) 815 square feet, and was manufactured by Geo. Kempt, Esq., of Lindsay, whose lumber last year commanded the highest price in the Quebec market.

Miscellaneous.

The Australian Shepherd's Life.—The demand for shepherds is necessarily continually on the increase, and as it is employment which commands a fair remuneration, it is rather eagerly sought. It has one peculiar advantage—that of being suited to almost any man of respectable character. The wages of this class of persons have risen considerably since the gold discoveries. There have been emigrants who aspired to be at once flockmasters instead of shepherds, with very little knowledge of what they were about to undertake. A "spirited" young gentleman a short time ago arrived at Sydney, with a large capital, and a desk full of introductions. At the end of a month of *fetes* and dissipation he bought 10,000 sheep, but when he had paid for them he found that he had forgotten to secure a run, and was obliged to re-sell them immediately, at an enormous sacrifice, to escape being utterly ruined. Many men of good education and refined tastes, who have no capital to lose, fascinated at first by the attractions of the gold fields, but disappointed in their hopes, or unable to bear up against the exhausting toil, have taken to "the bush," and found competence and peace of mind as

veritable shepherds—the fevered life of a gold-digger being succeeded by the repose of the silent plains. Life in these vast solitudes has in it, for many, an inexpressible charm. The shepherd rises just before the sun, and after making a breakfast that would be a substantial dinner to an agricultural labourer, he follows the sheep all day, just keeping them in sight, letting them wander wherever they please, except into the thick scrub; at noon he directs them towards water, where they camp or lie still in the shade. As evening closes in he turns his flock homewards, and arrives at his hut just as the sun is sinking below the horizon. If he has a hutkeeper, or an assistant, his work is done for the day, and he may attend to the little garden which he has fenced in from the wilderness, or prepare the evening meal. If the dogs are good, no special attendance is required before midnight, when a watchman takes his seat in a box beside the sheep. We have heard of a young Oxford undergraduate, who, under the pressure of family difficulties, struck out his own path to independence, and now has the management of 3,000 sheep in one of the remotest stations of Australia. He kills and cooks his own mutton, saves nearly the whole of his salary, and lives in plenty and content. The love of literature, which he has carried with him from the university, cheers his days and nights, and an occasional newspaper, and the regular packet of letters from home, are read by the light of a tallow lamp with a zest that only a "gentle shepherd" in the Australian wilds can know. Many of the great grazier lords of Australia, the owners of seventy or a hundred square miles of pasture, and the proprietors of hundreds of horses, thousands of bullocks, and tens of thousands of sheep, lived formerly in a state almost as barbarous as civilised man could sink to—"Ancient Britons," as was once said of them, "in everything but paint." There are now many squatter families of superior education, who, emulous of the old country, have their orchards, plantations, and ornamental gardens, and are setting a good example to such of the shepherd lords as remain in their bachelor condition, and consequently retain many of those uncivilised habits which a long residence in the bush is too apt to engender.—*Quarterly Review.*

Successful Mode of Extirpating Rats.—A correspondent of the *North British Agriculturist*, after trying the various nostrums of vermin killers, and attempting to shoot the rats, found all unavailing, the vermin kept increasing in number and audacity. He observes:

"Such was my distress with rats in the spring of 1858, when, happening to pay one of my neighbouring farmers a visit, I mentioned how I was nearly overpowered with the vermin, when he recommended me to try cats; but having had always one or two about the house, I was led to think that the prodigious number of rats prevented their making any impression. But this was a mistake. My friend offered me a cat with two young ones, which I accepted, and sent for them next day. I made their crib in the granary, and got the carpenter to make circular holes in every door on the premises, sufficient to admit a cat; there was thus a free passage through the whole steading. I gave strict injunctions to the dairy-maid to feed the cats regularly and well; for I found that a cat, realising the feelings of a true sportsman, kills more for the pleasure of the chase than the luxurious enjoyment of the game. The result was, that in the beginning of 1859 my place was perfectly clear of rats. The cats having increased to seven or eight, that number I still keep up, and feeding them only at the steading, and for the last twelve months no rat has been seen.

Attachment between the Dog and the Cat.—The attachment of the dog and the cat is sometimes curiously manifested. In a large metropolitan household there had been a change of servants, and the new cook begged as a favour to be permitted the company of her dog. Permission was granted, and the dog took up his quarters in the kitchen, to the infinite disgust of the cat, who thought her dignity insulted by the introduction of a stranger into her own special domain. In process of time, however, she got over her dislike, and the two animals became fast friends. At last the cook left the family, and took away her dog with her. After an absence of some length, she determined on paying a visit to her former companions, her dog accompanying her as usual. Pussy was in the room when the dog entered, and flew forward to greet him. She then ran out of the room, and shortly returned, bearing in her mouth her own dinner. This she laid before her old friend, and actually stood beside him while he ate the food with which she so hospitably entertained him. This anecdote was related to me by the owner of the cat.—*Routledge's Illustrated Natural History, by the Rev. J. G. Wood.*

American Story of a Bear.—It is very seldom that a bear is met with in the woods, for his activity is chiefly nocturnal; but a highly curious *rencontre* is said to have taken place one day in a part of the forest not very remote from this place, which I will give you, as illustrative of the manners, both human and ursine, of these parts. A planter had ridden out into the wood to look after some strayed cattle, carrying with him the redoubtable cow-whip, consisting of a handle three feet long, and a lash of twisted raw hide thirty feet long, which was coiled on his right arm. Suddenly a huge bear starts up before him, from behind the gnarled roots of an old tree. The man could not resist the impulse to give the animal a lash with his whip, but, to his surprise, the bear showed a disposition to fight. It was rather an awkward predicament; but the horse was intelligent and agile, and as the rider made him face the bear, he was able, by leaping nimbly to and fro, to evade the ferocious brute, stung to madness by the repeated blows of the terrific cow-whip. At length the bear acknowledged his master, and turned tail for flight; when a thought struck the planter that he might possibly drive him home, as he would a refractory bullock. He accordingly kept close behind the animal, driving him along one of the numerous cattle-paths that thrid the forests, admonishing him, by a severe cut with the whip whenever he attempted to leave the track, until at length the poor creature patiently went as he was driven. A distance of six miles was thus traversed by pursuer and pursued, till the planter came within hail of his own house, when his son came out with a rifle and shot the poor persecuted bear. *Letters from Alabama.*

The Origin of Cigars.—The cigar, though more delicately manufactured, is essentially the same as smoked by the red man when first visited by Columbus. We may here describe an Indian mode of tobacco-taking, not yet given in this volume, but which is evidently the origin of the cigar. It is told by Lionel Wafer, in his account of his "Travels in the Isthmus of Darien in 1699." He says that when the tobacco leaves are properly dried and cured, the natives "laying two or three leaves upon one another, they roll up all altogether sideways into a long roll, yet leaving a little hollow. Round this they roll other leaves one after another, in the same manner, but close and hard, till the roll is as big as one's wrist, and two or three feet in length. Their way of smoking when they are in company together is thus: A boy lights one end of a roll, and burns it to a coal, wetting the part next it to keep it from wasting too fast. The end so lighted he puts into his mouth, and blows the smoke through the whole length of the roll into the face of every one of the company or council, though there be two or three hundred of them. Then they, sitting in their usual posture upon forms, make with their hands held together, a kind of funnel round their mouths and noses; into this they receive the smoke as it is blown upon them, snuffing it up greedily and strongly, as long as ever they are able to hold their breath, and seeming to bless themselves, as it were, with the refreshment it gives them." Lieutenant Page, who commanded the American expedition to La Plata, speaks of the universal custom of smoking in Paraguay, and inviting visitors to join. The servants, as a matter of routine, bring in a "small brass vessel, containing a few coals of fire, and a plate of cigars. This last hospitality is offered in every house, however humble its pretensions in other respects; and all men, women, and children, delicate refined girls, and young masters who would not with us be promoted to the dignity of pantaloon—smoke with a gravity and *gusto* that is irresistibly ludicrous to a foreigner. My son sometimes accompanied me in these visits, and was always greatly embarrassed by the pressing offer of cigars. I made his excuse by saying, 'Smoking is a practice we consider injurious to children.' 'Si, Senor,' the Paraguayan would reply, "with all other tobacco, but not with that of Paraguay." With both sexes tobacco is a constant passion."—*Tobacco; its History and Associations.*

Removing Mildew from Clothes.—When clothes are rolled up in a damp state for a few days, they become spotted with mildew, consisting of minute *fungi*. These are very difficult to remove, and they injure both the texture and color of the clothes. The only effectual method known to us for removing such spots from linen is by steeping the latter in a weak liquor of chloride of lime. It is made by obtaining some chloride of lime from the druggist's (say one pound,) then stirring it into about four gallons of cold water. It is now allowed to settle for one hour and the clear liquor is ready for the clothes, which should be steeped in it for about two hours, then washed thoroughly in cold water, and exposed on the grass to the sun.

We have had several inquiries regarding the best method of removing mildew from clothes, and some perhaps of our lady

readers (of which we have quite a respectable number) may be able to give us a more efficient and simple method than the one we have described. Much fine linen is often laid aside from use on account of becoming mildewed and discolored. A renovating remedy for this evil would be a great favor to many persons.

SPRING.

No more of frost, no more of snow,
The streams have cast their chains and flow;
The soft winds genial, breathe like song
The tender leaves and flowers among.
The happy birds no longer mute,
Make music sweet as lovers' lute;
And love itself pours sweeter strains
'Mong blooming maids and loving swains.
A theme more joyous none can sing,
Than hail to thy sweet promise Spring.

To those who've journey'd many years,
Their joy may shine amid their tears;
The bygone springs have left a trace,
Left blanks, that nothing can efface.
The bright eyes quench'd, the warm hearts cold,
The shepherd left without his fold;
Departed, loving mate and young,
No wonder, if his lute's unstrung.
Yet, while that life is on the wing,
With joy he still doth hail the Spring.

It seems awakening youth to all,
Whatever storms their fate befall;
For nature bursts her seeming tomb,
All life and sunshine, joy and bloom.
The skies like early brightness shine,
Earth's tendrils blossoming entwine;
Birds chirp and trill on every tree,
What joyous, untaught minstrelsy.
What time has brought, what time may bring,
With joy we still must hail thee Spring.

Suppose like thee, we winter cast,
Leave freezing glances with the past;
The biting word, the act unkind,
The passions, wild as winter wind:
Forgiving injury with grace,
Good-nature levelling every trace;
And casting off pride's iron mask,
Forgiveness too of others ask.
If thou such genial feeling bring,
Oh! how we ought to bless thee Spring!

J. W. THIRLWALL.

Editorial Notices, &c.

EMIGRATION TO CANADA: Quebec, 1860.

This is the second edition of a very able and useful pamphlet, comprising a clear and strictly reliable outline of the geographical position, productions, climate, capabilities, educational and municipal institutions, fisheries, railroads, &c., of Canada. It has received the approval of the Bureau of Agriculture and Statistics, and was prepared under the direction of its able and indefatigable Secretary, William Hutton, Esq., and is designed "for extensive circulation in Great Britain and Ireland, and the continent of Europe, in the hope that Canada, as a distinct and important portion of North America, may thus become better known."

The extensive circulation of this excellent little production in the mother country cannot fail to be highly beneficial to this Province, and will be found of the greatest practical use to intending emigrants of all classes; some of whom have been disappointed after they arrived on our shores, from the exaggerated statements they had read in unauthorised publications. This work being prepared and published by the authority of a Governmental Department, will command public confidence, and afford a safe and useful guide to the intended settler; while it offers another proof of the substantial service rendered the country by those who superintend the various duties attached to our Bureau of Agriculture and Statistics.

CANADA, 1849 TO 1859: BY HON. A. T. GALT: Quebec, 1860.

The Hon. Inspector General has managed to compress within the compass of fifty pages of letter press a vast amount of information, including such an array of facts, clearly and succinctly arranged, as to convey a definite idea to a stranger of the astonishing progress which Canada has made during the last ten years. Mr. Galt scrupulously avoids treating his subject in a mere party and political point of view, and in the most enlarged and patriotic spirit exhibits by facts and reasonings that must be felt and understood by every intelligent reader, whether on this side the

Atlantic or the other, the certain and of late rapid progress which this Province has made in legislation, education, and the industrial arts of life. This little work, like the preceding, is just what is wanted to meet the exigencies of the times, and cannot fail to make a strong and favorable impression of what Canada is and will be.

BLACKWOOD'S MAGAZINE FOR APRIL, 1860.

We are in receipt, through Mr. Rowsell of this city, of the April number of this favorite Magazine. The leading articles are: Wellington's Career; Lady Hamilton; Our Position with China; Alison's History of Europe from 1815 to 1852; What we have done for the Princes of India; and Parliamentary Duelling. We have also part 4 of the Autobiography of Norman Sinclair; Poetic Aberrations, a review of "Poems before Congress" by Mrs. Browning; Stabat Mater, a Translation; and two or three clever short pieces in verse. Blackwood is reprinted by Leonard Scott & Co., New York, and may be had of Mr. Rowsell and booksellers throughout the country for $3 per annum; Blackwood and any one of the four British Reviews, $5; the four Reviews and Blackwood, $10.

NEW YORK STATE FAIR OF 1859.—The Report of this show which appears in the Transactions accompanying the present number, appeared in part in the Journal last autumn. It is now published officially as a portion of the volume of Transactions.

SEEDS.—We are happy to be able to state for the information of our friends in the Eastern half of Upper Canada, that they can now be supplied with excellent Agricultural and Horticultural seeds, imported direct from the best London and Liverpool Houses, by Chandler & Co. of Belleville, C. W.

THE PUBLIC GRANT TO AGRICULTURAL SOCIETIES.—In reply to numerous inquiries we repeat here what we have referred to in another column, that the sum named in the public estimates as the public grant to Agricultural Societies for the current year, and which will doubtless be voted by Parliament, is the full amount authorised by the Act 20 Vic., Cap. 32. Each County or Electoral Division Society, therefore, with its township branches, will receive three times the amount of their joint subscriptions, as shown in the affidavit transmitted to the Board of Agriculture, up to the maximum sum allowed by the Act. The Township Societies must deposit their subscriptions with the Treasurer of the County Society on or before the 1st day of May, and the Treasurer of the County Society should forward his affidavit to the Secretary of the Board of Agriculture at Toronto as soon as possible afterwards.

Market Intelligence.

TORONTO MARKETS.

TORONTO, April 28, 1860.

The flour market continues buoyant, and a speculative inquiry has caused quite a number of sales. Among others, we hear of 1,000 bbls. of extra, of a favorite brand, selling at $6 f.o.b. We quote superfine at $4 95 a $5 05; fancy $5 40 a $5 50; extra $5 90 a $6; double extra $6 25 a $6 50.

WHEAT in great demand, and rates somewhat higher, owing to the favorable news by the steamer. The receipts were about 1,500 bushels, and of very good quality. The price paid for the best lots were $1 50 a $1 53, and very little really good shipping wheat was got below the inside figure, which, taking the whole deliveries into account, was about the average price for the day. Common and ordinary lots $1 43 a $1 48.

SPRING WHEAT in active demand at $1 10 a $1 15—the latter in one case only.

BARLEY 65c a 66c.

RYE 70c a 75c.

OATS 35c a 37½c.

PEAS 58c a 62c.

BUTTER—Fresh 18c a 20c; tub 10c a 12c.

NEW YORK MARKETS.

NEW YORK, April 28, 1860.

FLOUR—Receipts 10,887 barrels. The market is 5c a 10c better; sales are 8,00

bbls at $5 45 for superfine State; $5 55 a $5 65 for extra State; $5 45 for superfine Western; $5 60 a $6 for common to medium extra Western; $6 20 a $6 30 for inferior to good shipping brands extra round hoop Ohio. Canadian flour a shade better; sales 70 barrels at $5 80 a $7 50 for extra. Rye flour is steady at $3 50 a $4 25.

GRAIN—Wheat—Receipts 1,185 bushels; the market is nominally 1c a 2c better, but the demand is almost entirely checked by the advance asked; sales 20,000 bushels at $1 18 a $1 30 for Chicago spring. Rye quiet at 84c. Barley unchanged. Receipts of corn are 9,420 bushels; the market nominal, and 1c a 2c better; sales are 12,000 bushels at 84c a 86c for white Southern; 82c a 87½c for yellow do, and nominally 80c for mixed Western.

PROVISIONS—Pork dull and unchanged; sales 525 barrels at $17 50 for old mess; $17 81 for new mess; $17 87 for old prime, and $14 25 for new ditto. Beef quiet and unchanged. Lard steady; sales are 800 barrels at 10¾c a 11½c.

Advertisements.

Five Splendid Strawberries.

HOOKER—Very productive; large, beautiful, and of unequaled quality.

WILSON'S ALBANY,—Exceedingly productive; fine for market.

TRIOMPHE DE GAND—Immense size; splendid appearance, and *high flavor.*

PYRAMIDAL CHILIAN — Very handsome; productive, hardy, and *good flavor.*

LARGE EARLY SCARLET—The earliest; productive and *excellent.*

As it is impossible to secure all the excellencies of this most popular fruit *in one variety*, we offer the above as comprising, in five sorts, the various points desirable.

We again confidently RECOMMEND the HOOKER, as by far the best for family use, if only one sort is to be planted—combining a greater number of excellencies than any other variety.

☞ All of the above have perfect flowers, and will produce excellent crops, if planted singly or together.

☞ Order directly from the Nurseries, to be sure of the *genuine*—"The Hooker" originated on our grounds.

Money, at our risk.

PRICES—(Securely packed to be forwarded by express):

Per 100 plants of any of the above varieties,.....$2.00
" 100 plants 20 of each variety,.... 3.00
" 500 plants 100 of each variety,... 7.50
" 1000 plants of the Hooker..... 10.00

H. E. HOOKER & Co.
Commercial Nurseries,
March, 1860. *Rochester, N. Y.*

HUNGARIAN GRASS.

This valuable grass was introduced into this neighborhood three years since by our County Agricultural Society, and has given very great satisfaction to all who have tried it. Its ordinary yield is FOUR TONS TO THE ACRE, and in some cases SIX TONS have been cut. Cattle and all kinds of Stock are very fond of it, preferring it to Timothy. Its fattening qualities too are believed to be superior to those of any other known grass.

The Subscriber has obtained a quantity, and will send to any person making a post-paid application, sufficient to sow one-third of an acre for One Dollar, or One Bushel for Five Dollars.

All seed will be sent free of charge.

ARCHIBALD YOUNG,
Treasurer,
Lambton County Agr. Society

Sarnia, February 10, 1860.

SPRING FAIR.

TOWNSHIP OF GORE OF TORONTO AGRICULTURAL SOCIETY will hold their Spring Fair at CLAIREVILLE, on the Third Wednesday in April, 1860, and their Fall Fair at MALTON, on the Third Wednesday in October.

By order of the Board,
J. P. DELAHAYE,
President.
Gore of Toronto, March 19, 1860. 7-2t

AYRSHIRE CATTLE.

PATRICK R. WRIGHT, Esq., Cobourg, C. W., breeder of Ayrshire Cattle, Sheep, &c., has several young BULLS and HEIFERS for sale. His herd is well known as the best in Canada West, and his terms of sale are liberal.

☞ Full Pedigree of all animals—U. C. Stock Register.

April 2, 1860. 7-6m

YONGE STREET SEED STORE.

CHOICE VEGETABLE & FLOWER SEEDS FREE BY MAIL.

THIRTY SIX VARIETIES FOR TWO DOLLARS.

THE Subscriber, wishing to give parties who reside at a distance an opportunity to test the quality of his Seeds, will, on receipt of $2, free of postage, send free to any Post Office in Canada, 24 Full Sized Papers of VEGETABLE SEEDS, many of them containing half an ounce of seed, and 12 Papers of Choice FLOWER SEEDS, with Descriptive Catalogue and Box included—*the seeds to be of my own selection.* None but the most useful and desirable varieties will be sent.

JAMES FLEMING.
Seedsman to the
Agricultural Association of U. C.
TORONTO, Jan., 1860.

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