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THE  
**Canadian Agriculturist,**  
AND  
JOURNAL OF THE BOARD OF AGRICULTURE  
OF UPPER CANADA.

VOL. XII.

TORONTO, APRIL 2, 1860.

No. 7.

SPRING WHEAT.

There is too much reason to fear that our winter wheats in many situations have already more or less suffered, from the sudden and extreme changes of temperature, which have characterised the winter. We have had several days in March as warm and spring-like as those of April or May; leaf and fruit buds were rapidly swelling, and appearances in general indicated the early advent of spring. A sudden change, however, has taken place, and the latter portion of the month has been characterised by cold north-westerly winds, producing most serious injury on the young wheat plant, which previously exhibited in most places rather a weakly appearance. Although the plants at present look sickly and unpromising, yet if their roots are living and escape being thrown out by frost, and the weather hereafter prove favorable, upon dry and well prepared soils, the crop may reach an average, in case it escapes the ravages of the midge. But should the present severe weather continue much longer the most serious apprehensions will be entertained, particularly on wet and badly prepared land, for the result.

With such a contingency looming in the distance, we would earnestly invite the at-

ention of farmers to the subject of spring wheat. It is not yet too late to make the necessary preparations; land that was in with peas, or any kind of root crop last year, if not otherwise occupied, will do excellently for spring wheat. Even a clover ley, if ploughed up at once, may do well for this purpose. Not a day, however, should now be lost in determining what to do in this matter.

From the attacks of insects, and the injuries from late severe frosts, fall wheat has of late years proved to be an increasingly uncertain crop; and notwithstanding the higher price which winter wheat always commands, there can be no doubt that upon wet and heavy lands, especially, spring wheat is a far more certain and profitable crop. It does not require, like the winter varieties, the preparation of a summer fallow, and its yield in general, as we are circumstanced at present, will in most cases be found both more certain and more abundant.

We have had in Canada for several years past, several good varieties of spring-wheat. The club and Mediterranean, have in many places done well, but these and other sorts have unquestionably deteriorated of late, and it would be highly advantageous to introduce either new sorts, or fresh seed

imported from Europe, A change of seed of all our cultivated grains, grown on different soils and in somewhat different climates, is a matter of much greater moment than many farmers, judging from their practice, seem to imagine. We are convinced that more attention will have to be paid by our farmers for the future to these matters, or the attempt to grow wheat in many places will prove to be abortive, and consequently unprofitable. In several large districts in Upper Canada spring wheat has in great measure superseded the winter varieties, and although the price is relatively lower, yet the comparative certainty and greater yield of the crop will, in most cases, be found more than a compensation.

The most generally approved variety of spring wheat at the present appears to be the *Fife*. Upon high, light ground it is thought less suitable than the club, and some other sorts; but on low, wet lands it is perhaps the best suited of all varieties. It possesses also this advantage over others, that it will bear late sowing, and upon suitable and well prepared soils will generally yield from 25 to 30 bushels and upwards to the acre. Many people prefer sowing it late, in order to avoid the risk of the midge. Fife wheat can be sown as late as the middle, or even the end of May in the western section of the Province, with a good chance of a favorable result. This feature in its characteristics must recommend it to a large number of farmers at the present time. The Fife has, we believe, been cultivated in this Province for upwards of a dozen years, and by obtaining seed from different soils, carefully selected for its purity and plumpness, it may be kept from any serious deterioration for some time to come. From the want of attention to such precautions the Fife wheat generally is not now equal in weight and quality to what it was a few years since. In the present uncertain state of wheat growing both here, and throughout a large zone of this North American Continent, the introduction of new varieties both of winter and spring

wheat is a matter of the greatest public interest. We may state for the information of such as are practically interested in this matter, that Mr. Fleming, Seedsman, of this city, has a large quantity of Fife Wheat, for seed, which he warrants to be of pure quality.

In recommending farmers to turn their attention more to spring wheat for a while at least, we would urge them to make the best preparations in their power. The ground should be well ploughed and free of weeds, and in a condition as regards its chemical constituents, fit for producing a profitable crop. *Nothing short of these requirements, can, for any length of time, remunerate the producer.* The continuing the cultivation of poor, worn out soils, while it exhausts the pocket of the farmer, is equally certain to deteriorate the *quality* of the grain.

In conclusion we would recommend the rolling of wheat lands, such as are light and spongy especially, as early as the state of the surface will admit. This will tend to consolidate the earth around the roots of the plant, and will materially assist, by fixing more closely the roots, to enable them to obtain a more certain and copious supply of food from the soil. In case the surface should be smooth and hard, and the roots and lower parts of the plant alive, a light bush harrow, followed by the roller, might be beneficial. But where winter wheat is extensively killed in the root, by the action of wet and frost, there is but one alternative, to plough the ground immediately, and sow either spring wheat or some other crop.

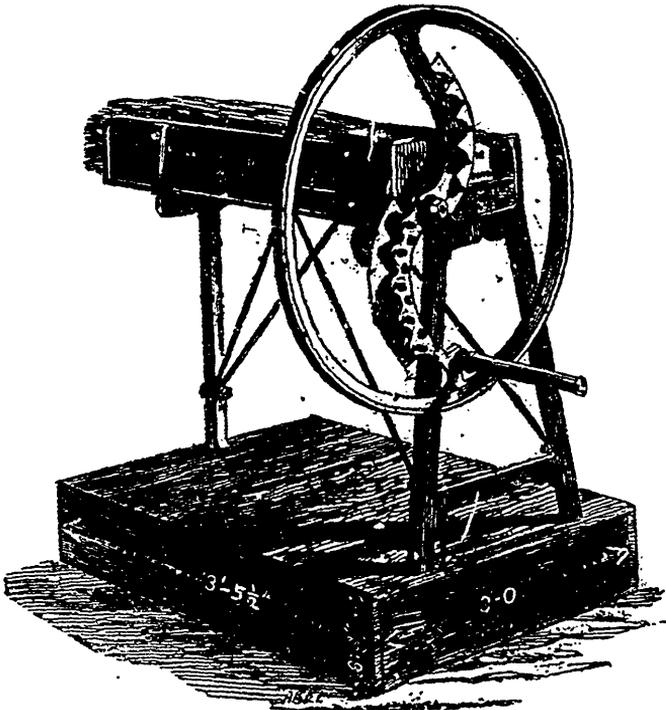
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#### STRAW CUTTERS.

The advantages of cutting fodder for cattle are now universally acknowledged, and there are few farms of any considerable extent, but have a straw, or, as it is commonly but erroneously called, a chaff cutter, which is found to be a machine of great economic importance.

There are several classes of these machines in use both in Europe and America, most of which possess some particular advantage or other; those known as the *disc*, seem to be generally preferred for ordinary purposes. The principal feature, the cutting knife, fixed upon the fly-wheel, is invariable, except that it sometimes carries one, at other times two knives. The machinery or details are exceedingly varied. In some, it is adapted to cut of various lengths by means of ratchet wheels and lever catches applied to the motion of the

a straw cutter manufactured by Messrs. Ransomes and Sims, of Ipswich, England, specially adapted for exportation; and of which large numbers have been sent to the British Colonies. It is entirely made of iron and steel, and so arranged as to take to pieces and pack into a box measuring 3 feet 5½ inches by 3 feet 1 inches, by 8¾ in. deep, or about 7½ cubic feet, as shown in the engraving. It has a mouth 8 inches wide, and cuts the straw into ¾ in. lengths. But little power is required to work it; a stout boy can easily cut from 10 to 12



feeding-rollers, and at the same time to move the substance forward only in the intervals of the strokes of the knife; in others, the motion of the straw at intervals only is attended to; in a third, a continuous motion of the straw is deemed sufficient; and these varieties of motion are produced by other and various arrangements of spur, bevel and screw gearings.

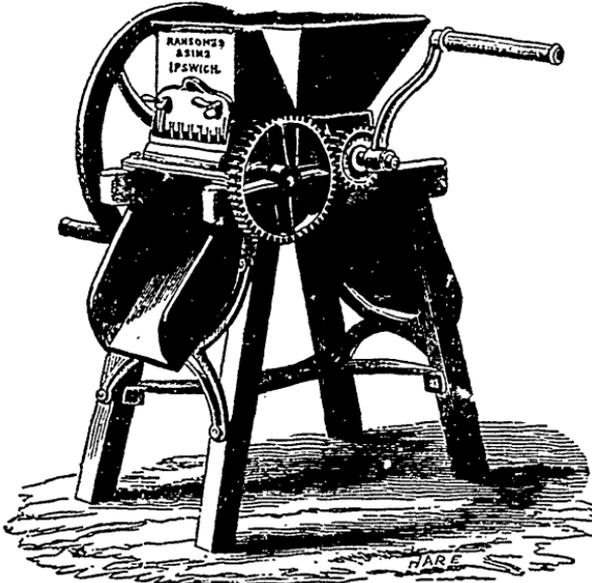
The accompanying engraving represents

bushels of ½ inch chaff per hour. The machine being simple in its construction and made of the best materials in a substantial manner, is not liable to get out of order, and with proper management will be found very enduring. Price £3 15s. Packed in case with the following extras: 1 worm, 1 pair of wheels, 1 pair of knives, with half a dozen each of bolts and set screws, £5 5s.

## GRAIN AND OIL CAKE BREAKERS.

Agricultural mechanics have of late years rendered the farmer the most essential assistance, not only in cultivating the soil, but in reaping, threshing, and preparing grain for market; also in crushing or breaking it for the feeding of sheep, horses, and cattle. It is now well known that grain, when crushed, is brought into a much more favorable condition as food for stock, than when it is given whole. Not

hand. *Third: breaking and grinding by the common grain mill stones, and, therefore, chiefly, worked by water or steam power. Linseed bruisers, from the oleaginous nature of the seed, are apt to have their rollers clog up, and to get out of order, unless made perfectly smooth, and with the greatest care. To grind or break into small fragments the cake, after the oil has been expressed, is found in practice to be both convenient and beneficial in feeding it to cattle.*



The accompanying figure represents an admirably constructed Hand-power Mill, made by Ransomes & Sims, of Ipswich, which will be found exceedingly useful. It essentially consists of three distinct mills on one frame. (1) A BIDDELL'S PATENT BEAN MILL, which will cut or crush 3 bushels of beans per hour, irrespective of their size and dryness. The great novelty of this machine consists in the teeth or cutters being made of separate pieces of hardened steel, fixed in a cylinder; each tooth

only is the labor of mastication reduced, but grain when broken is more thoroughly acted upon in the stomach, and is thereby more readily and completely assimilated so as to repair the waste, or add to the growth of the animal tissues. As might be expected, the varieties of machines applied to these purposes are quite numerous, but they may all be arranged under three kinds. First: such as act on a principle that partakes of cutting and bruising, by means of grooved metal cylinders, and which is applied to those chiefly driven by the hand. Second: machines adapted to bruise only by means of smooth cylinders; this is applied exclusively to those driven by steam, or other agency more powerful than the human

has three prepared cutting edges, so that when one edge, or set of edges, becomes dull, they may be taken out, turned one-third round, and put in again, and a *new edge, or set of edges* is obtained; and when these fail, they may be again taken out and turned one-third round, and it makes a *second fresh set*; and when this resource fails, they may be taken out and *easily replaced* with new teeth by an ordinary laborer, at the small cost of five shillings. (2) A BIDDELL'S PATENT OAT MILL, capable of cutting or crushing from 3 to 5 bushels of oats per hour. Its construction is of the most simple form, and not liable to derangement, and the labor of working it is very light for one man or stout

boy. There are one or two peculiarities about this mill, which will be interesting to the farmer as well as the machinist. The roller which cuts the oats is on a much superior principle to any thing yet out, inasmuch as the cutting edge is formed of pure steel, which is supported at the back by cast iron. This enables the manufacturers to harden the steel as much as can be done by fire and water, and the cast iron not being susceptible of hardening by the same process, you get the toughness of the soft material supporting the keen cutting edge of the harder metal. Thus a very durable and excellent article is produced, and at a cheaper rate than could be done by the old process of making the cutting barrels of wrought iron, and then case-hardening them, an operation that was attended with much risk and expense. The other process of making them of cast iron, and case-hardening them, produced an apparently good article, but a very worthless one really, as the hardening was only skin deep, and soon wore away. Thus a very superior article has been obtained at a reduced cost. (3) AN OIL CAKE BREAKER, which is a useful and strong machine, for breaking oil cake for sheep and cattle, and is easily worked.

The above combined machine can be had in England for the comparatively small sum of £7 10s. In considering the price, it should be borne in mind that the implements and machines of this extensive and long established manufactory are not only constructed on the most approved mechanical principles, but are made of the best prepared materials, and with ordinary care seldom requiring repair, and very durable.

By the way, field or horse beans are not raised in this western section of Canada, to any extent. We have seen good specimens grown in the Eastern Provinces. The horse bean is very rich in muscle-forming materials, and is an excellent food for hard working horses, as well as for cattle and pigs. Our summers may in general prove too dry for it; the blossoms of the ordinary

Windsor bean in gardens frequently fail to fructify, on account of the sudden heat.—Still field varieties are worth a fair experimental trial. We saw the other day at Mr. Fleming's, seedman, of this city, a sample of excellent small Tick beans, which are highly prized in England, and which he had imported for the purpose of affording farmers an opportunity of trying them in this country.

#### DAIRY HUSBANDRY.

Mr. J. C. Morton, Editor of the *Agricultural Gazette*, and the best *Encyclopedia of Agriculture* in the English language, published by Blackie & Sons, Glasgow, has commenced the publication of a series of *Agricultural Handbooks*; from the one on the management of the Dairy we take the following extracts, which will be found interesting and useful to many of our readers. Mr. Morton has managed to compress a vast amount of sound, practical information in this little manual, relative to the feeding and choice of the cow, the management of milk, butter and cheese, and has embodied the most recent investigations and experiments.

An immense amount of discussion has taken place on the special merits of different sorts of milk-pans. Probably the greatest quantity of milk in this country is set for cream in leaden cisterns about four or five inches deep; the next commonest pan is of brown earthenware, white inside, some twenty-one inches across at the top, and four inches deep or thereabouts, and a foot or more wide at bottom. Vessels of tinned iron of similar shape are also very common for the purpose. Zinc, which is much more easily acted on than tin by the acid of milk, though occasionally used, is therefore not so good a material. Glass milk-pans are much more in vogue; exceedingly clean, as dirt is so much more easily seen on them; they are, of course, more brittle than the earthenware.

Captain Stanley Carr, who farms largely in Holstein, employs these glass pans almost exclusively. He says:—"In my dairy, which contains upwards of 180 cows, the glass vessels have been used for four years;

and I give them a decided preference over all others. Their form is good, being sixteen inches broad at the top and twelve at the bottom; the glass is dark bottle-green, transparent, and perfectly smooth, about one-eighth of an inch thick, and provided with a rounded rim at the upper edge, which makes it easy to retain a safe hold of them even when full. They contain eight quarts, but never receive more than six. They cost eight pence a-piece, and their durability may be estimated by the fact that, to encourage carefulness, each dairy-maid is allowed one dollar per annum extra, as *pan money*, being bound at the same time to pay ten pence for each one she breaks; yet hitherto no girl has broken to the extent of her dollar. It is self-evident that acidity cannot be communicated to glass; and the ease and rapidity with which they are cleaned, requiring merely to be first washed with lukewarm water, then rinsed in cold water and placed in a rack to dry, effect a great saving in fuel and labor, diminishing the number of our dairy-maids by at least two." Captain Carr stated that Mr. Thomas Peterson, of Trinity Chambers, Water-lane, Tower-st., London, had undertaken to supply the German milk-pans in any quantity at 2s. each, or at 21s. for the dozen. The earthenware vessels cost about the same price, 1s. 4d. to 2s. a-piece. If made of clear glass, the pans cost 4s. a-piece.

Mr. Duncan, of Bradwell, near Stony Stratford, writes thus:—"When I first took to dairying on a large scale, I laid out £20 in glass pans, because they looked so well in a dairy. On further acquaintance with them I have come to the conclusion that they are the cheapest things (even at 4s. each) that a farmer can use; for they are washed, and wiped, and kept clean with 300 per cent. less trouble than 'leads,'—My glass pans are about twenty inches in diameter: I do not like larger ones. They hold about five quarts each."

Besides these several materials, stone cisterns or vessels cut out of what are called milk stones in Derbyshire, or out of common slate, are in use in some dairies. The milk stone vessels are deemed by those who use them to surpass anything else for their very excellent preservation of milk. The stone-masons of Bidford, near Stratford-on-Avon, work these stones very well by manual labor.

Mr. Love, of Northampton, gives his experience of slate as a capital material for milk vessels. They are from three to four inches deep, two and a-half feet wide, and three feet long, and excavated out of the

solid block of slate. They are placed on shelves in the dairy, and considered as fixtures, the milk being drawn off at the bottom, while the cream is left behind in the cavity of the slab. After being in use for fourteen years, no other change in the material was to be observed than that which consisted in a little better polish being given to it by wear. Mr. Love considered such masses of slate as nonconductors of sudden changes of temperature, and as preserving the milk, in consequence, in a state of equable coolness. In this case, no joints are left for absorption of milk and retention of stale animal matter of any kind.

As to the asserted differences in the yield of cream from milk set in different kind of pans, that must arise if the milk in each was of the same depth, from their influence respectively on the temperature of the milk. That a good deal depends on this point is plain from ordinary experience, and especially from that of Mr. Horsfall, of Burly Hall, Otley. It is well known that in very hot weather milk is apt to spoil even before the rising of the cream, and in very cold weather there seems to be a sluggishness in the butter globules, probably owing to their greater specific gravity, which hinders their ascent. Mr. Horsfall on this subject states that by placing his milk vessels in a shallow leaden cistern as a shelf, in which water of such a temperature circulates that in the depth of winter he can maintain a temperature of 55° Fahr. in his dairy, he obtains a higher yield of cream and butter from his milk. The object should be to preserve the milk both in summer and winter at a temperature of 60°, or thereabouts, and this cistern is available for the circulation of cold water in the former season, and warm water in the latter. Mr. Horsfall adds: "By a series of carefully conducted experiments at varying temperatures, I am of opinion that a correct scale of the comparative yield of butter at different temperatures might be arrived at. As thus:—from a very low degree of temperature little or no butter; from a temperature of about 38°, 16 ozs. from 16 quarts of milk; ditto 45°, 21 ozs. from 16 quarts of milk; ditto 55°, 26 to 27 ozs. from 16 quarts. This is somewhat beyond the ordinary experience of dairymen.

Let it be added to the above (1), that each day's skimming, or, rather, the cream separated at each operation, at whatever interval it be taken, is placed in the cream-crock, a vessel which may be of earthenware or tin; (2) that at each addition to the store in this vessel, and, indeed, the

oftener the better, the whole is mixed up together by means of a wooden stirrer kept there for the purpose; and, (3) further, that it be shifted from one vessel to another every day, in order to the more perfect breaking up of the cream, and the hindrance of anything like a permanent curdling of it; (4) that when the last skimming of the milk is accomplished the remainder of the skim-milk is either placed together in a large wooden tub whence it is drawn for sale, or where it is set for cheese, either by itself or added to the whole milk of another meal, or it may at once be placed among the store of food for the pig; and (5) that as soon as the vessels are emptied in which the milk has been set for cream, they are to be well washed and dried, and placed ready for the reception of the next meal of milk: the washing being done first with warm water, and then with swillings of cold water in the case of glass, earthenware, or tin—and with water and wood-ashes scoured to and fro over the surface, generally with the help of a handful of hay, and abundant swillings with cold water in the case of leaden cisterns. This completes the case of milk and cream management under the ordinary plan.

In Devonshire, however, a different method is adopted. The milk is set for cream in tinned vessels or pans of iron or brass, of more than the common depth of milk-pans; and after twelve hours' standing or more these are placed upon a furnace till the first steam is seen in blisters under it, after which they stand till the milk is cool, and then the cream is collected with a skimmer in the usual way, or it may be even lifted with the hand. It is kept thereafter in the cream-crock for a few days, or until enough is gathered, when butter is easily made from it by "flapping" it, as it is called, with the hand in a tub for about ten minutes or less. In some cases these tin vessels are never moved when full of milk, but placed upon the horizontal flue of a furnace which serves as shelf. After twelve hours' standing the fire is lighted, and the milk heated until the cream blisters, when the fire is withdrawn and the milk cools, and in another twelve hours is ready for the separation of its cream.

*To be continued.*

#### AGRICULTURAL SCIENCE AND MACHINES.

The following remarks of that admirably conducted paper, the *Scientific American*,

contain much sound sense, and are equally suggestive and important on this side of the boundary line as on the other.

The questions naturally arise: why is there such an ado made about improved agriculture now-a-days? Do we not feed ourselves, and also supply other countries, with large quantities of provisions, and are those not evidences of the prosperous condition of agriculture among us, and the high state to which the science and art have been carried by our farmers? To these, we answer, this subject is of vast importance to our people, because two-thirds of our population are engaged in, or connected in some manner with, agriculture; it is the greatest interest of our country, and ought always to engage the most attention. Another reason why this should excite them in more than an ordinary manner at present, is the fact that in most of the older cultivated districts the crops have decreased, both in quality and quantity. This has caused alarm, and it accounts for the activity among our people to retrieve evils which had been inflicted upon the soil by former unwise and unscientific farming. There are many extensive tracts of country, where wheat was once cultivated with great success and profit, where not an acre of it is now grown; and this is the case with some fruits, also, such as the peach and plum, which are now aliens to the same lands on which they once flourished. It has been proved that, in proportion to the extent of soil cultivated, there has been a decadence of the agricultural products of our country, and this has been caused by improper cultivation and exhaustion of the soil. This fact was formerly not duly appreciated, that the grain, fruits, hay, butter, beef and pork raised on farms, and sold to consumers, represented so much of the fertile soil itself, and that every bushel of wheat or other crop taken from it required to be returned again in some form as constituents, under the penalty of future barrenness. This fact is now universally recognized, and it forms the very foundation stone of agricultural science. Old farms, under proper cultivation, can be made to yield larger crops than new farms; but the best methods of enabling them to do so can only be acquired by experience. The whole science and art of agriculture may be summed up in a few words; it consists in the practice of the most successful farmers; this is the only sure guide for others to follow. Many persons seem to consider "agricultural science" in the light of an abstraction; some-

thing exceedingly subtile and vague, which can only be learned in colleges. But we assure them it is something exceedingly practical; it means nothing more than farming conducted in the best and most systematic manner.

At this season of the year, we call the attention of our farmers to these, the leading ideas which should govern in agriculture. In the mechanical department of farming, it is a gratifying fact that our country is unrivaled; thanks to our inventors, and the encouragement given to them by the protection of patents. No farmer can really be successful unless he employs the most improved labor-saving implements and machines; and to us it is a most certain sign of success and progress to witness the alacrity of our farmers in adopting the most recently patented and improved machinery. Among the most valuable patents issued are those for agricultural implements; they meet with ready sales, and are justly remunerative. Every farmer should commence the season's operations with the best implements he can obtain; they will yield profitable returns for their cost before the year is closed.

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### Correspondence.

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#### METCALFE FARMERS' CLUB.

METCALFE, COUNTY OF MIDDLESEX,  
March 12th, 1860.

*To the Editor of the Agriculturist.*

GENTLEMEN,—A Farmers' Club in connection with the Branch Agricultural Society has been established here, and the members meet monthly for the discussion of subjects pertaining to agriculture. As the prospects of the agriculturists brighten or fade, so do the prospects of our noble country, and any thing that will tend to foster or promote the interests of the farmer should be looked upon as of great national as well as individual importance. Under these considerations I have sent you a brief report of the discussions that have taken place at two of our meetings. If you can find any thing in them that you consider will be of benefit to our brother farmers, and worth publishing in the *Agriculturist*, I shall, with great pleasure, furnish you with the reports of other meetings as they occur.

Yours truly,

THOMAS MOYLE,  
Secretary.

#### SOWING SPRING WHEAT.

On the 6th of February, the subject discussed was The best mode of preparation of land for sowing spring wheat.

The Chairman, CHRISTOPHER BEER, Esq., R. N., an old resident of Canada, and a successful farmer, in introducing the subject, said,—he had grown more or less spring wheat for twenty years; he had raised the best crops after hoed crops the previous year, by fall plowing and early sowing in spring. Thinks the Fife Wheat is best adapted to this part of the country. As the land is strong and fertile, great care should be taken in sowing not to bury the seed too deep; from 1½ to 2 inches was quite deep enough for germination, and if sown deeper a large quantity of the seed rotted in cold or damp weather before it came up; and on the other hand the roots will run far enough down if the land is well cultivated.

Mr. HAWKEN said, from his experience fall plowing was the best. Notwithstanding the short crop of 1858 he averaged twenty bushels to the acre on pea fallow. He agreed with the chairman in regard to the advantage of early sowing.

Mr. MOYLE said, the subject under discussion, the best preparation for spring wheat, was one of vital importance. In the first place it is coming into general use among farmers, who, a few years ago, hardly raised any, and consequently was almost a new crop to them. And this was in consequence of the belief that the midge did not damage it to the same extent as it did the fall wheat, a belief that his experience fully confirmed. His preparation was fall ploughing after a hoed crop or pea fallow, putting the cultivator length ways of the furrow before sowing, and across after, and he found that the crops came up quick and even, and generally looked well until they were harvested. His crops generally averaged 20 bushels to the acre.

Mr. ABRAYS, miller at Napier, said that farmers should be very careful as to which kind of seed they sowed; as that which grew the largest number of bushels to the acre was not always the best for sale or for milling purposes.

Mr. F. HARRIS said, he had sowed two kinds of wheat in one field, Morden and Fife. The Fife was a good crop, the Morden rusted and consequently was worth nothing.

Mr. THOMPSON said he had very little experience in growing spring wheat, but perfectly agrees with the other speakers in regard to fall plowing and early sowing.

He would recommend plaster in light soils as a top dressing for spring wheat.

Mr. LARGE had sowed spring wheat on sod and had raised good crops. Clover seed is a good preparation for spring wheat if plowed in spring and sowed immediately and well harvested.

#### SOWING BARLEY, PEAS, AND OATS.

On the 5th of March the subject of discussion was The best method of preparation of the soil for sowing Barley, Peas and Oats.

In opening the discussion the CHAIRMAN said, Gentlemen, in meeting you on this, the second evening of our club, I again urge on you the necessity of our united exertions to diffuse the knowledge we possess relative to husbandry amongst each other. Nothing can be better adapted for this purpose than a meeting of practical farmers, who, from experience, can speak positively on the modes of their own cultivation, and the best methods of raising the different crops usually grown in the neighbourhood. This is not the only consideration. It is absolutely necessary that practical farmers should have a thorough knowledge of the different breeds of horses, cattle and sheep, and the kinds that would be most profitable for the locality in which we live, as well as of the most profitable kinds of grains and grasses, particularly a new kind of grass called Hungarian, which I hope will have a fair trial amongst us. Now where can those things be discussed so well as in a Club of practical farmers, where every one is ready to give every information in his power; and you may depend we are all in need of knowing the improvements science is making in the present day in every department, agricultural as well as others, and we must take advantage of it to keep pace with the times. We must recollect that seasons bear judgment, and not be discouraged by one failure, but persevere, and in the end we shall succeed. The Poet says:

"The seed is sown, no more to man is given,  
The grateful farmer trusts the rest to Heaven,"

I find in the cultivation of peas, that the best crops are after oats, grown on grass land, ploughed down in spring, and in the fall well manured and turned under the following spring; cultivated twice, once along the furrow and once across, and as early as the ground is fit. Sow from 2½ to 3 barrels per acre. Harvest early, as the straw of early cut peas is the best feed for sheep, and it also gives time for two ploughings if intended for fall wheat, for which it is an excellent preparation. The scythe is the

best way of cutting small tillages, but in large fields the horse rake is the method I use, and if care is taken the peas shaken out will be small in quantity, and the hogs and sheep will soon pick them up. For seed I prefer the small white pea. I have grown great crops of oats, both after wheat and lay grass. Summer fallows are now nearly obsolete, and when I intend breaking up an old pasture I plough down early in spring, sow four bus. to the acre, and harrow well. I sow thick to enable the oats to overcome the grass that comes up at the edge of the furrow, and find at harvest that I have a good crop of oats, and also the advantage of an excellent fallow. If after wheat, I generally manure, sow 3 bus. to the acre, and seed down with clover and timothy. I have sown the potato oat, but find it degenerates in this climate. This last year I sowed the Black Tartarian, and the small white oat; they both yielded well, but as a general crop I prefer the small white oat. My land is a rich marly loam

Mr. MOYLE said he generally sowed his peas on stubble land, plowed the previous fall, and had the cultivator put through across the furrow, before sowing about five inches deep, and after sowing, lengthways of the furrow about three inches, which buries the peas as nicely as if plowed in. One harrowing and a rolling completes the operation. The rolling enables one to pull them with the horse rake, a great saving if they chance to ripen at the same time as other crops. He preferred the small white pea for a general crop, sowed about 3 bushels to the acre, general average from 25 to 30 bushels to the acre. Land, clay loam. Generally sowed about the first week in May. Oats he grew sometimes on sod and sometimes on stubble. If on sod, he preferred plowing in spring, and sowing as soon as possible after plowing; if on stubble land, he preferred fall plowing and cultivating twice in spring. Oats, like any other crop, will pay well for cultivation; had raised from 60 to 70 bushels per acre on well cultivated land; sowed about the last week in April—generally speaking the earlier it is sown the better; prefers the Canadian grey oat for a general crop. About barley he could not say much, as his land was not adapted to its growth; had tried it but was not successful.

#### HOW TO USE BONE DUST.

PRESCOTT, March 25th, 1860.

Editor of *Agriculturist* :

DEAR SIR,—There are several farmers

in this locality that wish to try the effects of Bone Dust upon their crops, but they want information as to the mode of proceeding. You promised an article in the *Agriculturist*, and they have been looking for it in each succeeding number ever since. Please insert something in your next on the following inquiries:—

1. The way in which Bones should be used, and the quantity per acre?
2. The kinds of crop they are best adapted for?
3. The state of the bones, whether coarse or fine for any particular case?
4. The soils to which bones are best adapted?

Yours respectfully,  
W. E.

REMARKS:

We were not aware that we had promised an article on Bones as a fertiliser till we received our respected correspondent's letter. We will shortly treat the subject somewhat in detail; in the meantime, we submit the following observations for the consideration of the parties to whom our correspondent refers.

1st. Bone dust can be beneficially added to a compost, consisting of farm-yard manure, and earthy matter, incorporating the whole thoroughly together. When applied by itself to drilled root crops, it should be scattered in the drill. Drilling machines may now be procured for sowing seeds, and manures, such as finally ground bones, rape-cake, guano, pondrette, &c., with the seed. The quantity should be varied according to the nature of the soil, and the requirements of the crop. More will be required if spread broad cast than when applied in drills. In the former case say 20 bushels to the acre, in the latter 10 or 12 bushels. If the land is in good heart and manured slightly with other substances, less quantities than the above may be sufficient; otherwise, the amount of bones may be beneficially increased.

2nd. Bones are particularly adapted to Turnips; and may be used for root and grain crops generally. They often have an excellent effect on pastures. Turnips well manured with bones and farm-yard

dung, and carefully summer worked, will leave the ground in excellent condition for barley and clover with grass seeds the following spring, without further manure.

3rd. It is not advisable to use bones more than half inch, as they will be a long time in decomposing. For turnips, and such crops as require a quick action of the manure, it is much better to use bones in a state comparatively of powder. In that case a less quantity will be sufficient for the wants of the immediate crop; coarser bones will slowly decay, and afford by degrees a smaller amount of nourishment to a succession of crops. We strongly recommend such as are finely ground.

4th. Bones act with greater power and certainty on light and dry soils, in which they more readily decompose than in cold, wet clays. If the latter soils be drained, bones may be applied to them with advantage. No kinds of manure produce their maximum effects on wet land.—EVS.]

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EACH OF US MUST DO ALL WE  
CAN FOR CANADA.

*To the Editor of the Agriculturist.*

SIR,—The farmer is doomed to toil and get his bread by the sweat of his brow, and is exposed to the heat and cold, and after all his toil in plowing and sowing, his hopes are often blasted by the ravages of the midge, the worm, the rust, or the untimely frost. Who then would be a farmer? exclaims the young lad of Canada? True, the calling of the agriculturist has a very dark side to it, but then it has two sides, and having viewed the one we will now turn over and look at the other. We have seen that the farmer has to toil, and who has not? Are any free from this decree? We think not. Let us enquire of a few among the professional and mechanical classes. Perhaps, my lad, you would like to be a lawyer, and do you think lawyers have no toil? Why, it is all toil with them, from the time they commence their preparatory studies, until the end of their practice. Moreover, the lawyer has to depend on man for his success, while the farmer's dependence is on his God, whose is the earth, and the fullness thereof. Then how few lawyers succeed in their practice

and become wealthy, while the majority of farmers. if they do not amass riches, secure to themselves and families ease and comfort. But another boy is saying he would rather be a merchant; and think you is there no toil here? If your labour will not be so heavy, it will be monotonous, tedious and endless; you will never be free from anxiety either about purchasing or selling of goods, meeting of bank payments, or from fear of loss by water, by fire, by bad debts, and by thieves. Another young aspirant is heard to express his wish to be a doctor. Very good, the healing art is both useful and respectable, but not free from toil, very far from it; if you will be a doctor make up your mind to work hard, day and night, summer and winter, in the wet and in the dry, in the heat and in the cold, and often without remuneration, not even thanks, and worse than all, censure is often heaped on the wisest and best of physicians, who have been called up out of their midnight slumbers. Not so with the farmer, he rises at his pleasure, takes his meals regularly, has none to hurry him, and at evening retires to rest without a fear of being aroused by any midnight cries; if he has toiled through the day he can now repose unmolested. But other lads may be thinking of the mechanic, and coveting his position; but you need not, for with him it is all toil or no success, when he lays down his tools his work stops. Not so with the tiller of the soil, for while he reads, or visits, or sleeps, his grass and grain are all growing, and should he by sickness be unable to go into his field, his crops are maturing, and thus enriching him day by day.

Then there is no class of men so healthy and longlived as farmers, none who have more time for visiting with their friends, none suffer so little in times of epidemics or by failure of crops. The farmer secures a sufficiency for himself and family first, and if any be left then others may share with him. Then few farmers fail of success, and if they would economise or manage better their prosperity would be still greater.

From the foregoing remarks we may infer that there are none so happy, healthy and independant as farmers. Young men believe this, and make up your minds to be farmers.

Every thing that can be done ought to be done to encourage our sons to be agriculturists. Furnish your farms with good stock, such as fine well-bred cattle, sheep, and hogs; keep good horses, and teach the boys to feed, clean, and drive them.

It costs no more to keep good stock than to keep poor, and the good will always command a better price and ready sale. Let all your farm tools be of the most improved kind and in good order. Have all your outbuildings convenient and comfortable. Supply your family with good agricultural journals, so that they may learn what others are doing—fit something for the agricultural shows. All this will give a taste for farming, and there is little fear but the boys will like the calling.

Yours truly,

STEPHEN KING,

Wentworth, Ryckman's Corners, C. W.

Mr. EDITOR,—I must add a few more thoughts; first on the subject of ploughing matches. These are of long standing—in England and Scotland they are numerous, and they generally excite a great deal of interest in the locality in which they are held, and cultivate a great fondness for ploughing among the youth, and this is the effect they have had in this county. At the last match, held by the Pioneer Ploughing Match of the South Riding of the County of Wentworth, which came off lately, there were over fifty entries, and several hundred spectators; the prizes were numerous and some of them very valuable. The first for iron ploughs was a splendid set of harness, valued at seventy dollars, and the gift of Z. Choate, Glanford, and James Jolley, Saddler, Hamilton; and the first prize for wooden ploughs was a handsome iron plough, valued at forty dollars, the gift of a gentleman here. I hope other public spirited gentlemen who are anxious to encourage and help on the farmers will go and do likewise. Why do not our agricultural societies give one prize to such matches? I think they ought to do so, and would it not be a wise outlay of a little money on the part of our Government. I fear a worse use is often made of the public funds. At these matches heretofore, we have had three classes, viz: Men with iron ploughs and men with wood ploughs, and the boys all under twenty-one years of age. For one, I would like to see some change in the management of these matches; that is, I would make four classes, two among the men and two among the boys. Another change that I would suggest is, the making of the prizes the same in all the classes; that is, the wood ploughs should have as good a prize as the iron ploughs, and the boys in both classes as good as the men. What is the object of these matches, but to encourage good ploughing, and to make farming a science, and to enlist the youth of our coun-

try in this primitive and honorable calling? Then why give the costly prizes to the men, and the cheaper and smaller ones to the boys. If any difference is to be made, let the youth have it, but I say make all the classes equal. The boys classes should be divided thus: all under eighteen years of age plough together, and all over eighteen and under twenty-one. Boys seldom go to the match until they are fifteen years of age. This will give them three years before they are eighteen, and three after eighteen, before they join the men. Let the boys have their choice, either of wood or iron ploughs. Another change I would like, is the fixing of the time in which the work is to be done. I do not believe in awarding a prize to a man or a boy who has occupied two hours more than he ought to have done in ploughing a half acre of ground.

I hope the directors of ploughing matches will give these views their consideration.

S. K.

#### THE COMPARATIVE COST TO THE FARMER OF RAISING TIMOTHY SEED AND CLOVER SEED.

*To the Editor of the Agriculturist.*

Will some of our more experienced farmers give us the results of their observations in these matters? Timothy seed can generally be purchased for less than half the sum paid for clover seed; is this difference of price caused by the difference of cost in the raising of the latter? If not, then tell us what it is that causes the difference in the price of these two sorts of seeds. To us it appears, that a bushel of clover seed can be raised with as little cost as a bushel of Timothy seed. First, you can raise a heavy crop of clover hay in the same season, and off the same ground where you get your clover seed. I doubt not but you can get a bushel of Timothy seed off a less quantity of land than that required to raise a bushel of clover seed. But taking the clover hay into account, I am quite of the belief that the clover costs us no more than the Timothy. Then where you raise your Timothy seed, you have no fall pasture. Again, your clover leaves the land the better; but is it so with the Timothy? does it not leave it greatly impoverished? These are considerations worthy of our attention, and it may be profitable to note down these things, and give others the advantage of our knowledge.

S. KING,  
Ryckman's Corners.

#### ALSIKE CLOVER.

NORTH DUMFRIES, 26th March, 1860.

*To the Editor of the Agriculturist.*

SIR,—In the February number of the *Agriculturist* for 1858, I saw a letter from Mr. P. R. Wright, of Cobourg, wherein he gave a description of a new kind of Clover, called the "Alsiike" or Perennial Hybrid Clover; he also stated that he had grown it for a number of years, and recommended it very highly, he said if he could only persuade one hundred or even fifty *intelligent* farmers to make a trial of it, and report their success to you, he felt confident that red clover would soon be numbered among the grasses that were in Canada. Well, having some confidence in a Canadian gentleman's recommendation, I determined to give it a trial, and I would now report with what success to you. In the month of April, 1858, I procured four pounds of the seed, from Mr. Fleming, Toronto, that being all he could spare me, I sowed it in a small field containing about one acre that was sown with Barley. Not being accustomed to sow such a small quantity to the acre, I sowed it rather thick, and only got it to go over three-quarters of the acre, the other quarter I sowed with the common red clover, so that I had a fair chance of comparing the two. I give the preference to the Alsiike by a great deal; it will make better and finer hay, and from what I have seen of it for the two past winters, I think it is a Clover that is going to stand the winter better and not be so liable to be thrown out of the ground by the spring frosts as the red, a quality that I consider one of its best recommendations in this part of the country, where the red clover is sometimes completely killed out by the freezing and thawing of the ground in the spring. I did not cut it until the seed was ripe, which was on the 19th July, 1859.—There was at least two tons of hay from the three-fourths of an acre, which I consider a good yield, when the frosts of last summer are taken into account. It has two things at the present time against its not being more generally introduced, the first is, the little that is generally known of it in this country yet—the second is the high price of the seed; but as it becomes better known, I am satisfied the demand for it will increase. I believe I am the only one in this part of the country who has cut a crop of the Alsiike the past year, but I believe there are a number of others who seeded down small patches last year. I also seeded another acre in 1859. I in-

tend to sow more largely of it this spring, so that Mr. Wright will see that it is working its way. But, Mr. Editor, I have spun this out longer than I intended, and would only request that others, like Mr. Wright, would go and do likewise. Wishing every success to the *Agriculturist*.

I am, Sir,

Your obedient servant,

JAMES WILSON.

[We shall be happy to hear again from our esteemed correspondent on the results of his farming experience. The Alsike Clover has given satisfaction in this Province, so far as we have received information. It is much prized in Scotland and the north of England, and is unquestionably a hardy and prolific variety. Mr. Fleming, seedsman, of this city, keeps it in stock, and has sold of it during the past two seasons some 800 lbs. By saving the seed in sufficient quantities in this country, the price may be reduced; but it can never be brought so low as red clover, from the circumstance that the seed is smaller and less abundant in yield.—Eps.]

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### Agricultural Intelligence.

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COUNTY OF GRENVILLE AGRICULTURAL SOCIETY.—We have much pleasure in stating, on the authority of a local correspondent, that the Grenville Society have adopted a very effective design, by Mr. Sims of Prescott, for a permanent Exhibition Building; and that the contract is already taken. The building is to be erected on the grounds belonging to Wm. Ellis, Esq., the indefatigable President of the Society, and it is to be completed in time to be occupied at the Fall Exhibition.

From the advantageous position of the town of Prescott, and its contiguity to Ogdensburgh, and that section of the State of New York, our friends in Grenville may fairly calculate, by proper management, on having Annual Exhibitions that will be numerous attended, and productive of a large amount of good. We trust that other societies will follow the example.

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#### PROVINCIAL AND STATE EXHIBITIONS FOR 1860.

Upper Canada at Hamilton, September  
—, (precise time not yet determined.)

Illinois, at Jacksonville, Sept. 10, 11, 12, 13, 14.

Indiana, at Indianapolis. Oct. 2, 3, 4, 5.

Iowa, at Iowa City, Oct. 2, 3, 4, 5.

Kentucky, at Bowling Green.

New York, at Elmira, Oct. 2, 3, 4, 5.

Ohio, at Dayton, Sept. 25, 26, 27, 28.

Vermont, at Burlington, Sept. 11, 12, 13, 14.

Wisconsin, at Madison, Sept. 24, 25, 26, 27.

REFUSE FISH AS A MANURE.—In his valuable "Treatise on Waste Manures," *Hannan* very truly says that in some places fish are so very abundant that their offal and refuse may be procured in large quantities, at very little cost. In such cases it should always be used as a manure. All matters which have had life, it is said, will furnish matter for future life; and fish as an animal body, is rich in nitrogen, the most potent fertilizing element. Johnston says that its muscular parts are nearly identical in constitution with the lean of beef, and blood. But flesh contains in thirty pounds as much nitrege as are contained in 1,000 pounds of manure, and blood a similar quantity in 32 pounds. In the practical experiments of Professor Hermbstadt, blood was equal to night soil; each giving a produce of fourteen times the seed sown, being the highest results obtained from any manure.

The bones of fishes, as they are composed of nearly the same kind of ingredients as those of land animals, are also of great use, while the *fat* they contain is of itself a good manure. Mr. Mason, of Clinton, according to Lord Spencer, found that forty gallons of oil in compost with 120 bushels of earth, gave 23 tons, 5 cwt., 6 stone of turnips. The late Dr. Hunter, of York, found equally good effects from a compost of oil, earth and ashes. Fish, therefore, of every description, as it is composed of three ingredients, each of which is a powerful fertilizer, must be of great value to the farmer, especially when it can be obtained without much expense. The best way of using it is as a compost with earth or other vegetable matter. The fisheries of Michigan annually afford vast quantities of offal and refuse which might be applied to the soil with the greatest advantage. Another consideration with regard to fish is, that if we carry one thousand tons of it to our land, we are not robbing any other soil. Fishes being the produce of the water have not received the ingredients of their composition from the

soil; and every crop raised from this manure is an extra production, obtained from a new source, and made of new materials. When we make the water fertilize the land, there is no limit to the improvements that may be effected.—*Detroit Tribune.*

**MANGEL WURZEL.**—I now feel confident that root crops, such as beets, carrots, and mangel wurzel, can be grown as good in this country as in England. I have grown the mangel wurzel, the last five years, with good success, increasing them in size every year. Last spring I planted a piece of ground with the Long Red, and the Yellow Globe mangel wurzel, in rows two feet apart, and one foot in the rows. As soon as the weeds were an inch high, I gave them a good hoeing, which kept the weeds down for a considerable time. I thinned them to one strong plant in each foot,—another good hoeing was all they required. I had the lower leaves taken off, and given to the cattle, which I consider would pay for the hoeing. When they were taken up in the fall they weighed 23,946 pounds. There were hundreds of them from 9 to 12 pounds each. The piece of ground they were grown on measured 38½ rods,—this yield would be about 48 tons to the acre,—which, at 25 cents per 100 pounds, would be \$240. The above distance would be rather close between the rows for field culture. It is quite a mistake to plant closer than the above to obtain large roots. I planted the first two years, nine inches in the rows, and the roots were smaller. One great cause of failure in this country is, we do not hoe in time, but let the weeds get too strong, which takes double time, and the work cannot be well done. I hope my statement will encourage those that never tried root culture, to commence this spring, and report progress in the *Rural*. J. C.  
—*Rural New Yorker.*

## Gorticultural.

### GARDEN MEMORANDA FOR APRIL.

"As Nature feels the sun's life giving rays,  
And genial showers now mark the long then'd days,  
Buds, and sweet blossoms, redolent of spring,  
To meditation, soothing moments bring."

This is the first spring month for our Canadian climate, and the most important for gardening operations. If the weather is favorable, and the ground in good condition for work, no time should be lost in getting it well prepared for the early spring crops, for the first thing to be done relating

to sowing is the proper preparation of the ground. It may be more or less fine, according to the sort of seed to be sown. *Beans* and *Peas*, of course, do not require the earth to be so fine, as small seeds do; still, the finer, the better, for everything; for many seeds, if not all, do best when they are actually pressed by the earth in every part. Never sow when the ground is wet, and if you even dig ground in wet weather, you make a sort of mortar of it, so that it binds when dried by the wind or sun. The following is a brief list of seeds that may be sown as the month advances:—

#### BLOOD BEET.

This esculent is universally cultivated, and is used for culinary purposes in all stages of its growth. The varieties most essential for the table are the *Early Blood Turnip*, and the long smooth *Blood*. Beets require a mellow soil, moderately rich, and well pulverized to a good depth. Draw drills about a foot apart, and one inch deep, sow moderately thick; when the plants are up strong, thin out, leaving them six inches apart.

**BROCOLI, CAULIFLOWER, AND EARLY CABBAGE**—Plants sown in the early part of this month, will be ready for planting out by the first week in May. To grow these to perfection, the ground requires to be highly manured, and well cultivated.

**CARROTS** may be sown any time during this month, and as late as the end of May. The most suitable ground for growing carrots is a deep rich soil, that has been well manured the previous year. Sow in drills one foot apart and one inch deep; when the carrots are up, thin them out, four inches apart, and keep the ground clear of weeds.

**EARLY PEAS** may be sown as soon as the ground is in condition for working. The situation should be sheltered from the north, and fully exposed to the sun during the middle part of the day. The soil for Peas should be moderately rich. The early varieties, such as the *Early Kent* and *Dan O'Rourke*, may be sown in drills about three feet apart. They grow about two and-a-half to three feet high, and will require but short sticks to keep them up. *Bishop's Long Podded*, and *Spanish Dwarf* are suitable varieties for planting around borders, as they only grow from one foot to eighteen inches high.

Successive crops of Peas may be sown every two weeks to the middle of June, and for general crop after the early ones, we would recommend the following:—

*Dwarf*, blue, *Imperial*, 2½ to 3 feet high.

Champion of England, 4 feet high.

Missouri Marrow Fats, 4 feet high.

With several varieties of the Wrinkled Marrows.

**RADISH.**—*Long Scarlet, Long Salmon, White and Red Turnip*, may be sown at intervals during this month, and up to the middle of July; sow on a light soil, and thin out the plants 2 inches apart.

**CELERY.**—This vegetable is much esteemed as a salad. It requires considerable attention to grow it to perfection. To have early celery the seed requires to be sown in a hot-bed in the month of March; for winter celery, the seed may be sown any time before the middle of May. Sow on a small bed of fine rich earth—beat the bed down with the back of the spade; sift a little fine earth over the seed; shade the bed with a mat or board until the plants begin to appear. Celery plants ought to be picked out into a nursery-bed as soon as they are two or three inches high. Cut their roots and tops a little before planting; water them well and shade them from the sun until they begin to grow. Let them remain in the nursery-bed about one month, after which they will be fit to transplant into the trenches. The best sort of soil to grow Celery in is deep rich loam, and in an open part of the garden. Mark out the trenches a foot wide and three feet between each trench. Dig the trenches one foot deep, laying the earth equally on each side. Put three or four inches deep of well-rotted manure into the bottom of each trench; put a little of the surface soil over the manure; dig it well up, incorporating the soil well with the manure; dress the plants by cutting off the long leaves and the ends of the roots. Plant in single rows along the centre of each trench, allowing six inches between each plant. Water them well, and shade them from the sun until the plants begin to grow. In earthing up Celery great care should be taken not to cover the heart of the plant.

**PARSNIPS** are an excellent vegetable, and require to be sown as early as the ground will admit. Cultivate the same as directed for *Carrots*.

**ONIONS** should be sown as early in the month as possible, which will give them time to make good bulbs. The *Yellow and Large Red* are the best for a general crop; the ground should be well prepared, by digging in plenty of well-rotted manure. Sow in drills one inch deep, and one foot apart. When the young Onions are up, thin them out to the distance of three inches apart.

**SPINACH** is a useful vegetable, and will come very early for use if sown on a very rich piece of ground. Sow in drills one foot apart.

The **TOMATO** is so widely cultivated, and so extensively used that it is now regarded as almost indispensable to every garden. There are several varieties grown, but we consider the medium *Red Tomato* the best for all purposes. To raise them to perfection in Canada, the seed should be sown in the early part of this month on a slight hot bed. When the plants are well up, they should have abundance of air during the middle of the day. The plants should not be set out into the garden before the middle of May, as they are liable to be killed by the spring frosts.

Hot beds now in operation will require constant attention to giving plenty of air during the day, and shutting them close up at night; but if the heat of the bed is strong, the sashes will require to be raised a little during the night. When there is a sharp cutting wind, it will be advisable to hang a mat over the opening, in such a way, that while the plants in the bed will not suffer from the blast, there may be ample opportunity for the admission of fresh air. No effort must be spared to keep the plants stout and healthy, the stems strong, and the leaves of a fine green color.

#### THE FRUIT GARDEN.

**GOOSEBERRY** bushes require to be well pruned in; that is, cutting in the last year's wood within two inches of the old wood. This makes the bushes spur, and on these spurs the fruit is produced.

**CURRENT BUSHES** require the shoots thinned out, to allow all to stand free and clear of each other, and shorten back the young wood from three to six inches of the preceding years growth.

**RASPBERRIES** will require to be well pruned in, taking all dead canes out, removing all straggling roots, leaving three or four of the strongest canes to form a stool; fork in plenty of manure, and mulch the ground well over with the same.

**APPLE, PEAR, PLUM AND CHERRY** trees not pruned last month, should now be finished as soon as possible. Where large branches are cut off, the wood should be covered over with a mixture of cow dung, wood ashes and lime.

**STRAWBERRY** beds will be benefited by having a good supply of well-rotted manure forked in between the rows. Where new plantations are to be made, the soil should be well prepared by digging in abundance

of well-rotted manure to the depth of eighteen inches, and the exposure must be entirely free from the shade of buildings and trees.

Our remarks on the Flower Garden must be deferred till next number.

J. F.

### DWARF PEAR CULTURE IN CANADA.

*From the Rural New Yorker.*

With your permission, I would like to avail myself of the extensive circulation of your valuable paper in Canada, to say a few words to my own countrymen on the subject of Dwarf Pears. With our characteristic patience, we have been waiting to see how you succeeded; and now, if I may judge by the number of the trees of late ordered from the nurseries, we are going to try our hand at growing dwarf pears. It is my wish that, as far as possible, those who are thus trying to supply themselves with good fruit, should be saved from needless disappointment—and with this view, seek to make to them a few suggestions through your columns.

The dwarf pear is certainly one of the greatest boons in the fruit line that art has given to man. It enables us, in from three to five years, to enjoy, upon our own premises, the finest and newest varieties of both Europe and America; and in most instances produces fruit of finer size and higher flavor than the pear stock. In fact, the time is at hand, when no one who has sufficient taste to endeavor to make his home attractive, will feel satisfied until he has planted an assortment of dwarf fruit-bearing trees, which will contribute so much to the adornment of his grounds, while ministering so abundantly to the delicacies of the table.

I said the dwarf pear tree is the gift of art; and it is by remembering this simple fact, and treating it accordingly, that it can be successfully grown and made to bear its yearly burden of delicious fruit. *Nothing valuable without labor*, is a maxim that has its application here. The man who is not willing to bestow the requisite care, ought never to plant.

First, then, as to where to plant. Great care should be exercised in selecting a suitable place in which to plant dwarf pears. It should be a rich, warm, dry spot, where no water stands; and where, if you dig a hole two feet deep into the ground at any season of the year, water will not remain in it for more than twenty-four hours. If

the soil be not thus drained naturally, it should be thoroughly underdrained. The best soil is a strong clay loam; yet any soil that will yield good corn or potatoes, may be used. If, however, it should be very deficient in clay, and such earth can be procured, a liberal dressing will be found highly beneficial.

Then, in planting, let it be done carefully. Spread out the small roots and fibres in their natural position, and pulverize the soil well as it is placed among and over them—settling it, if need be, with water, so that it may come closely in contact with the smallest roots. It is a tree, not a post you are planting. *Let no manure be placed with the soil among the roots.* It is very injurious. Many, anxious to make their trees grow rapidly, have committed this error, and killed them. Bury the stock in the ground up to the place where the pear bud was inserted, but not deeper. The quince, on which the pear is worked, is liable to the attacks of an insect known as the borer, but these are entirely prevented by burying the quince portion below the surface. If planted deeper the pear often throws out roots, thereby depriving us of the advantages of working on the quince.

After the tree is planted, a mulch or covering of leaves from the forest, spread on the surface under the tree, will help to keep the ground moist and at a uniform temperature, thereby greatly promoting the growth of the tree during its first summer. Coarse manure is sometimes recommended, but the rains often carry down a solution too strong for the newly transplanted tree, and on this account, if leaves can not conveniently be had, sawdust, chopped straw, moss, or spent tan, would be preferable to manure.

And now, it is just here that so many seem to think that their work is all done; that henceforth the trees will care for themselves and their master too. It is a great mistake, from which has resulted much of the disappointment that has been experienced in the growing of dwarf pears. In truth, it is just here that the labor really begins. The trees are well planted in a warm, thoroughly drained, fertile soil, and in a few days they will begin to grow. But about the same time the weeds will begin to grow also. These must be kept down, perfectly subdued, and *the soil kept mellow by repeated cultivation*; and that not only during the first summer, but during every subsequent summer while the trees stand. The cultivation should not be deep; not by spade or plow, lest the roots be cut

and torn; but with the cultivator or hoe, so that the surface may be kept mellow and the woods destroyed; and that not for a little circle just around the tree, but for a radius of at least ten feet.

Again—the trees must be fed. And that they may be supplied with a suitable quantity all the time, they should receive an annual dressing. The best fertilizer I believe to be a compost of well-rotted barnyard manure, leaf mold, and charcoal, of which the manure forms two-thirds; that the fall is the best time to apply it, and the best method of application is to spread it on the surface of the ground. By this means the too stimulating effects of fresh manures is avoided, the roots are protected from the severe and sudden changes of weather during the winter, while the early spring rains carry down the soluble portions into the soil.

Then, in the spring, comes the pruning,—and that not once in three or four years, but every spring. The pruning is a point in which many fail, and because of this failure on the part of the cultivator, the trees fail also. It seems to be hard, after taking so much pains to make the trees grow, to cut that fine, thrifty growth away. But the tree is a creature of art,—and as art has given it being, so art is required to keep it in vigor. Those who have succeeded best, have uniformly, every spring, cut back the previous summer's growth so as to leave but three or four good buds remaining on the shoot. It is impossible here to give a detailed description of the best method of pruning. Practice will soon teach an observing man what branch needs to be cut closest, and where to let in the light and air. I have never yet seen a dwarf pear tree that had been pruned too much, and am fully persuaded that, without proper attention to this part of the culture, the trees cannot be preserved in health and vigor, nor the fruit be large and fine.

Then, there is the *thinning out of the fruit*. Some varieties of pear set their fruit in clusters, and these need to be thinned so that the pears will not touch each other. Besides this, there is a great tendency in the dwarf pear tree to bear too much. This must be prevented by taking off a part of the fruit. It is best to do it early in the season, before the pears attain much size, selecting the smallest and the ill-shaped specimens. As to the quantity that should be taken off, I can only say, aim to bring the size of the crop to a just proportion to the size and vigor of the tree. It is harder to screw one's courage up to

the right thinning point when pears are to be cut away, than only the branches. But the fruit taken is not so much lost. The nourishment, distributed among so many, would not have been enough to have brought any of them to perfection. Properly reduce the number, and those that remain will be brought to the highest degree of excellence of which the variety is capable. Besides, the tree that is allowed to overbear will soon exhaust itself.

If any, who have had the patience to follow me thus far, think they cannot find time to prune their trees in the spring, to thin out the fruit and keep the ground mellow and clean in the summer, and to give them a good top-dressing in the fall, let them not plant. To such, dwarf pears would only be a disappointment and a vexation. Slightly to change the words of one of your eminent statesmen, the price of good fruit is eternal vigilance.

D. W. BEADLE.

St. Catherines, C. W., 1860.

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### Veterinary.

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CATTLE DISEASE IN MASSACHUSETTS.—Our Massachusetts exchanges come to us with detailed reports of a destructive disease which has made its appearance among the cattle of North Brookfield. Great excitement prevails in the farming community, and the attention of the Legislature has been called to the subject. Dr. Dadd, and other experienced veterinarians, have visited the locality of the contagion, and pronounced the malady epidemic *Pleura Pneumonia*. The *Boston Journal* says that the disease was introduced last summer by a calf of foreign breed, brought from the town of Belmont. It fixes itself upon the lungs, and produces a violent cough, and the lungs are finally destroyed. Some of the cattle attacked with it linger along for weeks; others die in a few days after the attack. None have recovered.—Letters from farmers in North Brookfield, say that the disease is apparently making a clean sweep through the herds in that section, where it has got a foothold. One man has lost ten head of cattle, and has as many more sick. Another man has lost seven, and the best of his herd are sick.—In North Brookfield and New Braintree, the disease is in five or six herds. One gentleman in North Brookfield writes to a member of the Legislature that the disease is of the most alarming character. The calf from Belmont was carried to Leonard

Stoddard. His cattle began to be taken sick, and one after another died. He sold an animal to Mr. Olmstead, and the stock of the latter are all dying. Mr. Stoddard also sold a cow to Mr. Huntington, who has since lost seven cows, and has ten more sick; so of another herd in New Braintree, where some of Mr. Stoddard's stock were sent. If allowed to spread, continues the writer, the disease will cause general destruction. It is a foreign disease, and the same that prevails in Holland at this time. It seems almost certainly fatal. We learn that the disease has entered the herd of the gentleman in Belmont who sold the calf to Mr. Stoddard, and that his cattle are nearly all exterminated.—*Rural New Yorker*.

**TICKS ON SHEEP.**—There are various modes adopted and recommended for ridding sheep of ticks. Randall, in *The Shepherd's Own Book*, remarks as follows:—"Ticks, when very numerous, greatly annoy and enfeeble sheep in the winter, and should be kept entirely out of the flock. After shearing, the heat and cold, the rubbing and biting of the sheep soon drive off the tick, and it takes refuge in the long wool of the lamb. Wait a fortnight after shearing to allow all to make this transfer of residence. Then boil refuse tobacco leaves until the decoction is strong enough to kill ticks beyond a peradventure. This may be readily tested by experiment. Five or six pounds of cheap plug tobacco, or an equivalent in stems, &c., may be made to answer for 100 lambs. The decoction is poured into a deep, narrow box, kept for this purpose, and which has an inclined shelf one side, covered with a wooden grate. One man holds the lamb by the hind legs, another clasps the fore-legs in one hand, and shuts the other about the nostrils to prevent the liquid entering them, and then the lamb is entirely immersed. It is immediately lifted out, laid on one side on the grate, and the water squeezed out of its wool. It is then turned over and squeezed on the other side. The grate conducts the fluid back into the box. If the lambs are annually dipped, ticks will never trouble a flock."

Another mode, and one successfully adopted by one of our correspondents, is to feed the flock sulphur. His views are thus expressed:—"When sheep are fed salt, (which they should have often,) mix common sulphur with it thoroughly, so as to give each sheep a common sized teaspoon full, and by the time you have given them three such portions, you will find the ticks have taken a furlough, and left for parts

unknown. This is the cheapest remedy I have ever found, and I am satisfied that if sheep are fed sulphur once a month, in this manner, through the year, they will never be troubled with ticks, and it will conduce to keep sheep in a healthy condition."—*Rural New Yorker*.

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## Arts and Manufactures.

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**CORN STARCH.**—This being an exclusive American manufacture, we find nothing said about it in Dr. Calvert's Lecture; we will therefore supply the omission with a brief description of the process. As corn contains considerable oil, it must be treated somewhat differently from wheat. It is therefore first soaked in the vats in a warm alkaline solution. Some manufacturers never permit fermentation to take place in soaking, to facilitate the separation of the starchy from the fibrous elements, while others allow fermentation to take place, as in the wheat starch manufacture. After this is properly effected (which requires from eight to fourteen days), the corn is ground between common grist mill-stones; from these it passes to rotary screens where it is washed with a stream of water, when the starch flows out through the meshes, and the grain hulls are left behind. The water containing the starch is then pumped into settling cisterns, and some dilute caustic alkali is added and all thoroughly stirred. The alkali causes the fibrous particles of the corn to separate from the starch and settle to the bottom. The starch liquid is then drawn off by siphons, into perforated wooden boxes lined with cotton cloth, from which the water gradually flows out and leaves the starch behind. Settling raffles (a series of inclined, narrow boxes connected with one another) are also used, and by the liquid running over an extensive rippling surface in these, more starch is thus deposited, upon the same principle that streams, in running over pebbly bottoms, deposit more mud and impurities than when flowing smoothly along. It is very remarkable that in the settling cisterns the starch exhibits polar attraction, that is, it gathers in bunches, as metallic oxyds aggregate in the act of crystallization; the localities being called "spheres of attraction."

There are vast quantities of starch manufactured in this country, but some of it is of very inferior quality. This is owing to the want of skill in the manufacturers. Good starch should not only be of a clear

white appearance, but should so stiffen muslins that they will possess considerable elasticity. A linen collar, for example, when stiffened with good starch, will not, when folded over, crack, and exhibit brittleness, but will exhibit a retractive force and endeavor to assume its original form. A great many manufacturers of corn starch, while they have succeeded in obtaining a product of a good appearance, have not succeeded in making it of a good stiff and elastic quality. There exists a prejudice against corn starch in the minds of bleachers, calico-printers, and cotton manufacturers who use large quantities of it; they believe it is not suitable for their purpose. There are some manufacturers who can make good corn starch, and the time may come when wheat starch will be as scarce as that made from rice, which is now only manufactured for dressing fine lace.

About ten years ago there was a great excitement caused by the supposed large profits obtained in the manufacture of all kinds of starch, and as a consequence a great number of companies were formed in various parts of the country; and starch factories sprung up like mushrooms. But owing to the want of skill and experience on the part of those chosen to conduct them, the greater number of them soon failed, and one of them (in Buffalo, N. Y.) which for the building and machinery cost over \$100,000, was sold a few weeks since for \$15,000. To conduct the starch manufacture profitably, about 23 pounds should be obtained from a bushel of grain, but owing to a want of knowledge of the fermenting process, many manufacturers fall a very long way below this produce. They permit vinous fermentation to take the place of the acetous, and considerable of the starch is thus converted into dextrine and passes off as waste. It requires a very critical knowledge of fermentation to conduct the corn starch manufacture successfully.—*Scientific American*.

**NEW BUILDING STONE.**—A good sand or freestone, easily worked, of a favorable color, and possessing strength and durability, is very desirable for building purposes in our cities. There are very few sandstones that are suitable for the construction of houses; Connecticut, New Jersey, and New Brunswick furnish all that are used in New York. None of these equal granite or Westchester marble in strength and durability, but they are much cheaper. Last week we examined a very beautiful specimen of building sandstone, obtained in the township of Esqueusing, C. W. It exists in

a mountain in four-foot layers, and the formation is at least 250 feet deep, and can be easily quarried. It is of a very soft drab color, is said to be very durable, and can be laid down in this city for 35 cents per cubic foot. The quarry is not far from the Grand Trunk Railway, and is, by land and water, distant about 489 miles from New York.—*Scientific American*.

### Miscellaneous.

**EXTRAORDINARY COW.**—The polled Angus cow, bred by Hugh Watson of Keillor, shown at the Highland Society's Show at Aberdeen in 1858, where she had a medal awarded to her, died at Keillor on Friday, July 1, 1859, at the wonderful age of thirty-five years and six months. This old cow was the dam of twenty-five calves, all of whom carried prizes at different competitions in Scotland, England, and Ireland, and they and their progeny are now spread over many countries and climes. The old cow retained her fine shape and rich mellow quality till she arrived at the mature age of twenty-eight years, when she gave up breeding or giving milk, but continued active, and picked up her food along with the other cows of the herd, never having got any food beyond the common run of the farmyard. She gradually fell off for the last two years, till she became a most striking picture of old age and infirmity, but gave up gathering her food in the field only two days, when an excellent photograph picture of her was taken by Mr. Jackson of Perth, and she then lay down and died, never before having been an hour ill, such was her robust constitution and healthy habit.

**HOW GENERAL MOULTON GOT A GORE OF LAND.**—New Hampton was incorporated Nov. 27, 1777, and then contained what is now known as Centre Harbor. In 1763, General Jonathan Moulton of Hampton, Rockingham County, having an ox weighing 1400 pounds, hoisted a flag upon his horns, and drove him to Portsmouth, as a present to Gov. Wentworth. He declined compensation, but would like to have granted to him a charter of a *small gore of land* he had discovered, adjoining the town of Moultonborough, of which he was one of the proprietors. His request was granted, and he named the *small gore* New Hampton, which is some seven miles long and in some places not above three wide, which name it retains to this day.—*Portsmouth Chronicle*.

**TAKE CARE OF YOUR EYES.**—One of the most eminent American divines, who has for some time been compelled to forego the pleasure of reading, has spent thousands of dollars in vain, and lost years of time, in consequence of getting up several hours before day and studying by artificial light. His eyes will never get well.

Multitudes of men and women have made their eyes weak for life, by the too free use of eyesight in reading small print and doing fine sewing. In view of these things, it will be well to observe the following rules in the use of the eyes:—

Avoid all sudden changes between light and darkness.

Never begin to read, or write, or sew, for several minutes after coming from darkness to a bright light.

Never read by twilight, or moonlight, or on a very cloudy day.

Never read or sew directly in front of the light, or window, or door.

It is best to have the light fall from above obliquely, over the left shoulder.

Never sleep so that, on the first awakening, the eyes shall open on the light of a window.

Do not use the eyesight by light so scant that it requires an effort to discriminate.

The moment you are instinctively prompted to rub the eyes, that moment cease using them.

If the eye-lids are glued together, on waking up, do not forcibly open them; but apply the saliva with the finger—it is the speediest dilutant in the world; then wash your eyes and face in warm water.—*Hall's Journal of Health.*

**NO RIGHT TO ENDORSE.**—1. A man has no right to endorse when the failure of the first party to meet his obligation will render the creditors of the endorser liable to loss in consequence of such endorsement.

2. He has no right to endorse for another man unless he make provisions for meeting such obligation, independent of and after providing for all other obligations.

3. He has no right to endorse unless he fully intends to pay what he promises to, promptly, in case the first party fails to do so. Few endorsers prepare for this.

4. His relations to his family demand that he shall not obligate himself to oblige another simply at the risk of defrauding or depriving them of what belongs to them.

5. He should never endorse or become responsible for any amount, without security is furnished by the first party. It should

be made a business transaction—rarely a matter of friendship. It is equivalent to a loan of capital to the amount of the obligation, and the same precautions should be taken to secure it.

6. A man has no more right to expect another to endorse his note without recompense, than to expect an insurance company to insure his home or his life gratuitously.

7. It is not good business policy for one to ask another to endorse his note, promising to accommodate him in the same manner. The exchange of signature may have, and usually does have, a very unequal value. It is better to secure him the amount, and exact a like security for the amount of responsibility incurred.

8. It is better to do a business that will involve no necessity for asking or granting such favors, or making such exchanges. It is always safe and just to do so.—*Prairie Farmer.*

**PASTURING MEADOWS.**—A statement recently was made in the *Country Gentleman* that 8,540 pounds, or four tons and a quarter of Timothy hay had been raised on one acre. The secret of such production being claimed to be that the meadow or grass land on which it was raised was not allowed to be pastured at any season. A correspondent from Burlington, N. Y., writes that this brings to his recollection that “having some years since been riding with a gentleman in Rhode Island among his numerous farms, and being asked by one of his farmers if he might not turn the cows on a piece of nice pasture: he replied “no, if the cows have not enough pasture where they are, go to work and cut up corn for them.” This was strange to me, and on asking him for an explanation, he said he never permitted his mowing lands to be pastured, or rather he never took off the aftermath in any way, and was enabled by this course to cut four tons timothy hay per acre. I once tried this course, and was rewarded by a bountiful crop the next year; but it is too great a temptation for most to resist, to have good pasture and not turn stock on it when they need it. But if we would only sow a few acres of corn broadcast in the fifth and sixth months, say half an acre at a time, for a stock of 15 to 20 cows, at intervals of two weeks, say from 1st of 5th month, (or earlier in some latitudes,) to the middle of 7th month, we should have abundance of first rate feed, and should be able to let our Timothy meadows stand.”

## Editorial Notices, &c.

THE ORCHARD HOUSE; BY THOMAS RIVERS.  
NEW YORK: C. M. SAXTON, BARKER,  
& Co., 1860.

This is a reprint of the English edition, by those enterprising publishers of Agricultural works, Messrs. Saxton & Co., of New York. It is very neatly printed and illustrated; and has in addition to Mr. Rivers's treatise, which has obtained to a wide popularity in Britain, a valuable appendix, containing additional directions for growing trees and vines in Orchard Houses, by Mr. Saunders, the well known Landscape Gardener, of Germantown, Pa.

Considering the failure which has more or less attended the fruit crops of several years past, not only in Canada, but over large areas of the United States, we have in this treatise minute and practical directions for erecting Houses in which the finer sorts of fruits, such as peaches, nectarines, grapes, cherries, pears, &c., can be raised for domestic use with almost certain success, and at a cost much below what we could at all have supposed till we looked into this interesting treatise, and saw what had been effected for the past few years in England. An expenditure, at the commencement, of some two hundred dollars would ensure, with proper management, a supply of the choicer kinds of fruits for domestic use: and there must be hundreds of families in this Province, that would gladly avail themselves of such an opportunity, if they knew how to go about the business. In this little treatise, the requisite information may be had for the small price of 40 cents.

While on this subject we beg also to refer to a valuable paper on Orchard Houses, which appears in the Transactions accompanying the present Number, by Mr. Gray of this city.

THE BRITISH REVIEW, No. 63; NEW YORK: LEONARD SCOTT, & Co, 1860.  
The current number of this able Quar-

terly, contains its usual number of interesting articles on some of the most important topics of the day; such as: Coast Defence and Rifle Corps; Erasmus as a Satirist; The Silence of Scripture; Austria; Wesleyan Methodism; Ceylon; Fossil Footprints, &c. The Sketch of the Works and Life of the late lamented Dr. George Wilson, Professor of Technology in the University of Edinburgh, will be perused by all who feel an interest in the life and productions of a truly great and good man.

This, as well as the other British Reviews, and Blackwood's Magazine, republished by Messrs. Scott & Co., can be obtained of Mr. Rowsell, of this city, and of booksellers generally throughout the Province.

TO SUBSCRIBERS.—We regret to have to state that we can now only supply a very few copies of the back numbers for the present year. The extent of our edition does not yet warrant the expense of stereotyping, nor, in fact are there the conveniences in this place for doing it. We have therefore to estimate, as nearly as we may, the number of copies which will be demanded, and print accordingly. This year the demand has been greater than we anticipated, and our edition is consequently exhausted, within a very few copies. We shall therefore enlarge the edition with the present number, and reduce the subscription price for the remaining nine months of the year to three quarters of the annual rate; that is, to 37½ cents a copy, with a bonus upon orders for large numbers of copies at the same rate as at present. Or rather, for the sake of the greater convenience to subscribers of remitting in even sums, the bonus will be made somewhat higher than it has been. At 37½ cents, the amount for eight copies will be the even sum of three dollars; and for every three dollars received, we will forward nine copies, commencing with the number of the 1st April, to the end of the year. This will be a bonus at the rate of 12½ per cent

in extra copies, instead of ten per cent, as for the whole year. Nine copies will therefore be forwarded for every three dollars received from this date; eighteen copies for six dollars, &c., and the price for intermediate numbers will be  $37\frac{1}{2}$  cents for each additional copy. It is hoped that these favorable terms will be the means of obtaining for us a large additional list of readers before the end of the year.

We are gratified with the success which has attended our publication the present year, and have to thank our friends for their liberal support in taking the whole edition with which we commenced off our hands. We hope to be able to announce the premiums for subscriptions in our next. The making up the accounts will however occupy some time, which may possibly prevent the announcement till the following number.

P. S. Since writing the above our supply of back numbers have been quite exhausted, and we are therefore unable any longer to furnish complete copies from the commencement of the year. As we have a few copies of all the Nos. except No. 4, any persons who have that number to spare will confer a favor by returning it to us, to enable us to make up orders now on hand. We will give two cents for each copy of No. 4, returned in good condition.

## Market Intelligence.

### TORONTO MARKETS.

COLONIST OFFICE,

Thursday, March 29.

There was a good attendance of farmers to-day in market, and the deliveries were as follows:—

FALL WHEAT—2,050 bushels, which, being of a superior quality, sold at from \$1 35 a \$1 37 $\frac{1}{2}$  per bushel.

SPRING WHEAT—750 bushels at from \$1 a \$1 06 $\frac{1}{2}$ .

PEAS—4,550 bushels at from 55c a 60 $\frac{1}{2}$ c.

OATS—2,750 bushels from 34 $\frac{1}{2}$ c a 37c.

BARLEY—770 bushels went off freely at from 60c a 65c.

RYE—Nominal at 70c.

HAY \$16 a \$17 per ton.

STRAW \$7 00 a \$7 50.

CLOVER SEED—The market is glutted with clover seed. Good samples sold at wholesale bring \$4 50.

FLOUR—Our quotations of flour are almost nominal. Both buyers and sellers are holding back, and very little is done. Double Extra, \$5 50 a \$5 75; Extra, \$5 25 a \$5 50; Fancy, \$5 60 a \$5 15; No. 1 Superfine, \$4 65 a \$4 70; No. 2 Superfine, \$4 35 a \$4 40.

POTATOS—25c a 30c per bushel.  
TURNIPS AND MANGEL WURTZEL \$6 a \$6 $\frac{1}{2}$  per ton.

BUTTER—Inferior 8c a 10c per lb. Roll 12 $\frac{1}{2}$ c a 15c; keg 10c a 12c.

EGGS—9c a 10c per dozen.

BEEF on foot \$5 50 a \$6 per 100 lbs.

SHEEP—\$5 50 a \$6 each.

MILCH COWS—\$14 a \$26 each.

PORK—\$6 a \$6 50.

HAMS AND BACON—Dry Salt \$7 a \$8—Smoked do. \$9 a \$10.

HIDES—Green Hides 5 $\frac{1}{2}$ c. Sheep Skins \$8 per 100 lbs.

### NEW YORK MARKETS.

New York, March 29, 1869.

FLOUR—Receipts 208 barrels; market dull and heavy; sales of 440 bbls at \$31 a \$5 20 for superfine State; \$5 25 a \$5 30 for extra State; \$5 10 a \$5 20 for superfine Western; \$5 25 a \$5 65 for common to medium extra Western; \$5 80 a \$6 00 for superior to good shipping brands extra rotund hoop Ohio. Canadian Flour—market is dull and unchanged; sales are 300 bbls at \$32 a \$7 00 for extra. Rye flour is steady, \$3 70 a \$4 40.

GRAIN—Wheat—receipts none; market dull, and prices drooping; sales 300 bushels white Kentucky at \$1 70; 3,400 bushels white Canadian at \$1 58; 4,500 bushels Milwaukee culb on private terms. Rye quiet at 85c. Barley dull; sales 6,000 bushels State at 80c. Receipts of Corn 1,404 bushels—market dull and declining; sales 150 bushels at 70c a 71c for mixed Western. Oats plenty and dull at 42 $\frac{1}{2}$ c a 44c for Western State and Canadian.

PROVISIONS—Pork market dull and heavy; sales of 850 bbls at \$17 25 for old mess, \$17 87 a \$18 00 for new do; \$12 55 for prime, and \$14 18 for new do. Beef quiet and steady. Lard heavy; sales 465 bushels 10 $\frac{1}{2}$ c a 11c.

### BUFFALO MARKETS.

BUFFALO, March 29.

GRAIN—Wheat dull, and no sales. Corn also nominal. Oats quiet at 35c.

PROVISIONS dull, at \$17 for heavy mess, \$16 for light do, and \$13 for prime corn to choice mess. Beef is held at \$7 50. Bacon dull, and no sales. Lard dull at 10 $\frac{1}{2}$ c.

**YONGE STREET SEED STORE  
AND FLOWER GARDEN,**

*Established 1836.*

**Fresh Garden, Field and Flower Seeds,  
for Spring sowing.**

**T**HE Subscriber begs to inform his friends and the public, that his stock of Fresh Seeds is now complete, and very extensive, embracing almost every sort of Seed that is adapted to the country.

The stock of Agricultural Seeds is large and well selected, and the vitality of each sort being fully tested, the genuineness of the seeds may be fully relied upon.

Comprising a large stock of:—Spring Wheat, Spring Tares, Tartar and Poland Oats of the most approved kinds; Field Peas, including Golden Vine, and other approved sorts, White and Black Eyed Marrow Fats; Barley, two and four-rowed; Imported Purple and Green Top Swedish Turnip, Imported White Globe do., Imported Yellow Aberdeen do., Imported Six-weeks or Stubble do., Imported Red Round, Red Globe and several other sorts of Turnips; Long Red and Yellow Globe Mangel Wurzel; Sugar Beet and Field Parsnip, Large White Belgian Carrot and Spring Rape; Long Orange, Red, Surrey, and Altringham Carrot; Timothy, Orchard, and English Rye Grasses; Red and White Dutch Clover; French Lucerne, Cow, and Hungarian Grasses, Alsike or Perennial Clover; Yellow and White Millet; Early Potatoes of the most approved sorts; Corn, 8 rowed Early Canada, King Philip, Yellow Dutch, and several other sorts.

*Horticultural Books and Garden Tools,  
Draining Tools, One Horse Ploughs, and  
Cultivators of all kinds.*

The Subscriber has also a full and general assortment of all kinds of Garden Seeds suitable for the country, a catalogue of which, with directions for sowing seeds, can be had gratis.

Merchants and Agricultural Societies ordering seeds in bulk will be supplied at wholesale prices.

Complete assortment of Garden Seeds neatly put up in small papers, with directions for sowing, and sold by the box, containing 150 papers. at very moderate prices.

Twenty packages of Flower Seeds, choice sorts, will be sent free by post to any part of the province, to the address of any party remitting \$1, free of postage, or 25 packages, postage unpaid.

**JAMES FLEMING,**

Seedsman to the Ag'l As. of U. C.

Toronto, February, 1860.

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**SEEDS! SEEDS! SEEDS!**

**TORONTO SEED STORE!**

Corner of Front St. and West Market Place.

**T**HE Subscriber in returning his sincere thanks for the patronage so liberally extended to him for the past four years, since commencing the business, would now beg to direct the attention of his friends and the public, to his large and well assorted stock of

**FRESH GARDEN, FIELD  
AND FLOWER SEEDS,**

All of which have been procured with his usual well-known care and practical knowledge from parties in Europe and America, personally known to him; he would therefore venture to say that the quality of all his Seeds cannot be surpassed in this Country or anywhere else.

FARMERS and GARDENERS would do well to examine before purchasing elsewhere, for it is their interest particularly to procure the best of seed to be had, and SPURIOUS SEEDS are often offered by unscrupulous parties under pretended inducements, which, if depended on, may prove fatal to crops, on which purchasers depended for a living.

No seed is sold in his establishment without first being carefully tested.

Large supplies of all the leading varieties of the different kinds of seeds, most suitable to this climate, are constantly kept on hand.

Catalogues with full directions for sowing and raising vegetable and other seeds, may be had gratis, on application; and being a practical gardener of 19 years' experience, he will always feel happy to give all necessary information, personally, regarding the mode of cultivation, selection of varieties, &c., gratuitously to any of his customers.

For the convenience of those who wish to stock a small Garden with Vegetables and Flowers, but are unacquainted with the proper quantities for that purpose, he has collections ready put up.

Price of Collection of Garden Seeds, \$2.

“ “ Flower Seeds, 1.

**J. A. SIMMERS,**

*Seedsman,*

Corner of Front St. and West Market Place.

Toronto, March 12, 1860.

6-t

**West Riding of York Agricultural  
Society.**

**T**HE SPRING SHOW of this Society will be held at WESTON, on Tuesday, 24th April. For particulars see bills.

**ST. GEO. SCARLETT, Sec. & Treas.**

Carlton West, March 28th, 1860.

7-2t

**Five Splendid Strawberries.**

**H**OOKER—Very productive; large, beautiful, and of unequalled 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,  
Rochester, N.Y.

March, 1860.

**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.**

**T**OWNSHIP 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.**

**P**ATRICK 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.

**T**HE 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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