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THE BRITISH AMERICAN



CULTIVATOR.

"AGRICULTURE NOT ONLY GIVES RICHES TO A NATION, BUT THE ONLY RICHES SHE CAN CALL HER OWN."—*Dr. Johnson.*

VOL. III.

TORONTO, OCTOBER, 1844.

No. 10.



THE CULTIVATOR.

"Agriculture is the great art which every government ought to protect, every proprietor of lands to practice, and every inquirer into nature improve."—*Dr. Johnson.*

TORONTO, OCTOBER, 1844.

MONTHLY CALENDAR.

Autumn ploughing will now require your almost undivided attention. This operation upon strong retentive soils is absolutely necessary, in order to secure a profitable return of tillage crops; though it should be practised with great caution upon soils where sand is the principal ingredient. It is obviously apparent, that of the diversified variety of soils, each requires a peculiar mode of tillage: ploughing ought, therefore, to be executed according to the nature of the surface and subsoil, and not performed upon one invariable rule. It is, however, worthy of remark, that in most cases where the farmers have studied to plough only to the depth of the surface mould, and where they have entertained the false notion, that mixing the cold clay, as they term it, with the surface-mould is prejudicial to the crops, that

deep ploughing would add greatly to the products of the soil under such circumstances, especially if the subsoil contains either lime or potash. Every farmer ought to make an experiment in deep ploughing, and at no better time can it be performed than in the present autumn. A portion of a field, for experiment, might be ploughed six, another eight, and another ten inches deep, and in this way the advantages of the system will be generally understood, and we doubt not but that it will be generally practised as soon as a few such trials in each neighbourhood have been made. In ploughing ten or twelve inches deep, we have found it most convenient to plough two furrow deep, by using two ploughs, one following directly after the other: it may also be done by employing either two span of horses, or one span of horses, and a yoke of oxen to a plough,—the latter method is the one that we shall practice on a large scale. It should be remembered, that deep ploughing is one of the leading preventatives of rust, which has been recommended to the farmers, through this journal, for the past three years: it will, therefore, behove those who have been inflicted with this great drawback upon their profits to adopt the practice here recommended without delay.

As soon as a field is completely ploughed, it should be so thoroughly drained with a plough or spade that no stagnant water will be allowed to remain on the surface. When this plan is pursued, and the work properly performed, it will greatly expedite farming operations in the spring.

Of the various other departments of agricultural operations which will require the attention of the thrifty farmer at this season of the year probably none are of equal importance to that of attending to the interests and to the movements of the local or general agricultural shows, and in adopting plans to obtain and extend the best information published upon the science and practice of agriculture. Many there are in this country who consider that the time and money laid out in this way are expended but to little purpose, and, instead of furthering the spread of useful knowledge, exert their influence, by precept and example, in the very opposite direction. As there is but little chance of convincing such parties of the fallacy of those sentiments, we would rather, for the present, devote a few lines in pointing out to our readers the outline of a plan which we hope to see adopted in this Province before the lapse of many years, which will most conclusively show the benefi-

cial and practical results of a general and combined effort to improve the agriculture of the country. These efforts may be arranged in the following order:—

1st. District Agricultural Societies, with Branches in the several Townships in each District, and connected in such a manner that the latter will be mutually interested in the success of the former. Probably the plan recommended by us on a former occasion would be found to work as well as any other that could be devised. 2nd. The establishment of either a Provincial Society or a General Agricultural Board, to be under the liberal patronage of Government, and to be represented equally by the Government and the District Societies. 3rd. The publishing a Journal of Agriculture, containing the proceedings of the Board, together with the information that the proceedings of the District and Township Societies may afford. 4th. The organization of Township or Neighbourhood Agricultural, Mechanical, and Scientific Libraries, in connection with Conversational Clubs, for the discussion of Agricultural, Mechanical, and Scientific subjects, and for mutually benefiting and promoting the interests of each other, by a general spread of useful and practical knowledge on all matters that appertain to the productive interests of the country. 5th. The Permanent establishment of a Provincial, of District, and of Township Exhibitions of Agricultural and Mechanical Products, for the purpose of giving encouragement to the skill and genius of the country. 6th. In connection with the Township Societies' Shows, the holding of Spring and Autumn Fairs, for the sale and exchange of every description of live stock, &c.; which Fairs should not only be held upon the day and at the place of the Shows, at fixed periods, but also to be under the management or supervision of the Township Societies respectively. 7th. The erection of, or providing suitable places in each Market Town for holding fixed Market Days in each week, for the sale of grain, meats, live stock, &c., the arrangements for which will probably require a special Act of Parliament before a general plan can be legally carried into effect, in other places than in corporate cities. 8th. The establishment of a Model Farm in each District, to be either a private, a joint stock, or a public enterprise, as the circumstances of the case may dictate, the supervision and management of which should be under

the control of a committee appointed by the District Society; and the results of the most interesting experiments made should be published in the Journal of Agriculture, for the general benefit of the country. 9th. The introduction of a proper set of Agricultural books into the common schools of the country, and also the adoption of some well-devised plan for the better preparing teachers, to perform their important and highly-responsible office.

Although every intelligent mind would be heartily rejoiced to see the above-mentioned Associations carried into immediate operation, and would also, no doubt, assist in communicating, to all classes in the country, such information as would conduce to the common good, still it must be remembered, that, in a new country like this, where the people's prejudices have to be combated with, it is extremely difficult to make rapid progress in accomplishing any object of a public nature, no matter how beneficial in its tendency it may be. One thing, however, is certain, that it only requires a beginning, and that beginning to be seconded by men of talent and influence in the country, to effect more than even the most sanguine ever anticipated. The first thing to be done is to get each farmer to consent to read a well-conducted Agricultural paper; the next is, to get him to enroll his name as member of an Agricultural Association; and the third important step is, to get him to assist in the establishment of an Agricultural Library and Club, and the several other movements or advantages will follow in due time.

The annual cost to each farmer in becoming a member of an Agricultural Society, in receiving an Agricultural Magazine, and in being a member of the Library and Club, would not exceed the small and trifling sum of ten shillings, yet, strange to say, that, with so small a sacrifice, scarcely one in a hundred of the Agricultural classes of the country can, as yet, be prevailed upon to engage heart and soul in the advancement of this great national movement.

If the people of Canada desire to see their country rise in the scale of respectability and wealth, they must, by every possible means, give encouragement to agricultural and mechanical genius. The way to do this most effectually has, in part, been pointed out, and we trust the friends of Canada, from Sandwich to Gaspé, will avail themselves of the leisure which this season of the

year will more or less afford, in aiding in the establishment of Township Branch Agricultural Societies, and in collecting subscriptions for Agricultural Libraries and Farmers' Clubs.

The long evenings should be spent in reading useful works on Agriculture and general science; and, if only two hours in each day be spent in this way, the amount of practical information that may be acquired is truly astonishing. Farmers sons are often taunted by the students of the learned professions, and, in fact, by the most common mechanics, for their ignorance, and for their incapacity to transact business: this stain upon their character can only be removed by a resolve, on their part, to acquire useful information, and to improve in every branch of their profession, until they have arrived at that high state of perfection that has been attained in older countries, where the profession of husbandry is considered the most honourable and independent in the realm.

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For the Cultivator. AGRICULTURAL SOCIETY OF HALDIMAND.

Sir,—I have been induced to send you the following statement of the proceedings of a newly-established Agricultural Society in the county of Haldimand, as an encouragement to the farmers in other counties who have not, as yet, formed such an Association within themselves:—

It is now twelve months since the subject was first broached in our county, and it met with but little encouragement for some time, but, owing to the perseverance of a few individuals, we have succeeded in enlisting nearly eighty subscribers in the cause. We have in our treasurer's hands, including the liberal allowance of Government, the sum of £82 10s., which at our last meeting was appropriated in the following manner:—£8 has been already expended in premiums, to the two best stud horses shown in May last, which have served during the season in the county; £40 will be expended at a general cattle show in September next; £15 have been equally distributed to the different townships, for the purpose of encouraging ploughing matches throughout the country; and the further sum of £10 has been set apart for a grain and root show, in January next. As an encouragement to subscribers, we have come to the resolution of giving every member an entire copy of the *British American Cultivator* gratis; and by this

liberal proceeding we consider the cause of Agriculture will be more materially advanced than by double the amount expended in premiums.—A Subscriber.

THE FARMERS' PROSPECTS.

We have delayed making any remarks in relation to the present year's harvest up to this late period, because the accounts that reached us at the early part of the season, as well as up to the completion of the harvest, differed so materially, that it has been extremely difficult to come to a correct conclusion upon the subject. From the most authentic information received, we should judge that the wheat crop in the United States and Great Britain will equal a full average, and, therefore, the prices of breadstuffs in those countries will range something lower this season than the past, unless there should happen to be some extraordinary demand for the article, which we have at present no right to anticipate. Every intelligent person must be aware, by this time, that the markets of the above-mentioned countries rival the markets of this country, so far as the principal export articles are concerned, and this being the case, the Canadian farmers will necessarily have to submit to any reduction in prices that may take place, through an abundant harvest abroad.

As the products of this country are now admitted into the British markets upon the most liberal terms, it is only rational to conclude that the price of wheat will seldom fall much below four shillings per bushel, and that other articles will bear a proportionate value. Prices may fall a trifle lower than this at the close of the navigation, in consequence of the rash speculations of buyers last year, but those who are able to hold their export produce until the re-opening of the navigation, will be very apt to receive higher prices than if they disposed of their articles before that time.

Some suppose that the efforts that are being put forth in this country to increase the products of the soil, will have the effect of materially lessening the price both here and in Great Britain: in the opinion of every sensible man, however, these conclusions will be considered untenable, inasmuch as the whole of the export provision trade of the country would not afford sufficient for a single breakfast for the vast population of Britain. If the pro-

ducts of the country were quadrupled—which might be accomplished, if only the proper and legitimate influences were brought to bear upon the profession of Canadian agriculture—the producer in this colony would certainly get as much, within five per cent., for his produce, as though the wants of the country were barely supplied. As soon as the prices of produce fall below the point that they will not remunerate for the cost of production, the Canadian farmer will even then be in an enviable position to the British farmer. When prices are at such a low scale here as to scarcely remunerate, they must be ruinous indeed to the British grower. Such a crisis in agriculture need not be apprehended in this country, if only cultivators of the soil would adopt the improved methods of cultivation which are so successfully practised in countries that are farther advanced in the science and practice of agriculture.

It is broadly asserted that wheat can be grown in the North-Western States, and afforded for 2s. 6d. per bushel, as readily as it could be produced in the Northern States and in Canada for twice that sum per bushel: The great natural advantages of the west could be counterbalanced, or, at least equalized by the Canadian farmer, through the adoption of an increased amount of skill, industry, and rural economy in the various branches of his farm-management: The state of agriculture in the north of Europe, when contrasted with the agriculture of the southern country, will clearly exemplify this statement. It appears to us, that the farmers of this country have much to gain, and but little to lose, so long as the British markets are unrestrictedly open to their produce. There is but one thing wanted to make Canadian Agriculture a most profitable occupation, which is simply an increase of knowledge. The wisest and best farmers among us would be much the gainers were they to search more deeply into the causes and effects that influence their various farming operations. It is alone by such means that we shall be enabled to successfully and profitably compete, in the production of agricultural produce, with other countries: If wheat, or other produce, can be afforded in other countries at a less price than it can be purchased for here, the cause of this cheap production should be a matter of investigation, so that the intelligent cultivator might decide upon the adoption of other, cheaper, and

more certain methods of management than those formerly employed, so that he might safely defy competition, let it come from what quarter it may. It is common for farmers to say, that they cannot afford to grow wheat under one dollar per bushel. Admitting that this be true under the old system of farming which has been handed down from father to son, for the last half dozen generations, or more, with very slight modifications, still it does not follow but that a much less price per bushel would be equally as remunerative under an improved system of cultivation. A really clever or scientific farmer seldom fails in obtaining a good round interest for the capital and skill expended in his profession, whereas a slovenly and bad farmer can scarcely pay common interest upon the capital he employs in agriculture: the one scarcely ever has reason to complain of the times, the other is ever finding fault with the times, crops, weather, &c., and is certain to attribute all the mishaps which befall him in his affairs to other than their legitimate cause.

If the Canadian farmers have any desire to be enabled to grow grain and other produce as cheap as their neighbours, the necessary information will be afforded them in detail, in the future numbers of this paper, at a merely nominal price: It should be born in mind, that what is recommended to others, will be practised by the writer, which circumstance should give an additional weight to the suggestions.

MEDITERRANEAN WHEAT.

We sowed a small quantity of this wheat last fall, and it has stood the test of the fly, rust, and other disasters to which wheat is subject. It ripens from ten to fourteen days earlier than the White Flint, has a good berry, and we consider it a very desirable wheat for this section of country. We raised 13 bushels on about half an acre of ground, which was not in very good condition. The berry is plump and good, and the wheat weighs 60 lbs to the bushel. We cut the wheat on the 17th July, and thrashed it out on the 20th. We refer also to the annexed notice of the "German Wheat" from the American Farmer, Baltimore. This is said to be an excellent variety, and one that will withstand the fly and rust.—Genesee Farmer.

We have been shown a sample of red wheat which is said to possess so many excellent qualities, that we do not hesitate to direct the attention of farmers to it. It was raised by Dr. Jonah E. Mace, of Dorchester county—a gentleman whose scientific researches have been of great service to the cause of Agriculture. The wheat above alluded to is called German Wheat. It possesses the important quality of ripening eight or ten days earlier than even the Mediterranean wheat, is not at all affected by rust, fly, or smut, weighs 64½ pounds to the bushel, and is pronounced to be, in good soils, extremely prolific. The present parcel was harvested on the 12th of June. The qualities here ascribed to it were satisfactorily tested by Dr. Mace, who watched the experiment with great interest.

From the American Farmer.

MANURES.

A Prize Essay, By S. L. Dana.

SECTION NINTH.

Of the Causes which make Urine better or worse, more or less. The Modes of Preserving it.

There can be no doubt, that the same causes which we have pointed out as affecting the value of dung, affect also the urine.

We have already alluded to the four chief circumstances to be regarded in urine. And first, of its composition. It will be affected by the age, sex, food, and difference of animal. The process of forming urine is the same in man and animals. Now if we reason here, as we surely may, from analogy, then the effect of age and sex upon the quantity of the essence of urine, or urea, will appear from the result of one hundred and twenty analyses of urine:—

In 25 hours there are discharged by men 432 grains of urea, by women 203 grains of urea, by old men, from 76 to 80 years of age, 122 grains of urea, by children, 8 years of age, 203 grains of urea, and by children, 4 years of age, 70 grains of urea.

It will be recollected, that each grain of urea is equal to a grain of carbonate of ammonia of the same, so that a healthy man discharges daily about an ounce of this salt. If, then, other animals are affected by age and sex, as is the human species, then we may say that bulls and oxen give a better urine than cows, steers better than calves, and a venerable old cow gives as much of the essence of urine as two calves.

Food affects the quantity of water, and that acting merely to dilute the urine, renders it weaker in salts for a given amount, though perhaps not the daily amount of salts. Supposing the animal well fed, so as to keep up the wear and tear of his blood and flesh, then as the urine derives its chief value from the worn out materials of the body, the actual amount of urea daily discharged may be the same, though the amount of the urine may vary considerably. We may increase the amount of salts and acids by particular food, but this can never be continued long enough to change materially the character of urine as a manure. Difference of animals has also a great effect on the quality of urine. The more active, the greater the wear and tear of the flesh, the better the urine in working animals. Where the animal is stall-fed, there no doubt the urine is still richer, and the urine of fattening animals is still more valuable. Hence of all animals, commend me to swine, as manufacturers of ammonia. Cast your eye on the table of the amount of urea or ammonia furnished by various animals. No one exceeds the hog. He seems especially favored by nature for this office. He eats everything. His habits require very little of that class of food which forms flesh and blood. He

is a fat-former, a magazine of lard, a real oil-butt, and demands, therefore, the food essential to form fat and keep up his heat. He returns of course, having little lean meat to form (nobody would praise him for that.) having little flesh to form to increase his size, he returns quickly the waste his body suffers as urea, which becomes ammonia. But it is only the still, and quiet, and penned animal, which gives this valuable product. If we would cause him simply to produce the greatest amount of his manufactory, without taking into account his labor in shoveling over the compost heap, perhaps no better rule can be given, than the Shaker practice of feeding with lettuce leaves. Having little brains to replenish or build up, and not quick in his nerves, (for be it known to you, reader, the opium of lettuce leaves is supposed to contribute mainly to the formation of brain and nerves,) the opium-eating hog will return a vast amount of the nitrogen of his lettuce, in the shape of ammonia. If now you add to the facts, common to the nourishment of swine, the action of ammonia on mould, as it has been explained, you will see, that he who neglects to fill his yards with mould, and swine to convert it, overlooks one of the cheapest, most effectual, and certain modes of forming manure, which practice and theory unite in pronouncing the surest element of the farmer's success. Not only is the quality of urine affected by age, sex, food, difference of animal, but the season also exerts an influence upon this liquid. The urine of cattle often contains ammonia ready formed in summer, but never in winter. In cold weather the amount of ammonia, or rather the principle affording it, is less; often it is not half in winter what it is in summer. This certainly is a misfortune to the farmer, who generally keeps his cattle up only in winter; but then it is an argument also for the practice of summer soiling.

Secondly, with respect to the circumstances necessary to change urea to ammonia; or, in short words, to fully ripen urine, or to make it a fit manure. These also depend upon the season, in part. It is to be remembered, reader, that this rotting of urine is only fermentation. It takes place because there is a principle in urine which brings on fermentation, just as it does in new cider. Now if it is by fermentation that urine rots, it will take place, as all fermentation does, best at a moderate temperature. The cold of winter will prevent it. Hence your winter manure must be allowed time, as the heat of spring comes on, to ferment, that the urine may be changed to ammonia; and every means must be taken to prevent the heat rising beyond, in the manure heap, or falling below a moderate temperature warmth. These are the circumstances which chiefly promote the change from urea to ammonia.

Thirdly, in regard to the time in which this change will take place, it will require at least one month; and six weeks are better. If urine be allowed to rot for a

month, it fully doubles its quantity of ammonia. In fact, it would have contained more than double the ammonia of fresh urine, had not a portion escaped.

This brings us to our fourth point, the best mode of preventing the flying off of the ammonia when this change has taken place. Much has been said about tanks, and vats, and urine pits, and many plans devised for preventing the escape and the loss of volatile ammonia. But when once the action upon mould, is understood, as we have already pointed it out, I am persuaded, reader, that those tanks, and vats, and urine-carts, will appear to you not only expensive and cumbersome, but useless. Your first point is, to save your ammonia, your second is, never to use urine in its caustic state. If you do you will as assuredly burn your crop, as the puddle formed by a cow burns the grass upon which she empties her watering pot. Here the urine, forming caustic ammonia, acts as would caustic potash, or a lump of stone lime, left to slack upon the grass. You want to change this burning or caustic ammonia into mild ammonia, or to combine it with some substance which has not only that effect, but also keeps it from flying away. Unless you understand, then, the principles of these actions, and apply them too, your labour is all vanity, when you attempt to save your own or your cattle's urine.

These principles are in number, two. First, the principle which changes caustic to mild ammonia, is carbonic acid, derived from air, or decomposing mould. Second, the principles which render ammonia less volatile, or wholly fixed, are certain acids formed in mould, as sour mould or certain salts which give up their acid to the ammonia. Plaster does this, by changing its lime for ammonia. Now let us go into the reason of this a little, and see if we can understand it. Very slowly, and supposing moisture present, the oil of vitrol of the plaster quits its lime, and unites to the ammonia, and so changes a volatile into a fixed salt. Now this is a change which has been of late much insisted on, and the practice recommended, of strewing the stable and barn cellars, and even the privies, with plaster, to save the ammonia, which escapes in these places. But it is doubtful whether the saving is as great as is usually supposed, for the ammonia arising from the urine is caustic, it flies off as caustic ammonia, that has no effect upon plaster. To produce this mutual effect of ammonia and plaster, the caustic ammonia must previously have been made mild. However, this plan is applicable only on a small scale. Copperas, alum, common salt, potashes and wood-ashes, all act to fix the volatile ammonia, and have all been recommended for this purpose. But it is easily seen, that, in employing some of these substances, is to buy ammonia almost at apothecary's price. These practices will be followed, therefore, only by those who place the crop and its value upon ammonia; this is a limited and narrow view. The true and farmer-like, as well

as the most scientific and natural mode of preserving the ammonia of urine, is to fill your yards and barn cellars with plenty of mould; by which I mean truly decayed and decaying vegetable matter, as well as loam. There is no mode more effectual, no mode more economical. Consider now for a moment, how mould formed and ammonia act. Have I not said, again and again, that ammonia hastens decay? that it makes mould more easily dissolved? and cooks the food of plants? That action having occurred during its progress, acids were formed. The ammonia unites with them, loses its burning properties, and becomes fixed. The acids having been satisfied, the ammonia is actually imbibed and retained by mould.

It does not drink it in like a sponge, but the mould forms a peculiar chemical compound with ammonia. This peculiar compound, while it does not render the mould an easily dissolved matter, yet holds ammonia by so feeble a force, that it easily yields to the power of growing plants. It gives up the stored ammonia at the place where, and the time when, it is most wanted. If you remember these actions of mould and ammonia, it will be as plain as day, that what we have said of the inexpediency and expense of vats, and tanks, and urine-carts, must not only be true, but is confirmed by the experience of a host of hard-working, thinking, practical men. In connection with urine, the dung of birds, for instance, domestic fowls of all kinds, and pigeons may be here mentioned. These animals discharge their solids, and what we may term their liquids, together. Their urea comes out combined with, or forming part of their dung. Now reflecting a moment on the nature of their food, strongly nitrogenous, being seeds, grains, &c., or animals, bugs, grasshoppers, &c., we understand why their droppings are peculiarly rich in ammonia and salts. The strongest of all manures is found in the droppings of the poultry yard.

But since these form but a small portion of the farmer's stock, and are never regarded as a principal source of manure, their further consideration may be omitted. It may perhaps be here added, that as from their nature bird-droppings run quickly into fermentation, with warmth and moisture, so they act quickly, and are quickly done. They are more allied to sheep-dung than to other manures. Their mould not being great, droppings of poultry require to be mixed with decayed vegetable matter, or loam. To this class belongs the manure brought from the Pacific Ocean, under the name of Guano, a Spanish word for excrement. New England farmers can find cheaper sources of salt, to which the main value of guano is owing, and therefore, reader, we shall detain you no longer on this point.

SECTION TENTH.

Mineral Salts or Manures.

Having thus considered the salts derived from the animal, let us now proceed to

those derived from the mineral kingdom. Among these, we shall find some whose action is similar to that of the animal salts. That is, they are true nourishers of plants.

They afford, by the action of the growing plant, the same elements as the animal salts. Of this nature is saltpetre. Now, reader, I want you to understand by saltpetre, not only that well-known substance, but also that which has lately been much used in farming, South American saltpetre. This differs from common saltpetre, by changing its potash for soda. One step more; I want you to understand by saltpetre, not one salt, in farming, but a class of salts; that is, a number, having the same acid, which may be combined with several different bases which all act one way. Saltpetre being a salt, of course must be composed of an acid and a base. The acid is always aqua-fortis, or nitric acid. The base may be potash, or soda, or lime, or ammonia. These all may be called saltpetre. In forming saltpetre, it is generally that variety which contains lime and aqua-fortis which is procured. So far as we understand the action of salts, and this has been fully explained, the action of the varieties of saltpetre is the same; and where it not for the peculiar nature of the aqua-fortis or acid of saltpetre, the explanation of the action of this salt might be referred to the general laws above set forth. But the acid of saltpetre is composed of volatile ingredients. It is nothing more nor less than a compound of the common air we breathe. Surprising as it may seem, reader, yet it is not the less true, the common air is a mixture of oxygen and nitrogen. What a bland and harmless, yea, what a healthful blessing is air, not only to us, but to plants! It is a mere mixture, not a chemical compound, a mere mixture. In every hundred parts, eighty of nitrogen, twenty of oxygen. Yet if you compel, as natural operations are continually compelling the air to unite chemically, so that fourteen parts of nitrogen shall unite to forty parts of oxygen, you will form aqua-fortis. Now, I do not mean to trouble your head further with the chemistry of saltpetre, than merely to say, that having thus shown you the composition and origin of the acid of all kinds of saltpetre, you will readily see, that a substance which affords such an abundance of nitrogen, cannot but be beneficial to plants. This nitrogen may, and probably does form some portion of ammonia in the soil. It may enter as nitrogen into the plants, dissolved in water, as a very weak aqua-fortis.

We have said so much upon the action of ammonia and nitrogen, that you will perceive how important a part nitro is likely to play in manure. Not only does the nitrogen act here, but the oxygen, the other component of the acid, also acts. It acts upon the mould as air itself would. Besides, the mould of soil and manure imbibes and condenses this oxygen in its pores, and consequently heat a little; so that saltpetre, whether added as such to soil, or formed in manure, as it is always, helps to warm a little the soil, like fer-

menting manure. So far as these effects are desirable they may be expected from the use of saltpetre. But this, reader, if you buy your saltpetre, is procuring a small effect at a great price. The action of the alkali of saltpetre is not different from alkali in other shapes, and therefore, if you have money to lay out for salts, let me advise you, reader, to spend it rather for ashes than for saltpetre,

To be Continued.

To Prevent Wood Decaying.—Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of bees wax, cut in small bits. Frequently stir the liquor, which as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any colour you want, first ground fine in some of the oil as will give the shade you want; then lay it on with a brush, as hot and thick as you can; some days after the first coat is dried give it a second. It will preserve plank for ages; and keep the weather from daving through brick work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given and in compound machinery, the separate parts should be varnished before they are put together, after which it will be prudent to give a third coating to the joints or to any other part which is peculiarly exposed to the action of moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all the timber which is near or within the ground. Each coat should be dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of fresh oil, should, for the sake of security, be heated in metallic vessels, in the open air, for when the oil is brought to the boiling point, or 600 of Fahrenheit, the vapor catches fire, and though a lower degree of temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

From the American Agriculturist.

A SHEEP-TROUGH.

I here give you a description of my sheep-trough, which I consider a very good one. Take two boards 8 inches wide, of common thickness, and any length you may wish the trough. Lap the edge of one board over the other the whole length; then nail the two together; a cross section of the trough will thus form the letter V. Now take a piece of board, or plank 14 inches wide, and 12 inches in length, and nail on each end of the trough, so that it will stand about 8 inches from the ground. This finished, nail a strap of board about 3 or 4 inches wide to the middle of each end, so that it will come up 12 or 14 inches above the upper edge of the trough, then take a piece of board of the same width, and the whole length of the trough, and nail on to the top of the last named pieces; this will prevent the sheep from getting in to the trough and dirtying their feed, so that they will not eat it, and it will prevent them from jumping over it, thus we may always have a clean trough, which I find a very good thing. I have 30 ewes and 24 lambs, that I feed with sliced turneps and corn every day.

Practical experiments are what we farmers want, and how we can make our land produce the most with the least expense.

H. C. M

Miller's Place, Long Island.

FAILURE OF THE POTATOE CROP.

The potatoe crop has received great damage, from a disease hitherto almost unknown in this country, previous to the present season, which is called *dry rot* in the United States and *curl* in England. It is known from the leaves of the stem becoming shrivelled, when the roots are found in a state of partial decay, and finally turn rotten. Considerable speculation has arisen among the farmers to discover its origin and cure, and we have yet to learn to what malady it is to be positively attributed, or how it is to be fully remedied. Among the various theories upon this disease that have been published, we shall mention a few, which to us appear the most sensible. Many ascribe the failure of the potatoe crop to the frost, that the tubers are not propagated sufficiently frequent from the small seeds which grow upon the haulm, others, that the tubers for seed should be frequently taken from land which has been lately cleared from the forest; and a writer in the *English Agricultural Gazette*, while treating upon the subject, states that, "the main point to be attended to for insuring a good crop must, of necessity, be the having good and properly saved seed. My method is this;—At the usual season for raising the potatoes, I cause them to be ploughed or dug up, and the quantity I reserve for seed is strewed thinly on the surface of the ground, in any shady place. Here I suffer them to remain exposed to the varied influences of the atmosphere, until they become quite green, and the texture of the potatoe perfectly firm, which will commonly be in about three weeks; during this time they require turning occasionally. I pay no regard as to whether the tubers be ripe or unripe when they are taken up, as I consider that the above treatment is an efficient method of ripening or harvesting the seed. When they are perfectly fit to store, I put them in a cool, dry place, covering them with plenty of clean straw, and here they remain till the time for planting arrives."

Another correspondent in the same valuable paper, in summing up the influences that have a bearing upon this difficult subject, offers the following suggestions: Thoroughly pulverising the land, by repeated ploughing and harrowings; never use unripe tubers for seed; never pit seed potatoes, if it can be avoided; never cut them, if it is possible to obtain medium-sized ones; make the drills much

wider apart from each other, and deeper than is generally practised; use well fermented barn-yard manure, employ the horse-hoe and plough as little as possible after the plants have made their appearance above ground; and remove all flowerers as soon as they make their appearance. If the foregoing remarks should not prove to afford much light upon the matter, it may, at least, elicit enquiry from those who have received injury to their potatoe crops. Obtaining seed from new land, and the introduction of new varieties, and also preserving the seed as recommended above, are considerations worthy of a fair trial. When potatoes are affected with this disease, they are unfit for the use of either man or beast.

THE CULTIVATOR GIVEN AS PREMIUMS.

We have observed with much pleasure, that a number of the Agricultural Societies have advertised that the third prize of each class shall be a volume of the *British American Cultivator*, and this, too, in addition to the copy supplied to each member, in accordance with the scheme published in the December number, which, we are happy to add, is being pretty generally adopted in Western Canada. It is certainly gratifying to observe the growing interest that is taken by all classes in relation to the circulation of our journal; and in no instance have we been more highly flattered than in that of having our work awarded as a reward for merit, to those of our brother farmers who may be successful competitors at either the local or general shows. As this noble example has been so wisely and liberally begun, we trust that it may be generally adopted throughout the entire Province, which would not only encourage us to persevere in the cause, but would be of incalculable benefit to every institution that adopts it, and also to the successful competitor who received it. If any practical farmer would carefully read and practice all the useful suggestions in a single volume of the *Cultivator*, he would receive a greater amount of benefit than if the whole of the funds of the richest Agricultural Society in the Province were given him. This being the case, the Societies that have been foremost in the adoption of this principle deserve great credit, and we doubt not but that their exertions to advance the cause of agricultural improvement will be duly appreciated by the agriculturists in general in their respective localities.

AGRICULTURAL ASSOCIATIONS IN THE WESTERN DISTRICT.

We are highly delighted at the manner in which, the farmers in the Western District have at last come out, in favour of a general movement, for improving their Agriculture. This district, first on the list as regards its natural resources, could scarcely boast of having a single Association for the encouragement of Agricultural improvement twelve months ago; but we are happy to say, that, through the exertions and influence, of a few spirited individuals, there are at present at least four established; and we have reason to believe, from information received from a private correspondent, that, in the course of the coming autumn and winter, an attempt will be made to establish Township Societies, throughout the District, upon the plan adopted in the Home District. We have no desire to see one District advance faster than another in Agricultural improvement; but, as the one under notice consists of that extreme Western portion of the Province which is susceptible of a high degree of cultivation, and as it has advantages in climate and richness of soil which are scarcely equalled by any other District in Canada, we would, at least, wish to see it improve, by artificial means, in ratio with other portions of the country.

In an ably-written Editorial article, in a late number of the *Western Express*, the Editor has, in a most lucid manner, pointed out to his Agricultural readers, the advantages that would accrue were TOWNSHIP AGRICULTURAL SOCIETIES established in each Township in the Western District. When Editors of political papers, Honourable members of the Legislative Council and House of Assembly, Officers of the British Army, Lawyers, Doctors, and Merchants enlist their influence and means in the cause of Agricultural improvement, as has been the case within a very late period in the counties of Kent and Essex, we would cry shame to the farmer who would be indifferent in these matters.

Without adding another remark further than our best wishes for the success of the several infant Agricultural associations established in the above two counties, we beg to subjoin the following letter, upon the same subject;—

Amburstburg, 43th July 1844.

SIR,—You will, no doubt, be much gratified to find that we are awakening from a state of lethargy in the "Far West," and that a Union Township Agricultural Society, of the Townships of Malden and Anderdon, has been formed, which from the support already tendered, bids fair for becoming a Society of some importance, indeed, when such men as the commandant of the Western Frontier, the Assistant Commissary General at this post, the Hon. James Gordon, James Dougal Esq., &c. &c. &c., came forward on such an occasion, and tender their aid and influence, it does them much credit, and

well as the Society in which they have enrolled themselves. Nearly all the Townships of the County of Essex, &c last following our example, so that there is a fair prospect, in a few years, of our country (which nature designed as the Garden of Canada, being also one of the first in the science of Agriculture.

At a recent meeting of the Society, a resolution was adopted, authorizing the Secretary to write for forty copies of the *British American Cultivator*. I therefore beg leave to enclose \$20 and you will be kind enough to send us the papers (40,) with as little delay as possible.

It is intended at our next meeting to form a Committee for the purpose of purchasing the best breed of sheep; perhaps you would favor us with a hint which are the best breeds, and best adapted for the country, as also where they can be got the cheapest and most pure, &c. You will also confer an obligation on the Society by publishing this letter, together with the following rules and regulations of the Society, which were adopted at our last meeting, and which the members are anxious to have published at least once in the *Cultivator*.

I am Sir, your most obedient humble servant,
G. BULLOCK, Secretary.

To W. G. Edmundson, Esq., }
Editor B. A. Cultivator. }

The Committee appointed on the 15th day of June, 1844, to draft rules and regulations for the recently-formed Agricultural Society at Amherstburg, beg leave to make their report, embodying the same as follows:—

1. The Society shall be called the Union Agricultural Society of the Townships of Malden and Anderden.

2. The Society shall consist of such inhabitants of these Townships as shall subscribe and pay into the hands of the Treasurer, yearly, the sum of five shilling. Any member who shall neglect or refuse to resume his subscription, and pay the same on or before the first Saturday in August, in every year, shall be reported by the Treasurer, and dropped from the roll of the Society, and excluded from its benefits from that date.

3. The officers of the Society shall consist of a President and five Directors, who shall be elected annually at the general meeting of the Society, and of a Treasurer and Secretary. Any vacancy occurring may be filled up at the ordinary monthly meeting.

4. It shall be the duty of the Treasurer to keep the funds of the Society, and make the necessary disbursements, and to render an account thereof at the annual general meeting.

5. The Secretary shall attend every meeting of the Society, and keep a record of its proceedings.

6. The Society shall hold monthly meetings on the first Saturday in every month, for discussion, or otherwise advancing the aim and object of the Society.

7. The annual general meeting of the Society shall be held on the first Saturday in June, in each year.

8. Any alteration or amendment of the rules of the Society can only be made at the annual meeting, or at special meetings, to be called by the President, upon the requisition of at least ten members of the Society.

9. The purchase of seeds and stock, the time for holding shows, the kind of stock, and other matters connected with such shows, shall be regulated by a committee of not less than five, in addition to the Directors, to be appointed at the monthly meeting previous to such intended show, and there must be at least fifteen members of the Society present when such Committee is appointed.

10. Each subscriber shall be entitled to a copy of the *British American Cultivator gratis*; the same to be paid for, out of the funds of the Society.

Respectfully submitted

(Signed)

Lewis G. Gorzen,
A. Duff, Jun.,
James Dougall,
Henry Wright,
Daniel Botsford,
George Bullock,

Committee,

Officers for the present year —

ROBERT REYNOLDS, Esq., President,
GEORGE BULLOCK, D. C. Secretary,
HENRY WRIGHT, Treasurer
ISAAC AXEW,
WILLIAM McGER,
THOMAS BOYLE,
ASA WILCOX,
ALEX. BOWMAN.

Directors

The information required below, by our esteemed friend Mr. Bullock, we heartily tender, and would most willingly confer similar favours to any of our friends in other sections of the country when desired. The pure South Down breed of Sheep, when all things are considered, is the best adapted to the Western District; there are, however, but few flocks of this choice breed in the country, and the few there are are probably not so well bred, as a few flocks that have been lately imported into the United States, purchased from the celebrated English breeder in South Downs, Jonas Webb, Esq., we therefore advise those who wish to purchase this breed, free from alloy, to send their orders to A. B. Allen, Esq., Editor of the *American Agriculturist*, New York, who would, no doubt punctually attend to any orders of the kind that may be entrusted to his care. As short fine wool, will be in great requisition the ensuing season, in consequence of a number of extensive woollen manufactory establishments that are being erected in the Home District, it is advisable for the breeder of sheep to pay more attention to the quality of the wool than has been previously the case in this Province. We are led to suppose that a good quality of merino wool will command a price averaging from 2s. to 2s 6d. currency per lb. A breed of sheep known in the United States by the name of Paulor merinos are said to thrive well in the Northern part of Vermont, and the climate there being much more severe for sheep than here, we should judge that they would be pretty well adapted for Western Canada, and especially for the Western portion of it. This breed of sheep may be had of General Harman, Wheatland New York, upon very reasonable terms.

As long wool will also be much sought after, for the purpose of being manufactured into woollen blankets, carpets, strong cloths, &c., the Leicester and Lincolnshire breed of sheep, will be of much more value to those who possess them than they have been for the past few years. The Leicester are now common from Sandwich to Quebec, but the pure breed are only in the hands of a few individuals. Mr. George Simpson, Newmarket Grange, has the largest flock in the country. His prices for tupes range from \$15 to \$20 each.

For the Cultivator.

PUERPURAL FEVER.

Perhaps the details of the following case may prove of some interest and value to your readers:—

A favourite and valuable short-horned cow, named Beauty, eleven years old, imported by me

from England, in 1834, calved early on Thursday morning, August 8th, in a quiet and well-sheltered pasture. She has always been a particularly hardy, healthy animal, and this was her tenth calf, at nine gestations. The calf was a bull, of large size, and very lively. She was brought into the stable, and had some warm drinks from time to time. The placenta came off easily enough, and all seemed in a favourable train. I kept her in the stable all night, ordering her to be let out next day, at noon, for a few hours, if the weather should prove fine.

Friday, 9th.—About noon this day, the cow was seized, quite suddenly, with the loss of the use of her limbs. Upon leaving the stable, she staggered into an open shed, and fell down, utterly powerless, and evidently in great pain. Her flanks heaved violently, and she moaned deeply, looking anxiously at her flanks, and exhibiting symptoms of the greatest agony. Within an hour, by the aid of a kind neighbour, I had her bled, taking at two bleedings nearly eleven quarts. This seemed to afford her but small immediate relief,—indeed, she appeared about to go off, after the second bleeding,—yet I am satisfied it was the means of saving her life. I could not ascertain the state of the pulse, from her violent movements. The blood did not exhibit any particularly inflammatory symptoms. I gave her a gruel drench, with an decoction of nitre. Her bowels were close, I therefore had her back raked, which removed a considerable quantity of hardened feces. Frequent clysters of soap and salt were from time to time injected by a syringe. I gave her forty grains of castor seed in gruel, as a laxative. She continued moaning, and apparently not likely to survive many hours. A careful man watched her during the night.

Saturday 10th.—Rather easier this morning, but unable to rise. Back raked again; little or no hard stuff. The laxative not operating, repeated the dose. Gave her frequent drinks of warm water and bran. About noon the medicine began to operate; her eye became less glassy, and she noticed a dog come near her. She had less heaving of the flanks, and ceased moaning. About eight o'clock in the evening, she rose spontaneously, and managed to reach some pasture close at hand. Her medicine was now operating freely: the discharge highly offensive: left her for the night in a well-littered shed, with hay.

Sunday, 11th.—Continues better, but very weak and much reduced. Her milk has not left her, but I do not allow it to be used. As the evening was somewhat chilly, I kept her in the stable all night: gave her a moderate mash of milled barley and oil-cake.

Monday, 12th.—When let out this morning, she soon found her way to the other cows at pasture, and may therefore be reckoned as off the sick list. She will, however, require attention, and I shall continue for some time to give her a barley mash at the end of milking.

I shall never despair of a case in future, as her life seemed, on Friday night, not worth an hour's purchase. She is a cow which has done much for my stock, and I greatly prefer her to another which I imported along with her, and sold into Kentucky, for \$300.

Your obedient Servant,

ADAM FARQUHARSON

THE INJURY AND WASTE OF GRAIN FROM THE PRESENT PRACTICE OF TOO THICKLY SOWING.

Through the politeness of Frederick Widdor, Esq., we are in receipt of a pamphlet, written by Mr. Hewitt Davis, and published for the truly patriotic purpose of directing his brother farmers in Britain to the great waste that is entailed upon the agricultural community, and upon the nation, from the practice of too thickly sowing grain. The statements of Mr. Davis appear to be written with candour; and, from the fact that the author is a successful practical farmer, on a large scale, and has himself practised his plan for many years, his new and novel theory deserves attention. From what has come under our observation, we have come to the conclusion that too little seed is sown upon the old cultivated lands in this country, and have, therefore, recommended the practice of increasing the amount of seed, with an unlimited degree of confidence. We are not prepared to retract what has been recommended, as our own crops, as well as the crops of our neighbours, that were sown tolerably thick, are evidently much better than those that were sown thin, for experiment, as set forth by Mr. Davis.

Notwithstanding that thick sowing is better adapted to the system of cultivation at present practised in America than thin sowing, still it does not follow that if the system were changed to suit the latter method, but that thin sowing might be found to give the same results here as in England. We are inclined to entertain the opinion, that if it were practicable to bring farming operations to the same standard in Canada that Mr. Hewitt Davis and thousands of others have in England, that still more favourable results would be effected from thin sowing and the thorough system of culture practised, than in that country.

We feel confident that thin sowing can only be practised with success upon land that has been long under cultivation, when accompanied with the practice of sowing in rows, as directed by Mr. D., and also horse or hand hoeing. Depositing the seed in rows, and horse hoeing, will yet become the most popular style of growing grain, especially winter wheat; and we have no doubt that both will be practised on a large scale in this country as soon as a few well-directed experiments have been made, to ascertain the amount of benefit that would result

from the practice. Even hand hoeing would pay, if labourers could be had at the rate of a bushel of good wheat for hoeing an acre. If the wheat plants be in rows, about fourteen inches asunder, a smart boy and a horse will hoe about three acres per day, with but little effort, and an ordinary workman would hand hoe two roods per day upon land which had been previously horse hoed.

As wheat growing is the principal branch of farming that is depended upon as a source of raising large sums of money in this country, it is therefore of the utmost importance that the cultivators of the soil should be in possession of a correct knowledge of the various systems of managing the soil which is successfully practised in other countries. Now, it appears to us that the multiplicity of evils which are attendant upon this, the golden crop to the farmer, may, in a great measure, be obviated. A rational system of rotation of crops, deep ploughing, thorough culture (such as Mr. Davis recommends), and, in every instance when circumstances are favourable, depositing the seed in rows and horse hoeing, are parts of a system of farm management which would better remunerate the farmer than the slovenly and uncertain system which is too generally practised.

Many of the subscribers to this paper are abundantly able and quite capable to try any experiment in farming that would have for its object the advancement of their honourable profession: to such we would direct their attention to the importance of sowing small portions of the same field with seed averaging from one to two bushels of wheat per acre, and also an experiment in drilling or ribbing, together with horse or hand hoeing; and by duly reporting the results of such experiments to the public, through the medium of this journal, they would have the gratification of seeing that the farmers in general would, by degrees, adopt such methods as science and experience may have proved to be most successful. By acting upon this principle, in the various details of husbandry, an entire change for the better may be brought about in Canadian agriculture. As a stimulus to those who may be willing to test the methods here adverted to, as well as to test every other method calculated to improve the agriculture of the country, we would say, that what we recommend to the attention of others shall be practised by ourselves, on a

scale that will assist in establishing Canadian husbandry upon a sound basis.

If grain of any description be sown in rows, and the soil frequently stirred with a hoe, and thoroughly cleared from weeds and grass, a much less quantity of seed would suffice than if the seed were sown broadcast. Three pecks per acre really appears to us too small a seeding, but if it should prove sufficient, when accompanied with drilling and hoeing, it is of much importance that the fact should be generally known. It is of more real consequence than most people imagine to attend to even the most minute details of any operation,—for instance, steeping seed, deep ploughing, thorough pulverization, water furrowing, and a score of other details, the neglect of one of which might alone be the means of lessening the product 100 per cent.; and also, if it should prove correct, as appears from the facts upon record before us, that three pecks of seed wheat will insure a greater product than six, the quantity usually sown in this country, we trust that all who have any desire to profit by farming will take the necessary steps to ascertain this fact. We seldom have the opportunity of presenting to our readers so complete a system of operations as those contained in the short treatise before us, the most essential portions of which we insert for their benefit. We assert, with it fear of contradiction, that one page of matter, arranged in Mr. Davis's practical style, would prove to be of more real benefit to the practical farmer than a whole volume of much of the theoretical writings that have been published of late years;—

THE INJURY AND WASTE OF CORN FROM THE PRESENT PRACTICE OF TOO THICKLY SOWING.

As in the following paper I shall propose to the cultivators of my country a very considerable reduction in the quantities of seed which they have been accustomed to use, and shall endeavour to show to them that the question requires their serious attention, not only for the economy of seed, but principally as very materially affecting the after growth of their corn; it may be well to premise that this recommendation does not emanate from a theoretical agriculturist, farming only in his closet and over his books, or from one who follows agriculture as an amusing occupation; but on the contrary, that besides being largely engaged as a land agent, and in the cultivation of farms for the proprietors, I am a practical and successful farmer on my own account of between seven and eight hundred acres of highly-rented poor land; and, moreover, that whatever I

am about to recommend, I have not only long and successfully practised, and on a large scale, but that I have ever been willing and ready to support, by showing the crops in this way produced. And I am sure that any farmer who witnesses these will readily allow that with the adoption of the system of thin sowing I grow very large crops, much beyond the general average, and on soils of a very inferior description, and with less than the ordinary expenditure in labour and manure.

There are few persons who seriously take into consideration how small a return is commonly realised from the seed sown, and how large a proportion of that return is again swallowed up for seed. Let us take wheat for instance. The practice throughout England is to sow two and a half or three bushels per acre, and the yield is seldom forty bushels, and more commonly only twenty bushels, and one-tenth at least of the crop growing is consumed as seed. These facts, and the knowledge that a single grain of wheat, planted where it has room to tiller out, will readily produce four hundred-fold, and often very much more, has induced me, in the course of the last eleven years, to make a variety of experiments—the results of which have shown me that independent of the waste, a positive and serious injury is done to the crop from sowing so much seed, and in result is perfectly analogous to attempting to feed four animals on a pasture sufficient only for one; and in consequence I have gradually reduced my proportion of seed wheat from three bushels per acre, which was my practice, down to about three pecks, which reduction I have accomplished to the evident improvement of my growth of corn. And I have at this time (July, 1843), the finest promise of a crop on all my farms from this latter quantity, and this, too, after one ploughing of pea and bean stubbles, and upon soils very low in the scale of natural fertility, and without having had any fallow or having had applied any manure for some years.

In order to show that it is not by any artificial aid that I have grown the crops produced on my farms, and in reply to the questions which I have so often had put to me as to what is my practice, I go into the following details. My course of cropping is as follows, viz. :—

1st Year—**RYE**, } For green meat, and feeding
 " **TARES**, } off with sheep in April,
 May, June and July, and
 followed by
 " **MANGEL WORTZEL**, } With a liberal
 " **SWEDES**, } Dressing of farm
 " **CABBAGES**, } yard dung.
 " **TURNIPS**, }
 2nd Year—**OATS** or **BARLEY**, with **CLOVER**.
 3rd Year—**CLOVER** twice mown for hay.
 4th Year—**BEANS** or } The Beans having Tur-
PEAS, } nips sown between the
 rows, and which come
 into food in September
 and October.

5th Year—**WHEAT**.

By this rotation of cropping I never grow two crops of a kind in succession, and I get three green crops and three corn crops in five years. The produce

of corn and cattle food grown by me in this way, I do not hesitate to say, is very much larger than I could obtain by any other, and at less expense and far less hazardous.

My practice is to drill every thing (clover seed alone excepted); to carefully horse-hoe, hand-hoe, and weed, so that the land may be kept perfectly free from weeds, and the soil between the rows may be stirred and receive the benefit of pulverisation and aeration, advantages of which gardeners are sensible—but by farmers are lost sight of, or not sufficiently attended to. My rye and tares, for green feeding, are sown in rows at nine-inches intervals; all my white corn at twelve inches: and my pulso at twenty-seven inches. When I have established this routine, the only dressing given is for the root crop, and that with manure produced on the farm, by the consumption by fattening stock of the Swedes, and of hay and straw, and fodder by other stock in the yard. I fatten a large proportion of sheep, at least two and half in the year for every arable acre; these consume on the land, having oil cake, and in folds, all the turnips and cabbage, and half the rye, tares, and Swedes—the feeding being so arranged that the folds extend alike over the parts cleared with that fed. My proportions of seed per acre, and times of sowing, are as follows, viz. :—

Cf Rye, 1½ bushel, in August & September.
 Tares, 1½ bushel, in three sowings, in August, September, & October.
 Mangel Wortzel, 6 lbs., in April.
 Swedes, 1 quart in May.
 Turnips 1 quart, in July.
 Cabbages, 1 every three feet, in June.
 Oats, 8 pecks, in February and March.
 Barley, 7 pecks, in Feb., March, & April.
 Wheat, 3 pecks, in Sept. and October.
 Peas, 8 pecks, in January & February.
 Beans, 8 pecks, in Sept. and October.

Between the crops which are sown at twenty seven inches intervals, I constantly in the spring use the horse-hoes; beginning with tines which bring to the surface all root-weeds, and pulverise the soil; and alternately with knives, which cut all on the surface. By the free use of these hoes, and by hand-hoeing the narrow sown corn, and by drawing all weeds from out of the rows, and by using Finlayson's harrows after most ploughing, I have brought my land clean and without fallowing; and I am sure I grow better Swedes and turnips after rye and tares than I used to do after a fallow; and am much less attacked by the fly.

My ploughings are all as deep as I can afford to give time and strength to them, I occasionally use the subsoil and trench ploughs; going fifteen and sixteen inches deep, and bringing all the fresh soil to the surface that I can get up.

My farms are naturally very poor; two are principally gravel—in parts very boggy and springy, wet in winter and burnt up in summer, reclaimed from heat only thirty years; and the other a hill farm, with but few inches of soil

above chalk. These farms have been greatly improved by the free use of the subsoil and trenching ploughs, but are only kept in profitable tillage by the general economy in husbandry, and the large returns I have obtained.

In this way, and on these farms, I have frequently produced about five quarters of the best white wheat to the acre, and have grown above thirteen quarters of oats and above eight of barley; and my clover and turnip crops are always remarkably good.

Having from this brief detail of my practice shown the success on an extensive scale with thin sowing, I will explain why it is that three pecks of seed wheat per acre must be much nearer the correct quantity than ten or twelve pecks, and that any surplus of seed beyond a bushel must be very injurious to the latter growth of the crop.

The produce of an ear of thick sown wheat yields about forty grains (I say thick sown, for thin sown yields very much more), and therefore the produce of an acre (or twenty bushels, the ordinary average) must be, no matter how much has been sown, the growth of the ears from one fortieth, or two pecks of seed (and that, too, is allowing only one ear to grow from each grain, and forty grains from an ear). This being the fact, of what use, I ask, or what becomes of the remaining eight or ten pecks of seed which are commonly sown? But in allowing one ear only to grow from a grain of seed, and each to contain only forty grains, I am far from taking what in reality should be the produce; for a single grain having room will throw up ten or twelve ears, and these ears will each contain from sixty to eighty grains; and hence any provision for the loss of seed from vermin or birds unnecessary, for supposing half or much more of my small allowance to be taken away or destroyed, the deficiency of plants is immediately met by the larger size of the ear and by the tillering which is made, and the additional ears so produced, wherever room admits of the increase. Among the many proofs I have had of the advantage from thin sowing, the following is a striking and among my people well-known fact. In the autumn of 1840, I had to sow with wheat a field of eight acres, and I gave out seven bushels for the seed, but owing to an error of the drill-man in setting the drill, when he had sown half of the field, he found he had not put on half of the seed; but that I might not discover, by the overplus, his error, he altered the drill, so as to sow the rest on the remainder of the field, and in this way one half of the field had little more than two pecks to the acre, whilst the rest had nearly four pecks. I did not know of the error, and was surprised and frightened in the winter by finding part of the field so thin, and had not the rest of the field looked so much better, should have ploughed it up; but at harvest the thinnest sown half proved the best, and I

should never have known of the error in the sowing but for this fact having induced the earler to point it out to me.

Were the evil of the present practice confined to the waste of seed, the loss to the farmer is considerable, and is frequently equal to the rent he pays for the land. I am also about to prove it is of far too great importance to the nation, not to be deserving of investigation; but the loss is not limited to the waste of seed, great as that is, for there are many other ills attendant upon thick sowing, which greatly diminish the return, and are of far more importance. At first, no matter how much seed has been sown, nearly every grain vegetates, and finds space to grow, and in the early stages, when air and soil are moist, and the plants small, there is food for all. But as the plants increase in size, a struggle for room and nourishment commences, which increases with their growth, and finally terminates by the destruction of the weaker by the stronger plants; but not until after a contest, lasting up to harvest, which leaves the survivors stunted, and the soil exhausted by having had to support three plants instead of one, and producing mischief which is frequently the cause of blight, mildew, and failing of the crop.

That this struggle does take place, is shown by my calculation of the number of straws that can rise into ear, compared with the grains sown, and is plainly betrayed by the yellow sickly colour of the thick wheat in the spring, when all other vegetation puts on its greenest tints, and by the uneven crops and the small size of the underly ears at harvest as compared with the thinner sowing.

Nature, in their growth, plainly betrays the evils of thick plantations of every description, by the dwindling plants, and by their sickly appearance, and the planter and the gardener are ever ready to take warning by the lessons she thus affords. The planter and forester well know the after ill effect of an overcrowded plantation; and the gardener by the free use of his hoe is careful to give ample room to each plant; it is the farmer only, who guided by his eye, is pleased in the early stages of his crops to see his ground well covered with plants of young corn, without stopping to reason upon the room wanted, and the power of the soil to bring them to maturity. That the sowing of much seed must be injurious in the after-growth, appears to me self-evident, for in what way can nature do away with the extra plants so produced, without injury to the remainder? And it is to this, I repeat, I would principally ascribe the mildew and blight, and failing of the crop; for so far my practice proves it, that since I have taken to sow only a bushel of wheat per acre, and I have done so now for some years, and on many hundreds of acres of wheat, I have rarely found any portion affected by any disease; and so satisfied am I by the result of my practice, as shown by my crops this year, that although I last year sowed

so little, I this year intend to farther reduce the quantity.

The importance of the inquiry, even in a national point of view, will be striking to every one who is made acquainted with the fact, that were my practice of thinner sowing general, the proportion saved each year would amount to much more than the annual average of the quantity of foreign corn imported into this country during the last fourteen years.

The total quantities of wheat and flour imported during the fourteen years ending with 1841, were as follows:—

	Qrs.
1828	590,929
1829	1,725,781
1830	1,662,280
1831	2,309,670
1832	469,902
1833	297,565
1834	176,321
1835	66,905
1836	241,743
1837	559,942
1838	1,371,957
1839	2,875,005
1840	3,432,765
1841	2,783,602

Total Qrs. 17,566,270

Averaging per Ann. Qrs. 1,254,733

The population of England, Scotland, and Wales, which at the end of the year 1831 amounted to 16,366,011 persons, had increased in 1841 to 18,666,761 persons. For the purpose of calculating the consumption of corn during the fourteen years ending with 1841, I consider the population to have averaged, during that period, 17,000,000 persons.

Taking the annual consumption of 17,000,000 persons at the ordinary allowance of a quarter of wheat to each person, it will amount to 17,000,000 quarters, and deducting the quantity imported, 1,254,733 quarters, leaves the quantity annually consumed of our own growth to be 15,745,267 quarters.

Allowing that the average produce per acre of wheat grown in the kingdom is equal to twenty bushels, and that of these seventeen and a half bushels are appropriated for food, and two and a half bushels for seed, it follows that about 17,713,425 quarters must have been annually grown, and that to produce this quantity 7,085,370 acres must have been sown with wheat.

Now, to sow 7,085,370 acres at two and a half bushels of seed per acre, which is the ordinary allowance, there would be required 2,214,178 quarters. But to sow one bushel per acre, only 885,671 quarters would be required, so that the annual saving of seed would be 1,328,507 quarters; that is to say, 73,774 quarters more than the average of the annual importation of foreign corn the last fourteen years. And although I merely take the instance of wheat, I am at the same time proving

what may be done with all other corn for the saving in seed which I practise in equal proportions with all other kinds of grain, and with equal success. Having thus proved the magnitude of the national saving capable of being made in seed-corn, and having shown that if my system of thin-sowing were universally adopted, there would be no necessity, even with our present enlarged population, and without the advantage of increase in the crop, for the importation of any foreign corn, and that at once an actual saving to the farmers of arable land to the extent of half their rent may be made—I hope every practical farmer will be induced to give the thinner sowing a fair trial. Let parts of a field be drilled with one bushel of wheat per acre, at a foot apart, taking care to hand-hoe the same in the spring, and to have all weeds extirpated; and I promise that at harvest, supposing in all other respects the field to be alike, that these portions will yield the most and best sample.

The expense of seed wheat is generally 7s. or 8s. per bushel, and the difference between one and three bushels is therefore 14s. or 16s.—a saving per acre of consequence; and if I be right that a larger and better crop will be obtained from the lesser quantity, I should have done a good to the farmer that will enable him to compete with the foreign grower, and lower prices, and, by placing this country independent of any foreign supply, make all corn laws of little consequence; and for many years to come we may grow all we want, and to spare.

HEWITT DAVIS.

3, Frederick's Place, Old Jewry,
London, July 15th, 1843.

The Glanders.—Mr. J. B. Cook, in the Albany Cultivator, says:—"Whilst writing, I will mention a fact for your veterinary department. More than thirty years since, the glanders of the most virulent kind, was amongst the horses of the neighbourhood in which my father lived. Great numbers died off. His horse was affected, and under the belief that he also would die, my father commenced an experiment on him with a strong decoction of tobacco juice given internally. In a short time the horse broke out all over his body in sores. These cured up in a month or so, and the horse was sound, soon fattened, and was, as long as I knew him afterwards, a sound and healthy animal. This was the only horse in all the neighbourhood recovered. Some farmers in the vicinity, noted for fine sleek horses, occasionally give Scotch snuff to them."

Toothache.—The London Medical Gazette states that the *Flyta cataria* of Linnaeus is recommended by Dr. Gausmannschia as a sovereign remedy for toothache, whether it proceeds from catching cold or caries. The leaves of the plant are placed between the affected tooth and the opposite one; this causes the a copious flow of saliva, and in two or three minutes the most violent pains are relieved. If the patient cannot keep the leaves in contact with the diseased tooth they must chew them, and the object is equally attained by a flow of saliva thus induced.

Cure for Locked Jaw in Horses.—It is said that pouring water along the back from a watering pot, for a considerable time without intermission, will effect a cure.—S. lected

From the Transactions of the New York State Agricultural Society.

ON THE CULTIVATION OF DYERS' Madder AS AN ARTICLE OF AMERICAN AGRICULTURE.—RUBIA TINCTORIA.—By M. B. Bateham, one of the Editors of the New Genesee Farmer.

The quantity of madder consumed annually in the United States, and imported from abroad, is perfectly astonishing to those who have given no attention to the subject. Unfortunately, our public records do not give very exact information on the subject; but Mr. Ellsworth, as the nearest approximation he could obtain, gives the amount as *five thousand tons*! Estimating this at the low average price of ten cents per pound, it makes the round sum of *one million of dollars* paid annually to foreign countries for an article that can be produced as good and as cheap at home—paid, too, by a people loaded down with indebtedness, and disgraced by the forfeiture of pledged obligation!

The Cultivation of madder has heretofore been represented as a tedious and labourious operation, requiring much care and skill, as well as outlay of capital. The directions have been mainly gathered from foreign works, detailing the methods practiced by the plodding Dutch in Holland and Germany. These accounts have appeared so frightful to Americans, that none of them have dared to undertake the business; and labour-ingenuity have never been exercised upon it.

It is true, the crop requires three or four years to arrive at maturity, and needs considerable labour and some knowledge; but the quantity of land it occupies, and the amount of labour it requires, is far less in proportion to the value of the crop than those of any other farm-crop that can be named.

These assertions are fully corroborated by the experience of an enterprising American farmer, Mr. Joseph Swift, of Erie county, Ohio, who has been engaged in the culture of madder for 5 years past. A detailed account of Mr. Swift's mode of culture, and its results, was obtained at his residence last winter, by the writer of this essay, and published in the *New Genesee Farmer* for March, 1843.

From this account it will be seen, that after having informed himself on the subject, and becoming satisfied that the business was practicable and profitable, he at once planted 9 acres—a quantity that would astonish Mynheer Van Hollander. This he allowed to grow four seasons, and the crop was harvested and sold in the fall of 1842. The following are some of the results of his experience. The product of his best land is at the rate of 2,000 lbs. per acre; and he is certain that, with his present knowledge, he can obtain 3,000 lbs. per acre—which is more than the best average crops of Holland or Germany. The quality was superior to the average of imported madder.

The labour required, including the whole time, with the digging, clearing, threshing, &c., was from eighty to one hundred days' work per acre. The outlay for buildings, fixtures, &c., did not exceed, in all, fifty dollars.

The value of the crop was at the rate of fifteen cents per pound, at which price he sold most of it—notwithstanding the circumstance of its being unknown to purchasers, and all the prejudice that usually exists in such cases.

The result, then, in figures, fairly stated, stands thus, for an acre of good land properly managed:—

Mr. Swift, was one of the earliest settlers of that section of the country, having resided nearly thirty years on the farm he now occupies, which consists of about 400 acres of choice land, mostly alluvial, in the valley of the Vermillion river, seven miles from Lake Erie. At my request, he furnished me with the following practical directions for the cultivation of madder, which he remarked must be understood as intended for those who wish to cultivate only a few acres, and cannot afford much outlay of capital. Those who wish to engage in the business on an

extensive scale, would need to adopt a somewhat different practice.

Soil and Preparation.—The soil should be a deep, rich, sand loam, free from weeds, roots, stones, &c., and containing a good portion of vegetable earth. Alluvial "bottom" land is the most suitable; but it must not be wet. If old upland is used, it should receive a heavy coating of vegetable earth, (from decayed wood and leaves.) The land should be plowed very deep in the fall; and early in spring apply about one hundred loads of well-rotted manure per acre, spread evenly, and ploughed in deep; then harrow till quite fine and free from lumps. Next, plough the land into beds four feet wide, leaving alleys between, three feet wide; then harrow the beds with a fine light harrow, or rake them by hand so as to leave them smooth and even with the alleys. They are then ready for planting.

Preparing Sets and Planting.—Madder-sets, or seed-roots, are best selected when the crop is dug in the fall. The horizontal uppermost roots (with eyes) are the kind to be used; these should be separated from the bottom root, and buried in sand, in a cooler or pit. If not done in the fall, the sets may be dug early in the spring, before they begin to sprout. They should be cut or broken into pieces, containing from two to five eyes each—i. e. three to four inches long. The time for planting is as early in spring as the ground can be got in good order, and severe frosts are over, which, in this climate, is usually about the middle of April. With the beds prepared as directed, stretch a line lengthwise the bed, and with the corner of a hoe make a drill two inches deep along each edge and down the middle, so as to give three rows to each bed, about two feet apart. Into these drills drop the sets, ten inches apart, covering them two inches deep. Eight or ten bushels of sets are requisite for an acre.

After Culture.—As soon as the madder plants can be seen, the ground should be carefully hoed, so as to destroy the weeds and not injure the plants; and the hoeing and weeding must be repeated as often as the weeds make their appearance. If any of the sets have failed to grow, the vacancies should be filled by taking up parts of the strongest roots and transplanting them; this is best done in June. As soon as the madder plants are ten or twelve inches high, the tops are to be bent down to the surface of the ground, and all except the tip end covered with earth shoveled from the middle of the alleys. Bend the shoots outward and inward, in every direction.

When ready to take out of the ground, put half a bushel of roots at a time and stir them about in the water, pulling the bunches apart so as to wash them clean; then, having a platform at hand, lay them on it to dry. To make the platform, take two or three common boards, so as to be about four feet in width, and nail cleats across the under side. On these spread the roots about two inches thick for drying in the sun. Carry the platforms to a convenient place, not far from the house, and place them side by side in rows east and west, and with their ends north and south, leaving room to walk between the rows. Elevate the south ends of the platforms about eighteen inches, and the north ends about six inches from the ground, putting poles or stumps to support them: this will greatly facilitate drying. After the second or third day drying, the madder must be protected from the dews at night, and from rain, by placing the platforms one upon another to a convenient height, and covering the uppermost one with boards. Spread them out again in the morning, or as soon as danger is over. Five or six days of ordinary fine weather will dry the madder sufficiently, when it may be put away till it is convenient to kill-dry and grind it.

Kiln-drying.—The size and mode of constructing the kiln may be varied to suit circumstances. The following is a very cheap plan, and sufficient to dry one ton of roots at a time. Place four strong posts in the ground, twelve feet apart one way, and eighteen the other; put girts across the bottom, middle, and top, a d nail boards perpendicularly on the outside as for a common barn. The boards must be well seasoned, and

all cracks or holes should be plastered or otherwise stopped up. Make a shed-roof of common boards. In the inside, put upright standards about five feet apart, with cross-pieces, to support the scaffolding. The first cross-pieces to be four feet from the floor; the next two feet higher, and so on to the top. On these cross-pieces, lay small poles about six feet long and two inches thick, four or five inches apart. On these scaffolds the madder is to be spread nine inches thick. A floor is laid at the bottom, to keep all dry and clean. When the kiln is filled, take six or eight kettles or hand furnaces, and place them four or five feet apart on the floor, (first securing it from fire with bricks or stones,) and make fires in them with charcoal, being careful not to make any of the fires so large as to scorch the madder over them. A person must be in constant attendance to watch and replenish the fires. The heat will ascend through the whole, and in ten or twelve hours it will all be sufficiently dried, which is known by its becoming brittle like pipe stems.

Breaking and Grinding.—Immediately after being dried, the madder must be taken to the barn and thrashed with flails, or broken by machinery. (A mill might be constructed for this purpose,) so that it will feed in a common grist-mill. If it is not broken and ground immediately, it will gather dampness so as to prevent its grinding freely. Any common grist-mill can grind madder properly. When ground finely it is fit for use, and may be packed in barrels like flour for market.

Amount and value of Product, &c.—Mr. Swift measured off a part of his ground, and carefully weighed the product when dried, which he found to be over two thousand pounds per acre, notwithstanding the seasons were mostly very unfavourable. With his present knowledge of the business, he is confident that he can obtain at least three thousand pounds per acre, which is said to be more than is often obtained in Germany. The whole amount of labour he estimates at from eighty to one hundred days' work per acre. The value of the crop, at the usual wholesale price, (about fifteen cents per pound,) is from three to four thousand dollars. In foreign countries it is customary to make several qualities of the madder, which is done by sorting the roots; but as only one quality is required for the western market, Mr. Swift makes but one, and that is found to be superior to most of the imported, and finds a ready sale.

If any person desires instruction for making several qualities of madder, or further information respecting any other point, it may be obtained by addressing, post paid, Joseph Swift, Birmingham, Erie county, Ohio.

Blackberry Syrup.—We are indebted to a friend for the following receipt for making blackberry syrup. This syrup is said to be almost a specific for the summer complaint. In 1832 it was successful in more than one case of cholera:—

To two quarts of juice of blackberries, add one pound of loaf sugar, $\frac{1}{2}$ oz. nutmegs, $\frac{1}{2}$ oz. cinnamon, pulverised, $\frac{1}{2}$ oz. cloves, $\frac{1}{2}$ oz. allspice, &c. Boil all together for a short time, and when cold, add a pint of fourth proof brandy. From a teaspoonful to a wine glass according to the age of the patient till relieved, is to be given.

For cleansing brass, take 1 oz. oxalic acid to a quart of alcohol. Rub with a woollen rag till dry. It has been tested, and with great satisfaction to many.

It is said that ringworms may be, in most cases, simply cured by scratching around the outer surface with the point of a sharp needle. The disease will not pass the line, if the skin is thus cut.

The blood of a white hen, (says the *New England Farmer*,) smeared on a freckled face, and suffered to dry thereon, and afterwards wiped away, clearly takes away all spots from the same.

[Continued from the September Number]
**EVERY MAN HIS OWN CATTLE
 DOCTOR.**

CHAPTER VI.

Inflammation of the Lungs.

When common catarrh has been neglected, it will sometimes run on to inflammation of the lungs, or the beast may be attacked with this disease without any of the previous symptoms of catarrh. This is a very serious complaint, and requires the most prompt and decisive treatment.

The symptoms are dullness, shivering, and cough that is particularly sore; the ears, roots of the horns, and legs are sometimes cold, but not invariably so, as the quantity of cellular membrane about the legs is often sufficient to keep them warm in spite of the nature of the complaint; the breath and mouth are hot; the mouth is generally open, and there is a rosy discharge from it; the beast will often lie down, and can scarcely be induced to move; the flanks heave very laboriously, and the head is pretraded, showing the great difficulty of breathing. The pulse is not always much increased in number, but is oppressed, and can sometimes scarcely be felt.

Inflammation of the lungs is caused by the perspiration being obstructed from sudden and great changes of the weather, especially when accompanied with wet. Cattle that are driven long distances, and then exposed to the cold and damp air of the night, are particularly liable to it. In most cases it can be traced to the cattle being imprudently exposed to cold, but when the cause is not so apparent, it oftenest attacks those that are in good condition.

Young cattle, and particularly calves, are more subject to this disease than older ones; and in them it must be principally attributed to their being in a state of plethora, that is, having a redundancy of blood in their systems.

Sometimes the membrane covering the lungs and lining the chest is the part principally attacked; the disease is then termed *pleurisy*, and is in this form often complicated with rheumatism, but it is more usual for the substance of the lungs to be affected in common with their envelopments.

Copious bleeding is the remedy most to be depended on for subduing the inflammation, and should be had recourse to as soon as the disease is discovered. The beast should be put into a cool cow-house well littered, and immediately bled. If the difficulty of breathing and other symptoms are not much relieved in six or eight hours after the first bleeding, it should be repeated. A third or fourth bleeding may in bad cases be requisite. In this disease, more than in any other, the person who attends the cattle should be present when the beast is bled. It is impossible, by looking at the patient, and considering the symptoms, to say what quantity of blood ought to be taken away; but as a general rule, and especially in

inflammation of the lungs, and at the first bleeding, the blood should flow until the pulse begins to falter, and the animal seems inclined to faint. The faltering of the pulse will regulate the quantity of the after-bleedings. Little bleedings of two or three quarts, at the commencement of inflammation of the lungs, can never be of service; from six to eight quarts must be taken, or even more, regulated by the circumstances that have been mentioned, and the blood should flow in a large full stream.

A seton should be set in the dewlap immediately after the first bleeding, and the purging drink (No. 2, p. 47) given. Four drachms of nitre, two of extract of belladonna, and one of tartarized antimony, may afterwards be administered twice a day in a drink.

In very severe cases the chest has been fired and blistered with advantage.

Warm water and washes must be regularly given two or three times a day.

When the beast has recovered, it will be proper, as much as possible, to avoid all those causes which induced the complaint. The animal should for a short time be housed during the night, and, if the weather is very unsettled, kept up altogether, or turned out for a few hours only in the middle of the day.

CHAPTER VII.

Rheumatism, or Joint-fellon.

The early symptoms of this complaint are those of common catarrh, with no great cough, but more than usual fever; by degrees, however, the animal shows some stiffness in moving, and if the hand is pressed upon the chine or any part of the back, the beast will shrink, as if this gave him pain. When the complaint goes no farther than this, it is called *chine-fellon* in many parts of the country; but generally, in two or three days, the animal appears stiffer in the joints; these afterwards begin to swell, and are evidently painful, particularly when he attempts to move. Sometimes the stiffness extends all over the body, and to such a degree that the beast is unable to rise without assistance.

This is generally termed *joint-fellon*. Old cows are very subject to it, and especially a short time before calving; but milch cows and young cattle are oftener attacked by it at the spring of the year. It is mostly occasioned by the animal being kept in a state of poverty during the winter, and suddenly exposed to the vicissitudes of the weather in the spring, or to the inclemency of the north or north-easterly winds, especially in low situations.

This disease sometimes comes on suddenly, and is present in a very acute form, being in fact a severe chill: these acute symptoms may subside, and be succeeded by others, milder but more obstinate. Sometimes abscesses will form amongst the muscles, or the sheaths or bodies of the tendons; and the capsular ligaments of the joints are often distended

with synovia. These symptoms are particularly unfavourable.

In this disease we find the same class of membranes, viz., the serous, diseased throughout the body, and an examination after death sometimes exhibits, in addition to the diseased appearances before noticed, the membrane lining the heart, the chest, and the abdomen, considerably affected, either wholly or in part, and sometimes a considerable effusion of water in these cavities.

As soon as the disease makes its appearance, the beast must be taken to a warm cow house or stable, or some situation sheltered from the severity of the weather. The following purging drink should then be given:—

Recipe No. 7.—Sulphur Purging Drink.—Take sulphur, eight ounces; ginger, half an ounce. Mix with a quart of warm gruel. This drink should be repeated every third day, if the bowels appear to require it.

The bowels having been gently opened, a drink which may cause some determination to the skin, and increase the insensible perspiration, should be administered.

Recipe No. 8.—Rheumatic Drink.—Take nitre, two drachms; tartarized antimony, one drachm; spirit of nitrous ether, one ounce; mixed powder, an ounce. Mix with a pint of very thick gruel, and repeat the dose morning and night, except when it is necessary to give the sulphur purging drink No. 7.

If there should be much fever at any period of the complaint, the sulphur drink must be exchanged for the purging drink No. 2, and three or four quarts of blood taken away.

If any of the joints should continue swelled and painful, they should be rubbed twice a day, and for a quarter of an hour each time, with a gently stimulating embrocation.

Recipe No. 9.—Rheumatic Embrocation.—Take Neat's foot oil, four ounces; and camphorated oil, spirit of turpentine, and laudanum, each one ounce, oil of origanum, one drachm. Mix.

Should a scaly eruption break out on the joints, or any part of the legs, after the beast has apparently recovered, an ointment composed as follows will generally clear off the scurf, heal the cracks or sores, and cause the hair to grow again.

Recipe No. 10.—Healing Cleansing Ointment.—Take lard, two pounds; resin, half a pound. Melt them together, and when nearly cold, stir in calamine, very finely powdered, half a pound.

If stiffness or swelling of the joints should remain after the inflammation and tenderness are removed, the joints should be well rubbed morning and night with a gently stimulating embrocation. The following will be as good as any:—

Recipe No. 11.—Camphorated Oil.—Take camphor, two ounces, and break it into small pieces; put it into a pint of spermaceti or common olive oil, and let the bottle, being closely stopped, and shaken every day, stand in a warm place until the camphor is dissolved.

When a beast has had one attack of rheumatism, he will be always subject to its return, and therefore should be taken more than usual care of in cold variable weather; and should he appear to have a slight catarrh, or to walk a little stiffer than usual, he should be housed for a night or two, and should have a warm

mash, and the following cordial rheumatic drink; which, however, would be very improper in hoose or cold, or rheumatism connected with any degree of fever.

Recipe No. 12.—Cordial Rheumatic Drink.—Take rhododendron leaves, four drachms; and boil it in a quart of water until it is diminished to a pint; strain the decoction, and to half of the liquid, warm, add gum guaiacum, finely powdered, two drachms; powdered caraway seeds, two drachms; and powdered aniseed 2 drachms, mixed with half a pint of warm ale.

CHAPTER VIII.

Inflammation of the Liver.

This is a disease to which cattle are often subject than is imagined, and particularly those that are in high condition and stall-fed: the symptoms, however, are usually sufficiently distinct, to guide the attentive observer.

When the milch cow is attacked, there is a diminution of milk, and it has a rosy appearance and saltish taste after being separated from the cream. The animal has a heavy appearance, the eyes being dull, the countenance depressed, with a stiffened, staggering gait; the appetite is impaired, and the membrane of the nostrils and the skin is a yellow colour.—Sometimes the respiration is much disturbed; at others, it appears tranquil, but the pulse, though unusually quickened, is rarely hard or full. The bowels are generally constipated, though sometimes purging exists. Rumination is usually disturbed, & occasionally altogether suspended. To these will be occasionally added the characteristic symptoms of pain on pressure on the edge of the short ribs on the right side. In acute inflammation of the liver, the most frantic pain has been exhibited; but this is rarely the case.

A high degree of fever will indicate the propriety of bleeding, but it should not be carried to too great an extent, but may be repeated. After bleeding, one or two drachms of calomel, with a scruple of opium, and two drachms of ginger, may be given in gruel, and a few hours afterwards twelve ounces of epsom salts, and half a pint of linseed oil. The calomel and opium may be repeated twice a day, and the purgative also until the bowels are sufficiently operated on. If, however, purging be present from the first, a few ounces only of Epsom salts should be given, but a drachm each of calomel and opium repeated twice a day; and if the purging continue, the case may be treated as one of diarrhoea. The sides in this disease should be blistered, and setons may also be inserted.

Inflammation of the liver frequently leaves after it a great deal of weakness, and tonics are clearly indicated. The best medicine that can be given is the following:—

Recipe No 13.—Tonic Drink.—Take gentian root powdered, half an ounce; ginger powdered, one drachm. Epsom salts two ounces. Mix the whole with a pint of warm gruel, and give it morning and night.

No hay, and little corn, should be given in inflammation of the liver; but

the diet should consist of mashes and green meat.

When a beast dies of this disease, all contents of the chest and the belly will often be found to be considerably affected. The lungs in almost every case exhibit inflammation, and there are patches of inflammation, in the bowels.

It has been stated that fat beasts, or such as are in good condition, are very liable to this disease, and particularly those that have been fed much on oil-cake. It is more frequent in hot than in cold weather, and in store cattle that have been over-driven, or worried in woodland pastures by the flies. Sudden change of weather; the exposure to considerable cold, of a well-fed beast that had been well housed, or indeed anything that has a tendency to excite fever, will produce inflammation in an organ that has been over-worked, or is disposed to disease from the undue secretion of bile in the rapid accumulation of flesh and fat. Chronic inflammation of the liver is characterized by symptoms similar but more moderate than those detailed. The debility gradually increases, and death often succeeds. The same treatment should be pursued, with the exception of bleeding.

To be Continued.

COAL-TAR AS A PAINT.

I think it would be well to call the attention of farmers to the use of coal-tar as a paint. The tar produced in coal gas works is used extensively in England for painting fences, outbuildings, &c., and is being introduced in this country also. It never alters by exposure to the weather, and one or two good coats will last many years. It is the cheapest and best black paint that can be used. Our buildings are painted with it, all our apparatus also: and even the wrought-iron pipe we place in the ground, is coated with it. I think if its advantages were fully known, it would be generally used throughout the United States. The government soak the bricks used in building the fort at Throg's Neck in this tar, which renders them impervious to water; and posts painted with it are protected from rot when put in the ground, as effectually as if they had been charred.

CHARLES ROOME.

Manhattan Gas Works, New York.

A Practical Life Preserver.—A very simple instrument has just been introduced here, called the "Lancourt Nautilus." For convenience and safety, it is as perfect as possible. It is an harmonicon without the musical part. It consists of two oval tin plates as large as a man's hand, connected by a spiral wire capable of being extended to the length of three feet. This wire is covered by a water-proof bag or sleeve, the ends of which are sealed to the plates. The whole affair, when compressed together, is about five inches long by four thick. Through one of the tin plates is a hole, closed by a clipper on the inside. Take a plate in each hand, and draw them apart to the length of the bag, and the machine is inflated. The wire keeps the bag distended, so that the air would press out very slowly, even if a small hole were to exist. It has been adopted already by the Admiralty service both of France and England.

Sprains in Sheep.—The best mode of treating sprains is to immerse the limb in a pail of hot water for half an hour at a time, several times a day. Apply the hot water as soon after the accident as possible.

Exhausted Land.—Liebig, in a late work of his entitled "Familiar Letters on Chemistry," says, "Can the art of agriculture be based upon any thing but the restitution of disturbed equilibrium? Can it be imagined that any country, however rich and fertile, with a flourishing commerce, which for centuries exports its produce in the shape of grain and cattle, maintain its fertility, if the same commerce does not restore, in some form of manure, those elements which have been removed from the soil, and which cannot be replaced by the atmosphere?"

Flowers.—The most beautiful array of flowers may be produced by taking an elder stalk, punching out the pith, and placing within the stalk a variety of seeds whose flowers blossom about the same time, and burying the stalk in the earth. When they spring up, the sprouts form themselves into one stalk; and when blossoming, it bears the various kinds of flowers according to the seed you planted in the stalk. Try it, ladies.—Michigan Farmer.

Face Ache.—The common affection, so often supposed to be excited by a diseased tooth, although the latter fails to be detected—a rheumatic, chronic kind of pain, wholly different from that of tic-douloureux,—is often speedily curable by muriate of ammonia. This salt should be given in doses of half a drachm, dissolved in water, three or four times daily. About four times will be sufficient to test the potency of the remedy. At other times the iodine of potassium, in five or six grain doses, is quickly effective towards a cure. The efficiency of the latter remedy renders it probable that that effectation is of the nature of periosteal inflammation.—Dr. Watson's Lectures.

Make your own Candles.—Take two pounds of alum for every ten pounds of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clayify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.

Green and Dry Wood.—A cord of wood whilst green, is said to contain 1,443 pounds of water, or one hoghead and two barrels. Let every farmer who hauls wood to market, remember that when he transports it green, he is carrying that weight and quantity of water on his load, which, if he had suffered his wood to remain after it was cut till it was suitably seasoned, he might save from the burden of his oxen or horses, or pile upon the top of it three-fourths of a cord of seasoned pine, and yet have no heavier load than the green cord alone weighed.

To Prevent Hogs or Cattle from being injured in fresh Pea Fields.—The destruction of hogs and cattle, by turning them into fresh pea-fields, is not very uncommon. The remedy, however, is very simple. Stock, immediately before being turned upon a pea-field, should be watered, and at first only be permitted to remain in the field a few hours, when they should be removed to a lot, and have free access to water. After observing this precaution twice or three times, they may be permitted to remain in the pea-field constantly, without danger, if they have free access to water.—Southern Cultivator.

How to Clean a Fowling Piece.—Stop up the touch-holes by means of a little wax and then pour quicksilver into the barrels, and roll it along them for a few minutes. The mercury and the lead will form an amalgam, and leave the gun as clean as the first day it came out of the Shop. Strain the quicksilver through a piece of thin wash-leather, and it is again fit for use, for the lead will be left in the strainer.

To involve yourself in inextricable difficulty, shape your course of action not by fixed principles, but by temporary expedients.

From the Albany Cultivator

CEMENT CISTERNS—THE BEST METHOD OF CONSTRUCTING.

Messrs. Editors,—You will doubtless allow me to communicate through your valuable monthly, pro bono publico, but especially for the benefit of those interested a few brief hints in regard to the proper manner of constructing cisterns; household appendages so necessary to the comfort and convenience of those who are not blessed by nature or art with a generous fountain of pure soft water at their doors.

Of the various methods recommended and practiced in different sections of the country, the plan of constructing cisterns of brick and water-cement, is doubtless far superior to any other, particularly in regard to usefulness and durability. Though we have made one answer a tolerably good purpose for a number of years, made of white pine, bound with strong iron hoops, and firmly set in blue clay, yet the habit of the material to decompose and become useless, even when every precaution is used, suggested the propriety of adopting some improved mode in constructing it. The plan chosen was the one above mentioned. We constructed two of different sizes. For the largest, a pit was ordered to be dug ten feet in diameter and nine feet in depth, the bottom being shaped similar to that of a large potash kettle, and the sides perpendicular. The brick selected for the kiln for the purpose, were those burned hard, though but little cracked or warped. The mortar used was made of two parts coarse clean river sand, and one part ground water-cement ready for mixing, obtained at the mill near Schuylerville, N. Y., at 25 cents per bushel, though from the fact that it does not putify or "set" as soon as some kinds, it is believed a superior quality may be obtained. Water is worked in, to render it sufficiently soft for use, like common lime mortar. With materials and pit thus prepared, the mason commences operation exactly in the centre and bottom of the excavation, by covering the surface with a thick coat of his mortar, and laying the bricks with their flat surfaces contiguous, forming, as soon as convenient, a perfect circle of some three or four feet in diameter. Regular courses are then laid around the circle, taking care to increase the inclination of the upper edge towards the centre, so that when the bottom is finished to the edge from where he wishes to carry up the sides, the bricks will be placed in an angle of about fifty degrees with the perpendicular side. Extreme care should be taken with this part of the work, and an extra quantity of cement used, in order to prevent the possibility of a leak, as in turning up the wall, the outer edges of the bricks must necessarily be further apart than the inner, and every cavity should be completely filled with the mortar. The sides were then carried up perpendicularly five feet, from which point they were gradually so small as to admit of being covered with large slabs of white marble, with a circular orifice sufficiently large to admit an ordinary sized person and to place a pump for raising the water. A urd is then carried up sufficiently high to prevent any action of the frost on the work below, and filled in with dirt or gravel that will not heave. At the top of the brick wall, and immediately under the stone covering, is left an opening the size of a brick, from which a drain is laid to conduct off the surplus water, made like the cistern of brick and cement. While the wall is going up, the mason should be particularly careful to lay on a good coating of cement over the outside, before filling in, care being taken to preserve a sufficient space between the bank and wall, for this purpose. To complete the work, a flat stone is placed on the bottom of the cistern in a bed of mortar for the pump to stand upon, the whole inside plastered with cement similar to the walls of a house, and after drying a few hours, whitewashed with a thick mixture of cement and water, and the work is done. Water may be admitted after the work has become partially hardened, but should be conducted to the bottom in such a manner as not to wash the coating of cement. The first quantity of water discharged into it will be hardened and rendered unfit for use, by the sulphate of lime contained in the cement, which may be pumped out, when the next will be soft.

The advantages of having cisterns constructed as above described, must be apparent to the most casual observer. When done in a workmanlike manner, and with proper materials, they will be as durable as though formed of solid rock, and the inside presents a surface as free from holes as any stone vessel used for culinary or household purposes. Diligent families will of course require different sizes, and the amount of material necessary to construct them vary accordingly: the one described, containing something like 45 bushels, the other about 20. The builder, Mr. Richard Swartwout, of Schuylerville, N. Y., has often, to save expense, been ordered to plaster the cement directly on to the earth as shaped with the shovel, and covered with plank or large stone as before. But the mode is evidently objectionable, as, if accidentally exposed to the frost, the sides will crack and become leaky. Brick cisterns laid up with common mortar, are also liable to crumble in time, and prove defective. In either case, however, the top should be sunk below the surface, and covered with gravel sufficiently deep to prevent the action of the frost on any part of the masonry. If any of our readers choose to construct their cisterns according to the above directions, taking care to secure an experienced workman and good materials, they will find doubtless, should they live so long, that the lapse of half a century will not affect their usefulness or impair their durability.

J. CHACE.

Hoosick Falls, June, 1844.

From the Tennessee Agriculturist.

TO FARMERS' DAUGHTERS.

It has been sometime since I talked to the girls. This evening I will give them a few lines, letting them know I think of them yet. As usual, I am dwelling on the common, every day affairs of life, and feeling more and more the importance of young females being well acquainted with all the manual thereof. The reason for my writing as I do at present, I will give you.

A few days since, I heard a gentleman, who wished a domestic, industrious, and contented wife, speaking of a pretty, interesting girl, praising her modest deportment and engaging manners; but at last, wound up with, "She does not know how to do anything useful; she could not even make her own dresses, she would be of very little use in this world of hard work." Now, I had nearly the same opinion myself, though I would not tell him you know; but thought I would tell you, and let you profit by it, if you choose. He spoke also of some young ladies who studied mental and moral philosophy, chemistry, and other branches, and wanted to know what use it would finally be. He was certain, from his own observation, they did not have enough of philosophy to govern their temper and general conduct, and as to chemistry, all their study of it had not given them a knowledge of bread making, which he considered a very important item, his mother having been successful in that line of business, and he had been accustomed to the business of bread. He thought, at their studies were not of some practical utility, they might as well be let alone.

I was really amused, to hear views so much in opposition to the prevailing notions of the day; and, to tell the truth, I thought there was some good common sense in them, though I informed him the girls would laugh most heartily at such nonsensical stuff, in these days of improvement, when many considered it polite and sensible to be perfectly ignorant of common affairs. My advice was, that he should go away out in the country, and look for the daughter of some good farmer, who had taught his family that it is honourable to engage in all the useful employments in which the greater part of the duty of woman consists—one who could sit down happily at home, and study household good, without sighing for the excitement of fine dresses, fashionable furniture, fashionable visits, and all those fashionable things that disturb the peace of young housekeepers, and render home a scene of misery and strife, instead of the gathering place of the heart's best affections.

If girls had any idea of what would promote their future happiness and interest, more of their precious time would be spent in the acquisition

of useful and necessary knowledge, rather than flitting it away to gain a few (generally useless) accomplishments. The first is of great importance, in every situation of life; the latter are almost always given up, as soon as their possessor takes her station at the head of a family. I was led to consider what should be the character of a lady who has finished her education, or who at least has left school, and also of the training necessary to form that character. Nothing preventing, I will tell you my cogitations at some future time, although some of you will think I am altogether too old-fashioned to be writing in these days of light and knowledge.

Luce.

THE FARMERS' FAIR.

Tune—Auld Lang Syne.

Ye husbandmen, both far and near,
Up, up, stir round, prepare
With sons, and wives and daughters too,
To attend the Farmers' Fair.
Bring wheat and corn of various kinds,
Bring all that's new and rare,
And barley, oats, rye, buckwheat, millet,
All to the Farmers' Fair.
Bring pumpkins, squashes, carrots, beets,
Quince, apple, peach, and pear,
Potatoes, turnip, cabbage, peas
And beans to the Farmers' Fair.
Bring "sheep and oxen," large and fine,
And cows, and horse and mare,
And pairs of horses, asses, mules—
Bring all to the Farmers' Fair.
Bring heifers, steers, and stately calves,
Let "bulls and goats" be there,
Bring natives, short horns, long horns, no horns,
All to the Farmers' Fair.
Bring porkers spotted, porkers white,
Suit every connoisseur—
Let Berkshire, Briffeld, Chino, Leicester,
Meet at the Farmers' Fair.
Ye wives and daughters bring your best,
And best with good compare,
Bring something that your hands have wrought,
And come to the Farmers' Fair.
Bring golden butter, melting cheese,
Bring nick-nacks rich and rare;
Let woollens, cottons, linens, silks—
Bring praises on THE FAIR.
Mechanics too and artists come,
Bring samples of your ware;
Display the products of your skill,
And crowd the Farmers' Fair.
Bring cultivators, harrows, Ploughs,
All made for wear and tear;
Corn planters, drills, yokes, shovels, hoes,
And rakes to the Farmers' Fair.
Machines for trashing, lenning mills,
Horse-power and smaller ware,
Saw-cutter, corn-mill, cheese-press, churn—
Bring all to the Farmers' Fair.
One word to him of generous soul,
Who loves thus to prepare—
Oh, let that "Farmers' coat of arms,"
Be here at the Farmers' Fair.
Ye clergy, teachers, students come,
Come taste the bright blue air;
Pa'se, sorrow, sickly, "feeble folk,"
Trun out to the Farmers' Fair.
Ye Lawyers, Doctors, Merchants too,
Come gather round—for where
Shall non-producers learn their place!
Save at the Farmers' Fair.
Come men and women, old and young—
Let boys and girls be there,
Come rich, come poor, come mute and blind—
Come all to the Farmers' Fair,
Bring smiling faces, cheerful hearts—
At home leave gloom and care—
Let a right good hearty shake of the hand,
Go round at the Farmers' Fair.
The Farmers' Fair—that glorious day—
May 'U and I be there;
And friendship, joy, and peace unite,
To bless the Farmers' Fair.
The Farmers' Fair—oh glorious day,
Loved here and everywhere:
Now all in chorus join and raise:
Three cheers for the FARMERS' FAIR.

AGRICULTURE IN CANADA.

It appears, from an article in the September of the *Genesee Farmer*, that the Editor of that paper has been on a tour through Canada, and has embraced the occasion as he terms it, "in watching the want of progress in agriculture with considerable interest;" and among other things, has taken the freedom of dictating to the Canadian farmer what will have to be done before much progress will be made. He also states, that more thorough and successful efforts must be made to circulate intelligence, by means of spirited and interesting agricultural papers; and for this purpose their papers must be better conducted, as well as better patronized.

We are at all times willing to receive counsel and advice from such of our fellow countrymen as are qualified for the task, but for foreigners to take upon themselves the office of dictating to us, how we shall proceed in the management of our own affairs, is more than we can conveniently brook—to be plain, we do not thank Mr. Bateham for his freedom, and we consider the hasty manner in which he has passed judgment upon Canadian agriculture, and his style of jumping at conclusions, a downright insult upon the Canadian farmers—a class to which we have the honor to belong. Although we have no desire to assume the honour of being "leader," of the agricultural classes, still we have faith in our own ability and experience, to conduct an Agricultural Journal, as well as any other person on this continent, notwithstanding Mr. Bateham's opinions to the contrary. As long as the Canadian public are satisfied with the character of our magazine, so long shall we publish it, if we be spared; and we doubt not but that agricultural improvement will progress as rapidly in this country, in proportion to the intelligence and wealth of the people, as it will do, or has done in the United States, under such leaders as Mr. Bateham, who has been very justly styled, by the sagacious Editor of the *central New York Farmer*, 'a gentleman of leisure,' or, in other words, a farmer in theory. We assure Mr. B. that our removal to our farm, need not create any uneasiness in his breast, so far as the well-management of the *Cultivator* is concerned, as every discriminating mind must be sensible of the advantages that must accrue from the arrangement that we have lately made. We fancy that the columns of the *Cultivator* will afford evidence of the benefits that must follow from having so closely connected ourselves with the farming interests and operations. We shall, in future sustain no pecuniary loss, and our mind will be so completely unshackled from the bustle of a city life, that entire freedom will be given to our pen, in communicating to others practical advice upon husbandry.

Mr. Bateham very justly complains of our neglecting to give him credit for the excellent article we copied from his journal *The Agricultural Society of the*

Midland District, at a late meeting, had their attention drawn to Mr. Bateham's remarks upon Canadian Agriculture, and publicly noticed the very unbecoming manner in which he expressed himself towards us, for not having given him credit "for three whole pages of his Editorial articles." They judged rightly of the cause which led to that omission, which was an oversight on the part of the printer, the Editor being at a distance at the time of publishing, and had not therefore the opportunity of reading the proof sheet.

HOME DISTRICT AGRICULTURAL SHOW.

The public, through the medium of this Journal, have been informed, on various occasions, that on the 8th and 9th instant an Agricultural Show would be held, at the West End of this City, to be conducted on a more magnificent scale than anything of the kind that has heretofore taken place in British America. The pertinent information to the Agriculturists of this District was published by us upon the good faith of certain proceedings of the Home District Society, which transpired last winter and in the spring, which proceedings went forth to the public through the columns of the *Cultivator* as Editorial remarks, and not in the shape of official documents emanating from the District Society. Through some cause unknown to us, the Secretary of the Home District Agricultural Society has not been in attendance at any of the annual quarterly or other meetings of the Society for the past twelve months, and, probably, through this circumstance alone may be attributed the total absence of officially-published proceedings of the Society during that period.

The most important parts of those proceedings were, the establishment of Township Branch Societies, and the appropriation of a large sum of money for a General Autumn Show. Township Societies were formed upon the plan proposed, and the President and Vice-President of the District Societies assisted in their organization, and entered into a full explanation of the nature and objects of the plan, that the District and Township Societies should be connected, to the entire satisfaction of the respectable assemblage of farmers, who had met to organize themselves, as they supposed, into Branch Societies. At a general meeting of the Society a quorum of directors being present, and also the President, Vice-President, and Treasurer, it was resolved "That on the 8th and 9th of September next, a grand District Show shall be held on the St. Leger Race Course, west end of Toronto, and the members of the Township Branch Societies shall be competitors in common with the members of District Society." This announcement was published by us, together with a list of prizes, amounting in all to £150, which list was made out by the President of the Society, W. B. Jarvis, Esq., the Vice-President, Edward W. Thompson, Esq., Warden of the District, and the Treasurer, W. Atkinson, Esq., and by others subsequently submitted to a meeting of the Directors, which received their approval and hearty concurrence. Circumstances having rendered it necessary that we should remove to our farm, in the early part of last summer, and consequently could not make it convenient to attend to any Agricultural meeting or watch over their proceedings in any form, unless assisted by written documents, sent to our address. Our readers may form some idea of our surprise when we were presented with a Show Bill, printed only a few days before the day appointed for the great display, in which Bill or Advertisement, many

of the most important items were omitted and only about one half of the amount of premiums published, that were agreed upon by the Directors of the Society. In reading the regulations for the day, this astonishment was considerably increased when perusing the following paragraph:—

"No person shall be allowed to compete for any of the above Premiums unless he shall have been a member of this Society at least four months previous to the day of the Fair, or pay the sum of, fifteen shillings on entering his stock, &c."

We leave this matter, for the present, without further comment, trusting that the farmers of this old and wealthy District will not allow any irregularities that may have taken place in the management of the District Society, to damp their zeal in the furtherance of the progress of Agricultural improvement. It is clear that an explanation must be made by those who instigated the change, and we trust that it may be done to the satisfaction of all parties concerned.

WHITBY AGRICULTURAL SOCIETY.

THE FAIR AND SHOW OF THE WHITBY BRANCH OF THE HOME DISTRICT AGRICULTURAL SOCIETY will be held on WEDNESDAY, the 16th of October, 1844, at OSHAWA, when the following prizes will be awarded:—

For the best Ram	£0 15 0
2nd best do.	0 10 0
3rd best do.	0 10 0
Best Ram Lamb	0 15 0
2nd best do.	0 10 0
3rd best do.	0 5 0
Best bred Ewe	0 12 6
Best pen of three Ewes, not thorough-bred	0 12 6
2nd do.	0 7 6
Best Bull Calf	1 0 0
2nd do.	0 10 0
Best Heifer Calf	0 15 0
2nd do. do.	0 10 0
3rd do. do.	0 5 0
Best Fat Ox, Cow, Steer, or Heifer	0 15 0
2nd do.	0 10 0
Best Boar	0 15 0
2nd do.	0 10 0
3rd do.	0 5 0
Best Sow	0 10 0
2nd do.	0 7 6
3rd do.	0 5 0
Best sample Winter Wheat, not less than one bushel	0 15 0
2nd do.	0 10 0
Best sample Spring do.	0 15 0
2nd do.	0 10 0
Best do. of Oats	0 10 0
2nd do.	0 5 0
Best home-manufactured Coverlet 2nd do.	0 15 0
Best Piece of home-spun Fulled Cloth, not less than 20 yards ..	0 15 0
2nd best do.	0 10 0
Best Piece of home-spun Flannel, plain or coloured, not less than twenty yards	0 10 0
2nd best do.	0 5 0
Best twenty pounds of butter 2nd best do.	0 10 0
Best twenty pounds of cheese 2nd do. do.	0 10 0
Best dozen of Corn Brooms grown and manufactured in the township ..	0 10 0
2nd do. do.	0 5 0
Best piece of Turnips, not less than half an-acre	0 10 0
2nd do. do.	0 7 6
3rd do. do.	0 5 0

* * All Persons who are not Members of the Society offering any of the above articles for Competition are required to pay 10s Entrance. JOHN KITSON, Secretary.

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 N B Publication Office of "THE BRITISH
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 Toronto, July 23, 1844.



MOUNT HOPE BOTANICAL GARDEN and NURSERY, ROCHESTER, New York.

The Proprietors of this Establishment respectfully announce to their Friends and Customers, and the Public generally, that
 THEIR PRESENT STOCK OF
FRUIT AND ORNAMENTAL TREES,
FLOWERING SHRUBS, PLANTS, &c. &c.,
 which they offer for Sale the ensuing Autumn, is unusually large and fine.

The Collection of the various Fruits for the Garden and Orchard comprises the most popular and esteemed Varieties known in Europe and America. The Trees are handsome, thrifty, and of the most suitable Age and size for successful Transplanting; and being propagated by the Proprietors themselves, with the most scrupulous Care, either from bearing Trees in their own Grounds, or from others of undoubted genuineness, and being in every other respect—in the Cultivation, Removal, and Packing—under their immediate personal Supervision, they can be confidently recommended to the most exact and scrutinizing Cultivator.

In addition to the extensive Collection cultivated on the Establishment, they have also on hand a large Assortment of the choice European PEARLS, selected last Spring, by one of the Proprietors in person, from the best Fruit Tree Establishment in France. They are on Quince Stocks, adapted for Dwarfs or Pyramids, and are now in a bearing state: they will bear abundantly the year after transplanting. This system of culture for the Pear has been thoroughly tested in Europe and America, and is warmly recommended by the most eminent Horticulturists of both Countries. It annihilates the objection usually raised against planting Pear Trees, viz., that "it is a long time before they bear." These dwarfish Trees are at once productive, and, moreover, can be cultivated in small Gardens and other limited Grounds, where standard Trees could not be introduced.

The collection of Apples includes 3,000 trees of the valuable "Northern Spy," a native of Western New York, and acknowledged to be one of the very best varieties cultivated. It is a large, beautiful, and fine flavoured fruit, and may be kept fresh and sound till the 1st of July. These will be sold at \$25 dollars per 100 trees.

The stock of Ornamental Trees, Shrubs, Roses, &c., is very fine, and will be furnished at very moderate prices. Where quantities are wanted for ornamenting public grounds, &c., a very liberal discount will be made.

The collection of Roses includes about one thousand standards, being inoculated on strong stocks, 4 to 6 feet high, embracing the choicest varieties of Hardy Moss, Province, Chinese and Noisette, Monthly, and Ice scented. These are beautiful objects for lawns or borders, presenting the appearance of miniature trees.

A large collection of Dutch Bulbous Flower Roots will be received from Holland in September next, and forwarded, on very liberal Terms, to Amateurs, Gardeners, and Agents.

Persons who design planting this coming fall should send in their orders by the 1st of October at farthest, in order that they may receive early attention. Fall planting should be performed as early as possible, so that the trees may be partially rooted, and the earth settled around them before the arrival of heavy frosts.

It is expected that all orders coming from persons unacquainted with the Proprietors will be accompanied by a remittance, or that some responsible reference will be given.

No person is authorised to receive orders for the establishment except the duly advertised agents; and we would particularly caution the public against responsible speculating persons, who, we have been informed, have represented themselves as our agents, to facilitate the sale of their worthless articles.

Priced catalogues will be sent gratis to all persons applying (post-paid), or may be had from any of our agents.

Orders left with any of the following agents will receive prompt attention:—

Hamilton, Mr. Samuel Kerr.
 Toronto, Eastwood & Co.
 Port Hope, Mr. David Smart.
 Kingston, Mr. J. W. Brent.

Or they may be addressed directly to us, with directions for forwarding, &c.

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