

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/  
Couverture de couleur
- Covers damaged/  
Couverture endommagée
- Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée
- Cover title missing/  
Le titre de couverture manque
- Coloured maps/  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur
- Bound with other material/  
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

- Coloured pages/  
Pages de couleur
- Pages damaged/  
Pages endommagées
- Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached/  
Pages détachées
- Showthrough/  
Transparence
- Quality of print varies/  
Qualité inégale de l'impression
- Continuous pagination/  
Pagination continue
- Includes index(es)/  
Comprend un (des) index

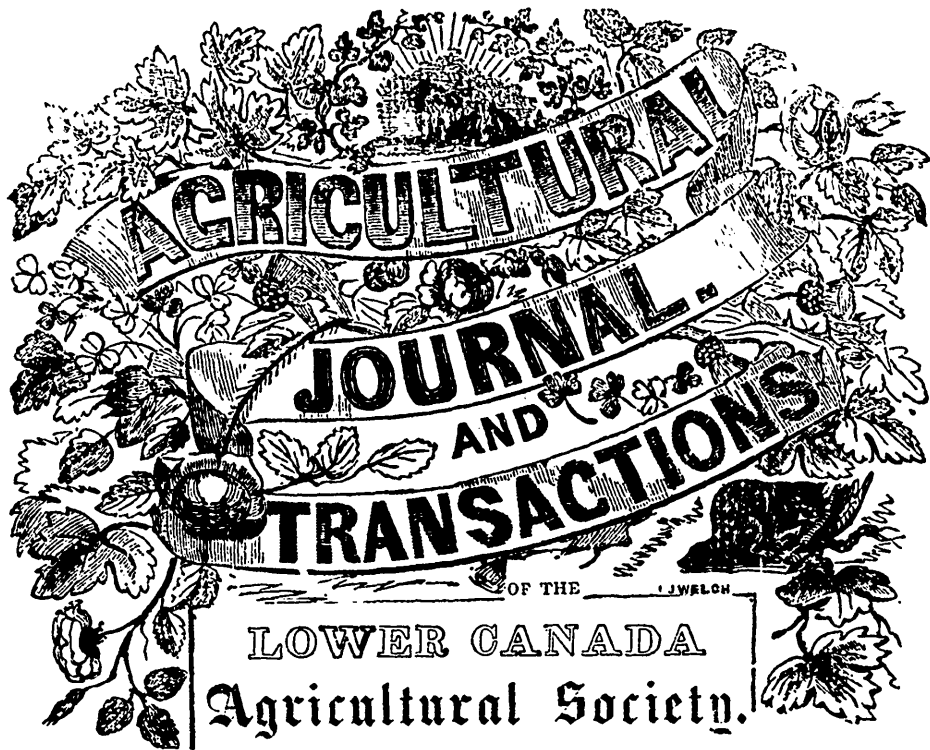
Title on header taken from: /  
Le titre de l'en-tête provient:

- Title page of issue/  
Page de titre de la livraison
- Caption of issue/  
Titre de départ de la livraison
- Masthead/  
Générique (périodiques) de la livraison

Additional comments: /  
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below /  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X



**AGRICULTURAL**  
**JOURNAL**  
**AND**  
**TRANSACTIONS**  
OF THE  
**LOWER CANADA**  
**Agricultural Society.**

Vol. 4.

MONTREAL, APRIL, 1851.

No. 4.

**FLAX AND HEMP.**

We trust that some action will be taken next Spring in the cultivation of these two plants. We have for many years recommended their culture, and urged the necessity of erecting suitable mills and machinery for dressing and preparing the fibre. It is an extraordinary fact, that with water power of unlimited extent, there could not be found one individual in Canada who would venture to expend one or two hundred pounds, in putting up a flax mill that could not fail to be a safe speculation. It is the want of such mills that has deterred farmers from growing flax or hemp. If there was a certainty that they could dispose of the crop when grown, we should see large quantities cultivated. The only means to encourage their cultivation, is the certainty of a market, when grown and secured in the field or barn. This is the plan adopted in other countries. There is no doubt that our climate and soil are favourable for the production of flax and hemp

in great perfection, if the soil is only cultivated properly for it, and good seed procured. A warm climate is favourable for the production of both plants, but the soil requires deep cultivation. The seed produced per acre of flax would be more valuable than a poor crop of wheat. It is a great draw-back in Canada, that we have not parties who will come forward to assist in developing the resources of such a fine country. It is a well understood fact, that the want of flax-mills has prevented the growing of flax in Lower Canada, and notwithstanding, not one has yet been erected. It is very probable that flax will be substituted for cotton to a great extent in English manufactures, and if so, the demand will be increased a hundredfold. But this circumstance out of the question, why not cultivate and manufacture it for our own use, instead of cotton. It would be infinitely better for part of our clothing, and for household

use than cotton. Farmers might use it for most of their clothing for six or seven months of the year. We complain of the backward state of the country, while we neglect to do what is in our power to promote its prosperity.

Since writing the above, we have received a letter from Wm. G. Knox, Esq., of Lachine Mills, on the subject of Flax. This gentleman came from a part of Ireland, where the cultivation and management of Flax is well understood, and his ideas are entitled to attention. He has water power at Lachine, equal, perhaps, to any in Canada, and conveniently situated for Flax machinery. We have no doubt that a Flax crop would pay as well as any other cultivated by the farmer—*provided*, he could sell the produce, when stacked in the field, at a fair price. The assurance of a market is, however, necessary for the farmer, or he will not be induced to cultivate the crop. The importation of seed from Russia and Holland, is also necessary, in order that we may grow the best quality of Flax. Now is the time to take some action on this matter. Even for our own use, the fibre for manufacture and the seed for feeding our cattle would greatly augment the value of our annual production. We cannot understand why we should be so slow in introducing improvements that must be advantageous to the country. We were told some time ago, that in the State of New York, parties purchase the crop of Flax in the field from the farmer, when pulled and stacked, and pay from eight to ten dollars a ton for the straw, which they take to their mills for dressing, and they are said to make it a very profitable business. We have frequently described the cultivation necessary for Flax. In the British Isles, it is found, that lands, not very fertile, will produce a crop of as much value, as the richest soils. The cause of this is, that the richest soils produce a strong, heavy quality of flax that is not much more than half the value of that produced on poorer soil, weight for weight.

Land that has been in grass, well ploughed or dug, and the ploughed surface well pulverized by the harrows, will give a fair crop of Flax, and is not likely to have much weeds. We beg to refer to our last number for an article on the mode of cultivating Flax.

*To the Editor of the AGRICULTURAL JOURNAL.*

SIR,—I take the liberty of requesting you to lay before the Agricultural Board for their consideration, the following communication respecting the cultivation of Flax.

The possibility of cultivating flax in Lower Canada to advantage, is a subject that has often been discussed by farmers and others taking an interest in the welfare of the country.

The chief objection to its cultivation arises from the difficulty the farmer would experience in preparing his crop for market after being raised. It being a troublesome and expensive operation, and that kind of handicraft business not commonly understood by farm laborers.

The objections are now obviated by the new process of steeping and dressing flax, which throws this part of the business out of the hands of the farmer, and into the hands of the flax miller, who also becomes a flax merchant, purchasing the crop on the field from the farmer.

The average price which can be given for flax, is £8 per arpent; that is, £6 for the fibre and £2 for the seed, and this price will repay the farmer better than any other crop he can raise at present.

One flax mill should employ forty people, and would require 500 to 1000 arpents of flax to keep it in regular work throughout the year.

I propose erecting such an establishment at Lachine Rapids, should the farmers of the neighbourhood, and the Agricultural Society offer encouragement by using their influence to induce 100 farmers to sow an arpent each as an experiment, and should that succeed, self interest on both sides, will increase the quantity to the desirable extent, for it is not contemplated that the cultivation would extend beyond five or ten arpents on each farm, so as to make it a rotation crop.

I understand that Brewers, when first in-

roducing their trade into Lower Canada, found a difficulty in getting barley at the commencement, and no doubt, should an establishment for dressing flax be erected, a greater difficulty would be experienced in obtaining the necessary quantity of properly cultivated flax, to make it profitable.

I am therefore in expectation that the Farming Society and others having the welfare of the country at heart, will see that in this matter of dressing flax, the great difficulty the miller will experience, will be to get a sufficient quantity of flax to operate upon, so that his machinery and hands may be regularly employed throughout the year.

As for the explanations on the best method of cultivating, I leave that to the farmers themselves, being convinced that, generally speaking, good wheat or clover land, with which the neighbourhood of Montreal abounds, if deeply ploughed, well raised and well pulverized, and clean of weeds, is all the cultivation that is necessary. I merely suggest one thing, that is, that the Agricultural Society might lend their countenance to the Importation of £200 worth of Russian and Dutch Flax Seed, which could be done through some of the Montreal houses, if they had guarantee that the farmers would take it off their hands. The importation and selling of Flax Seed to the farmers is a regular trade in those countries where flax is cultivated for the sake of the fibre.

The great object to be desired in a flax crop is, fine quality of fibre, and the stalk as long as possible before branching or forking. Canadian and American flax seed grows too short, and branches too soon—though it might do if well cultivated, and no other seed could be got for the present season. But if the subject is taken up, more particular instructions for its cultivation in every stage, can be given by yourself, better than I can pretend to.

I have the honor to be,

Your most obedient servant,

W. J. KNOX.

The communication of a "Constant Reader" refers to subjects that have a great influence on the farmer's business, and profits. We were accustomed before we came to this country, to have the grain

and flour market opened at a regular hour, of which notice was given, by the ringing of the market bell, and if any produce was sold before that notice, the owner was liable to a fine; indeed, no sales were allowed of any article, until the ringing of the market bell. It might, however, be inconvenient to establish such a regulation in this country. Perhaps it would be sufficient that the markets should close at a given hour, and that all articles remaining unsold at that hour should be removed. There is a most injurious waste of time by the farmers, in consequence of the market continuing open from daylight in the morning until the night. If there was a limited time for buying and selling, parties who required to purchase would find it necessary to come within this time, and the farmers would find it their advantage to sell their goods within the time prescribed. This would be a much preferable mode of doing business for both buyer and seller, to the present system of the buyer endeavouring to tire out the seller, by keeping him in the market the whole day. This is more particularly the case in the hay market, where the sale of hay is generally delayed to a late hour, causing a waste of time to the farmer, and injury to his horses, which together is a serious drawback upon the price he receives for his hay. The hay, and other markets, we humbly conceive, should close at an early hour in the afternoon, and give the farmers an opportunity of returning to their homes in reasonable time. We do not see that such a regulation would be unjust to any party. If one party would have to buy in a given time, the other had to sell within the same time. Any regulations that would lessen the waste of time, without injury to any one concerned, must be beneficial in Canada, and we hope this subject will receive due consideration in the proper quarter, that can adopt a remedy. Let the markets open as early as possible, but let them close at two or three o'clock in the afternoon.

The next subject to which our cor-

respondent refers, is the appointment of salesmen, as in the old countries, for the sale of cattle and sheep in our cities, and market towns.

There is no question that this plan would have many advantages, provided competent and trust-worthy salesmen were appointed. Under the present system, the farmers bringing fat cattle or sheep to market are completely in the power of the buyers, and are obliged to sell for whatever prices may be offered, as they cannot keep over the animals, or remain in town at expense, to sell, perhaps, only a few pounds worth. When there happens to be an over supply in the market for the demand, farmers have to make great sacrifices, rather than bring back their cattle to their own homes. If there was a salesman, who should necessarily have suitable accommodation for stock, any stock that could not be disposed of at reasonable prices, might be kept over until the market would be more favourable for disposing of them. In every other business and trade, parties can hold over their goods until they obtain what they consider fair prices, unless forced by necessity to sell, but the farmer who comes from a distant part of the country has to sell, at whatever price is offered, and there is no chance of fair competition, because if an offer is once made, no higher price will be given by any other party. Farmers near market who may have fat animals to dispose of, seldom take them to market, but have buyers to come to their places and purchase. In this case, a farmer requires no salesman, but can sell for himself, as he is not at the mercy of the purchaser while his animals are safe in their stalls or on their pastures. Every assistance should be afforded to farmers, to enable them to make the most of their produce, and the suggestions of our correspondent, are entitled to obtain due consideration, and action should be taken upon them without delay, if they would be likely to prove beneficial to the agricultural interests. No other parties could complain

of any injustice towards them by the appointment of salesmen. As our Correspondent suggests, ample security should be required from salesmen, before they would be licensed to act in that capacity by the city authorities. The last suggestion of our correspondent for the monthly or quarterly meetings of farmers for the discussion of subjects connected with agricultural improvement would only be following the example of our brother farmers in the British Isles, and could not fail to be advantageous, in many respects. Those meetings are numerous attended in Britain, and if they were not found to be interesting and beneficial, farmers would not attend them. We cannot follow better examples in anything connected with agriculture, than those of the countries where agriculture is brought to greater perfection at this moment, than in any other part of the earth's surface.

—

*To the Editor of the Montreal Agricultural Journal.*

SIR.—I embrace the opportunity offered by your columns of bringing before the agriculturists of the district, something I consider for the general good, the result of 20 years experience in Lower Canada.

1. The want of proper regulations in the grain and flour market.
2. The entire want of salesmen for disposing of farm produce, particularly for the *sale of live stock*, by private bargain on payment of a reasonable per centage upon the amount of sales.
3. The want of monthly or quarterly meetings among farmers, as in some part of Upper Canada for mutual improvement in their profession.

The first of these in my opinion might be remedied by the Town council of Montreal, by their adopting the practice followed in Dalkeith (Scotland) market which is an extensive grain market: there no samples or bags are allowed to be shown or opened before the market bell rings, say at 9 A. M., under a fine, and nothing to remain on the market after 12 or 1 P. M. on market days, say 2 days in the week, in which short space of time

all the business now scattered over 6 days in the week from sunrise till dark, could be despatched and to better purpose.

2. The want of salesmen exposes farmers to the combinations of buyers of different kinds of produce, whenever good roads or any other cause brings an unusual quantity of any given article upon the market. At such times, if the vendor does not take the first offer, *whatever it may be*, for what he has for sale, they lay their plans so that the next offers are less and less. In this way farmers have to part with their produce at a great loss, as the expense of remaining in Town and the necessary neglect of business at home, compels them (instead of handing it over to a salesman whose interest it would be to sell to the best advantage,) to make sale often much below the cost of produce, this is particularly the case with live stock. Now Mr., Editor, I would ask you and your readers, if this is the way to encourage enterprise among farmers in supplying our market with good articles of produce; would it not be better to adopt the mode practised throughout Britain, of employing salesmen, who reside upon the spot, know the real state of the market, and the true value of what is intrusted to their care, which the owner (perhaps a stranger from a distant part of the country) could not possibly know. The farmer had better pay a reasonable percentage to such a person than run the risk of selling his produce far below real value, which he may not be aware of till too late. To establish such salesmen I humbly think the different Agricultural Societies in this District should bestir themselves; a union of them for this purpose to employ such men, and if necessary, a small subscription from each to ensure sufficient support for the first year or two would accomplish the matter.

3. This subject could very properly be taken up by county Agricultural Societies, Farmers' Clubs where each member communicates his experience, would be a mutual benefit, and we have good authority for believing that in a multitude of counsellors there is wisdom.

I hope some of your numerous Subscribers will take the trouble of stating their views on the above proposals, which may perhaps

arouse farmers not only to think but act in these matters.

I am,

Sir,

Your most obedient Servant,

A CONSTANT READER.

21st February, 1851.

We are very glad to hear once more from our Correspondent, Mr. Wm. Boa. His communications are always acceptable, because they are practical, and to be relied upon. This is a character that in numerous instances does not belong to communications we see published in Agricultural Periodicals. Practical farmers, however, are not to be imposed upon by exaggerated statements, although they certainly may do much harm with Agriculturists who may not be able to discover their fallacy. We should be delighted to hear from practical farmers on practical subjects—and as we know that we have many excellent farmers in Lower Canada, it is ungenerous of them to withhold their assistance to make this Journal more useful to their brother farmers, who may need information and suggestions on Agricultural subjects.

VIRTUE ROADHEAD, Feby. 24, 1851.

SIR—I have seen the first and second numbers of the forthcoming volume of the Journal, and feel highly pleased with its greatly improved appearance. I trust those improvements will greatly increase your list of subscribers, as well as contributions to the pages of the Journal, by many of our best practical farmers in both sections of the Province; these results obtained, the Journal would, for all practical purposes, be the most useful Agricultural paper we could take, as far as Eastern Canada is concerned. You have often expressed your surprise and inability to account for the backwardness of your brother farmers, in assisting to carry out and accomplish the ends for which the Journal is published. Now, sir, we acknowledge that you have good reason to complain on this score. We are led by all we can

learn, that there are scarcely any people in the world that pretend to any degree of civilization, who manifest such an unaccountable indifference to Agriculture as ourselves, and this to the business in which a great majority of our people are engaged. If we take up a British, or an American, or even an Upper Canada Agricultural paper, we find a great many original articles by practical farmers, showing their own practice and experience, thereby creating action, and diffusing knowledge that cannot fail to prove useful to themselves, and greatly encourage both editors and publishers of Agricultural papers, when they find that those for whom they are labouring are interested in the work as well as themselves. I think it must be a weary business to sit down to select from foreign papers, or forge from your own brain materials to make up the Journal, while at the same time you must be convinced from the difference of climate and other circumstances that your selections are not directly applicable to our own country, whose Agricultural prosperity you appear to have so much at heart. Why you have so few correspondents may be partly accounted for by the want of education amongst us, yet there are many excellent farmers scattered all over the country who are very able, and might yet find it turn out to their own interest, to communicate their knowledge for the sake of their less informed neighbours, and the country in general. We have heard it whispered that motives of self interest keep many from lending a helping hand here, alleging that there would not be a market for our produce if all the farmers knew their business equally well, and that we have not remunerating prices for our produce at present rates. Now, sir, if it be true that there is any farmer who holds such opinions, I think he is guided by a miserable, short-sighted policy, who does not know that where the "carcass is, there will the eagles be gathered together." Let us set about putting this country in a position to sell as cheap as any other, and if possible cheaper, this can only be done by adopting a judicious system of Agriculture, thereby creating a great surplus of produce in the country. Let the world have free access to our markets and us to theirs, we might perhaps see the French Eagle stretching his

wings across the Atlantic in quest of our surplus produce, and giving in return many of the comforts of life which the farmers of Canada would then have as good a right to as any one else. Or the American Eagle in taking a turn over our waters, might shake from his wings a little of the gold dust of California, in lieu of which he might pick up eggs, or oats, or chickens, or horses, or any thing we had to spare, that might suit his taste. While our own respected Mother will continue to stretch her fostering and protecting wing over us, and call us her noble and dutiful brood. You will allow me to record my approbation of the firm stand you have always taken in defence of Lower Canada, as an Agricultural country, in defiance of all that is said against it. I cannot convey my own views on this point, better than in the words of a comic song I used to hear sung long ago. It was not the bonnet, but the head that was in it, made a body talk, &c No one can deny that there are a good many farmers of all origins in Lower Canada, who during the last twenty years have greatly improved their worldly circumstances, but those are contented silently to enjoy the fruits of their skill and industry. But on the other hand we have known parties who had acquired capital in business, who, tired of bales and books, must needs go a farming. These seldom if ever succeed; they generally want practical skill in conducting the business of the farm, or patience to wait for the return of capital expended, the consequence is, that in one year or two they give it up, and raise a hue or cry against the country and farming. I knew a gentleman who went farming some years ago, who, on being asked how he liked the farming, replied that he liked none of it, that he was obliged to work like a slave in summer, that his hogs might be gentlemen in winter. I do not believe it necessary that Canadian farmers should work like slaves, but like intelligent freemen, making hogs and every other creature on the farm as comfortable as possible, these in return will assist in making the farmer a gentleman, at all events making him more comfortable. Still there is no use in denying the fact that the Island of Montreal, with a soil well adapted for the growth of wheat, has not yielded last year an average of five minots per arpent.

This is such a woful account of our condition that I feel rather ashamed to mention it, and fear that you will either think I am jesting or that my information is not correct. This information I acquired from the owners of thrashing mills, who have been moving from barn to barn since last harvest, and have had every opportunity of ascertaining the fact, and upon whose veracity I can depend. They mention one farm that used to be a first rate farm for wheat, that had forty minots of wheat sown upon it, and yielded only sixty-five, and many others little better. We hear every kind of reason given for the failure but the right one, such as bad years, bad luck, bad degenerating seed, &c., but very seldom bad farming. Now we think this last could be easily proved to be the principal cause, as there are individual farms here and there all over the Island that could show a very different account respecting their crops, but these have been cultivated in a different way from that generally in practice. I think the reason why we have so little wheat is because we sow so much of that, and other white crops, thereby exhausting the fertility of our farms and rendering them comparatively barren. I have extracted the following sentence from a lecture by Henry Youle Hind. No farm can continue to produce grain growing crops on a greater surface than one third of its cultivated extent for many successive years without diminishing greatly its produce.

This sentence ought to be printed in large gilded letters and posted up at every cross-road in Canada East and West; it would keep us Eastern Canadians in remembrance of our own sins and the sins of our fathers, and be a warning to our Western friends. Mr. Hind's statistics shows that they are cultivating under grain crops forty-seven acres in the hundred. If their sins do not find them out their iniquity will certainly be visited upon their children. Now I do not believe that this or any other generation of farmers, had or ever will have a right to impoverish any succeeding generation, by robbing the earth of its fertility, or to leave the world in a worse condition than they found it.

I think you have done well in laying before your readers a catalogue of the kinds of wheat sown in Scotland, and hope that your

suggestions will be carried out, the introduction of some of the rapid-growing, spring varieties may prove of great importance to Lower Canada. But in case of your suggestions not being carried out or any mistake taking place in the selection, which would be no uncommon occurrence as I once sowed wheat that the seedsman warranted to be spring wheat which took fifteen months to ripen from the day it was sown, and the sample consisted of three different kinds and all ripened at different times, now to avoid such disappointment I think we might do something for ourselves. I am determined to try it in this way. I have collected as many kinds of the early spring wheat as I can lay my hands on. I will prepare a piece of land on which the seeds are to be sown dividing the land into as many equal parts as I have different kinds of seed. I will sow the same weight of seed on each portion of land at the same time and treat all in the same manner marking the progress of the growth of each recording the time at which each kind ripens, and weigh the produce grain and straw together, and the grain after thrashing. By such experiments as this we may ascertain which varieties would be most profitable for us to cultivate. You may tell me that this will prove nothing beyond the farm or the immediate vicinity of the farm where the experiment is made. There may be some truth in this but there is nothing to hinder some farmer or farmers in every county in the province to try the same thing and Report through the columns of the Journal, which I feel certain you would willingly appropriate to such communications. And also by showing the different samples at our district and provincial Exhibitions both thrashed and in the straw. In connection with this I give the results of an experiment I made last year on twenty three pounds of wheat I selected in the ear from a mixed lot. It was sowed in drills twenty-seven inches apart, my object being rather to increase the quantity of seed than to obtain a large crop from the land. The land was manured and prepared in every respect as for green crops, the seed was sown in proportion of thirty pounds per arpent. It yielded thirty-eight pounds and eighteen ounces to the pound sown, and in proportion of twenty minots and one gallon, per arpent. It is known as Webster's wheat, it belongs to the velvet or



woolly eared species, is an exceedingly rapid grower, a considerable portion of it six feet high; it was sown on the twenty ninth day of May. I examined it on the tenth of June and found the beard or seed leaf seven inches long and laying flat on the ground, the second blade just making its appearance. I examined it again on the fifteenth and found the second leaf about one inch longer than the first; the coronal roots had struck and grown to a considerable length and some of the most forward plants had put up a second stem. It came into ear about the end of July and was reaped between the fifteenth and twentieth of September, showing no symptoms of disease or rust although it grew in a very exposed situation being quite near to a swamp. I sowed a few rows of black sea wheat along-side at the same time, which ripened nearly two weeks sooner and was evidently attacked with rust. I have had both kinds made into flour at the same time and baked in the same way in the same oven. We have shown the loaf made of both kinds to many of our neighbours who invariably pronounced the loaf made of the Webster wheat the best. I think this kind well worth the attention of farmers at present.

I dare say, Mr. Editor, you are quite out of patience with me by this time. I am sorry that I cannot plead in extenuation of my bad writing my superior farming as is quite common for men of my class to do, still I could plough a ridge in such a way that the harrows will hide most of its defects.

Your humble servant.

WILLIAM BOA.

The communication of "Montreal," will be found in our columns. Perhaps it would be better for us to wait for "Montreal's," next letter (which he promises,) than to offer any observations at present. We cannot, however, refrain from observing, that the Lower Canada Agricultural Society have as useful a vitality for the advancement of Agricultural improvement, (although they had not yet any "Great Exhibitions,") as any District or Country Agricultural Society in Lower Canada. This, we believe, may be readily proved by letters and reports in our hands from all sections of Lower Canada. We wish

it to be distinctly understood, that we have no desire to create prejudice against other Societies, in any reference we have occasionally made to them, in this journal, we only objected to the arrangements at the Exhibitions, and in some instances, to the modes of distributing premiums. We also conceived that in every instance, all the means that were possible, were not adopted to produce improvement *where most required*, and that a large portion of the funds of Societies were frequently appropriated by parties who required no encouragement to practise a good system of husbandry in preference to a defective system. If those funds were derived from private subscriptions, every Society would have an unquestionable right to distribute them as they thought proper. But when two-thirds of the funds are *Granted* by the Legislature, for the encouragement and improvement of husbandry, where bad systems are practised, we conceived that all Agricultural Societies should be governed by these considerations. We can assure the readers of this Journal that the object of the Lower Canada Agricultural Society was to promote the improvement of Agriculture, *generally*, throughout Lower Canada, and the only means at their disposal to communicate their advice and suggestions to every section of the country, was by the publication of this Journal, which has been sent to every parish in Lower Canada, and certainly the results are reported as very favourable.

*To the Editor of the Agricultural Journal.*

Sir,—Though not personally engaged in agricultural pursuits, I have nevertheless invested all my little capital and employed whatever skill I possess in the acquisition and improvement of a farm. But besides the personal interest I have at stake in the success of Agriculture in Canada: believing that with Agriculture this country must either rise in the scale of prosperity, or, sink even lower than it is at the present, I feel a very deep interest in every measure tending to de-

velopo its Agricultural resources. Actuated by these sentiments I read with no small degree of surprise, your correspondent "Quebec's," letter published in your last Journal. Your correspondent seems to regard "Exhibitions," as the very life and soul of all Agricultural improvement, and having taken pen in hand to "discuss the best means to adopt in order to promote the improvement of Agriculture in Lower Canada," he confines his remarks entirely to exhibitions, and I should have allowed him to exhibit any amount of self-sufficiency he pleased nor presumed to disturb his fanciful dream, of highly qualified and scrupulously honest Judges exhibiting their extraordinary skill in deciding that very nice question which seems to lie at the very threshold of Agricultural improvement viz., The respective merits of "Lincolnshire Long Wools," and "South Downs." But, Mr. Editor, when I find this "advocate" of "Exhibitions" who declares that without them "you can have no permanent Agricultural improvement" recommending a "petition to the Legislature to do away with the County Societies altogether" by which no less than seventy or eighty Exhibitions, annual, or semi-annual, would be blotted out. I am forced to the conclusion either that "Quebec" is labouring under some Lunar hallucination or that notwithstanding his professed friendship to Agriculture, and well clad as no doubt he is in Lincoln long wool; he is nevertheless an animal well known to our backwoodsmen, as having a peculiar relish for South Downs. The correctness of these conclusions I propose to establish by the evidence of your correspondent himself. For while he proposes to despoil the County Societies "on the ground that the Counties do not contain within themselves persons competent to conduct a Society, the total absence of the requisite number of judges, and that these Societies are too local and too much under the influence of party to be of much public advantage." I should like to see how the County Members would hide their diminished heads when "Quebec" brings forward his "petition" based upon such incontrovertible facts. And justice might well be pardoned should it look confounded while he gazed upon two faithful portraits which the petitioner has drawn of the two regenerating Societies who are to work the mighty change,

and to whom the Sums now annually spent in the counties should henceforth be confided. The first is the "District Shows," and their claims upon the public, Quebec thus establishes. "But it is too well known that these shows are conducted in a most ignorant and inefficient manner," and this "well known" fact he places beyond doubt or cavil, for, says he "in this neighbourhood I can answer for this." And your Journal for November is adduced to prove that "The District of Montreal appears to be in an equally benighted condition." Such, if Quebec has told the truth, is the condition of one of the Societies by which Agricultural improvement is to be effected and to whose upright and *enlightened management* he would confide a large amount of the funds to be withdrawn from the Counties. But, Sir, if Utilitarians or sober unsophisticated Farmers should harbour a lingering doubts respecting the benefit to be derived from "District Societies" they must be incredulous indeed if any doubts remain after they have considered the condition of the other Society from which much more important results are promised. It is "the Lower Canada Agricultural Society" and according to "Quebec," it is either totally defunct, or in a state of hibernation from which a division of the spoil from the County Societies might haply resuscitate it at least during the Summer months. "Let the Agricultural Society of Lower Canada arise from its lethargy, show symptoms of vitality, and by the aid of such an influential body much may be done!! Another principal advocate of Agricultural improvement—the alternating system by which "Sherbrooke, Montreal Three Rivers and Quebec" would in turn divide the prey and "show symptoms of vitality," which would act as a model of good management &c." Now it would be difficult to determine whether this sublime idea has been derived from agriculture or from our political state. Rotation of Crops, is good, rotation of Parliaments doubtful, rotation of Agricultural District Societies tried and condemned by "Quebec." And Quebec has himself condemned county Exhibitions and alleges their deplorable ignorance and "benighted condition." I shall now briefly notice the "Grounds &c. 1. The counties do not contain within themselves persons competent to conduct a Society."

2 "Total absence of the requisite number of Judges." 3. County Societies are too local and too much under the influence of party." Upon these three capital charges Quebec has convicted the county Societies. The district Societies he considers "most ignorant," and benighted. And the Agricultural Society of Lower Canada in a lethargic state so intense as to show," no "symptoms of vitality." What a brilliant prospect for Canada. Now, Mr. Editor, either the picture drawn by your correspondent is true or it is not, if true, justice and wisdom would both decide that inasmuch as the County societies would appear by your correspondent to be in the most efficient condition, the public grants should be withdrawn from the other two, and equally divided among them, fearing that I should occupy too much space in your Journal I shall reserve any further remarks upon this subject till your next issue, when I too shall attempt to discuss the best means to adopt in order to promote the improvement of Agriculture in Lower Canada.

I have the honour to be,  
Mr. Editor,

Your very obedient servant,  
MONTREAL.

#### ST. HYACINTHE AGRICULTURAL SOCIETY.

We are glad to perceive that an Agricultural Society has been organized at St. Hyacinthe, the report of which, we give below. From the officers that have been elected, we have no doubt this society will be active in the cause of Agricultural improvement, and we wish them every success in their laudable object. The society, we understand, takes 12 numbers of this Journal, and there are 9 numbers taken for the schools in that parish. This is something like encouragement in one locality, and as the Journal is altogether devoted to Agricultural subjects, the subscribers take it upon the principle of its being an Agricultural publication, and of Canadian manufacture. This is something like patriotism, although farmers may subscribe to as many other Agricultural publications as they may feel

disposed, but upon the principle they generally advocate, they should undoubtedly subscribe to this Journal unless it is utterly unworthy their support, and calculated to do them injury, rather than benefit. We make this statement though not interested personally in the matter.

ST. HYACINTHE, 10th March, 1851.

MY DEAR SIR,—I have the pleasure to inform you that, at a meeting of the School Commissioners of this parish, over which I had the honor to preside, held in January last, it was unanimously resolved to introduce the Agricultural Journal of Lower Canada into every school of the parish, and the Secretary was instructed to subscribe for *nine copies* in the name of the Commission.

It is with no less satisfaction that I also inform you that, at another meeting of the Agricultural Society for this County, of which I have the honor to be the President, held on the 8th instant, it was also unanimously resolved to encourage throughout the County the circulation of the above valuable publication, and in order to suit the action to the word, it was proposed by Mr. Morison, seconded by Mr. Perrault, and carried unanimously, "That the President be and is hereby authorized to subscribe for *twelve copies* of the Agricultural Journal of Lower Canada for the use of the members of this Society.

These, Sir, are facts on which you are at liberty to comment. If this example was followed by the municipalities, the Agricultural Societies and the School Commissioners, throughout the Lower Province, you may well imagine what would be the immense circulation of the Journal in question, and the advantages bestowed on our country population at a comparative trifling expense; for I maintain that every incorporate body above alluded to, might apply, with credit to itself, a trifling part of its funds, towards spreading agricultural knowledge throughout the Province.

This letter, my dear Sir, is at your disposal, to enable you to draw your inferences on the

facts therein contained, and publish it if you think it may be useful.

I have the honor to be,  
My dear Sir,  
Your's very truly,  
P. E. LECLERE.

Wm. Evans, Esq.,  
Montreal.

At a meeting held at the Court House, St. Hyacinthe on Thursday the 20th day of February, Instant, for the purpose of Electing officers for an Agricultural Society for the county of St. Hyacinthe, Dr. Bouthillier, Senior Justice of the Peace, for the county, then present being Chairman, &c., Delorme was requested to act as Secretary, and the undernamed Gentlemen were then Elected as follows:—

President, P. E. Leclère, Esq.,  
Vice President, M. Joseph Poulin,  
Secretary, Ovide Désilets, Esq.,  
Treasurer, P. C. Perrault, Esq.,

Members—Moysse Préfontaine, Simon Levasseur dit Bélisle, Michel Frégeau, Frs. Chatier, Pierre Gaudron dit Larochelle, André Gauthier, D. G. Morison, esq., David Bertrand, Narcisse Blais, Thimothé Brodeur, J. Bte. Durocher, Pierre Chartier, jun.

Leonard Boivin Esq., having been requested to take the chair, the following resolutions were unanimously adopted.

*Resolved*—On the motion of P. E. Leclère Esq., seconded by P. C. Phaneuf, Esq.

That the thanks of this meeting be presented to Thos. Bouthillier, Esq., for his dignified conduct in the chair.

*Resolved*—On the motion of L. Taché, Esq., seconded by R. C. Després, Esq.

That the proceedings of this meeting be published in the public Journals.

L. DEORMLE,  
Secretary.

We give insertion to the communication of "Un Ami du Progrès Agricole," a correspondent at P'Islet, and we can assure him, that it affords us the greatest satisfaction to hear that Canadian farmers, headed by their clergy, are determined to adopt measures that cannot fail to produce the improvement of agriculture at P'Islet. We heartily wish that the clergy and rural population of every parish in Canada were to act as they have done, and are about to do, at P'Islet. This would be a move in the right direction, and with a certain prospect of success. There is no man who is

capable of understanding the real condition of our agriculture, who must not be convinced how much it requires amelioration, and that its profitable amelioration is possible, and by no means difficult to accomplish, provided we set about it in good earnest and in a proper manner. It is a great point gained to know that improvement is required. When this is clearly understood, we must suppose that endeavours will be made to introduce improvement. We would not by any means recommend what is understood as high or expensive farming, but such improvements as are manifestly required in our system of husbandry to make our crops and our stocks remunerating. When we prove the advantages of doing this, we may then attempt to make further progress in the art of agriculture. Experience will make us more capable, and create a desire to practice a perfect system of agriculture. If a good commencement is once made, there is not the slightest doubt of satisfactory progress.

The Cheviot breed of sheep which our correspondent inquires about, are much esteemed in Scotland for their hardiness and adaptation for hill pastures. Their carcase, when fat, will weigh generally from 12 to 15 lbs. a quarter, the wool is of medium fineness, and seldom exceeds 3 lbs. the fleece. They are better calculated for running at large over an extensive pasture, than for such confined pastures as we have in Canada, and we believe it would be a difficult matter to confine them in our pastures. They are often crossed with the Leicester breed in Scotland, and found to answer well. We would recommend our correspondent rather to try to improve the native breed of sheep by importing a ram than by importing ewes, as much the least expensive mode. There are good breeds from imported sheep to be had in the neighbourhood of Montreal, and by selecting the best ewes of the native breeds of sheep to put to rams of a good description, useful sheep can be had by this cross, that would be very

suitable for Canada. We have seen a cross between the Leicester and Canadian sheep of excellent quality, large carcase, well woolled, and suitable for our climate. Of course, in breeding sheep, selections of the best ewes should be made, and all the inferior sold to the butcher. We never can have choice flocks of sheep or herds of cattle, unless we adopt this plan. The Chinese and Berkshire breed of pigs make a very good cross, and we have many fine pigs in the country to breed from, but the native Canadian breeds of swine are a very inferior race and we would by all means recommend better breeds to Canadian farmers, which can readily be had about Montreal, and other places. We shall refer to this subject again.

—

*To Wm. Evans Esq., Editor of the Agricultural Journal.*

Sir,—You will no doubt learn with pleasure, that at the suggestion, and by the exertions of the Curé of our parish, a Society for "Agricultural discussions," has been formed in the parish. The Society is composed of all the educated persons in the place, and also, of all the farmers who may be willing to unite in it. There is no exclusion, as the only ticket of admission is ability, and inclination to be useful in discussing Agricultural subjects. We have a President, (the parish Curé has done us the favor of accepting the charge,) a Vice-President, a Secretary, and assistant Secretary—and a Committee of twelve members, chosen in the different sections of the parish. This Committee have the charge of preparing in advance, the various subjects to be discussed at the meetings, and each member is expected to bring before the Society the exact state of Agriculture in his locality.

In some instances, we have had as many as 125 persons present, some of them coming more than six miles to the meeting, which takes place in the evening. I think this is an excellent means of spreading Agricultural science, and of promoting Agricultural improvement. I would like to see such Societies in every parish—and it could not fail to induce the Canadian farmer to consider his condition, and adopt a mode of cultivation more in harmony with his wants, and more suitable for this soil and climate. A great number of the most assiduous of our members, are determined to put in practice many improve-

ments which have been suggested to them. Those changes and ameliorations will not fail to be followed by others; for, as you said in a late number of your Journal, the Canadians are imitators, and thus from neighbor to neighbor those improvements will spread all over the parish, and would all over the country, if similar Societies were established in every parish. The Societies are the more easy to be formed as they do not require any money. Good-will and the assistance of those who are the best educated, is what is required, to encourage all farmers to unite and become members of the Societies.

We have first taken care to apprise our farmers of the necessity and utility of extracting from their farms all that is required for the comfortable maintenance of themselves and their families, and that they should rather encourage domestic manufactures for their own use, than expend the means of improving their farms on the purchase of foreign productions. The advantages of draining, manuring, and cultivating root crops have been discussed, also improving the breed of sheep, and we are now commenting upon the pamphlet of His Excellency the Governor General. Practical men have assured us they have found a sure means of raising sound potatoes, and in a greater quantity, others have suggested the means of preserving them sound in the cellars by sprinkling powdered lime or charcoal over them.

If you ask me from what source we draw these notions on these particular subjects—my answer is, that it is from your treatise on Agriculture and your Journal, which is received by about twenty persons here. As to your Journal, I hope I may be permitted to suggest to you to put at the head of each member, a summary of the different subjects treated of in it, and also an alphabetical table at the end of each year. That would give the reader the facility of referring to any article at once which he might require to peruse for information or instruction.

Could you give me any information in your Journal, where the Leicester and Chiviot breed of sheep can be got, and what might be the price? Would it be better, from the principles expressed in page 118 of your treatise on Agriculture, (French copy,) to purchase a male or a female of these breeds? I beg to make the same enquiry respecting the breed of Swine, known as the Berkshire, and Chinese, which would you recommend?

Yours, &c.

UN AMI DU PROGRÈS AGRICOLE.

L'Islet, February 1851,

The preceding communication was translated from the French.

*To the Editor of the Agricultural Journal.*

Sir,—In answer to the call you make to the Agricultural Societies of Lower Canada of informing you, whether there are minor branches of Societies, and what they are, I have to tell you, that the Society of the second division of the County of Saguenay, established at the instigation of only a few friends of these Societies, is in existence only since the month of February 1850. These gentlemen knowing the advantages it would confer on this locality, have not been stopped by the numerous difficulties they have met at the beginning. They are happy to be able to say that, notwithstanding the short time it has been in operation, the scarcity of money, and the small quantity of land fit for cultivation, their exertions have obtained the most satisfactory success. It has been easy for us to see it in the first exhibition, which permits us to anticipate the most encouraging prospects for the one which will follow. Our Society reckons as one of its members, His Excellency the Governor General, who has honored it with his patronage, and it is composed of the following members:—

- P. C. L. Dubois, President.
- J. Kane, Treasurer.
- J. S. Surlant, Secretary.
- L. T. Brousseau, Assistant-Secretary.

Twelve other farmers, six members of the clergy, the member for the county, the seignor of Malbay, part active, and part honorary members.

Upon a subscription raised, His Excellency has been pleased to order the issue of a warrant of £70 2s 6d., which is expected daily.

Sir, I have the honor to be,  
Your most humble servant.

J. C. L. DUBOIS.

*To the Editor of the Agricultural Journal.*

Sir,—For the benefit and information of young farmers, will you permit me to enquire, through the columns of your valuable and well conducted Journal:—

1st. Which of the two roots—mangel-wurtzel or the Swedish turnip, is the best for feeding milk cows in the winter season, to make them produce the most milk; and which of the two roots will fatten a cow or an ox in the shortest time, fit for the butcher and make the best beef!

2nd. Which is the best time of the year for the application of plaster of Paris as a manure; and what sort of soils does it suit best; and, what crops is it most beneficial

to; and, in what quantities should it be applied per acre, and, how long will it last?

A YOUNG FARMER.

Ste. Foy, County of Quebec,  
March 14th, 1851.

In reply to "A Young Farmer," as to which mangel-wurtzel, or Swedish turnips are the best for feeding milk cows in the winter season to make them produce the most milk; or which of the two sorts will fatten an ox or cow fit for the butcher in the shortest time,—We believe that mangel-wurtzel will be found best and most profitable for milch cows—and will not give any ill taste to either milk or butter which turnips of any variety, generally do. We believe also that mangel-wurtzel is a more certain crop, if put in carefully and in time, always having plants growing in a seed-bed to fill up any want of plants in the field drills. If stored dry and sound they will, perhaps, keep us well as Swedish turnips. For fattening, however, we should prefer Swedish turnips, but it is a good plan to give mixed food to cattle when fattening, and an occasional change from mangel-wurtzel to Swedish turnips will be found beneficial. One feed in the day of ground oats, barley, beans, or peas, will be found to hasten the fattening of cattle, and greatly improve the quality of their flesh, and increase the quantity of their tallow. This latter kind of food is particularly beneficial in our cold climate, as it keeps up the heat of the animal's body, better than roots will do alone.

With regard to the application of gypsum or plaster of Paris, it cannot be applied too soon after the commencement of Spring. On clovers it always has a good effect, but on old meadows, we believe, it has not much. The quantity applied per acre should be as much as the farmer can afford, from half a barrel to a barrel. It is said to be a good application as top-dressing to young wheat, barley, and oats, but not having any certain reports of the results of experiments made, we cannot say how far the expence

of the application would be prudent. For Indian-corn we need not repeat how greatly it is recommended. We have applied it to potatoes and we have no doubt that it produced a more luxuriant growth of tops, but whether it increased the quantity of tubers we could not say. We beg to refer our correspondent to what we have stated on this subject in another column.

*To the Editor of the Agricultural Journal.*

Sir,—Your number of last month has particularly attracted my attention, as generally interesting, but as a resident, practical farmer of the District of Quebec, it is right for me to feel more interested for HOME, (where more need of improvement exists than, perhaps, in any other part of the world,) than to stray far-away, and lose sight of that HOME. And therefore, "Quebec," in his communication of 23rd December, claims my first attention. I do not intend to follow, nor presume to dissect "Quebec," for I believe he means well; on the contrary, I will endeavor to agree with him so far as I feel convinced he does not lie under a mistake.

That County Agricultural Societies in Canada East, have been a failure, (aye, a nuisance)—from the injudicious manner in which they have, to this time, been conducted and managed, must be admitted by every honest man, who is in the least degree acquainted with the subject:—indeed, they are a PARTY MONOPOLY, which has incorporated itself cunningly, under the Provincial Act, 8 Vict. Chap. 53., for the *legally* appropriating of public money. *Let them deny this, if they dare, and I shall be at their service.*

The proceedings of those BODIES CORPORATE, have been too frequently exposed, and ably discussed by many of your correspondents and yourself, to require any very minute exposure of their mistaken practices, in this brief communication.

I agree with "Quebec," so far as "County Societies," are concerned. In confirmation of "Quebec's" just antipathy, I take the liberty to refer you to the "Quebec Mercury" of 30th November last, where you will find a dashing publication, headed, "County of Quebec Agricultural Show, and Exhibition

of Domestic Manufactures, held on the Plains of Abraham, on the 29th October last, open to farmers of the County"—which will show you that there was no *lack* of judges, though they probably were of the *stamp* of which "Quebec" justly complains.

In the name of common sense of what benefit are such "Shows" to Agriculture? They are a profuse and shameful waste of public money. Our "District Society" is not better managed, nor conducted on more judicious principles, and is as great a nuisance to the real interests of Agriculture as the "County Societies."

"Quebec's *debut*—the almost uselessness of your Journal; and the almost uselessness, or impracticability of Agricultural Schools, and Model Farms," because "we do not possess sufficient information, to justify us in recommending them to *such* a country as Lower Canada!" Such astounding information proceeding from a person who appreciates the virtue, (the power,) of a well ploughed, and well manured field! I therefore *must* dissent from "Quebec," were he as powerful as "Mars," the god of war, or even as wise as "Solomon." The very arguments, if arguments they can be called, which "Quebec" marshals in warlike array against your Journal, and the institution of "Agricultural Schools and Model Farms, in a Country such as Lower Canada," are the very reasons why your Journal should be encouraged and supported, and "Agricultural Schools and Model Farms" established, at least in every District, for the present; and ultimately in every County. If as "Quebec" believes, we do not possess sufficient information," &c., which I think we do, if it were sought, and suppose we do not, among ourselves, it then becomes our imperative duty to *import* such information.

But at all events, if we are the sincere friends of Canada, and possessed of a true Agricultural spirit, we will have Agricultural Schools and Model Farms in every District, without delay, which will cost less than all our "Silly Shows," and "other Demonstrations," and be of infinitely more benefit to the Country.

It should be the duty of competent, salaried persons, having the superintendence of "Agricultural Schools and Model Farms,"

aided by a Committee or Committees, elected by the Farmers, to visit the several farms in their District, and award premiums for "well managed farms, good draining, good fencing, good stock of cattle, well managed dairy, &c."

Now that your valuable Journal is published in both languages, I hope the Legislature will grow sufficiently wise, to lend you a constant and a powerful hand. In the mean time I remain respectfully.

"PRACTICAL."

DISTRICT OF QUEBEC,

March 15th, 1851.

*To the Editor of the Agricultural Journal.*

Sir,—It is very pleasing to see the interest taken of late years to improve the Agricultural department of Canada, the demand for all kinds of farm implements, such as improved ploughs particularly, has increased amazingly, but much has yet to be done.

Permit me through your valuable paper to call the attention of Agricultural Societies to the great importance of infusing into the minds of our country friends a desire, yea, a determination to improve their dwellings and outhouses; the appearance of our farm houses is discreditable, yea, a by-word; how seldom even repairs are put upon them, but allowed to go into decay. How very easy it would be to white-wash with lime the out-houses, and put a little paint on the dwellings, how much that would improve the appearance and preserve the buildings. Also, how very easy it would be to keep (especially in front of the dwellings) all clean and neat. Likewise, having a garden and a few trees in front of the houses. Oh! let us be no longer a by-word, let Canadians show to strangers that they can do things like other countries. Well then, I would propose that in addition to the prizes given for the different departments of farming—that prizes be given by the different Agricultural Societies—for the neatest farm houses and grounds around.

I request your urging this on the Agricultural Societies.

THE FARMER'S FRIEND.

Montreal, 25th February, 1851.

Mr. Mitchell, an Edinburgh engraver, intends sending to the Exhibition, a piece of gold so small that an ordinary pin's head will cover it, yet it contains the whole of the Lord's Prayer.

Prof. J. F. W. Johnston, Durham, England has sent us the Preface to his "Notes" on America. Prof. J. says—

"I have given the following volumes the title of 'Notes,' because I am conscious of the imperfect and hurried character of some of the observations they contain, and of the mistakes, generally trivial I hope, and always unintentional, which natives of North America will not fail to discover in them.

"In recording my remarks and impressions, while I am sensible that I have regarded objects with the eyes and feelings of a 'Britisher,' and have written as if I were addressing British readers only; yet I have endeavored to speak fairly and with candor, both of the institutions and of the social condition of the states and provinces through which it was my fortune to travel. While I have expressed my opinions freely, I have endeavored to avoid either ridicule or causeless reproach. And although I cannot hope that my remarks will be always agreeable to my friends in the United States, yet I hope none will accuse me of a desire either to violate confidence, or to return bitterness of speech for the respect and kindness which I every where experienced.

"Some persons in the United States, and perhaps not a few at home, will be ready to controvert the opinions I have expressed in regard to the agriculture and productive capability of the wheat regions of North America. I will not maintain that more knowledge might not somewhat change my views on these subjects; but as these form in reality one of the points in my book upon which I have bestowed much deliberation, I have not put them upon paper without being fully satisfied that they are substantially correct. It will not alter these opinions, that some American writers may dissent from them. My own experience has shown me, that the areas in regard to which individuals in the United States possess really correct and precise agricultural information are very local and limited; while the majority are insensibly inclined to give faith to exaggerations upon this as upon other topics, provided their tendency be the patriotic one of exalting the greatness of their country.

"I trust, however, that even where my observations do not wholly coincide with those of my American readers, they will at least acquit me of picking out defects, even in their agriculture, for the mere sake of finding fault, or of exposing them in a censorious spirit. I have spoken of the soil, and its treatment, as I would were I describing a district of Great Britain; and where I have pointed out defects in past or present practise, it has been for the purpose of mentioning along with them the remedies for past mismanagement, and the improvements of which existing methods are susceptible.

J. N. Y. S. A. S.



# Agricultural Journal

AND

TRANSACTIONS

OF THE

---

**LOWER CANADA AGRICULTURAL SOCIETY**


---

MONTREAL, APRIL, 1851.

---

We conceive that the business of Agriculture offers sufficient inducement in Lower Canada, to any party who would choose it as a profession. It certainly will not afford such large profits as to make a fortune for a man in a few years, but we know many who are now independent, who came to this country as laborers. With a reasonable share of skill, and a sufficient capital, any man might become a farmer, with every prospect of *reasonable* success, but skill and capital are both essential to success. We have often been amused to hear of the large profits of Agriculture—so large, in fact, as to be equal to what could be realized in any other business. We warn those who would become farmers with such expectations, that they will be disappointed. Capital employed skillfully in Agriculture, will make reasonable, and what should be satisfactory returns, but nothing more, except in very extraordinary circumstances. We can estimate with some degree of accuracy, at least, with all the accuracy that is necessary, what the ordinary returns of a farm would be, provided we know the nature of the soil, the stock kept, the mode of cultivation, the wages of labor, and the markets for the sale of produce. It is not difficult to calculate what the expenses of a given mode of cultivation would be, and the returns both of the dairy, and of cattle, and sheep. When farms are represented to make very large returns, such representations should be received with caution, and for our own part, we would give no credit to them unless proved by a regular balance sheet having all the details.

## FARM YARDS AND ROOT CELLERS.

The nature of the Canadian climate is such that it requires a judicious arrangements of farm buildings, that would afford shelter to the animals when out in the yard, and the stables should be so constructed that they would secure a sufficiently warm temperature for all animals housed. This would contribute to keep them in health and condition, with a less quantity of food than they would require, if exposed to great cold. In feeding vegetables to stock in winter, it is impossible to do so to advantage if the stables have not a temperature above freezing. These matters are essential to the profitable cultivation of root crops, as well as to the profitable employment of them in feeding stock. The best temperature for root houses, or barn cellars for keeping roots for stock, is from 32° to 35° and the nearer 32° the better. If the storing places are too warm, the roots will be sure to spoil. At the temperature of 32° they will not injure by cold, and will keep in good condition throughout the winter, if put up sound and dry. They should be piled up in small heaps with alleys between, to give air, ventilation is also necessary. It is expensive to grow root crops, and it acts as a great discouragement to their cultivation, if the roots are not kept properly after they are raised, and employed judiciously in the feeding of stock. Where circumstances will admit, cellars under barns will be found most suitable and convenient for keeping roots for cattle but there must be certain means of drainage. Cellars constructed under barns, need not be expensive, if the soil and situation are favorable. The digging out would be the principal expense, and the soil dug out would answer a useful purpose for mixing in compost, or filling up hollow places. The cellar might be faced with stone if to be had conveniently, and if not, with pickets and rough planks, small rails, or split wood. It would be well in all cases, that at least four feet of space should be left

between the outer walls of the barn and the excavation made for the cellar to prevent the frost getting in—Thus:—a barn 40 feet by thirty feet, should have an excavation of only 32 by 22 feet. Indeed, it might be advantageous, to have a greater space than 4 feet between the outer excavation for the cellar and the walls of the barn, but this must rest with the party interested, to determine. We would, however, recommend that every farmer proposing to grow root crops, should endeavour, first, to prepare a safe keeping place for them, and he will save the expense of making this preparation, perhaps, in one year. Root crops are necessary to good farming, and we should be sorry to see farmers who would commence to grow them, discouraged from perseverance, by the rotting of the roots in their storage or by mis-employment of them in feeding. A little industry and attention will prevent this, and these are the principal requisites in most matters connected with Agriculture.

#### MANURE.

If farmers were to give due attention to making and saving manure, they would very soon have their lands in a more productive state. It is no wonder that lands should deteriorate, if the grain that is grown upon them is sold, and most of the straw consumed as food by the cattle, instead of making it into manure. Hay, grain and roots should be grown for the animals, and the straw employed as litter for them. If this was done in a proper manner, both the solid and liquid manure would be preserved for improving the land and producing crops. There is abundance of gypsum or plaster to be had, both in Montreal and Quebec, and by having a supply constantly on hand, it would be an excellent plan to spread a small quantity over the litter in the stables every day. It mixes with the manure, and is said to prevent the escape of useful gases and ammonia from the manure. Gypsum is found to answer a very

good purpose on some crops and on some soils; but it has not the same beneficial influence on all soils, or in every case that it is applied. On peas, beans, indian-corn, potatoes and clover, we believe that gypsum has a very good effect generally. It should be applied early in Spring on clover, so as to give a chance of the Spring rains dissolving it. It should, in every case, be applied when the clover is wet by rain, or a heavy dew. We feel persuaded that the failure of special manures, is often to be attributed to their not being applied at the proper time. We beg to call attention to the advertizement, in this number, of "Méthot, Clinic, Simard & Co.," of Quebec, who prepare gypsum or plaster of Paris, and who have other useful manufactures. We are quite delighted to see Canadians take part in such manufactures, and we wish them all possible success. The farmers about Quebec are very likely to leave those of the District of Montreal far behind in agricultural improvement, if the latter do not advance more rapidly. Manure is a grand requisite, and by collecting compost heaps, and mixing every waste about the farm in those heaps, with salt, lime, bad fish, ashes, and sea-weed, where it can be had, an ample supply of manure would be made on every farm, for crops, and for top dressing.

#### ENGLISH, DUTCH, AND AMERICAN CLOVER SEEDS.

A few days back, we met Mr. Wm. Morrin, farmer at St. Augustin, County of Two Mountains, who came to purchase seeds, from Mr. Shepherd, seedsman of the Lower Canada Agricultural Society, and he informed us, that he had sown in 1849 as an experiment, in the same field, and in alternate ridges, Dutch clover, purchased from Mr. Shepherd, and American clover, purchased same time, and that last year, the produce from the Dutch seed he believed to be nearly, if not fully, double that from the American seed. He also stated that the

latter was much sooner in flower, than the Dutch clover, which is a great advantage, when mixed with Timothy—the American clover being in flower long before the timothy is fit to cut, and loss, consequently incurred. The difference of a few coppers in the price of seed by the lb., should not be of much consideration, if the crop from the higher priced seed is nearly of double the value of that from the lower priced. It is a matter of the greatest consequence to farmers, that they should be able to procure good seed, and that in all cases, it should be new, unmixed, and what it was represented to be.

#### BOULEVARDS.

We are rejoiced to see that there is now a probability that the citizens of *Montreal* will soon be accommodated with a Boulevard. The Reverend gentlemen of the Montreal Seminary have offered to give sufficient land for it where it is proposed to pass through their beautiful farm on the side of the mountain. If the plan is judiciously carried out it will be a great advantage to the citizens to have a beautiful and healthy promenade for air and exercise if for no other amusement. It will command a view of a beautiful country in every direction for many miles. There could scarcely be found in any country a more favourable situation for a Boulevard.

#### ICE HOUSES

Are very necessary appendage to a farming establishment in this country, and as it need not be very expensive, every farmer might have one. An ice house is so useful in connexion with the dairy, for the preservation of meat and fruits, and for many other purposes, that to want it is a loss and inconvenience. We should prefer to have them below the ground, when there was opportunity for drainage, by artificial or other means, as ice cannot be preserved without drainage.

The house need not be large, and the walls under ground would only require to be rough and strongly built. Eight or ten feet below the surface would be sufficient and whatever size was thought necessary. The New England Farmer gives the following directions, which we think are very correct:—"At the top of the ice-room, lay cross beams, on which place a floor. On this floor, put a layer of tan, or sawdust, two feet thick. Make a roof that is tolerably steep when there will be less heat at the top from the sun. At the ends of the roof, have ventilators to conduct off the heat, which will accumulate in it on a hot sunny day. There should be two doors to the entrance made for filling the house with, or taking it out. There should be poles or joists placed along against the walls, to prevent the ice coming in contact with the walls of the house. In the bottom, place small blocks of wood more than a foot deep, level them, and place a layer of shavings over them. Over those lay a plank floor. The layers of blocks and shavings retards the melting of the ice." This plan of an ice-house is very good. The doors for filling and taking out ice should be from the ends over the floor, with a trap door through this floor to the ice-room. The tan, or saw dust would require some sort of covering to prevent it mixing with the ice. The New England Farmer goes on to describe the mode of building an ice-house over ground as follows:—"In making an ice-house above ground, there should be, on all sides, two rows of posts, set in the ground, of stout joists or large poles, with one side hewed straight. These rows should be two feet or two and a half apart, with the hewed sides facing the other row. On these fair sides of the posts, boards should be nailed. Then the outer row of posts will be outside the building, and the inside row on the inside, so that the filling between the two board walls, will press the boards against the posts. The space between the board walls should be filled with tan, sawdust, or powdered charcoal. Fine shavings, straw, chaff-husks, leaves, and other light substances will answer, but they are not so good, and when they are used, they should be packed in very close and trodden down as firm as possible, and it would be well to make a wider space between the poles, if light materials are used.

Make the foundation or the under part of the ice-room, the upper floor, and roof the same as when the house is made under ground, and observe the same caution with regard to double doors at the entrance. The beams at top may be fixed upon the posts, and keep them in their place, at the sides and at the ends, and the posts must be fastened together that they will not spread with the weight of materials placed between the boards."

Ice-houses above ground, must be very carefully constructed, or they will not keep ice—and we believe that it might be prudent not to allow the ice to touch the inner walls, but to allow some interval between it and the boards. This might be easily done by poles, and as the entrance must be upon the side or end on a level with the ground, it would be advantageous to have an alley of about 2 feet between the ice and the walls, to admit placing articles for preservation in this alley. We shall give some other plans of ice-houses in a future number.

We have received from Mr. Dawson, Bookseller, Place d'Armes, the 14th number of the "Farmer's Guide," published by Leonard Scott & Co, 79 Fulton street, New-York. This number is fully equal to the preceding numbers of this valuable work, which should be in every farmer's library as a book of instruction and reference.

#### AGRICULTURAL REPORT FOR MARCH.

During the month of March, we had frequent falls of snow, and we do not recollect to have seen the ground more deeply covered with snow, upon the 21st of that month, than it was this year at that period. This is not to be regretted, if we have the spring to open soon, to enable farmers to commence their work, but a late spring is always a great impediment where our working time is so much shorter than in countries of temperate climates. If the time for putting in the seed is far advanced in the season, it produces hurry and an im-

perfect execution of the work, which is very detrimental to the farmer. All we can do now is to hope for an early spring, and when it commences, to use every exertion to forward the work of sowing, and execute the work in the best manner that may be in our power. However anxious to put in the seed early, farmers should not sow, until the soil is in a dry and fit state for harrowing and working. If the soil is too wet when sowing in spring, there will scarcely be a chance of a good crop, however favorable the season may be, subsequently. If land is worked in Canada, in a wet state in the spring, the dry and hot weather of the summers renders it so baked and hard that it is impossible for crops to thrive in it. This is one of the principal causes of deficient crops and the rotting and loss of a large proportion of the seed sown. Good drainage, and in the Fall, the land well laid up in ridges, not exceeding from six to nine feet wide, is the only means in our power to have the arable land in good order for early sowing in the spring. Narrow ridges appear unsightly to some parties, but in the clay soils, and level surface of a large portion of the lands of Canada, they should not be made wide, when we have no under-draining. We should not hesitate to sow wheat as early in April as possible. The most dangerous time for sowing is between the 20th of April and 20th of May. The crop grown from seed sown before or subsequent to those periods is not so subject to injury by the fly. The seed wheat should always be well washed in a mixture of salt and water and all the light grains skimmed off, and then it should be dried with lime or ashes previous to sowing. This preparation will generally prevent smut in the crop. Barley should not be sown until the weather and soil becomes warm and this does not often take place in April. Steeping the seed in liquid manure, or rather in the drainings of the manure of the farm-yard, is a good plan. It causes the seed to vegetate more rapidly when sown, and is said to be otherwise benefi-

cial. When taken out of steep it should be dried with lime or ashes for sowing. Oats for seed might be steeped in the same way. The time for remaining in steep may be from 24 to 48 hours, as the farmer may have opportunity. Peas and beans may also be steeped for some time, but not so long as other grain. We have been told it was injurious to steep Indian-corn previous to planting. In sowing peas, it would be very desirable that drills should be made for them—the seed might then be sown broadcast, and in harrowing the land the seed would be sure to fall into the drills. Sowing in this way would insure the covering of the seed equally and sufficiently, which seldom happens when covered by harrowing without drills. The unequal and insufficient covering of seeds is a great fault in cultivation, and prevents the crop from filling or ripening evenly. Potato planting should be attended to at every opportunity, as early planting has been found, in most instances, to produce a crop less liable to disease, than late planting—and the potatoes are infinitely better for table use. The use of lime, charcoal, salt, ashes, and soot, spread along in the drills, is recommended, and we know the application of any one of them is useful. In favourable situations, carrots and parsnips might be sowed, if an opportunity should occur, in April. Sprouting those seeds slightly before sowing, is a good plan, but it must be carefully done or the seed may be spoiled. It should be mixed with sand, and sprinkled occasionally with water, and the heap turned morning and evening to prevent the seed adhering together—and when the sprouting appears, the seed should be sown without delay, but not covered too deeply. If the drills are fresh made, so much the better, and if the weather is very dry, watering the drills after sowing would be beneficial. In every case that small seeds are sown, the fresher and more recently the soil has been prepared, the better chance will there be of the seed succeeding. This is a matter

of great consequence, particularly in sowing small seeds. If it is possible, farmers should endeavor to have all their spring-work finished by the 1st of June, except the sowing of turnips and buckwheat. When sowing is put off to a later period, the land becomes dry and hard, and crops have not a fair chance. We hope to have an opportunity in the May number to offer some further suggestions as to the sowing of green crops. For all descriptions of green crop, with the exception of the potato, the more the soil is pulverized and made fine the better, and farmers should attend to this in time before sowing. Top-dressing meadows, when there is means to do so, should be executed with as little delay as possible, taking care not to cut up the surface with carts. In all cases, the land should be bush-harrowed after the manure is spread. If top-dressed with compost manure, it might be beneficial to sow some timothy seed, and harrow well with a light seed-harrow having iron tines. We have improved old meadows very much by this management. In all applications of special manures such as gypsum, guano, ashes, &c., as top-dressings they should be spread early in the season, when the surface is moist or immediately before rain. The dairy will now be requiring attention and, if profit is expected from it, the greatest care and competent skill is necessary, in the management of both cows and dairy. Where those requisites are not forthcoming, the dairies will neither be creditable nor profitable to their owners. The wretched manner that salt butter is put up in casks, can be seen in our markets continually, and hence what should be one of the most valuable products of the farm is diminished half its value by bad management. There is a constant sale for good butter and cheese in Canadian markets. We have seen some excellent Canadian cheese in market this winter. Superior mutton and beef has also been abundant in our markets, some of the former rather too fat in our opinion. The

sale of horses to Americans has been considerable this winter, and would have been to a greater extent, if there were good horses to sell. All sorts and sizes have had a ready market at fair prices. This trade, we conceive, might be much extended, by greater care in the breeding of horses. Canadian farmers might vastly augment the value of their products by raising more, and a better description of horses for our American neighbors. For this purpose, the best stallions of pure Canadian breed should be kept in every parish in Lower Canada. If we go on selling all, without reserving any, we shall soon lose the breed altogether. This subject is worthy the attention of all friends of Canadian prosperity. Every County Agricultural Society, should offer several premiums for stallions of pure Canadian breed, kept in the County, *expressly* for breeding, and no mixed breeds should be allowed to compete with the pure breeds, but mixed breeds might compete in a separate class. Agricultural Societies should be very particular to class animals properly, and we never have seen a cattle-show in Lower Canada where animals were classed correctly in distinct breeds as they should be for fair competition. The usefulness of shows, and of awarding premiums is done away when animals of the same breeds and varieties are not classed together to show their quantities and enable judges to decide correctly. There could not be any objection to have a separate class or sweepstakes for the male animals, of all breeds, as they have at their great Exhibitions in England, and elsewhere—but in all other cases, let distinct breeds compete with each other, and not with other breeds. Points that would be considered imperfections in the Canadian horse, would be considered perfections in other breeds of horses—and it is the same case with other animals of distinct breeds. We submit these observations for the consideration of parties who may entertain a different opinion on the subject, and beg them to state their views.

We only wish that the best arrangements may be made whoever may propose them.

March 25, 1851.

We give insertion to an article on the "Agriculture of England," from the "Cyclopedia of Agriculture," which is worthy the attention of Canadian farmers. The present state of British Agriculture has been attained by the introduction of draining, and an improved system of husbandry in all its various branches. If we desire to improve our agriculture, it is only by adopting an improved system of husbandry that we can do so. We have been trying the no system plan long enough to understand its advantages and defects. If we have proved it to be advantageous, we may rest content with it; but if we are convinced that it is defective, we should change it for a better system, with as little delay as possible. They have had a defective system in England before now, and they have changed for a more perfect one. Why should we not follow their example, and if the perfection of English husbandry is not attainable, let us come as near to it as we possibly can.

*A Cyclopedia of Agriculture, Practical and Scientific.* Part II. By J. C. MORRIS. Blackie and Son, Glasgow and London.

In again alluding to this valuable record of the improvements which have been introduced in agriculture in modern times, we have given, entire; a paper "*On the Agriculture of England*," a subject which must be interesting to every lover of his native soil. The writer is evidently thoroughly acquainted with the matter in detail, from his position in agricultural literature, and connexion with the leading agricultural society of this country:—

AGRICULTURE OF ENGLAND.—It is difficult even to sketch, for the natives of a country, its peculiarities in agriculture, as in any other respect, except by contrast to other countries; because those features which strike a foreign traveller by their novelty, appear to the inhabitants matters of course. Thus in England, at the gloomiest season, we see, wherever we journey, field after field clad in the bright foliage of the turnip, with thriving flocks of sheep folded on them by hundreds and thousands. They are the very foundation of farming in England. But let an English farmer pass, as he may, in three hours, from Dover to Ostend, he will

perceive a few patches of small turnips, probably grown on the corn stubbles; or to Boulogne, and he will see none. In neither country will he find a sheep in what he would call a flock. In any other land but Great Britain, a flock of sheep penned on a large turnip field would be as strange a sight as the vineyard with its vintagers, or as negroes gathering sugar canes in our own island. The causes of this peculiarity are two: our climate, which enables us alone to grow turnips as a field crop; our manufacturing and commercial population, ready to consume fresh meat of good quality; a third condition may be added—the size of our farms, which enables sheep to be kept in flocks. As to our climate, the insular situation of England gives us, by means of the sea breezes, mild summers and temperate winters, each indispensable for that root. The hot summer of inland France or Germany is incompatible with its healthy growth. The severe winters of Germany, where the frost lasts sometimes for three entire months, would destroy it if grown; and the flocks too, in that country, are consequently housed in winter. Even within Great Britain, climate affects much the growth of this fundamental crop, and still more the profit of growing it. Thus, in East Lothian, towards the north, where the cool summer allows the Swede to be sown early, its slower growth renders it far more nutritious than in the south. With the help of straw only, it will fat a beast out. Consequently, a Swede crop may be sold for £10 an English acre to consume on the land. This return is equal to that of the crop of wheat, and the Swede may therefore be regarded as a principal crop. In the more inland southern countries, the scorching summers require the Swede to be sown late; the bulk of the crop is much less, and that bulk is inferior in nutriment, being grown more rapidly. Hence it is difficult to obtain or the crop even £2 an acre, to feed off on the land; because hay, or corn, or oilcake are required in addition to fatten the animals. Thus, even within our own island, in the cooler parts, this peculiar root may be regarded as a principal crop; in our warmer regions, as a subordinate one, preparing for the production of grain. There is, indeed, another root crop which delights in the hot summer of our southern countries—the field beet, mangel-wurzel. In Suffolk, accordingly, it is grown in breadth, and is gradually spreading elsewhere in the south. Though the climate of England has been spoken of as varying by north and south, it has been observed, for some years, that it varies at least equally by east and west: namely, that an equal difference is produced by the winter cold and summer heat in the air that reaches us on the east side from Northern Europe, and by the temperate breezes from the west from the Atlantic. Our

ancestors, from time immemorial, marked this difference by their practice. On the eastern side of England, the ancient rotation of crops was a three-course one; two white crops—wheat and oats—with a *naked fallow*, or wheat and barley, or wheat and beans, but always with the *naked fallow*. Rye should have been spoken of, perhaps, instead of wheat. The greatest mark of improvement in English farming, perhaps, is that rye is now a forgotten crop. This is still the rotation of northern Germany; and, barbarous as it seems, lingers yet in some parts of Yorkshire. On the western side of England the mild winters keep the grass growing till Christmas, and the ploughed field, if left to itself, covers itself soon with herbage. The old system, therefore, on that side of England was and still is, in many of the hilly tracts, to grow three or four corn crops in succession, and then to leave the field for three or four years in grass. The old system is entirely abolished upon light land, and is superseded by the fourcourse—wheat, turnips, barley, clover. Though clover itself is not a stranger in the continent of Europe, the extent to which it is grown is peculiar to our own island. Thus, instead of two corn crops and a blank in three years, we have now two much ampler corn crops and two green crops for the production of meat in four years. Even in our strong lands, which have fallen in comparative value, now that corn is no longer the farmer's exclusive object, the *naked fallow* is gradually disappearing; and though root crops cannot well be grown, clover and vetches are raised for the stock. Thus the demand for meat increasing the stock of animals, increases greatly the manure, and, of course, increases the corn crops; but the consequent abundance of dung occasions a neglect peculiar to this country as compared with the highly-tilled parts of Europe, a neglect, namely, of night soil. This neglect is the more singular, because animals are fattened at a loss for the sake of their manure; not indeed at a real loss, because the dung is as much a part of the animal's produce as its wool or its hide, or its lamb, and consequently no change of management can, according to the ordinary rules of trade, give us the dung of our fattening stock gratis. This high attention to the production of dung, exerted by the purchase of oilcake for stock, distinguishes the best-farmed parts of England even from Scotland. So also does the large purchase of artificial manures, as of bones for turnip crops, rape-cake and rags for wheat, &c. The use of artificial food, and application of purchased manure to each succeeding crop on light land, which took its origin in Norfolk, and may there be seen in perfection at Castleacre, are the pre-eminent features of English farming. All, however, turns upon the great demand for fresh meat. The sheep is no longer kept for its wool, as it is still kept on the Conti-

ment. Hence arose attention to early maturity of our cattle, so that in rapidity of fattening, our breeds exceed all others, the quantity of meat produced being thus doubled in time as well as in space; so that our short-horns, Herefords and Devons, Leicesters and Southdowns, are now as much superior to foreign stock as our racers and hunters. The stock thus capable of early maturity, is brought to that maturity, as has been said, by high feeding, which raises, while continued, the condition of the soil. The English soil has also been improved permanently to a far greater extent than that of any other country of similar size, though the steady progress of that improvement, for more than a century, has rendered it less striking than more sudden changes elsewhere on a far smaller scale. It is enough to mention only the improvement of widely-spread tracts by chalking, marling, warping, irrigation, and above all, by under-draining; which last improvement has been practised in Essex for a century, but has greatly improved of late, chiefly through the increase of its depth, by Mr. Parkes. Besides under-draining, tracts have been redeemed from the flood in Romney Marsh, the Bridgewater Level, and, above all, in the great Bedford Level and Lincolnshire, by systems of canals not inferior to those of Holland. In the middle portion of the Bedford Level, £400,000 have been nearly expended within the last five years, and the Whittlesea Meer is dried up this very summer. There is another strong peculiarity of English agriculture—the extensive use of machinery. The ordinary implements—ploughs and harrows—have been improved. The ground is cleaned with grubbers, pulverized with clod-crushers. The corn and turnips are sowed with drills, supplying manure if necessary; there is even a water drill furnishing moisture also. The rising crops are hoed with Garrett's horse-hoe, cutting as securely between the narrow rows as the cloth is shorn in the factory at Leeds. The haymaking machine assists the haymaker. The corn is thrashed and dressed by a fixed or moveable steam-engine. The turnips may be said to be chewed for the sheep by the turnip-cutter. There remains only our old heavy waggon, a memorial of miry roads, as a disgrace to English machinery. The above are the chief features of England as distinguished from Scotch or Continental farming. In much of Ireland there is no farming at all. To dwell on these features in detail, would be to encroach on other articles; to point them out, has been the subject of this. Though these features are chiefly favourable, they must not be regarded as universal in England. On the contrary, there are many backward districts, as the Weale in the south-east, and Durham in the north; where almost everything remains to be done by the land-owner or the farmer. The English farmer himself,

it should be remarked before closing, is perhaps the greatest peculiarity of English agriculture—a peculiarity not enough valued by the English landlords, or the public unacquainted with foreign management of landed property. In France, the land is minutely subdivided, and scantily cultivated by peasant proprietors. In Germany, the gentry are said to occupy their own estates. In Italy, the landlord finds stock and seed, and divides the produce with the occupier—a process of endless trouble and fraud. England and Scotland are the only countries with a class of cultivators possessing sufficient capital to stock farms of good size at their own risk, paying a yearly sum certain to the proprietor. The advantage of the system to the landlord is obvious, in the leisure and certainty it affords. The social and political advantages arising from such a body of substantial yeomen do not belong to an agricultural work. Our farmers have passed through many difficulties formerly; and we may hope that, with the help of their landlords in improving their farms they will equally overcome the present state of transition.

#### NEW AND VALUABLE DISCOVERY IN LAND DRAINING.

It is well known that several implements have, from time to time, been invented for the purpose of facilitating and economising the cutting of drains, and many powerful ploughs have been constructed with that object; but none have been hitherto found capable of meeting the *grand desideratum*. We are happy to say, however, that we can at length announce the accomplishment of this important object—so far, at least, as the present recent trials have gone.

One of the warm supporters of our journal, Mr. Cotgreave, of the Rake farm, near Eccleston, in the neighbourhood of Chester, has at length vindicated his county, long stigmatised as the most backward of all English counties, in adopting the improvements of the age, in every thing which relates to the amelioration of its most unyielding soil; how far this stigma may be deserved after the efforts made to give to drainage something like a system, by the promotion of a Drainage Company, and still more recently by the invention we now notice, we leave to others,—for ourselves we are content to mark the progress of events not doubting that justice will one day be done to the county, as well as to the individuals whose aim has been to render the clay farms of Cheshire all that they are capable of becoming, and that we are bound to say, we consider *very productive*. We have no doubt that many land-owners have hitherto abstained from draining their estates because of the great outlay required; now, however, when they find that cutting the lateral



drains can be efficiently executed for one-half the former cost, besides effecting a considerable saving in time, there will, we trust, be in this part of the kingdom, few farms undrained.

We have not yet had an opportunity of viewing the work which has been done at the Rake farm by Mr. Cotgreave, but shall avail ourselves of an early opportunity of doing so, as soon as the inventor has completed his arrangements for exhibiting his system in full work, when we will give our readers the result of our inspection.

The Marquis of Westminster, who at present is extensively engaged in draining his estates; and other eminent agriculturalists in the neighbourhood have expressed their approval of this ingenious invention.

At present we content ourselves with giving the following extract from a newspaper of the neighbourhood, and we fondly hope that our close examination of Mr. Cotgreave's implements and mode of operation will enable us to stamp the process with our approval, as one worth the consideration of our readers:—

"We cannot commence our labors in a manner more advantageous to the public, and more satisfactory to ourselves, than by laying before our readers some results of a new discovery in this neighbourhood, which it appears to us is calculated to secure most important and immediate benefits to all connected with the cultivation of the soil. We allude to Mr. Cotgreave's (of Eccleston) new practice of draining, in which three vitally important considerations are comprehended, viz.:—economy of outlay, economy of time, and increased employment of labour, with its judicious and profitable distribution.

"Mr. Cotgreave's principle consists of a series of ploughs derived from the carpenter's plane; in fact it is nothing more or less than a land-plane; and when seen, every one must wonder why the principle now brought into operation has not been applied years ago. With the exception of the main drains, all the work, even to the obtaining the perfect level of the drain, is performed by the plough-plane. Mr. Cotgreave has so adapted his plough that with four horses he can throw out a drain from four to five feet deep. The saving of time is another material object. The work by this process is almost incredibly expeditious, and very little damage is done to the surface; indeed, in grass lands, a heavy roller will repair all damages. *The cost of workmanship is half of the price of manual labor, on the present system; and the time occupied one-tenth;* while the work, to say the very least, is as efficiently and durably performed.

"In the neighbourhood where the plough has been used, much has been said of the probability of the implement throwing many men out of employment. This we contend is

erroneous, because the want of such an economical implement has, hitherto, prevented draining to any great extent being carried on. As the agricultural markets now are, the farmer too frequently says, with truth, 'such a field is too wet and poor, I cannot work it.' Consequently, that land is thrown out of cultivation; and, as land is abandoned to take its chance, so the assistance of labourers is dispensed with. Poverty and poor-rates increase; and crime inevitably follows in the wake. But if the expense of draining is brought within compass, then, as a matter of course, more land will be drained more labourers permanently employed; and the agriculturist will have a chance of so increasing his produce, that he may earn a livelihood, and by extra exertion, something more.

"The working of the plough-plane is a problem many may doubt; we did so; but we saw, and were convinced of its power and efficiency.

"All who have witnessed the operation of Mr. Cotgreave's draining plough are unanimous in their approbation of the plan, and their conviction of its full and complete success.

"We are desirous of calling the attention of the land-owners and holders to the actual merits of this most clever adaptation of the plane, deeming that merit of every kind imperatively commands the attention of the public press most particularly.

"Mr. Cotgreave has, most fortunately, that kind of education which is well adapted to his occupation, viz., that of land-valuer and surveyor. His experience as a land-valuer has been called into operation by the Tithe Commutation Act to a great extent; and for the performance of the duties thereto annexed, he must, of necessity, have considerable knowledge of the nature of soils generally. Added to this, he has a large clay farm in cultivation, in his own hands, the treatment of which needs no more reference from us, save that those who wish to know how he works it can see if they will visit his farm.

"We now proceed to the detail of the plough:—We find that the necessary staff of men is ten, and of horses four; and with this at command, Mr. Cotgreave will be enabled, without distressing either horses or men, to commence two statute acres in the morning, and finally complete, that is, cut the drains, (including the main drain,) lay the pipes, fill in and make good the surface of one statute acre, and half prepare the second to be ready for work the next day. The plough as we have already explained, is on the plane principle, and, by means of screws, can be adapted as occasion requires, even while in operation in the cutting, to take a shaving of two, three, four, five, or six inches in depth. This control of the plough is most necessary, as it must be evident that

certain portions of the land requiring to be drained frequently have undulations; and if there were no regulating principle, it is quite certain no water level could be obtained by a plough. This point we particularly impress on the attention of our readers, because every practical man at first would inquire how this difficulty is to be overcome.

"Again—How is the plough to work when a stone obstructs it? This has been considered by Mr. Cotgreave and provided for. If the stone is too large to pass along the plane, or too deep to be turned up by the cutting in operation, the coulter of the plough is so formed as to protect the share, and with a lever and hooked instrument the stone is removed ere the plough returns, when the debris of the obstruction, in addition to the shaving (if we may so call it) then in process of casting out, are removed at one and the same time.

"One of its great recommendations is that it is adapted to every variety and condition of soil, and that it can be worked almost independently of the weather, unless the frost is very intense. In fact, those who have witnessed the plough at work are at a loss which most to admire—the absence of complexity in the contrivance or the rapidity and perfect success of the operation.

"Mr. Cotgreave's system is to commence with spades, and complete the whole of the main drains before he begins with his plough. He then casts out, with his plough, the clod, measuring six inches square, on the left side of the intended drain, over the compass of two statute acres. This is of great advantage where there is much surface water, as the process of draining immediately commences and renders the land less liable to damage by the treading of the horses, and the main drain being cut, the water percolates to it

and so passes off. He then returns to the first acre, and with the same plough, casts out on the right hand side the subsoil. To attain the depth of eighteen inches by six inches wide, he requires four drafts—viz., the first 6 inches, the remaining three, 4 inches each. The plough is then changed for one which will cast out its shaving two inches wide by six inches deep. With this he attains a level bottom. Then commences the pipe laying. To insure the level, a gauge is passed along the bottom of the drain. This effects the double object of clearing any fallen soil out, and forming a perfect bed for the pipes. As the drain is too narrow to admit of a man getting into it, a new process of laying the pipes is adopted, viz., threading them on a half inch iron bar, the one end trailing in the drain and the other end in a man's hand. The rapidity and perfectness with which the pipes are thus laid is surprising. A man then follows with a sort of paddle, with which he completely adjusts the pipes, and if there are any spaces by breakage, or otherwise, he repairs the damage. The drain is then ready for filling up, which process again is rapidly executed, and the first clod, in almost *one entire piece* the whole length of the drain, is rolled on to its bed.

"We think we have said enough to excite a reasonable curiosity in all to witness the operation of this valuable implement, and a natural desire on the part of agriculturists to profit by a process so easy in its application, so effectual in its results, and the benefits of which can be appropriated at *HALF THE COST, AND IN ONE TENTH LESS TIME*, than the prevailing practice. Mr. Cotgreave is now making arrangements for exhibiting his system in full work within a few miles of Chester; when our readers may have an opportunity of inspecting the plough and its operations.



NECKLACE—A SHORT HORN COW.

## A DAIRY STOCK.

I recommend the following mode of managing a milk stock, the principles of which are followed by the best milk-selling farmers:—Curry and wisp the cattle once a day; give water twice a day, when in the stall, and an hour's airing in the yard. Let the food be given to them at exactly the same hour every day, and likewise the water. When food is given, and any cow does not take to it readily, take it from her and let her be without any until next feeding time. (This is the way man should do to remain in health.) Never pamper immediately after calving. At milking time, the master or mistress should assist, or be present, in order to see that the milkers milk briskly, and without talking. A great deal depends on these two points. A milker may sing or whistle, but not talk; but then it must be tuneable. There is an old saying, that the last drop is the richest, and should be drawn. This is wrong; for the last drop from a good milker never does come. I have seen milkers pulling at the udder for the "last drop," while a weakly-constituted cow has been nearly sick. A mother who has suckled children can understand this; and yet I have known thoughtless mothers to forget it when milking cows. In stripping a cow, a milker finishes with his right hand, by taking the teats in rotation, and getting what he can out; and when he gets hold of a teat, if he can get milk twice, he must try that teat again, after he had gone them round. But if he can only get milk once, he should give up; for the last drop which ought to be taken, is then come; and if more after this is got, it is to pull upon the milk vein, and is no richer than milk taken at the first; or rather, it is of an average quality. If a milk farmer intends to follow his business to the best advantage, either he or his wife must themselves milk, or be present during the time of milking. One of the best managers I am acquainted with, always did the stripping himself, and left the others to do the regular milking.

The proper temperature for a dairy, where butter is made, will be from 50 to 60 degrees according to the temperature of the weather. There should be plenty of air circulating through it. If it be too warm where the cream stands, it will lift in the cream mug, and the butter will be rancid; and if it be too cold, the cream will not get sufficiently acid for churning in proper time; in this case the butter will have what we call a hingey taste. Bad dairyers, to insure good butter, will churn the cream before it is acid, but this is a waste of labour, inasmuch as the cream, in this case, must be churned until it is acid, before the butter will separate from the milk. When churning commences the cream should be at from 62 to 68 degrees, according to the temperature of the weather, or of the room. No water

should ever be used about butter in making up, as water left in butter is just as bad as milk, and it will soon make the butter bad. Nothing but labour, by working the butter, will produce real, solid, sweet butter, and make it keep sweet. The following is a statement for eight years, previous to 1840, of the stock, produce, &c., of a dairy farm in the neighbourhood of Rochdale: The farm is on the mixed system of dairying—that is, part of the milk is sold in the new, part skimmed, the cream being churned, and the skin-milk and butter-milk sold as well as the butter.

Year.	Number of cows kept.	Quantity of butter produced.		Quantity of new milk sold.	Value of butter sold.		Value of milk sold.		Total value of produce.		Average produce of each cow.				
		lbs.	Qrts.		£	s. d.	£	s. d.	£	s. d.	£	s. d.			
1833	28	6908	5384	359	16	2	345	8	5	705	4	7	25	3	8
1834	28	6695	6890	364	10	5	347	13	9	712	4	2	25	8	8
1835	27	6735	7735	366	11	7	323	5	11	694	17	6	25	14	7½
1836	25	6112	9380	357	15	8	353	2	0	710	17	8	28	8	8½
1837	25	6010	11390	376	5	0	334	19	10	711	4	10	28	8	11
1838	24	5929	9391	347	2	2	340	4	10	687	7	0	28	11	1½
1839	25	5615	4743	328	19	4	313	13	1	642	12	5	25	14	1½
1840	23	5530	2444	346	0	0	317	5	11	717	10	11	31	3	11½

In addition to the above there were about 150lbs. of butter, and 1,000 quarts of milk annually consumed in the house; value about £15. The cows were kept on pasture in the summer, with about one quarter bushel of grains daily, in the winter on hay, potatoes, turnips, and grains, with bean flour or oatmeal. On an average 11 cows were changed (bought and sold) every year, at about £6 loss for each cow changed. The farm was an entire grass farm, consequently all the provender had to be purchased, and cost, at an average, £150 per year.—*Ruthwell's Agriculture of Lancashire.*

Make your bargain beforehand, and never suffer a workman to leave the payment of his labour to your discretion.

IS IT DESIRABLE THAT EXPERIMENTS IN PRACTICAL AND SCIENTIFIC AGRICULTURE SHOULD BE EXTENSIVELY MADE?

This question may be considered in several aspects.

1. *Is it desirable for the state?* Everything which is likely to increase the gross agricultural produce of a country, if not too costly, must be desirable for the state. The permanent wealth and power of a great country depends upon the produce of its soil, and the one must increase with the other.

"It may with certainty be stated," says Lampadius, "that by the use of gypsum, the produce of clover, and the consequent amount of live stock, have been increased in Germany at least one-third."\* This illustration is sufficient to prove the importance of agricultural experiment to the national welfare. There are many applications which are fitted to produce, in most countries, effects quite equal to those produced by gypsum, and it is desirable that, by numerous trials, the value and influence of such substances, in each locality, should be established and made widely known.

2. *Is it desirable for the science itself?* I have already stated that, according to my views, the progress of scientific agriculture is to be greatly promoted by the introduction of a more general, and at the same time a more cautious and more exact system of rural experimenting throughout the whole country. Important practical facts will be brought out, opinions will be tested, received theories corrected, and the suggestions of hypothesis put to the trial. The science will also be advanced by the greater interest it will awaken, and the more numerous cultivators it will attract. The general esteem for a study, and the degree of attention bestowed upon those who prosecute it, are always important elements in securing for it a larger amount of talent and energy, and a more rapid advance.

3. *But is it desirable for the farmer?* Intellectually considered, we have already seen that it is highly so, as it will impart a new interest to the ordinary routine of his farming operations; and by calling forth thought, and leading to inquiry and discussion, will gradually elevate the class to which he belongs.

But, as a matter of profit, such experiments are deserving the attention of the rent-paying farmer. They cannot be a source of loss, because rightly (that is prudently) conducted, experiments will always, on the whole, more than repay the expense of making them; and no prudent man ought to begin his experiments on such a scale that he would suffer any material injury were they to fail altogether.

I may instance some of the results obtained by Mr. Fleming of Barochan, as showing how much crops may be increased, at a cheap rate, by the careful experimenter.

Thus, three successive crops of potatoes, oats, and hay, in 1842, '43, and '44, on two parts of a field, treated the one with farm-yard manure alone, the other with farm-yard manure mixed with other substances, gave the following economical results:—

1. Farm-yard manure applied alone, 30 tons. Potatoes reaped, 9 tons 3 cwt.

Oats, " 61 bushels.

Straw, " 1 ton 16 cwt.

Hay, " 2 tons 5 cwt.

Cost of Manure, £10 10s.; Value of produce, £36 12s.

2. Farm-yard manure, 14 tons; Potatoes, 15 tons 1 cwt.

Peruvian guano, 3 cwt.; Oats, 70 bushels.

Sulphate of magnesia,  $\frac{1}{2}$  cwt.; Straw, 2 tons 7 cwt.

Gypsum, 1 cwt.; Hay, 2 tons 5 cwt.

Cost of manure, £6 18s. 6d.; Value of produce, £50 6s.\*

Balance in favour of the mixed manure, £17 5s. 6d., or £5 15s. an acre every year.

Again, to successive crops of potatoes and barley, treated in three different ways in 1843 and 1844, gave the following results:—

1. *Manures applied per imperial acre—*

*a*  
Farm-yard manure, 30 tons.—Cost £10 10s.

*b*  
Farm-yard manure, 14 tons, Peruvian guano, 3 cwt.—Cost of, £6, 12s.

*c*  
Farm-yard manure, 14 tons; Peruvian guano, 3 cwt.; Sulphate of magnesia,  $\frac{1}{2}$  cwt.; Gypsum, 1 cwt.—Cost £6 18s. 6d.

2. *Produce reaped per imperial acre—*

*a*  
Potatoes, 14 tons; Barley, 63 bushels; Straw, 48 $\frac{1}{2}$  cwt.

Value of produce, £42 13s.

*b*  
Potatoes, 16 tons; Barley, 68 $\frac{1}{2}$  bushels; Straw, 45 $\frac{1}{2}$  cwt.

Balance in favour of mixed manure, £8 12s.

Value of produce, £47 7s.

*c*  
Potatoes, 18 tons; Barley, 66 bushels; Straw, 43 cwt.

Value of produce, £51 5s.†

Balance in favour of mixed manure, £12 3s. 6d.

or four and six pounds an acre respectively.

The dwarf Pinks of Verviers grow about 4 inches high; the stems are crowded with blossoms, the number of the flowers being very great; the corolla of a delicate rose color, with the variations. The aroma of

\* Potatoes reckoned at 40s. a ton, oats 2s. 6d. a bushel, straw 2s. a cwt., hay £3 a ton.

† Potatoes reckoned at 40s. a ton, barley at 3s. 6d. a bushel, and straw at 1s. 6d. a cwt.

\* Die Lehre von den Mineralischen Düngmitteln, p. 34.

these flowers is very agreeable, and nothing can be more suitable for the boudoir or parlor. To produce a specimen such as those alluded to, requires about three years of careful cultivation. These dwarf pinks are usually grown in pots, painted outside of a deep green color, and from 5 to 6 or 7 inches wide at the rim. The most favorable aspect for them, if grown at a window, is that where they may have full exposure to the sun for the greater part of the day. The reflected warmth of the windowsills, is also beneficial to their roots. The pots are not quite filled with soil, but to within about an inch of the rim; and as the leaves extend, and cover the border or rim, a humid atmosphere is maintained around the stem or neck of the plants.

#### BARE FALLOW.

In summing up the evidence for and against the practice of bare-fallowing clay land, we may say in its favour, that it is the most effectual means of cleaning, loosening, and sweetening the soil that we are acquainted with at present. Hitherto it has been the mainstay of the clay-land farmer; for although in itself unprofitable, when the price of wheat falls below 6s. per bushel, it so improves the physical texture of the land, that the subsequent crops of the rotation can be cultivated at comparatively little expense. The great objection to the system is that it is stationary, and admits of little or no expansion. It adds nothing to the soil, and consequently no provision arises out of it for increasing the elements of fertility. The process of bare-fallowing is, in some respects essentially an exhausted one; for it is a well-known fact, that the long-continued action of atmospheric air upon the surface of a soil, the particles of which are continually exposed to its influences by a succession of ploughings and harrowings, slowly, but surely, wastes the vegetable matter contained in it; and, so far as these soils are concerned, this decrease of vegetable matter is one of the greatest evils that can befall them. Another strong objection to the practice, where carried out to the total exclusion of green-crop husbandry, is the impossibility of converting the straw grown on the farm into good manure. In many districts at present, the consumption of clover and tares in the strawyard by cattle in summer, offers the only efficient means of converting straw into manure; and a failure of these crops may, and does often occur, and when this is the case, the straw can only be turned into manure by treading it down with horses, and such young wintering stock as can be kept under such circumstances. The result is a mass of dry, fire-fanged, and half-rotted straw, from which a large proportion of the ammonia developed during the process, is expelled by the high temperature induced.

We advocate, therefore, not the entire abandonment of the practice of bare-fallowing clay soils, but the adoption of a rotation where turnips or mangel-wurzel shall be introduced at some stage of its course. A bare fallow every eight years ought to be quite sufficient to keep a well-drained clay soil in a cleanly condition; so that in making turnips in the fifth year of the rotation, a much smaller amount of labour is required than in those cases where this is the only cleaning crop. That good crops of turnips can be grown on clay soils, is every year becoming more and more obvious, through the successful and spirited efforts of many enterprising farmers, both in England and Scotland; and probably the day is not distant when our most stubborn clays will be made to yield so far to the power of skill and high farming as to admit of green crops being systematically and profitably cultivated, and when a naked fallow will only become an occasional necessity.

#### THE SCIENCE & PRACTICE OF FLORICULTURE.

Through the kindness of the Messrs. Tyso & Son, Florists, Wallingford, Berkshire, we are favored with their excellent Treatises on the culture of the Ranunculus, Anemones &c. The practical directions of such men as the Tyso's, father and son, must be valuable to many of our readers, and hence we will give here the essence of their mode of treating the former of their flowers:—

*Soil.*—"The foundation of all good culture," say they, and they say correctly, "is the adaptation of the compost to the natural habits of the plant. Experience teaches that the Ranunculus delights in a rich hazely loam. If, therefore, the natural soil of the garden be unfavorable, procure the top spit of a pasture of rather heavy and tenacious, but not clayey qualities with the turf, and lay it in a ridge some months, and turn it two or three times before use. To give precise and accurate directions in print, for selecting a suitable soil, is difficult, but it is deserving of remark, that a pasture abounding with, and luxuriantly sustaining the British varieties of Ranunculus, or Butter Cups has also been found congenial to the Asiatic species. The addition of fertilizing agents to maiden soil is of paramount importance. Many composts have been recommended to the amateur, the proportionate ingredients of which have been prescribed with the precision of a physician's formula." Such absurdities have done more to disgust thousands, and to retard a true taste for Floriculture than all other obstacles put together. It is, therefore, cheering when we hear the most eminent growers of this flower, so express themselves "the secret of vigorous foliage and enormous blooms, has been a mixture of powerful chemical stimulents, or a substratum of cow dung, a foot

*thick*, or some other equally unnatural process! Our advice is to avoid quackery. Many valuable collections have been ruined by excessive applications of unsuitable manures, or the use of such as are destructive rather than nutritive. Decayed stable and cow dung, in equal quantities, constituting together about one-third, added to two-thirds of loam, will, when mixed and thoroughly incorporated, form a compost for the main depth of the bed, reserving a portion of loam sufficient to make a top layer of soil, 2 inches deep, to which about the above stated proportions of well decomposed manure may be added. It is of importance that the tubers should not be placed in contact with fresh manure, as it engenders disease in the roots, and consequently injury to the plants.

*Preparation of the beds.*—Having chosen an open but not exposed part of the garden which will admit of the beds being laid down east and west, remove the earth a foot deep, and from 3 feet to 3 feet 4 inches wide, and fill the bed with the prepared compost, to within 2 inches of the surface; leave it thus a month, and then add the reserved top soil. These operations are best done in autumn, that time may be allowed the earth to settle. The surface of the beds should be level, and not more than an inch higher than the paths, in order that the roots may be kept regularly cool and moist; and as the *Ranunculus* thrives on a firm bottom, the compost should not be disturbed at the time of planting more than is just needful for that operation. During winter the surface may be pointed up rough to take the benefit of frosts, but in no case should that be done more than 2 inches deep. The beds may be neatly edged with inch boards, painted lead color, and in case named sorts are planted, should be numbered with white paint to correspond with the numbers entered in the amateur's list. A bed well constructed at the commencement, will admit of several successive plantings, with an annual addition of fertilizing materials; it is worthy of the particular care of the cultivator, though the preparation at first may involve some little expense.

*Planting.*—The best season for general planting is the last fortnight in February, the plants have not then to contend with the severities of the winter. In some favorable seasons, the roots may be planted with advantage in October; they will have more time to vegetate and establish themselves; they will make stronger plants and will bloom more vigorously, and about a fortnight earlier than if planted in spring. Considerable hazard, however, attends autumn planting, and it is not recommended except by way of experiment, to those who possess a large stock and can afford to risk a portion. In fine weather towards the close of February, rake your beds perfectly level, and divide them into six longitudinal rows for mixed roots, allowing 4 inches from the

outside row to the edge; or for named sorts mark your beds transversely, at distances of 5 inches asunder, and plant six roots in a transverse row. Draw drills one inch and a-half deep, and plant the roots with the claws downwards, with a gentle pressure to secure them in the soil, so as to be one inch and a-half from the crown to the surface. When planting on a small scale, a dibble, with a shoulder at the precise depth, may be used; but in large quantities it is an inconvenient method, and planting at the bottom of a drill with slight pressure, and without disturbing the subsoil, is attended with similar advantages to the use of the dibble, and in practice will be found to have some points of preference. If the top soil is light after planting, it may be gently beaten with the back of a spade; this operation, however, must only be done in dry weather.

*Subsequent Treatment.*—The plants will make their appearance in a month or five weeks, after which it will be advantageous to press the soil closely around them with the hands, stopping up the holes made by worms, frosts, and the protrusion of the leaves through the surface. A top-dressing of rich compost, chiefly of decomposed manure (free from wireworm), may be added with advantage—first, as a protection against cold, and drying winds, and subsequently as a source of nourishment to the roots, carried down by the agency of rain. The uncertainty of our climate, and our liability to the occurrence of frosts in April, and even in May, is undoubtedly an obstacle to the easy and certain success in the culture of this flower; but then the same observation applies with equal force to the Tulip and other floral gems of the open garden. It is proper, then, as far as possible, to guard against this evil, by having a quantity of flake hurdles at hand to cover, at least, the best beds. Short stakes should be driven in the ground to support the hurdles just above the foliage. Other means of shelter may be useful, but as the object is the security of a *nearly hardy plant*, a close protection would be injurious, as it would weaken and draw up both foliage and blooms, and thus render the plants more subject to injuries, from being delicately brought up. Should the grower, from any circumstance, have neglected to cover his beds, the first step to take on rising in the morning on which a frost occurs, is to put on the hurdles and then cloths or mats, and not remove the covers until the plants and ground are thawed; after which the light should be admitted gradually, by propping up the hurdles on the north side, and the direct sunshine excluded for some time after all remains of frost have disappeared. If large worms exist in the beds they should be collected by hand at night, or destroyed by lime-water used in a clear state. The ascent and descent of worms is injurious to all choice plants, and

especially to the Ranunculus, which, from its shallowness in the soil, is the more exposed to harm from such disturbance.

#### ON THE PRICE OF THE QUARTERN LOAF, IN LONDON.

We have observed with surprise the following statement, in "Bell's Weekly Messenger," respecting the contracts for bread in one of the London Unions:—

Quarterly Contracts for twelve months after the abundant harvest of 1844, the fixed Duty on foreign wheat being 20s. the Quarter of eight bushels.

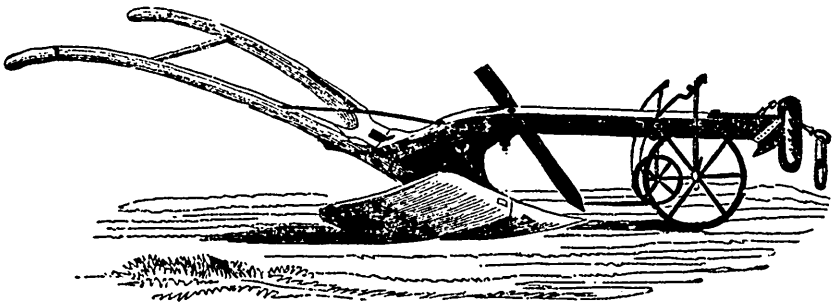
	20s Duty on wheat.	Average price of wheat.
September, 1844, loaf, 4½d.	45s. 11d.	
December,	4½	45 1
March, 1845.	4½	45 0
June,	4½	48 2
Average per loaf,	4½d. Av.	46 0½ per quarter.

#### Quarterly Contract for the year 1850.

	Fixed Duty on wheat. 1d. per quarter	Average price of wheat
March, 1850, loaf,	4½s.	38s. 6d.
June,	4½	39 8
September,	4½	42 10
December,	4½	39 9
Average per loaf,	4½d. Av.	40 2½ per quarter.

It would appear from this statement, that "Free-Trade," and lowprices for Agricultural produce, does notal ways give the consumer what he requires at proportionably low prices, and we have abundant proof of this fact.

EXPERIMENT WITH ASHES.—A correspondent of the New-England Farmer, spread "on a small square of a few rods," ten bushels of ashes, on worn-out meadow. "The grass there was three feet high, while all around, with equal advantages, except ashes, it was hardly five inches high in July."



RUTLAND WHEEL PLOUGH.

To the French Papers published in Canada, and the Curés of Parishes.—We are requested by the author of the "Tract on the General Management of a Farm in Lower Canada," to state that there is an error in one of the figures in it, viz, in the Mixture for Smearing Sheep, the printed Tract has 3 lbs. of butter, when it should have been 8 lbs. The mixture would not work at all with only 3 lbs. of butter; and therefore Newspapers and the Curés of Parishes are respectfully requested to inform those who have received the Tract, that they should read 8 lbs. instead of 3 lbs.

ANTIDOTE AGAINST POISON.—Hundreds of lives might have been saved by a knowledge of this simple recipe—a large teaspoonful of made mustard mixed in a tumbler of warm water, and swallowed as soon as possible; it acts as an instant emetic, sufficiently powerful to remove all that is lodged in the stomach.

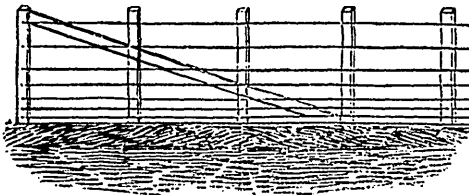
Editor of the "Agricultural Journal and Transactions of the Lower Canada Agricultural Society," WILLIAM EVANS, Esq., Secretary of the Society, to whom all communications connected with the editorial department of the Journal are to be addressed, and if by mail, post paid.

Complete files of the Agricultural Journal in English and French, from the commencement, unbound, and half-bound, may be had at the Office of the Society on moderate terms.

Also, half bound copies of Evans' Treaties on Agriculture, with the supplementary volume in both languages, together with complete files of the Agricultural Journal, from 1844 to 1846, both included.

#### LOWER CANADA AGRICULTURAL SOCIETY.

Office of the Society, at No. 25, Notre Dame Street, Montreal, opposite the CITY HALL, and over the SEED STORE of Mr. George Shepherd, Seedsman of the Society, where the Secretary of the Society, WM. EVANS, Esq., is in attendance daily, from 10 to 1 o'clock.



WIRE fences are attracting much attention in all parts of the country. When they have failed, it has usually been owing to poor iron or too small wires, in endeavoring to make them cheap. Where stone for walls, or timber is scarce, they may prove valuable. Col. Capron, of Maryland, made two-thirds of a mile in one entire piece, stretching the wires the whole length between two stout main posts, the wires being supported by intermediate posts 8 feet apart. The main or end posts must be firmly braced, as in the above figure. Col. Capron used No. 5 wire next the road, weighing one pound to 8 feet, and costing about 70 cents per rod for 6 wires. He thinks No. 7 wire, weighing one pound to 11½ feet, will do for partition fences. Some use No. 10 wire, which is about 24 feet to the pound, but it is liable to become broken, except under unusual circumstances. A wire fence, patched with rails and boards, as we have often seen, where small wire was used, is not a pleasing object. The wire must be annealed.

The wire passes through the end posts and may be fastened to the intermediate posts by staples, made as follows: wind a wire closely round a flat iron bar, passing from one end to the other; then with a cold chisel cut the wire along the middle on both sides, which will both flatten and sharpen the newly made points. Gas tar will prevent the rusting of the wires, but being so black will make them very hot in the sun, and they will lengthen and contract more by heat and cold, than if painted with yellow ochre. Col. Capron keeps his wires always equally stretched, by means of a 150 pound weight, acting on a lever at one end. His two-thirds of a mile of wires, by expanding and contracting, cause this weight to rise and fall about thirty degrees.

Before using, the wire should be wound on a large cylinder, which may be attached to a wheelbarrow. The ends are looped together or if large, by flattening each end, and then binding them together with small annealed copper wire. It is tightened in the main posts by means of screws passing through the posts by turning a nut, the wire having been drawn tight and keyed in the previous post, braced for this purpose. Square headed, iron bed-screws, may be brought cheaply by the dozen, and the ring or hook welded on by a blacksmith. In making the fence, the hands must be protected by thick leather mittens.

If a ridge is thrown up by two furrows, seven wires will be enough in rows at bottom, or a bottom board case, at the following distance apart: 4½, 4½, 6, 7, 8, and 9. In secluded or unexposed places, wire fences, with small wires, have been made for fifty cents per rod; but a good substantial one can not be made for much less than one dollar per rod, and some have cost considerably more.

GOOD RULES AND GOOD MANAGEMENT.

ONE of the best farmers in the State of New-York, has the following rules and regulations agreed to and signed by every man he hires.

*It is expected that all persons employed on the farm of———, will carefully attend to the following system:*

- Regularity in hours.
- Punctuality in cleaning in putting away implements.
- Humanity to animals.
- Neatness and cleanliness in personal appearance.
- Decency in deportment and conversation.
- Implicit obedience to the proprietor and foreman.
- Ambition to learn and excel in farming.
- No liquor or strong drink of any kind to be allowed.

MAXIMS OF ORDER AND NEATNESS.

1. Perform every operation in the proper season.
2. Perform every operation in the best manner.
3. Complete every part of an operation as you proceed.
4. Finish one job before you begin another.
5. Secure your work and tools in an orderly manner.
6. Clean every tool when you leave off work.
7. Return every tool and implement to its place at night.

DRAINING ON A LARGE SCALE.—Prof. Norton, of Yale College, visited a farm in Scotland; the surface of the soil was stiff, and the subsoil a close clay. The owner had drained 900 miles. He had a machine for making tiles for his drains, which turned out 400,000 a year. The rent of the land was immediately raised by this improvement, from \$2.50 to \$6.50 per acre.



## GREAT SALE OF SUPERIOR THOROUGH BRED SHORTHORN CATTLE.

THE subscriber having more stock than he can well sustain on his farm, will offer at public auction, about 30 head of his improved short horn cattle, consisting of bulls, cows, heifers, and heifer and bull calves, on the 26th day of June next, at his farm  $2\frac{1}{2}$  miles from this city.

It is known to breeders of improved stock, in this country and in Canada, that the proprietor of this herd, during the past 12 years, has through the medium of importations from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn, for improvement and crosses upon other herds. His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirkclevington, Yorkshire, England, which herd it is well known has recently been disposed of at public sale by his administrators and dispersed in many hands, and can no longer be resorted to as a whole, for improvement. The announcement of that sale, created a great interest, and all short-horn breeders in England seemed emulous to secure one or more of these animals, to mingle with the blood of their own herds, and at the day of sale, there was found assembled the largest audience ever before witnessed upon a similar occasion, numbering as was said from 400 to 500 persons, and among them the breeders in England, and several from other countries, some of the animals bringing prices that seemed incredible to many.

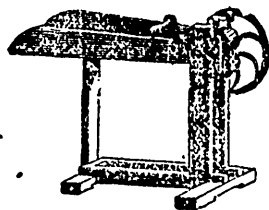
In the herd now offered for sale will be included, the imported Bull, Duke of Wellington, and the premium Bull, Meteor, these are Bate's bulls, and their reputation as stock getters are too well known to need any comment. I am, however, authorized by Dewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means of forming a judgment, to say "that in no instance to his knowledge had these two bulls been bred to short horn cows of other herds, previously imported into the United States but what the produce were superior in general qualities to such herds."

The most of the stock which is now offered for sale, have been bred from these two bulls, and the proprietor having a young Bull more remotely connected with that portion of the herd he retains. (being about 14 in number) can spare these two valuable Bulls. There will be in the stock offered for sale, seven young bulls from 8 months to about 2 years old, in addition to the two named above, and the remainder of the stock will be composed of Cows, (most of them possessors of extraordinary milking qualities,) Heifer and Heifer Calves. It is believed that no herd of short horns has ever been offered for sale in this country, exhibiting more of the valuable combinations of qualities which contribute to make up perfect animals.

A Catalogue containing the pedigrees of these animals, will be ready for delivery at an early period, in which the terms of the sale will be particularly stated. A credit will be given from 6 to 18 months. Gentlemen are invited to examine the herd at their convenience.

G. VAIL,

TROY, New York, March 1st, 1871.



## AGRICULTURAL WAREHOUSE.

THE Subscriber has constantly on hand, Samples of various kinds of AGRICULTURAL IMPLEMENTS, among which will be found, Ploughs, Cultivators, Seed Sowers, Straw Cutters, Corn Shellers, Subsoil Ploughs, Vegetable Cutters, Theriometer Churns, Horse Rakes, &c. &c. Expected by the opening of the Navigation, a large assortment of Cast Steel Spades and Shovels, Cast Steel Hay and Manure Forks, Hoes, &c. &c.

Agent for Sale of St. Onge's Patent Stump Extractor.

P. S.—Any kind of Farming Implements furnished to order, on the most reasonable terms.

GEORGE HAGAR,  
103, St. Paul Street.

Montreal, 1st April, 1851.

## CATALOGUE SALE OF FRUIT TREES AND FLOWERING SHRUBS.

ABOUT the latter end of this month or beginning of May, WILL BE SOLD BY AUCTION, about 3000 APPLE TREES, choice named sorts, together with an assortment of PLUM and PEACH TREES, RASPBERRY and STRAWBERRY PLANTS, all good named kinds, and a variety of ORNAMENTAL TREES and SHRUBS.

Particulars and time of Sale will be announced hereafter in the daily papers.

JOHN DOUGALL,  
Agent for James Dougall of Rose Bank and Windsor Nurseries, C. W.

Montreal, 1st April, 1851.

THE AGRICULTURAL JOURNAL AND TRANSACTIONS OF THE LOWER CANADA AGRICULTURAL SOCIETY, in the French and English languages, will hereafter be published by the Subscriber, to whom all COMMUNICATIONS relative to SUBSCRIPTIONS, ADVERTISEMENTS, and all business matters connected with the past or forthcoming volumes of the Journal, must be made.

The Journal contains 32 pages Monthly, is published at \$1 per annum, and any one obtaining new Subscribers, on remitting \$4, will be entitled to Five Copies of the Journal for one year.

Agents and Subscribers are required to remit immediately to the Publisher the amount due the Society. Also, a CORRECT LIST OF SUBSCRIBERS in their respective Localities.

Responsible Agents wanted to canvass for the SNOW DROP, AGRICULTURAL JOURNAL, and other Works, to whom a liberal Commission will be allowed.

ROBERT W. LAY,  
193, Notre Dame Street, Montreal.

MONTREAL:—Printed by JOHN LOVELL, St. Nicholas Street.