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# APRIL, 1860.

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### TRANSACTIONS OF THE BOARD OF AGRICULTURE FORELOWER CANADA.

Progress and encouragement of Agriculture in Canada; illustrated by the provi made for its encouragement in other countries-Several Remarks- Our Canada Universities and Schools-by James Anderson, F. R. S. S. A., &c., &c., &c., late of P Côte, County Essex, C. W. Editor of the Farmers' Journal.

## EXTRACT FROM THE REPORT

OF THE MEETING OF THE BOARD OF AGBICULTURE OF LOWER CANADA.

Meeting of the 23rd of January, 1860.

Mr. De Blois presiding in the place of Mr. Turgeon.

The President, after opening the meeting, announced the names of the new members elected by a majority of the votes of all the County Agricultural Societies.

Messrs Casgrain, (of l'Islet) Farmer and Proprietor, President of the Agricultural Society of the County of l'Islet.

- " Pomroy, (of Compton), Farmer and Proprietor.
- " Taché, Knight of the Legion of Honour.

The new members took their seats, and the meeting proceeded to the election of President and Vice-President for the year 1860. Messrs Turgeon and De Blois were reelected unanimously, and the meeting resumed under the presidency of Mr. Turgeon.

Mr. Turgeon (of Terrebonne), President of the Board.

- " De Blois (of Quebec), Vice-Pre-ident.
- " Campbell, Knight of the Order of the Bath, Farmer and Proprietor, St.-Hilaire.
- " Casgrain (of l'Islet), President of the County Agricultural Society.
- " Dostaler, (of Berthier), Farmer and Proprietor.
- " Pomroy (of Compton), Farmer and Propretor.
- " Taché, Knight of the Légion of Honour.
- " Hon. P. J. O. Chauveau, Superintendant of Education for Lower Canada.
- " Dumais, Professor of the Agricultural School of Ste -Ann.
- " Leclerc, Professor of Agriculture, College of Terrebonne.
- " Ossaye. Professor of Agriculture, Jacques Cartier Normal School.

The President reported the principal features of the management for the past year. He stated that the finances were in a prosperous condition, in spite of an unfortunate diminution of the grant voted last year to meet the expenditure of the Board. He then read the Report of the Secretary-Treasurer on his visit to some of the Counties to the South of the St. Lawrence; on the General Trial of Machines and Agricultural Implements at Montreal, and on other questions of particular interest. These reports were received by the Board.

The President then took up the discussion of the question of the employment of the funds, voted by Parliament; and to the purchase of seeds of forage plants and plaster, to be distributed amongst the members of the county "gricultural societics, and the Board came to the following conclusion : that it recognises the great importance of popularising the sowing of the forage plants not only in the pastures, but in the meadows, in obedience to the precept of the Great Sully: "Elevage et paturage sont les deux mamelles de l'Etat"—it recommends both the use of plaster on the forage plants and all the leguminous crops with a large system of leaves; therefore it will permit the employment of their funds in this wayin the new counties, which are not yet alive to the importance of the resources of forage, and the astonishing effects of plaster; as well as in the poorer and more remote counties, where the farmer cannot easily procure seed and plaster to improve his culture : and in such cases, the county agricultural societies ought to render a detailed account of the distribution made in each instance, so as to prevent the chance of fraud or imposition. In the other counties, where the funds have been for some years employed in the distribution of the seeds of foraging plants, the results arrived at are so apparent as to justify a discontinuance of the employment of their endeavours.

Now that the pastures and meadows have been generally improved, the Board have resolved to direct the attention of the agricultural societies more particularly to the improvement of their stock, ---at least to a careful selection of breeding stock. The introduction and establishment of Model Farms would seem to merit every encouragement.

Therefore the Agricultural Societies of Chicoutimi, Joliette and Charlevoix, No. 1, have alone authority to employ a part of their funds in the purchase of seeds of foraging plants and plaster for this year.

The Counties of Shefford and St. Maurice laid petitions before the Board, praying for a division in their Agricultural Societies; but the question of distance, the only satisfactory proof at law, is by no means sufficient, in the opinion of the Board, to authorise a division in the one or the other County.

The Agricultural Society of the County of Misisquoi having had some difficulties in its last organisation in the 3rd week of January, the delegates sent to represent the two parties were heard, and the Board came to the following conclusion :---

That it could not enter on the question of the legality of the proceedings of the meeting held by the Agricultural Society of the County of Misisquoi : that it would not be justified in taking into consideration anything beyond the "prime facie" character of the documents duly attested, which had been transmitted to it. These documents consist of two Reports of Election, the first signed by the President, attests that there has been no election—based on the difficulty of votes. The second is the Report of an Election, signed by the Secretary alone, and consequently informal ; as all Reports of Election should be signed by the President and Secretary. The Board therefore holds the documents transmitted to be informal and insufficient, and consequently cannot recognise the existence of the Agricultural Society of Misi-quoi, for the year 1860,—seeing that it has not been organised on the 3rd week of January, conform to law.

The question of the approaching Provincial Exhibition was then taken up. The Board, after having taken into consideration the prospect for an Exhibition, to include the two Canadas, on the occasion of the visit of the Prince Royal, concurred unanimously in this great idea, and resolved to communicate by letter with the Board of Arts and Manufactures for Lower Canada, regretting that our Government, last session, had granted but one part of the petition presented by the Board, thus rendering it impossible to give any definite reply, until the presentation and issue of a new petition, with amendments.

A communication received from the Honourable the Mayor of Quebec was then taken into consideration ; but for the reason therein set forth, the Board could not return any definite answer to the proposals of the Corporation of Quebec, in view of an approaching Provincial Exhibition in that city.

Thereupon the Board adjourned.

By order, J. PERRAULT.

Secretary.

## APRIL.

This is the month, when the weather is favourable, for the commencement of spring work. Sometimes the snow disappears early, and gives the prospect of an early spring, But not unfrequently there succeeds sudden changes in the thernometer indicating a low temperature-the snow falls-and the country speedily resumes the appearance of winter-and spring work is delayed till the beginning of May, before the end of which month the farmer ought to have spring sowing and planting finished. Buckwheat and turnips will be sown afterwards. The farmer must endeavour to get his land into the best condition for receiving the seed. If the wheat crop has been injured by the heaving of the frost, it is, in some cases, benefitted by passing the roller over it, and thus pressing the roots into the earth. New meadows should be rolled early in the spring, to render the surface smooth for mowing. Plaster, to be beneficial to meadows to the greatest extent, should be sown early in the spring. Seed barley, limed and rolled in plaster, has produced crops more free from disease, in consequence as some have believed of the operation, and yielded larger products. Take care in due season to increase the extent of your root crops, for they will exceed in value many times the hay from the same quantity of land. Read carefully your agricultural journals, now that the planting season is at hand. Continue to feed till the grass has a good start in the pastures, and do not allow your animals to grub out the first early sproutings that may appear. Feed carefully and bountifully your cows in Cleanse and ventilate your cellars as soon as the weather permits, to procalf. mote comfort and health. When time will afford, continue again to reclaim lands by drainage. Make and repair fences, and proceed to clear the surface as soon as the snow disappears. If hitherto neglected, take care to provide a sufficiency of the best seeds of all kinds. Have your horses in first rate working order .--Cart out composts and manures for use, and turn over heaps already carried. Take care to supply your cattle and hogs with abundance of dried swamp muck and other waste substances, to make as much manure as possible in your pens and yards. Take care that your eattle do not trample your meadows. Go on with your ploughing, but do not turn over clay soil in a wet state, as it will " bake" by so doing. Take care to encrease the depth of your ploughing, where

practicable. Be careful, especially, in selecting your potatoe seed; choosing select varieties. Take care not to turn out your sheep and lambs too early, sup plying roots to those about to lamb. Give littering sows plenty of liquid food with salt, and a little meal occa-ionnally, when procurable-keeping them all the time See that your tools, implements, and machines are in good comfortably bedded. order, and provide new ones when necessary-including working gear of horses and oxen, carts, wagons, mowing machines, rakes, &c, &c. If any bare spots should appear in wheat and winter grain, take care to make up the deficiency, and be careful to keep the stock from trespassing on these fields. We would say a few words to farmers about flowers. Everything should be done to make home pleasurable, on our own account, but especially on account of our families, to render them less easily seduced by the allurements and attractions of the city. Some are detered because they consider it expensive-many by other reasons. Trouble and expense need, however, be no excuse, for you can begin in a small way, and avoid both. You can at least form a small garden, or commence by setting aside a border for flowering shrubs and plants, and this will form a nucleus for more extended operations. Let your wife and children feel that there is at least one part of the farm that they can, in some sense, call their own, and they will probably relieve you of all trouble, save the mere spading of the ground. The general care of a flower border should be peculiarly suited to their habits and tastes, and they will take delight in it, and be much benefitted by the health-The ground must be deeply trenched and well manured ; and ful exercise. next procure such a collection of flowering shrubs and plants as the following : Spirceas, Deutzias, Hardy Azaleas, Altheas, Syringas, Viburnums, Loniceras (Honevsuckles), Calycanthus Floridus (scented shrub), Amygdalus Pumils (double flowering Almond), Pyrus Japonica (Japan Quince), Pæonia Moutan (Tree Peon)), Forsythia Viridissima, Euonymus, Weigelea Rosea, Wistaria Sinensis (Chinese Wistalia), Philadelphia Coronarius, (Fragrant Syringo), &c., &c., not forgetting a choice selection of bush and climbing Roses. Of herbaceous plants, Phloxes, Spirceas, Aquilegias. (Columbine), Campanillas Bell Flowers), Delphiniums, (Larkspur), Chrysanthemiums, (Artemisias), Lychnis, Lupinus, Dianthus, (Pinks), &c., &c., Pœonias, Dielytra Spectabilis, &c., &c., are indis-For bedding plants, Verbenas, Petunias, Scarlet Geraniums, Cuppensable. heas, Heliotropes, Nierembergias, &c.. &c. The last are tender, and require to be taken into the house in winter. They may all be propagated by cuttings in the Fall, or the old plants, after being cut may be lifted, julled and placed in the sitting room near the window, where many of them will flower during the winter. In addition to the above, and in the seed of some choice annuals, such as Alvssum Maritimum, (Sweet Alyssum), Reseda Odorata (Migonette), Phlox Drummondii, Dianthus, Chinensis, Clarkia, Portulace, Zinnia, Balsams, &c., &c., &c., you will have a gay and odoriferous border from spring till autumn.

J. A.

## HEMP AND FLAX CULTURE.

Great attention has been devoted for some years to the cultivation of Flax by the governments of all countries, where the plant is grown. Flax and wool were <sup>spun</sup> long before either cotton or silk ; and the use of Hemp is of as great antiquity as that of Flax. Commerce has lately made us acquainted with other textiles, which have been made subservient to useful purposes by human ingenuiby. Amongst these are jute - the fibre of Corchorus Capsularis; China Grass, Urtica Nivea ; New Zealand Flax, Phormium tenax ; Sunn Hemp, Cortolaria juncea ; Cocoa-nut fibre, Cocus nucifera ; Manilla Hemp, Musa textilis, &c., &c. With the single exception cotton, flax is employed to a greater extent than any other vegetable fibre, not only in the British Islands, but throughout the entire of Europe. The great developement has taken place between the 44 and <sup>60</sup> parellels of latitude. North of these, the weather is unfavorable, and farther south, it is the seed and not the fibre which is economised. The Temperate Zone is the true region of Flax ; for within its limits, the fibre attains the greatest length, and is grown of the fine t quality. Farther north, the shortness and great heat of the summers, are unfavourable to the maturing of fine fibre ; slow but regular growth being necessary to perfect a soft, strong and lustrous fibre, easily devisible into minute filaments. A hot sun induces too rapid maturity, and likewise a habit of branching and bearing a large quantity of seed, thus leaving the fibre coarse and tough. A mild, humid climate promotes regularity of growth :--- the plant grows tall and straight, the stem fine and branchless, and the fibre is in perfection for the purposes of manufacture. The extreme west of Europe is the great Flax region, as the tropical and extratropical regions of America are the great cotton region. Hence the British Isles derive their supply of two vegetable substances, which are converted by the ingenuity and industry of man into a wide range of useful articles, adapted to the clothing of persons, the furnishing of rigging, and the fitting out of ships ; and therein their Products are carried by commerce to the farthest ends of the earth. Next to climate, as we have already said of Hemp, soil is the most important topic, when treating of the production of Flax. The best soil of all is furnished by alluvial deposits - and these are peculiarly suited to the growth of this very important plant. The following are the relative quantities furnished to commerce by each country.

Russia,	tons.
	61
The Zollverein States	"
France, 55,000	"
Belgium,	"
Holland,	"
Great Britain and Ireland, 40,000	"
Scandinavia	"
Spain and Portugal, 4,000	•6
Italian States, 12,000	\$\$

Turkey,	5,000	"
North America,	2,000	"
Egypt,	3,000	
Total, 4	152,000	"

This quantity would occupy an area of 1,800,000 acres, and, at £50 a ton, would be worth £22,600,000 in the state of fibre ; and the fibre entering into the value of the fabric to the extent of one third, the value of linen manufactures throughout the world would appear to be above  $\pounds 70,000,000$  sterling. The strength of the Russian Flax fits it for the coarser fabrics, - its toughness, dryness. and the impossibility of dividing it into minute filaments, excluding it from the finer manufactures. It is chiefly used for sail cloth and bagging. Egyptian Belgium has long been considered unapproachable in the quais even coarser. lity of her Flax fibre, she therefore exports to all countries to the extent of £800,-000 yearly ; the price varying from £70 to £200 a ton, according to its quali-Much depends on the mode of treating the flax. There are two kinds, the ty. "Flemish" and "Courtrai." The two qualities are equally fine, but differing in colour-the former being of a slate grey-the other of a yellowish white. This difference is caused by the mode of treating the Flax ; the former being pulled green, and after the removal of the capsules, the flax is steeped, until the gum and gluten connecting the fibre of the wood have been decomposed by fermenta It is then dried on the grass, and the fibre cleaned out by scutching .-tion. The Courtrai is treated differently. To this point is carted flax from other parts of Belgium, to be steeped in the waters of the Lys, which flows past Cour, trai, and whose waters possess peculiar properties for the fermentation of Flax. It is found that Flax steeped in the straw yields a fibre of very superior quality, and passes under the name of Courtrai Flax wherever it may have been grown. The straw is placed in wooden crates, and anchored in the stream ; and though the disagreeable odour arising from the decomposition of the woody part might be deemed a nuisance, and the odour exhaled intolerable, and dangerous to publie health, yet it is singular enough that when the cholera raged in Belgium, the district along the Lys were totally free from it, nor has it ever been found that any complaint, whether endemic or epidemic, has been more prevalent in the steeping localities than elsewhere.

Forty to  $\mathcal{L}$ .<sup>(0</sup> an acre is a common return, and  $\mathcal{L}$ S0 to  $\mathcal{L}$ 100 is obtained for the finer qualities. The manufactures of Leeds and Belfast consume these finer qualities. To produce the finest qualities, great care and attention is requisite. The richest and most thoroughly pulverised soil is chosen; the seed is sown about double the usual thickness; and every weed eradicated from time to time. Branches and stakes are set in the ground, with lines intersecting like meshes of a net, in order that the wonderfully fine stems of the Flax, as they grow up, may have support, and may not be prostrated with the first high wind, or heavy shower. The stems are pulled green and steeped, and the utmost pains taken to pick out the coarse stalks. When scutched, the fibre is again most carefully examined, and every filament which shows any defect is removed. The Yield of this fine flax, is, of course, not large, and great expense is incurred in the details of management and preparation; but the profits are nevertheless, extraordinary. The Flax plant is grown in Holland in immense flats, offering a curious contrast to the small plots of the Belgian *petite culture*. The aspect of many hundred acres of rich green stems, with their delicate blue flowers moving in the breeze, is a heautiful sight in the month of June; and while gazing on the scene, the mind will pass in review the numberless purposes of taste and luxury to which it is destined to be applied in adorning the tables of the rich; as gauzy cambric to be grasped by the hands of the fair, wafting rich perfumes through the crowded ball room; as a coarse but serviceable garment, enveloping the study boor, or as a canvass, swelling on the breeze, and embracing the boisterous winds, hurrying along the gallant bark and her precious freight to distant shores.

Different modes of preparing the fibre have been tried, for shortening the steeping process, and for securing more certain results. The preparation involves many chemical changes and semi-manufacturing processes ; and the cultivation of the plant would become more general, if the grower could at once find a market for his crop at maturity, and not be obliged to undertake the actual procosses of steeping and drying, &c., &c. All the processes set out with the princi-Ple, that the flax should be pulled and dried in the field, and then sold to the persons whose business it should be, for their own profit, to convert it into a marbetable commodity. The simplest method of treating the dried straw is ancient, and has been revived in France, and this consists in the separation of the fibre by chemical means, from the stems of the plant, without any steeping or maceration of the latter. In order to understand this and the whole rationale of the steeping process, it is necessary to explain, that the stem of the Flax plant, after the seeds have been removed, consists of a woody centre, in some cases hollow, and in others solid, which is covered, just as a tree is with its bark, by longitudihal fibres, constituting the Flax of commerce, but cemented together by a gumby or resinous substance, which must be got out before the fibre is fitted for the manufacture of linen. The gum-resin is acted upon by water, and variations of temperature, and is destructible in acids and alkalies; and, as in the various processes of manufacture, all these agents are brought into play, it is necessary, in order to obtain an even and solid bleached fabric, that the gum should be cleared away before the fibre is spun, wove, or bleached. When the dry system, as it is termed, of separating the fibre was first brought out, this destructibility of the gum was not sufficiently considered, and, as a natural consequence, the bleached fabrics made from such Flax were of an uneven quality, being, indeed, quite unsaleable. The dry processes have been recently revived, and the use of the fibre so prepared, has been properly restricted to purposes where the yarns are dry spun, and the fabrics not bleached, and, indeed, in many cases, farther secured against deteriorating agencies, by being coated with oil, pitch, or Paint, as in the case of tarpaulins, railway truck-covers, rick-covers, &c., &c.--For a considerable range of purposes this dry fibre is now coming into use, and as it can be furnished at a low price it is actually substituted for Hemp, Jute,

and similar textile materials. An equal weight of Flax straw will give a much larger yield of this dry fibre, than of steeped fibre, as the former contains the additional weight of the gum. It is obvious that the expense of the steeping and drying being saved, its preparation must be more economical. It brings in the English market from £28 to £35 per ton. As a general rule, it may be stated, that although much trouble and expense may be saved by the dry system, and inferior qualities of Flax straw be more properly treated by it, £30 per ton, for the dry fibre, and £80 to £110 for the best kinds of steeped fibre, would be too great a sacrifice. The limited number of purposes too, to which it is, at present, believed to be applicable, must also curtail its extension, unless it be able to compete permanently with Russian Hemp, when the latter is at its ordinary Then we have the steaming process recently introduced. This method price. consists in placing the dried Flax and straw, after the seed has been separated, in iron chambers, having a ledge on the roof, so as to render the latter capable of containing cold water. When the straw has been placed in the chamber on a perforated false bottom, the door is closed with screws, and steam is driven by a pipe round the chamber and between the bottoms. The steam penetrates the mass of Flax, and softens it, the operation being farther facilitated by the condensation of the steam - the cold roof, which produces a continual shower of water, and, a decoction of the extractive matters of the straw are thus obtained. In eight or twelve hours the straw is taken out of the chamber, and is passed through metal rollers, heavily weighted, which press out great part of the water, splitting and flattening the straw longitudinally. The latter is thus easily dried, and in a few hours is ready for scutching. The water, which is in fact a vegetable extract, is employed, in the patentees concerns, for feeding pigs, joined with other feeding stuffs. It differs from the steep water produced in the ordinary way, in not being offensive to the smell. This arises from its being simply an infusion of the Flax stem, in place of holding in suspension the products of the decomposed gum, &c.

As yet the real merits of this system can hardly be estimated, in so far as the quality of the fibre thus created for manufacturing purposes is concerned.

There is another system, called the *hot water steep*. It was introduced about 1847. It had been previously applied to the treatment of Hemp. This system may be advantageously introduced in districts where Flax culture may be introduced, and the grower should have an immediate market for his raw produce, without being obliged to undertake the operation of steeping or scutching. A recent improvement in treating the straw after the *hot water steep*, turns out the fibre totally freed from impurities, so much objected to by spinners in *hot water steeped* Flax, which arose from the deposit of the gum on the fibres : and the simple process of rolling has already, though only lately introduced, told upon the value of the Flax brought from the retteries, and consequently upon the success of the entire system. It is of the greatest importance to attend carefully to the drying, after pulling, as it makes the greatest difference in the appearance and value of the sample. Many people seem to think that scutching mills would be better located in the country than in the town. It is held by such, that the scutchers should be in constant communication with the grower, supplying the seed, and regulating the management of the crop. Skill and economy are needed in order to make the growth and preparation of the article profitable. There are persons in the neighbourhood of Toronto preparing to enter upon the business. We wish we could say the same thing of enterprising individuals in our own city of Montreal, in Quebec, and elsewhere in Lower Canada. We have invaluable water privileges in our neighbourhood, and we wish sincerely we saw them turned to profitable account in the Hemp and Flax manufacture. At present there is no home market for Hemp or Flax, and no doubt, for a time, all we can produce will be sent abroad. But there is no reason why we should not retain the manufacture and the profits at home. There will be no want of a supply of the raw material when wanted ; as our soils, in many localities, are preeminently suited for the growth of these valuable plants.

We shall continue our remarks on this subject—going into details, so as to make ourselves thoroughly intelligible to all, and our remarks useful as a directory in practice.— $(To \ be \ continued.)$  J. A.

## To the Editor of the Farmers' Journal.

 $D_{EAR}$  S<sub>IR</sub>,—Having an opportunity of procuring a large quantity of waste tanners bark at a small cost; will you or some of your correspondents have the kindness to inform me of the best way of converting it into an active manure; by so doing you will greatly oblige A YOUNG FARMER.

SPENT-TAN FOR POTATOES.—Experiments show a good result from the use of tan as a top-dressing or covering in planting the potato. Mr. Bimford reports to the Mark-Lane Express, that he raised in 1857, with the use of the usual quantity of manure in the drill, and spent-tan as a covering, the enormous crop of 675 bushels to the acre, without any disease. Such a crop as this, we have not raised here for a long period. Where tan-yards are common, as in some places, this will be a cheap application, not for the potato alone, but for strawberry-beds, young trees, &c., affording a light mulch and assisting the entrance of air, and preservation of drouth.

### TO MAKE FARMING PROFITABLE.

HISTORY OF JAMES WISEMAN.

### [Continued.]

But we will not follow neighbor Wiseman year by year, in his progress. At the end of five years he had paid the seven hundred dollars which he owed for his farm. The mortgage was cancelled and the farm was his own. He had a fine yoke of oxen and a good horse, five cows that were considerably better than the average of his neighbors', four pigs, a couple of cosset sheep, quite a flock of hens and geese, and last, by no means least in his estimation, a fine boy and girl. His farm, in the mean time, had been steadily growing more productive. It produced nearly double the hay it did when he moved on to it. His apple trees were beginning to yield fair and beautiful apples. He had a large garden stocked with plenty of currants, peach trees, plums and cherries, and the year before he had set out a St. Michael, and a pound pear, both which were thriving and promised in due time to furnish them with a supply of their luscious fruits.

Who was happier and more independant than James? He had his troubles like other men, it is true. He had to work hard, and early and late, and eat the bread of carefulness. The borers and caterpillars would prey upon his apple trees. The mice would find their way into his corn-bin. The early cucumbers and corn would sometimes be nipped by the frost and have to be planted over again ; and every few years, the corn and potatoes would be injured by the early frost. Showers would come in hay time, and sometimes a long rain just when his rye was ready to reap, and a cow would occasionnally have the garget in her bag, but, notwithstanding all these troubles and trials, he was happy and cheerful, and enjoyed the fruits of his labor.

Neighbor Wiseman's farm had now so much increased in productiveness, that he found it necessary to have more barn room. The old barn was not very good, hardly worth repairing, he therefore erected a new one, and repaired his stables. The next thing he thought of was the formation of a garden having in his former days found out the great profits derived from that source. From the garden he passed to the orchard and procured the best selection of fruit trees, and bired his brother to work with him. During that period, he and his brother set to work, cutting what timber they thought best for board and plank, and cut the smaller timber into suitable dimensions for a barn sixty feet by forty, and hauled it home and hewed it. This, with the care of the cattle and hogs, kept him busy through the winter. In the early spring, they dug the cellar and laid the walls, and hauled the boards from the mill, and by the commencement of hay time, the new barn was ready for the hay. The barn was not clapboarded nor painted, nor furnished with ventilators, or blinds, or the many appliances which fancy barns of the present time so often exhibit. In short, it was not built in the style in which he has since built a hundred foot barn. But it was as good as he could afford, and indeed he had to hire three hundred dollars of Squire Jones, to enable him to pay the carpenters, and for the shingles and nails. But it was a great improvement on the old barn, which, the next winter, was pulled down and converted into a shed and hog sty. The next year be shingled his house, and in the course of two years he had paid his borrowed money, and was again free from debt. He had for sometime had his eye upon a lot of land containing about twenty acres, half pasture land and half covered with a growth of young hard wood, which lay at a convenient distance from his house. The following winter he purchased this lot for three hundred dollars, and agreed to pay one hundred dollars a year until it was paid for. The first year he cut off thirty cords of wood, and ran a fence across the lot, so that he might use the pasturage, and sowed three acres of rye. His wood when cut, was worth three dollars a cord, and he raised forty-five bushels of rye, worth a dollar a bushel. By the sale of the wood and the rye, he was able to pay the first instalment and the interest, and had rye enough left for the use of his family. He had been in the habit, from the commencement of his farming, of raising all his own grain. Sometimes he raised wheat and sometimes rve.

He was now able to keep eight cows, and he had raised them all himself, except the first two. He took good care of his calves, and fed them well, from the time they were taken from the cows, and kept them always in a thriving condition. He never allowed them to get lousy, or become stunted, but supplied them well the first winter with rowen hay, and turnips and other roots.— His cows too, were well cared for, and he found that by keeping them warm in the winter, and feeding them with a mess of turnips daily, through the cold weather, they gave more and better milk, and came out strong and healthy in the spring, and did not have to lose two or three months in the summer, to recruit what they had lost in the winter.

He became quite proud of his stock of cows, for he had the reputation of having the best cows in town, and of making the most butter for the number of cows. This resulted, as he was well aware, from having raised none but promising calves, and his having taken good care of them. His wife always took great pains with her butter, and the man who carried it to market, always returned her one or two cents a pound above the price of common butter. Neighbor Wiseman learned by experience the value of the turnip crop and always laid out for a good supply of flat turnips for the fall and early part of winter, and of ruta-bagas, for the remainder of the winter. Although most of his neighbors believed that turnips were of little value, yet somehow, by their use, his cows did better and made more butter than theirs, and when he had occasion to fatten onc, she made good beef, in less time, and at less cost, than they could make it.

In about three years from the time he purchased the twenty acre lot, he purchased a piece of meadow with a strip of woodland adjoining. He now had his barn quite full of hay and grain when he gathered in his harvest, and began to think it necessary to enlarge it. So he made his arrangements, and prepared to add forty feet to his barn the next season ; and as he now had four stout oxen, he soon had the timber on the ground, and the board logs at the mill, and before the end of the next season, he had a fine barn, one hundred feet long and forty feet wide. This time he put in a few extra windows, and set his barn doors on rollers, and built a tight board fence around his cow yard, to break of the wind from his cattle when they were in the yard. He took great care of all his stock, young and old. As he had raised them all himself, he knew their several characters and habits, and they were well acquainted with him, and knew his voice and step. They had all been accustomed from their earliest days, to look to him as their best friend and protector, and to conform to his will, so that he never had any difficulty in managing them. He thought the best time to handle steers and break them in, was when they were calves, and this he had always done, and no oxen in the neighbourbood were so well broken, and so sure on a hard pull, as neighbor Wiseman's. He never required more of them than he knew they could do, and they soon learned that they could do whatever he required. They trusted his judgment, and never refused to obey his orders. He believed that when more is required of the patient ox than he is able to do, he will soon learn to refuse to do what he can, and thus he is spoiled for service. His cattle were never breachy, for he kept good fences.

His cultivated fields were now inclosed with substantial stone. His walled land contained a good supply of stones, and he had dug them out of his fields, where they were worse than useless, and laid them into walls, where they did good service. This he had done, a little at a time, as he found opportunity, and thus not only made his fields more secure, but much easier of tillage. He added new improvements and conveniences as he found himself able. He had now two boys and two girls, all bright and healthy. He kept those who were old enough at school, while the district school kept. His oldest boy was now big enough to be useful in many ways, and he kept him employed with him, when he was not at school, and taught him to manage the team, and ride and drive the horse, and tend the cows, and do all kinds of work, for which his strength was competent. Neighbor Wiseman was now considered one of the most thrifty, well-doing men in town. His neighbors finding him successful in all his plans. often consulted him with regard to their crops, and farming arrangements, and seldom had cause to regret that they had followed his advice. He was public spirited, as well as economical, and was always in favor of every measure that

# Agricultural Societies

Societies.	Where established.	Presidents.	Vice-Presidents.	Secretart
Argentenil	St. André	Edward Jones Jr	Thomas Jefferson	H Howard
Arthabaska	St. Christophe	Edward Jones Jr	C A Pacaud	H HO J G Dune
Beauharnaia	Sic. Rosalic	J. Keith J. J. Keith J. O. C. Arcand. O. C. Fortier Eer M. P. P. L. M. Olivier Win Macdonald J. Meagher S. Pettes J. Naime B. Cinon J. Yule A. J. Martineau G. W. Baker	N Blais	PAB
Beauce.	St. Joseph	JOC Aroand	J B Scott	T SA A
Bellechasse	St. Michel	O C Fortier Eer M P P	E Forgues	P Forst
Bonaventure No. 1	Berthier.	L M Olivier	J D O McBean.	Chs Kell
Bonaventure, No. 2	Carleton	Win Macdonald	R H Montgomery	ATADH .
Brome	Brome	S Pettes	E W Hell	HSFOR
Charlevoix, No. 1.	Malbaie	J Nairne	Hon J M Fraser	Ed The
Chambly	Longueuil	B Cimon	E Boivin	O Renot
Champlain.	Ste. Geneviève Bat.	A I Martineau	Isidore Hurteau	B Trude
Chateauguay	Ormstown	A J Martineau G W Baker P C L Dubois A J Lindsey J B Daoust Ecr M P P. J Bte Carrière Hon W Sheppard G H S Browne Ecr. Ph LeBoutillier	G A Brandry	W Cross
Compton	Chicoutimi.	P C L Dubois	R Blair	O BOSS S A Hard D Massar
Deux-Montagnes	St Repoir	A J Lindsey	A Stimson	SMasse
Dorchester	St. Anselme	J B Daoust Eer M P P	L Rodrigue	FF
Drummond, No. 1.	Drummondville	Hon W Sheppard	Cant V Cook	RNB
Drummond, No. 2.	L'Avenir	G H S Browne Ler	J Bothwell	James Co.
Gaspé, No. 2	Gaspé Basia	Ph LeBoutillier. John Eden Ed Quim S H Schuyler	Capt J Baker	Joseph
Hochelaga	Monteupl	John Bach	J Perchard	JUSC
Iberville	St. Athanase	F X Poulm	R Wright.	I. Hame
Joherra	St Laurent	Dr L Pilet.	A Sommerville	N M Long
Kamouraska	Kamonraska	Win Berczy	Ls Levesque	Ed E
Laprairie	Laprairie	Frs Barbeau	A fraser	H Laucher
L'Assomption	L'Assomption	Hon P U Archambeanlt	U Deschauns	H Arches
Levy	St. Henri	F M Guay	B Demers	F Bolog
Lothinière	L'Islet.	F X Poulm Dr L Pilet. Wu Berezy. Revd Jos Pilotte Frs Barbeau. Hon P U Archambeault. F M Guay. O E Casgrain. John Mitchell	T Michaux	F Bo Dow S R Dow J Parke
Laval	S. Martin	P Labelle Cor M D D	E Montgomery	Dr Small
Maskinonge	Rivière-du-Loup.	Joseph Fortin.	Joseph Carifel	Dr Smith
Megantic, No. 1	Inverness	Donald McKinnon	Wm Moat	G E D McGille J Hulchis
meganue, No. 2)	Leeds	O E Casgrain. John Mitchell P Labelle Ecr M P P. Joseph Fortin. Donald McKinnon J R Lambly.	Jno Ross	JHU
Montmorency	Chateau Richer	L Fournier. Rev P Garriépy J Dufresne Eer M P P J Grégoire J A Lambert Lt Col J Beaubien	C Réanne	O Grad
Montcalm.	Ste. Julienne	J Dufresne Eer M P P	J Melrose	AHD
Nicolet, No. 1	Bécancour	J Grégoire	A Mérizzi	P beres
Nicolet. No. 2.	Ste. Monique.	J A Lambert Lt Col J Beaubien R McConnell A Cooke	L Leblanc	J Juliand
I fillouro No 1	Alumon	D	1 Decolcau	1
Quéliec (Citá)	Ouéboo	W Cobb	A Stewart	G Moore
Québec (Conté)	Quebec.	Lt Col I Lon in	L Bilodeau	TBDER
Richelien	Sorel	W Cobb H S Anderson Lt Col J Laurin J W Dorge J Greenshields	C Magnent	G CT
Rimouski	Rimouski	J W Dorge J Greenshields A E Gauvrean Major Campnell S W Blockwood	O Primeau	J Bie Sta
Shefford	Waterloo	Major Campuell	C O Rolland	HALL
Sherbrooke	Sherbrooke	C P Mallory	A E Knowlton	Chs Bround
Soulanges	Côteau Landing	B W Bridges	Frs Lalonde	G H Bent
Stanstead	Stanstead	Hon T L Terrill	S Bean.	L. K Girard
St. Jean	L'Acadie	A E Gauvrean. Major Campnell. S W Blackwood. C P Mallory. B W Bridges. Hon T L Tc rrill. G Boucherville. J Rissonnette. Dr L L L Desauhners. J Lanorgan. B Donne - John McDougall - John McDougall - D Mc Millan. L H Massue.	P Brunette	L Rola
St. Maurice	Yamachiche	Dissonnette	B Booth	FEMM
Terreboune	Terrebonne	J Lanorgan.	Alfred Turgeon	Dr. Sman
Temiscouata	Isle Verte	B Dionne	C Bertrand	I. N C Do
Trois-Rivières	Voudrenil	John McDougall	O Duval	Ch3 Lefa
Vaudreuil, No. 2	Rigaud.	K 1141W000	J Abern	ENF
Verchères	Varennes	R Harwood. D Mc Millan. L H Massue. W H Lothrop. J S C Wurtele.	C. Prefontaina	J N A A
Wolfe	Dudswell	W U Lothron	N Androuse	A Louis
Yamaska	D	** 11 LOUDOD	A AUGEWS	100 / /

# ower-Canada, 1860.

# Boards of Management.

Burney Gunzer, Stephen Burwash, James Gordon, John Hays. R Fuller, James Wilson
Burney F E Farwell E J Paradis T Oir, uond C Bruno J Murphy S Piché
Ber J, Duhaime, C. Lefebvre, A Morin J Decelle, M Desmarins, M Mouset
Be Juchesmay T J Taschereau J P Prouls L Lal rèque G Lessard A Pageot A Catheant
Be Duchesmay T J Taschereau J P Prouls L Lal rèque G Lessard A Pageot A Catheant
Be Duchesmay T J Taschereau J P Prouls L Lal rèque G Lessard A Pageot A Catheant
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Be Duchesmay T J McLackian, J B Ginnan, G C Roburson, H B Boright, S E Westover
Carcand, J McCraken, W McFherson, B MeGee, E Martel, D Kew
Carcand, J McLackian, J B Ginnan, G C Roburson, H B Boright, S E Westover
Carcand, J McLackian, J B Ginnan, G C Roburson, H B Boright, S E Westover
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Carcand, J McLackian, J B Ginnan, G C Roburson, H Boright, S E Westover
Carcan, J B Lebourceau, H O Hincheock, S Woolward, J McLary, C G Rice, T Peirce
Fefebvre, H Brauhien, Wm McGough, J Haunelin, R Waluer, O Linnoges, H John Robh Joseph Eoisvert Alex Lsepfraure Heery K Hernming Wm Robins A Milette
Fefebvre, H Brauhien, Wm McGough, J Haunelin, R Waluer, O Linnoges, J M Remen, L G Harper, J Countre, R Moir H Mahan, M Furlong, J B Reicher, J W Remen, L G Harper, J Countre, R Moir H Mahan, M Furlong, A Milette
Fefebvre, H Brauhien, J B Buckele, H Burkele, J M Remen, L G Harper, J Countre, R Moir H Mahan, M Furlong, J B Reicher, J W Ritter, N Hannang, J McDearm Tan, J. E. Caron, C. Martin, A. Lesage J. Vuyanin, J. Argin, M. L. Start, T. Mooney, S. Statter, R. Hill, D. Stuart, R. Cox, D. McKenzie Jr., Mooney, S. Statter, R. Hill, D. Stuart, R. Cox, D. McKenzie Jr., Mooney, S. Statter, R. Hill, D. Stuart, R. Cox, D. McKenzie Jr., Mooney, S. Statter, R. Hill, D. Stuart, R. Cox, D. McKenzie Jr., Materian, J. O. Charlonneau, P. Renaud, G. Blais P. Bais, L. Fortier A. Bernier, M. F. Statter, J. Money, N. Statter, R. Materian, S. Statter, J. Materian, S. Statter, R. Materian, S. Statter, S. Statter, N. Statter, S. Statter, S. Statter, R. Statter, R. Statter, S. Statter, J. Statter, S. Statter, J. Statter, S. Statter, J. Statter, S. Statter, J. Statter, S. Statter, S. Statter, J. Stat 

he believed would promote the public good. For many years past, he has taken an agricultural paper, and always read it with much interest, and has derived from it many valuable hints in the management of his farm. He is a member of the County Agricultural Society, and has several times taken premiums for his cows and his butter, the only objects he has offered for premiums. He says he takes a premium for his butter with more satisfaction than for anything else, because in this case, his wife shares the credit with him.

Neighbor Wiseman has continued to thrive to the present day. He is now fifty-six years old. It is about thirty years since he purchased his farm of thirty acres. He has at present, a hundred and twenty acres, some thirty of which are woodland. The rest is pasture, meadow, and tillage.

His house is in good repair. He has painted it three times, and a few years ago fitted it with blinds and put it in thorough repair. His barn we have already described. This he has lately clapboarded and painted, and fitted a ventilator to the top, rather to be in fashion, than because he considers it of any real value. His barn cellar, he has learned by experience, is the place that requires more labor and attention than any other on his farm, and he says no other labors pay so well. His meadow furnishes material for composting in the cellar, and he keeps a year's stock always thrown out, that it may be pulverized by the frost, and get well dried the next summer, before carting it to the yard and cellar. He says one load of well dried muck is worth two of heavy wet muck, for it will absorb twice as much liquid from the stable, and besides is much easier to handle. He has constructed a reservoir at a short distance from the rear of his house, into which the soap-suds and the sink drain are conducted. This he keeps well supplied with dried muck, and covers it with plank. He cleans it out twice a year, and strews over it a quantity of plaster, and says he finds it an excellent manure for his garden, and especially for his fruit trees, of which he has now quite a variety. He has never purchased any imported or artificial fertilizers, except occasionally a little plaster, which he first procured as a means of preserving his vines from the ravages of the bugs. He finds this useful in the cultivation of potatoes, as it preserves them from the worms. When he puts a small handfull of plaster in the hill, he says the potatoes came out smoother and handsomer, and will bring enough more in the market to pay for the plaster several times over.

His belief is that every farmer should rely mainly upon his own resources for manures, and that except in extraordinary cases, he should not attempt to cultivate any more land than he can provide manure for from his own farm.

Neighbor Wiseman endeavors to keep up with the times, and he avails himself of every new implement, or new method of cultivation, which upon careful examination commends itself to his judgment.

He has tried raising milk for the market, instead of making butter. This he did principally from regard to his wife, hoping to relieve her somewhat of the labor of the dairy.

While selling his milk, he cut a large portion of his hay for his milch cows, and moistened it, and added a portion of cob and corn meal to the feed, night and morning. But he found it on the whole less profitable than making butter. The relief to his wife was less than he anticipated. The daily labor of cleaning the cans was new to her, and quite as hard as the straining and skimming of the milk, and the working and packing of the butter. As for the churning, she had rarely done that, since they had more than two cows. He found he could not keep as many pigs as formerly, and the manure from the pig-sty was diminished.

Occasionally his milk was not all wanted, and the butter apparatus not being in order, the extra milk was of little value, except for the hogs. After trying it three years, he returned to the butter making. He now keeps twelve cows, and sends the butter to market weekly.

He concludes that this is the most profitable disposal he can make of his milk, and as his wife thinks a good deal of her skill as a butter maker, she says she likes it the best. She has a neat, airy milk cellar, with a clean brick floor, and shelves almost as white as the milk itself. It is a pleasure to see the long rows of tin pans upon them, filled with milk, or to see the pans on a bright day after churning, glittering in the sunshine.

Neighbor Wiseman has crossed his cows with the Ayrshire and Devon stock, and he thinks it has resulted in a marked improvement of their milking properties, though some of his neighbors think the improvement is owing to his always selecting and raising only the best specimens of his own stock, and to the very great care he takes of them when young, and to his always keeping them in high condition, and indeed I partly agree with them, for I believe a well fed cow will not only give more, but better milk, than a lean, half-fed one. But whatever it may be owing to, he has several cows that make ten or twelve pounds of rich butter in a week, during the best of the feed.

He usually rises six calves every year, and of course he is able to dispose of three or four cows every season. He sells his best cows, but those he does sell bring the highest price in the market.—To be continued.

#### OTTAWA, FEB. 29TH., 1860

#### SIR,

In answer to yours received yesterday, I beg to send you a copy of a statemen, sent by me to the Bureau of Agriculture at their request on the subject of my Barley.

My attention was drawn to a single plant of Barley growing in a cottage garden in England in 1851, and I brought its produce with me in that year to Canada. The amount of ears in that plant was 56; they were 5 rowed, and in that particular, unlike any other I have ever seen. In the following spring, I sowed a part of it, and it did not produce an ear, but an unprecedented quantity of fodder. In the Fall of the same year, I sowed some more, and was much gratified to find it perfectly sound in the spring. It was harvested on the 11th July, and as good in quantity as the parent plant. Since then, I have been trying it in all forms that suggested itself to me, as to its hardiness, the best time for sowing it, the proper quantity of seed, the soils best adapted for it, and whether it varied in its productiveness, or general habit of growth. Each year's seed being the preceeding year's growth ; and the results have been, that when sown early enough, and the land in proper order, such for instance as would suit Fall Wheat, it has never been winter-killed, and has preserved all the characteristics I observed in the first plant, amongst which are its earliness, which is proved by its being at least ten days in advance of fall wheat. Its truly wonderful productiveness and vigor of growth are remarkable, and the average quantity of ears to each plant would be about fifty, containing from sixty to seventy grains each, but a far larger number I have noticed wherever the plant has had more than ordinary room. I have until this fall, always sown in drills drawn lifteen inches apart, and the grain three inches; but this season, I have sown some at ten, twelve and fifteen inches, beginning on the 9th August, and at intervals of a few days, untill the 9th September, which will enable me to see if an increase of seed produces an increase of crop. My present opinion is, it will not. By adopting the above mentioned distances, the quantity sown on an acre was exactly six pounds, or rather less than one gallon, as its general average is from fifty two to fifty four pounds per Bushell .- I should here inform you I am not a farmer, but a Gardener—and the quantities grown have been merely experimental, and therefore, I can only give you an approximate statement of yield; but I am fully satisfied the minimum would be sixty bushells per acre, with a probable maximum of eighty. Grass has never been sown with it, but I think it probable that it would succeed in saving itself from being smothered.

The straw is fully proportionate to the great weight of ear, and I have never seen it laid. The fodder is of the best description, (a sample of the grain in the straw, I forwarded to the Bureau ; and Mr. Hutton writes me that although he had been a farmer for 40 years, he had never seen any thing like it for ears and straw). I have had some matted, and it is of the finest description. It has some other highly useful properties to which I beg to draw vour attention, viz., the thinness of the skin, and the great length of the grain, almost in the shape of rice, which will greatly increase its value to those who manupulate it into Pot or Pearl Barley. A gentleman, largely engaged in that manufacture, pointed out to me the advantage it would be, from the improved appearance of the article, being nearly as long when manufactured, as ordinary grains are in their natural state ; and he gave it as his opinion, that a very large business in that article would grow up, consequent on an extensive growth of it. Since I have grown it, I have never seen a plant, ear or grain of it affected by insect or blight of any kind; and as far as my observation goes, it is the safest, as well as the most profitable grain crop that can be sown in Canada, and one that every prudent farmer should avail himself of, where the wheat crop, from so many causes, is so uncertain. The effect it might have, if sown for one season over a large contiguous area in arresting the Wheat Fly, every intelligent farmer will form his own opinion upon : but when it is a well established fact, that the migration of that pest is exceedingly limited, the exclusive growth of a plant obnoxious to it, must extirpate it from that neighborhood ; and, if so, it would only require unity of action through the Province in a few years to eradicate that great enemy to the progress of this country. Some persons object to drilling grain as being too expensive, and occupying too much time. I am quite aware the time has not yet arrived for the general use here of the elaborate machines used for sowing grain in the old countries ; but where they are not, a very good and cheap substitute can be found within the reach of any person pretending to be a farmer. Here is the plan I adopted. My drill is formed of a piece of wood 6 feet long, 6 inches wide and 2 thick, pierced with an auger at the width I wish my drills made, and into the holes, I put hard wood pins. A pair of team shafts, and a pair of handles, like those of a plough are then fastened with a pin to the drill, and the whole thing is made without the necessity of a nail, or piece of iron. With a man to hold the drill, and a boy to lead the horse, a very large field is gone over in a very short time. To sow the grain, one of those barrow-shaped distributors should be used, which can be bought for \$4, and will place the grain with almost mathematical precission; and by altering the distributor according to circumstances, will sow all seeds that should be sown in drills. The cost of drilling over broadcast is but a mere trifle; but there is no reason why the 6lbs. should not be sown broadcast as well as two bushells, all that is necessary is to mix it with any substance to the required quantity, say for instance, dry ashes, and then scatter the whole, as if it were all grain, with the comfortable assurance you have saved nearly 2 bushells of grain for every acre sown. And that you may get it into your barn before your wheat calls for your attention, and if you have not seeded it down, you can, if you choose, get a good crop of turnips the same season, to the manifest benefit of the stock, and the greatly improved condition of farm, by the manure arising therefrom. I intended to have kept it to myself for one more year's experiment,

but my neighbors became impatient, and declared if I did not let it out they would steal it. I therefore exhibited it at Kingston last fall, and intend to let it out to the public this year ; and as I have only grown it experimentally, and not as a farmer, I have only a limited quantity; and as one gallon, is sufficient to sow one acre, and wishing it to be as widely diffused as possible during the first year of its general cultivation, I propose to charge \$2 per gallon which is a trifle in advance of the cost of the common barley sown to the acre viz 2 bushels. The product of a gallon will be far more than any farmer can sow, the ensuing year. I wish to get it into as many hauds as possible, and over as wide a space. During the summer I will give ample notice through the press, that all who feel interested in it may come and see it growing, and judge for themselves of its interest ; in fact, it must then tell its own story, and not me ; which I beg to assure you, will be to me by far the most satisfactory mode : for it does certainly assume more similitude to what is usually designated a "Fish Story," to say one gallon of seed can be made to produce 80 bushells, than to a sober matter of fact ; but it is none the less so.

I must pray you to excuse the inordinate length of this statement ; and

I am, Sir,

Yours respectfully.

### CHS. CHAPMAN.

To the Editor of the Farmer's Journal.

## CULTURE OF THE ONION.

EDS. CO. GENTIEMAN.—There is in the "Co. Gent." an enquiry for "a good article on the culture of the Onion." The answer comes in an article by J. W. Proctor of Essex, Mass, but as the onion is very largely cultivated in this vicinity, many farmers raising from two to twelve acres, and as our mode of cultivation may differ somewhat from that of Mr. P., I have concluded to write you a short article on the subject.

1. The ground selected for onions should be the *best* on the farm, as free from stones as possible; and it should be made very rich by the application in large quantities of the best manure to be bad. We have lately practiced plowing in our manure in the fall, and then in the spring we harrow thoroughly, and give a top-dressing of some bought manure—guano, bone-dust, or whatever we prefer. In this way we can sow our seed from one to two weeks earlier than if plowed in the spring, and experience shows this to be very important, Whether plowed in spring or not, the ground must be well harrowed—every stone or any other obstruction picked carefully off, and then made very smooth and level with a hand rake. Extra care in the preparation of the ground is amply repaid in the after cultivation.

2. When the ground is ready, me sow our seed, using a small machine which sows two rows at a time as fast as a man can walk. This machine is made near here, and I have never seen it in the agricultural stores. To the onion grower it is invaluable. The seed after being deposited in the drills, is covered by *pushing* a common hoe along the row, very lightly and carefully. The covering is sometimes done by a board attached to the machine, but I do not think in as perfect a manner.

If the weather is favorable, the plants will be up in about three weeks, and then the labor of cultivation begins. Our rows are *twelve inches* apart, and we use, for the space between the rows, very narrow hoes, about nine inches wide, and so narrow that the earth will run freely over without *moving along* in front. There have been two machines contrived during the past year for hoeing onions, and they promise to save a vast deal of labor. The weeding is done by hand, the boys passing over the row on their knees, and taking out the weeds with a small hoe an inch or two wide. These tools are best made from a thin saw plate, and should be kept bright. They are very handy about the garden. The weeding should be continued until the crop is fit to pull, as the injury done by going through the onions when large, is not half as great as that caused by the weeds going to seed for next year. When ripe, the onions are pulled and left on the ground to cure. They should be thoroughly dried, and then, if stored in a cool, dry place, they will keep without much trouble the whole winter.

The average crop with us is about 500 bushels per acre, but 800 are often grown. And the average price is \$1.50 per barrel, from which it is easy to see that with a good market, and thorough cultivation, the crop can be made very profitable. Ebw J. TAYLOR Southport, Conn,

GUANO.—According to Official Returns published in the Mark Lane Express, there were imported into the British "United Kingdom," in the nine months ending September 30, 1859, 64,984 tons of guano; during the corresponding period of the year 1858, there were imported 269,878 tons. More than four times as much last year as this year.

SAW-DUST FOR ORCHARDS. — A year last fall, I hauled a load of old rotten trees. My neighbor over the way is one of those characters who plods on, in the same old track that his father and grandfather did before him, believing that they knew all and more too. My neighbor said, if I put saw-dust around my trees I should surely kill them ! I told him I would risk it, 'any how.' I put fresh stable manure around one row, and saw-dust, around the next. Around another row I put leached ashes. And the remainder of the orchard I manured with rotten barn-yard manure, and in the spring spread it, and well planted the ground with corn and potatoes. The result was, many trees grew very luxuriantly, but the trees were the saw-dust was grew the best, the bark being smoother, and the trees had a healthier appearance. I will state, also, that the part of the orchard planted to potatoes grew greatly better than that part planted with corn. The soil was clay loam. OAK HALL.

ROLLING SNOW ON WHEAT FIELDS.—A correspondent of the *Toronto Globe* (C. W.,) advances the opinion that rolling the snow on the autumn wheat in winter would be an effective means of preventing winter-kill, by rendering the snow less liable to melt on every sudden thaw that occurs. He says the practice is extensively followed in Sweden. A good deal of discussion is taking place in the columns of that paper, on this subject, from which we gather that it yet requires the test of actual experiment to decide whether any benefit is to be derived from the operation or not.

BEST AGE OF MANES FOR BREEDING.—In reply to the question, "at what age ought mares to breed to make it best for them and colt, and to produce the best possible horses in the long run ?" a correspondent of the Genessee Farmer states that the most solid horses are from parents past ten years old at the time of copulation." It is quoted as the opinion of Col. Wm. R. Johnson, of Va., an "old Napoleon of the turf," that if raising a mare for breeding purposes only, one should commence at three years old, if she were well grown, not for the Value of her first colt, but for the extension of her breeding properties and enlarging her nursing capacities.

CHARCOAL.-Seeds germinate very quickly in pulverised charcoal, but do not grow well in charcoal alone. It is used with great effect as a top dressing. It is a great stimulus to vegetation on account of its power to produce carbonic acid gas, and exerts a favorable influence in the absorbtion and decomposition of matters excreted from the roots of plants, thereby preserving the spongioles from the detrimental effects of these putrifying substances. It has also a wonderful effect in invigorating sickly plants, and aids the rooting of plants and shrubs newly transplanted. Its value is not generally appreciated as it ought to be.

HOW TO FEED FOWLS.-- When my chickens are quite young I give them Indian meal five times a day, and when old enough to lay, about a table spoonful of cayenne pepper with their meal once a week, for twelve hens: This, with plenty of gravel, enables them to give near twenty dollars a year for their products.

MARING CHEESE IN WINTER.—A corrospondent of the *Rural New-Yorker* regards the present practice of making it in the summer both absurd and expensive. The winter, he says, is by far the best time to make cheese, because the milk is richer, more easily managed, and there is no danger from flies, or souring of vessels. There is also more time, and milk can be produced cheaper, and of a better quality than in summer.

WINTER BUTTER.—In answer to friend Leonard's inquiry how to make butter in cold weather, I will tell him how I practice. I heat my milk by putting it into a strainer pail, and set it into a kettle of hot water; heat until nearly scalding hot; set it in a cupboard with a cloth hung in front, in a room where there is a fire kept through the day; it will keep from two to three days. I am careful to skim it before it sours; keep the cream in the same room, and as near summer heat as I can. I never heat the cream before churning, but scald the churn before putting the cream into it. I add a little carrot juice to the cream when I churn it. It will puzzle the best judges to tell the butter that I am making this winter from that made in September.

SUCCESSFUL UNDERDRAINING.—A late number of the New England Farmer gives from J. W. Proctor, of South Danvers, the following account of great success resulting from thorough drainage: "The most extensive experiment I have seen was on the Pickman farm, (so called,) in South Salem. It extended over more than five acres of flat swampy land, situated between the Mansion House and the Forest River road. Various attempts have been made, in years past, to bring this land into condition for culture, by throwing it into beds of 30 or 40 feet in width, and excavating a main ditch through the center-all of which very imperfectly relieved it. The present proprietor determined to try what could be done by tile drains; accordingly he procured an accurate survey and level of the field, and employed experts to lay his drains, chiefly of there inch tile, at distances varying from 20 to 40 feet. This has been thoroughly done over the whole field. It was so early done, that the field was planted with the various kinds of vegetables cultivated in this vicinity. The increase of crop over anything before produced on the same land, has fully paid the expense of the draining process in all its parts, leaving the land worth, at least, three hundred dollars per acre-being more than double what it would have been estimated at. A specific account of the entire operation will soon appear in the Essex Transactions, now in press, and for which the first premium on underdraining was awarded by the trustees."

INSECTS ON STOCK.—Well kept stock, housed in clean, well littered. whitewashed stables, are rarely, unless they take them from other cattle, troubled with vermin—but pulverised copperas and sulphur, in the proportion of one teaspoonful of copperas and two of sulphur, with a little salt mixed in half a bushel of meal, given twice a week for three weeks, to 100 head of cattle or hoge, is said to be a complete remedy.

THE TRUE SECRET OF MAKING HOME HAPPY is to have the heart in the right place ; to have the charity to overlook foibles ; to learn to forgive and to forget, and never to be too proud to make concessions-ever, as it were intuitively, with a blind man's instinct, detecting those thousand little things that evince, in silence, a devotion and affection unspeakable. The wife should possess genuine piety ; the useful attainments of life should be blended with the lighter accomplishments, and the attractive amenity of her manners should spring less from the polish of intercourse than from the inborn sweatness of her disposition. She must be a woman true to herself, her nature and her destiny - one daring to break away from the slavery of fashion and the allurements of pleasure, and to seek her happiness in the path of duty alone. She must be sensitive in her piety-a woman self possessed, having the tranquil air of one conscious of her own moral strength, and of the existence of impulse and feelings too sacred to be lightly displayed to a world which has nothing in common with them. and which therefore, in the ark of love at home, gush forth, like a leaping fountain, in all their fullness and glory.

ARTESIAN WELLS. — Many of these wells have been made in California, to procure water for irrigation. By an article in the *Cabifornia Farmer*, it appears that these wells are charged with producing very serious injury by causing the drying up of mountain streams and other bodies of water. The editor says, after mentioning by name quite a number of streams, ponds and lakes that have disappaared, "there are scores of mountain streams and lagoons that in the last few years have dried up, and with them the loss of herbage and the pasturage of tens of thousands of stock."

Mr. Mechi has propounded as a novelty, the great saving (95 per cent) to be

made by employing deep cuts to carry off the water flowing from a higher level. Is this not a part of old E. L. Kingston's system revived. We shall have to make some remarks on this subject in a future number of the Journal. -Ed.

### HOW TO FATTEN CHICKENS.

We make the following extracts from on article on this subject in the London Cottage Gardener, and commend them to our readers :

"It is hopeless to attempt to fatten them while they are at liberty. They must be put in a proper coop ; and this, like most poultry appurtenances, need not be expensive: To fatten twelve fowls, a coop may be three feet long, eighteen inches deep, made entirely of bars. No part of it solid—neither top, sides, nor bottom. Discretion must be used according to the sizes of the chickens put up. They do not want room ; indeed the closer they are, the better, provided they can all stand up at the same time. Care must be taken to put up such as have been accustomed to be together, or they may fight. If one is quarrelsome, it is better to remove it at once ; as, like other bad examples, it soon finds imitators. A diseased chickén should not be put up.

"The food should be ground oats ; and may be put in a trough, or on a flat board running along the front of the coop. It may be mixed with water or milk ; the latter is better. It should be well slaked, forming a pulp as loose as can be, provided it does not run off the board. They must be well fed three or four times per day—the first time as soon after day-break as may be possible or convenient, and then at intervals of four hours. Each meal should be as much and more than they can eat up clean. When they have done feeding, the board should be wiped, and some gravel may be spread. It causes them to feed and thrive.

"After a fortnight of this treatment you will have good fat fowls. If, however, there are but four or six to be fatted, they must not have as much room as though there were twelve. Nothing is easier than to allot them the proper space, as it is only necessary to have two or three pieces of wood to pass between the bars and form a partition. This may also serve when fowls are put up at different degrees of fatness. This requires attention, or fowls will not keep fat, or healthy. As soon as the fowl is sufficiently fatted it must be killed; otherwise it will still get fat, but it will lose flesh. If fowls are intended for the market, of course they are, or may be all fatted at once; but if for home consumption, it is better to put them up at such intervals as will suit the time when they will be required for the table. When the time arrives for killing, whether they are meant for market or otherwise, they should be fasted, without food or water, for fifteen hours. This enables them to be kept for some time after being killed, even in hot weather."

THE LARGE OR PEAVINE CLOVER.—A correspondent of the Country Gentleman, (E. A. KING, of Cayuga county, N. Y.) after alluding to the partial failure of the grass crop the past season, thus alludes to this clover :

"Farmers who seeded with the larger kind of clover, were exceedingly well paid. The season was very favorable for this variety. It stands an early drouth better than any kind of grass. The smaller kind was ready to cut when the larger was green and growing finely. It thus received the benefits of the July rains, and got a fine growth. From a lot of five acres we cut this season 12 tons of as fine hay as a person could wish for. The lot was what is termed Lake land, of a clayey soil. If we had sown the smaller kind instead, we would probably have got about 3 tons. The greatest objection which farmers have to this clover, is its aptness to grow too large, and then fall before fit to cut. This I think can be remedied by increasing the quantity of seed; it will then grow thick on the ground, and will not grow so tall, and therefore will not be so apt to fall. Our stock cat it very readily. To my mind it would be just the thing to raise for the purpose of plowing under."

1 notice an inquiry about Peavine clover by J. A. Lawton. I am of opiniou that it is the variety known here as the German clover. It is sown largely in this county on the thin lands, with timothy. It is too large a growth for our limestone lands, and it grows too long and falls down, and is very hard to mow, but it produces double the quantity of hay. Long and rough as it is, it is eaten clean by cattle and horses, and is easily cured, as it is made after grain cutting; and for pasture exceeds the smaller variety, as cattle will graze on it when loose, where both kinds are sown in the same field. The seed can be had at our warehouses. If any of my brother farmers wish I will attend to having it forwarded to them if application be made soon. W. H. Woodburn. Neurville. Cumberland Co., Pa.

BITUMENIZED PAPER TUBING.—An experiment was recently made under the Great Clock Time, Westminster, for trying the strength, by hydraulic pressure, of a new description of tubing, composed of bitumenized paper, invented by M. M. Jaboureau is a contractor for paving Paris, and other Jaboureau of Paris. towns in France, with bitumenous concrete. It happened in the course of his experiments, that some paper which had been coated with bitumen, was laid aside in a coiled form, and after some time it became very stiff and solid. Pursuing the idea which thus accidently occured to him, M. Jaboureau put several layers of bitumenized paper round a cylinder, and submitting them to internal pressure, he found that a tube a quarter of an inch in thickness was capable of resisting a pressure of 250lbs. to the square inch. The Municipal authorities of Paris tried these tubes for the conveyance of gas, and on the recent experiments made here a piece of tube was produced which, though stated to have been underground in Paris as a gas pipe for twelve months, had the appearance of being a new pipe. The tubes subjected to the pressure of the hydraulic pump, bore a strain of 200lbs. to the square inch without bursting, which is more than they would ever be called on to bear in ordinary use. One of the tubes, half an inch thick, and with a bore of two inches, was also tested by weight, and it only gave way to a pressure of 428lbs., the bearings being three feet apart. was stated that the tubes might be submitted to a temperature of 160 degrees Fahrenheit without any deterioration of the material. The cost of the tubing is said to be less than half that of the ordinary iron piping. Messrs. Paul Joske and Alexander Young are the patentees in this country, (England.)

ARAB HORSES.—Grey of various shades, bay, chesnut and Brown, are the ordinary, and it may almost be said the only colors of the Arab horse. The commonest of all colors is one which I recollect as being very frequent amongst the Arabs met with in India, a dark, uniform nutmeg grey. Light grey, verging upon white, is neither rare nor peculiar to old horses. Next to grey in frequency come bay and chesnut, both fine and rich in quality, and the latter so prized above all other colors by the Arabs that they have a saying that, if you ever hear of a horse performing any remarkable feat, you will be sure to find, on enquiry, that he is a chesnut. Browns are not unfrequent; and in my regis-

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ter of horses brought from the Anazeh, I find one black. But so rare is that color, that, if I had merely trusted to my recollection, I should have said that I never saw a black horse in the desert. Of other colors I saw none, except in the solitary instance of a skew-bald; and I cannot at this moment, undertake to say that he was an Anazeh, or belonged to some of the tribes where the purity of the breed can be less depended on.—" Horse-dealing in Syra, 1854," in Blackwood's Magazine.

**RECEPTS FOR TESTING EAGS.**—There is no difficulty whatever in testing eggs; they are mostly examined by a candle. Another way to tell eggs is to put them in a pail of water, and if they are good they will lay on their sides, always; if bad, they will stand on the small end, the large end always uppermost nuless they have been shaken considerably, when they will stand either end up. Therefore, a bad egg can be told by the way it rests in the water always end up never on its side. Any egg that lies flat is good to eat, and can be depended upon. An ordinary mode is to take them into a room moderately dark, and hold them between the eye and a candle or lamp. If the egg be good—that is, if the albumen is still unaffected—a light will shine through a reddish glow; while if affected, it will be opaque or dark.

SOAP-SUDS FOR CURRANT BUSHES. - A writer in the Indiana Farmer says: I have found the cultivation of currants to be very profitable. By care and attention I have geatly increased the size of the bushes and the quality of the fruit. My bushes are now about six or eight feet in height, and are remarkably thrifty. The cause of this large growth, I attribute in a great measure to the fact that I have been in the habit of pouring soap-suds, and chamber-lye around their roots during the summer season. 1 am satisfied from my own experience, and that of some of my neighbors, that this treatment will produce a most astonishing effect upon the growth and product of the bushes, and would advize others to give it a trial."

# Monthly Meteorological. Begistrar.

8t. Martin Iste Jésus, Canada East, (nine miles west of Montreal.) for the month of January -Latitude, 45 degrees 32 minutes North. Longitude, 73 degrees 36 minutes West. Height above the level of the Sea, 118 fect.

BY CHARLES SMALLWOOD, M. D., LL. D.

Highest, the 14th day, 30'458 inches. Lowest the 21st day, 29'314 $\%$ Monthly mean, 29'861. Monthly range, 1'141. Thermometer. Highest, the 16th day, 46 $^{\circ}$ 4. Lowest, the 3rd day, 28 $^{\circ}$ 4. Monthly mean, 13 $^{\circ}$ 15	ozone was present in inouerate duantity.

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# MONTREAL RETAIL MARKET. -----

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Rye, per minot	<b></b>		0	0	a	0	0
Flax Seed, per minot			5	6	a	6	0
Timothy, per minot	WLS AND GAME.		9	6	a	10	0
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Oranges, per box			0	0	8,	0	0
			0	0	a.	0	0 5
<b>TRHOW</b> , per 10	BREAD.	•••••	0	4	8.	0	5
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White Loaf		••••	0	9	8.	0	0