

Should the subscription remain unpaid for 3 months from the time the first paper is sent to the subscriber, the price will be \$2.00.

Agriculture.

For the "Agriculturist"

VICTORIA COUNTY NOTES.

The heat of the last few weeks has diminished the prospects for heavy crops. The grain crop will be good average one. The wheat crop promises fairly, much broader fields have been sown than the previous few years.

The County Council of Victoria were only in session two days. The business before the session was the ordering of debentures of \$2,400,000 in addition to \$2,500,000 previously ordered. The ordering of the building of a new Registrar and Clerk's Office at once. Tenders for the same will be opened on the 15th inst., to be finished by 1st of October. The Court House and Gaol are being rapidly pushed forward, the buildings when completed will be a credit to the County.

July 8th, 1878.

We have received some very large heads of Timothy—measuring from 8 to 12 inches—grown by Mr. Smith who resides on the Miramichi road, a few miles from this city. We learn that Mr. Smith has a large field of about 30 acres in grass of which the specimen shown us is a fair sample. The land was a swamp, but has been reclaimed and drained by Mr. Smith. There are many farmers in this country who have just such fields that would yield quite as good return, if treated in the same way.

From the Honorable Wm. G. Le Duc, Commissioner of Agriculture, Washington, we have received the Departmental Reports from 1870 to 1876 both inclusive, and also a Report upon Forestry, by Dr. Franklin B. Hough, issued by the Department, for which we tender our thanks. These Reports are valuable, and contain a fund of information on almost everything relating to Agriculture. We have not had time to do more than glance at these volumes, but will give our readers such portions as may be most interesting to them and within the compass of our columns.

CATTLE TRADE WITH ENGLAND.

We have given our readers a good deal of information lately in reference to the shipment of cattle from the Canada and the United States to Great Britain, as we are anxious to impress upon our farmers the importance of this trade, which is peculiarly suited to this Province. We met two Ontario farmers last week who were looking through this Province with a view of purchasing land for raising stock to send to England. They were satisfied that this Province is better adapted for that business than Ontario. It is a better grazing country, better watered and the fall feed lasts longer. These gentlemen are now engaged in this business in Ontario, and think the advantages of cheap land and nearness to shipping ports along with the other advantages named above are all in our favor; but they said it was useless to attempt to trade with the cattle we now have, with few exceptions; none but large fine cattle will pay to send across the Atlantic. Our breeders should give heed to this. So long as they will continue to raise the small, ill bred animals, they now do, just so long they will have to complain of low prices and that it will not pay to feed stock. If they had large, well bred animals they could obtain a selling price for any number. The following articles give some information on this subject. The first is from the Toronto Globe in referring to a sale of Short Horns at Bow Park—the same herd that the importation in 1875 was from. The other is from the American Exporter, both of which we commend our reader.

The opportunity is a good one for enterprising farmers, who are trying to improve their live stock—with a view to the large and weekly increasing demand for well-bred steers, sheep, and hogs for the English markets. The small, unthrifty cattle, of which so large a proportion are found on Canadian farms, are quite unfitted for shipment to Europe, and the loss sustained by keeping them, instead of large, well-bred animals, can be distinctly seen from the comparative prices paid for the different classes of stock in our weekly market reports. In the month of June, the price of cattle in the Toronto market ranged from \$5.50 per 100 lbs. live weight down to \$3 per 100 lbs. Sheep ranged from \$8 per head down to \$3. Spring Lambs from \$4 down to \$1.25. Calves from \$14 down to \$2. Many thousands of these animals were sold in the Toronto market alone during the month, and the vast loss to the farmers from the inferior character of so large a proportion of the stock sold ought to them thinking seriously of the folly they are committing. It would not be difficult to demonstrate that

The Agriculturist.

A WEEKLY JOURNAL DEVOTED TO AGRICULTURE, LITERATURE, AND NEWS.

ANDREW LIPSETT, Publisher.

VOL. 1.

"AGRICULTURE THE TRUE BASIS OF A NATION'S WEALTH."

TERMS: \$1 50 per year, in Advance.

FREDERICTON, N. B., JULY 13, 1878.

NO. 14.

ORCHARD GRASS.

The merits of orchard grass do not seem to be well understood or appreciated by farmers generally; and it is a pity we are obliged to wait until this season of the year in order to show them examples of it. Of course we could have no better time only that the time of seeding is past, and before another spring many will forget all about the value and importance of this grass. Many instances of its value are seen in yards in this city, but the most marked that we remember this season was that in the of Hon. J. W. North—very much shaded by large trees, but yet covering the ground completely and standing thick and tall. This was cut on the 13th of June, just before blossoming, at which date it measured over two feet in height, and yielded we should judge fully two tons of hay per acre. We made a memorandum of this handsome grass on the day it was cut, with the intention of writing an article on its merits and advantages—but just here comes the Country Gentleman, with an article from the pen of Mr. Lewis F. Allen of Buffalo, N. Y., giving his experience with this grass, which seems so well adapted for our latitude that we copy it entire. Mr. Allen, it will be remembered, is one of the best informed agriculturists in the country, and the author of several standard works on different branches of farming. He says:—

"On this 11th day of June, 1878, I am cutting a piece of orchard grass of about one acre, which has stood in the lawn of my dwelling for the past thirty years. It averages fully three feet high, and portions of it run to four feet and upwards. It is in full bloom, and to let it stand some days longer would deteriorate it in quality for hay purposes. It is more or less mixed with red clover, now in full bloom, and both in perfect condition for the best quality of hay. The soil in which the grass grows is a strong clayey loam. It has had little stable manure for years past—none at all for several successive years—and last year a liberal dressing of unleached wood ashes on the stubble after the grass was cut. To appearance, the grass now yields fully two tons or more to the acre.

The real value of orchard grass is not well known. Cut when in bloom and the stalks full of sap, it is an excellent hay for all classes of farm stock; and mixed on the ground with red clover, as it should be (for they are both in cutting season together, and the cover fills in the spaces between the tussocks of orchard grass, as the latter grows in compact bunches), both together form a thorough matting over the ground, and the clover, with occasional top-dressing, will stay on the soil as long as the orchard grass remains. People not experienced in the growth of orchard grass, suppose it will run out after a few years' occupation of the ground. To confute such idea, I have about an acre of it on my farm, sowed by myself about forty years ago, mixed with red and white clover, timothy and blue grass; soil clayey loam. It has been mowed and fed closely every year since, with no manure at all, or scarcely so, that I recollect, and it is now a heavy crop for hay uses. I admit that the present season is an uncommonly early and favorable one in this vicinity for grasses. Yet the orchard grass is always as good and productive as timothy, with the advantage of being nearly two weeks earlier for hay purposes, coming in exactly with red clover, the latter maturing for cutting too early for timothy, when grown together. For soiling (green food uses), orchard grass is the best I know. Sown in the spring of the year, two bushels to the acre.

Another advantage for orchard grass is its earliness, as well as lateness, for pasture and its hardiness and durability in the soil. It will not run out sooner than blue grass (Poa pratensis)—at last I have had them together for forty years, and they look equally good now as ever. Any good soil, no matter if tenacious or clayey in composition—not loam, gravelly or sandy—will yield orchard grass in perfection. I admit it does not make a marketable hay, as most men who buy hay do not know anything, but timothy—a very common sort, in my opinion, for farm stock uses, and quite inferior to the mixed grass usually grown. Another advantage orchard grass has over timothy is its not 'running out,' which the latter in most cases does in five or six years from seeding, when the land requires breaking up, and an alteration of two or three grain crops before re-seeding to timothy. If I were some years younger, and lived on my farm myself I would have a hundred acres of orchard grass meadow in two years from this."—Maine Farmer.

MULCHING FRUIT TREES.

Not the least important of the many different items of farm work is that of mulching fruit trees. The fact that frequently, for weeks at a time, trees are subjected to a severe drought, during which the soil around the trees, and even the roots of the trees, become dry and parched, and the leaves become shrivelled, and almost crisp, is enough to show the imperative duty of every grower to mulch his trees. Even if trees will grow and do well in an indifferent sort of manner, the fact that their continued and profitable existence is insured by timely mulching is enough to convince a prudent man that it is not the least of his duties. Fruit trees, to do well, should be planted in mellow soil of continued and regular moisture. The soil should also be frequently cultivated after the trees are set. To keep the soil moist in this climate, is a difficult matter. Where there are few trees, resort may be had to watering. This is an impossible task in a large orchard, and it behooves the careful cultivator to seek some substitute. This is only found in some light material that can be spread on the soil around the tree, protecting the soil from the sun and preventing evaporation. It is not economical to use for mulching, material that possesses value for any other purpose. Chip manure, sawdust, and shavings are frequently used; damaged hay, straw, and marsh hay are all superior for mulching purposes. With me the best article is straw which has laid in the cattle yard all winter and is about half rotten, and also the straw that is used to litter the early calves. I usually have a quantity of half-rotted straw that possesses a merely nominal value for manure. By using it for mulching it is subjected to the elements, and in three or four months it reaches such a state of decomposition that it is profitable to spread it over the adjoining land. This is an unimportant matter compared with the benefits arising from having the surface of the soil for three or four feet around the fruit trees, protected from the rays of the sun during the warm months. Mulching should extend farther than the roots of the trees. The material depending somewhat on its character, should be from four to eight inches deep. If trees are mulched at all, it should be done effectually. After trees are mulched there is danger from the wind for a few days only, as the mulching settles and in a few days becomes quite compact.

I can say from experience, that the difference between trees that are mulched annually and those which are not mulched is most extraordinary. While a tree that is mulched will grow more wood in a season, and ripen it perfectly in the fall, a tree that is not mulched will very often not grow half as much wood, and instead of properly ripening what it does grow, it too frequently commences to dry up a month or six weeks too soon in the fall. I know that a tree in bearing, which is regularly mulched, will produce more and better fruit, than a tree that is not mulched, and will produce with greater regularity.—Country Gentleman.

A WORD ON PIGS.—A correspondent of the Milch Zeitung insists upon the necessity of letting pigs have access to plenty of moist sand or earth in some form or other, and considers that the system of feeding them almost exclusively on skim milk, meal, and such materials is responsible for many of the ailments of the intestinal canal so frequently met with. He states that ailing pigs are often quickly restored to health by simply putting a trough of wet sand in their sty and recommends that a supply should always be kept there for the inmates to help themselves ad libitum. Pigs roaming about at large consume a considerable proportion of earth with the various acorns, roots, larvae, &c., that they grub up, and they should not be deprived of it when in confinement. Any one may convince himself by observation that it is a natural want. If a sucking pig but a fortnight old, that has never left the sty be turned out into the open, it will at once begin to eat sand greedily if that be accessible, or in its absence will indulge in earth or cinders with almost equal satisfaction.

Benjamin Franklin has the credit of being the first person in the country, who made use of gypsum or land plaster as a fertilizer. The manner in which he used it may be somewhat egotistical. He sowed it in the presence of a number of skeptical farmers on a portion of a field of grass on a hill-side, in the form of large letters, spelling his name. After a few weeks the grass upon which the plaster was sown so far outgrew the rest that the name B. Franklin could be plainly read for a long distance. From that time there was no doubt in the minds of those who knew the secret of the land plaster as a fertilizer for grass.

GENTLE HINTS TO YOUNG FARMERS.

When commencing your Agricultural life, remember that industry, economy and integrity will insure success, and form the best capital that can be employed.

Plow deep. The wealth of the soil is not all within six inches of the surface. Cultivate thoroughly if you wish to reap abundantly. Do not waste your means, and fritter away your time by raising a crop of noxious weeds with your cane or cotton or corn.

Keep a watchful eye upon the farm and its surroundings. But it does not follow that you should imbibe "eye-openers" at public houses, beer shops or corner groceries. Sheer your sheep at the season when you shed your coat for the season. Then be careful that some smart "travelling agent" does not pull the wool over your eyes and shear you.

Dress your lands with fertilizers rather than yourself with broadcloth. The one reimburses the amount expended with interest—the other returns nothing, but continually clamors for further disbursements.

After your crop has been raised, it will be wisdom to raise any mortgage which may be resting upon the farm. This will raise a heavy load from your mind, and raise your courage and spirits beyond measure.

Do not curry favors with the rich or great. If you must do something of the kind, just curry your cattle and horses. This will do them good, and benefit you also. When, by reason of inclement weather, you cannot cultivate the soil, it will be wisdom to your part to cultivate the mind. A valuable harvest will reward all earnest and faithful culture.

Never allow yourself to be inveigled into "running in debt." When you are tempted to do so, go into your field and plant an extra acre with some edible crop.

The Sheriff is an undesirable acquaintance. Avoid him as you would a pestilence. This can easily be done by paying cash on the spot for everything you purchase. Remember that everything of value we honestly obtain is the result of diligence and intelligence. Do not, therefore, expect prosperity unless you are willing to work for it.

Make the collection and composting of fertilizing materials a constant employment. The odor of your manure heap should be more attractive to you than the smell of the whisky shop.

Of course you will become the owner and raiser of stock. No farm is complete that ignores stock raising. Get the best, which is always the cheapest in the end. Give scrubs a wide berth.

Never purchase farm utensils because they are cheap. Cheap tools are an unmitigated nuisance. The best workman in the world cannot make a good job with them. It is economy to buy the best, no matter what the price may be. Do not unwisely imagine that you will be able to "get along" without books and papers relating to agriculture. Successful farmers read extensively and consider the money they spend for the purpose their best investment. Occasionally, some ignoramus gets rich by "main strength and awkwardness." This is an exception to the rule, however. Read good agricultural books and subscribe for at least one agricultural journal, but it will pay to take several.

SALT FOR STOCK.—The use of salt for dairy cows varies with the season and the flow of milk. The larger the flow and the more immature the feed the greater the amount of salt required. In June, for example, when the flow is abundant and the grass tender, more salt is required than in November, when there is less milk and the grass is better supplied with mineral matter. In the former case the cows want salt where they can have access to it every day or often in the latter twice a week will answer all demands. The best way I have tried for salting cows is to keep a little salt in the manger, where they can have access to it every time they come into the stable to be milked. They will lick a little every time they come in when the grass is very tender. Salting twice a week is then not enough, as tests made upon the quantity and quality of milk have proved. Later in the season they will take it less frequently. If salt can be had ad libitum cows will never eat any more than is required for their good, but if it is fed only at long intervals they often eat to their injury. For salting young cattle the best arrangement I know of is to place rock salt in suitable box, or half barrel, where they can have easy access to it, and under a cover, so as to protect it from wasting by rain. This avoids both excesses and deficiencies, and requires the least labor and attention.—Prof. L. B. Arnold, in N. Y. Tribune

THE ADVANTAGE OF CULTIVATING THE SOIL IN SUMMER.

Soil cultivated regularly and frequently will cost the farmer nothing for weeding. This is one item of profit. The judicious saving of expense is clear gain. The frequent stirring of the soil effectually destroys such weeds as are annuals. Uprooted when they germinate, the tender germ perishes, and, hardy as many of them are, the injury to the germs is certain death to them. The roots of other weeds are also checked in their growth if not killed. The general drought of our Canadian climate makes the killing of weeds by the frequent stirring of the soil certain and comparatively easy work.

This continued disturbance of the roots destroys them, although by the most cultivation the soil is kept moister than it would otherwise be, and the growing crops are nourished, care being taken not to disturb their roots. During the driest weather it is most necessary that the cultivation between the rows of drilled crops be continuous, as the more you stir the soil during drought the more moisture the growing crop imbibes. The freshly turned soil possesses the property of attracting the dew during the night; the dew rests heavy on it, while undisturbed soil around receives little benefit from it, and this dew sinks into the soil and nourishes the thirsting roots. Soils of every variety are better for this frequent stirring, but on none are good effects so easily discerned as on the lighter soils. Morning and evening the horse and cultivator should be kept going between the drills. The weeds may have been utterly destroyed and the soil may seem loose and mellow, but the stirring of the soil should continue. Ammonia, a necessary element of plant food, is conveyed to the earth in the dew, so that the nutriment from the atmosphere is supplied in greater abundance to the plants growing in the soil that is well fitted to profit by it by the hand of the diligent.

Another great object in the cultivation of the soil is to make it so loose as to afford free access to the air heated by the sun's rays, an absolute requirement for growing plants. Heat and moisture, as is well known, are the great stimulants of civilization, and they are thoroughly incorporated with the soil by continuous summer cultivation more than by any other means.—Farmers' Advocate.

LOSS IN OLD PASTURES. A Scotch correspondent of the Journal of Forestry in an article on "Improving and Laying Down of Permanent Pasture, refers the above subject as follows:— A still more formidable enemy to restrain and extirpate in old pastures is the encroachments of the mosses. They are to be found thriving more or less in almost all situations, and in every description of soil, but more particularly are they to be found in all their luxuriance on moist, inferior soils. Where it is inconvenient or undesirable to plough up and drop land thus overrun with coarse grass and moss, something may be done to eradicate them by going over the surface with sharp, close-toothed harrows, crossing and recrossing till the moss is thoroughly scratched up; clear off the rubbish, and thereafter apply a good top dressing of lime, or lime compost. Unquestionably pure lime is preferable, and put on as hot as can be conveniently applied, at the rate of from five to six tons per imperial acre. The month of April and up to the middle of March, would seem to be the best time for this operation. After the lime has got a good shower of rain, brush or chain harrow it into the ground, removing all rubbish gathered up by the harrows, refuse of the lime, &c.

In about a month afterwards, and not later than the middle of April, sow a mixture of the best permanent grass seeds, at the rate of from twenty to thirty pounds per acre, which can be obtained mixed and ready, and suitable to the nature of the soil, from the seedsmen with whom you are in the habit of dealing. If there be any tufts or tussocks of coarse grass it would be well to root them out. Bush harrow again, and finish up by rolling with a heavy roller. On sheltered rich lawns, and parks surrounding mansion houses, where sheep only are grazed, and where from various causes the pasture is not eaten sufficiently bare by the sheep, we have seen moss and decayed vegetable matter collecting on the surface to a depth of an inch and a half, the ground feeling like a Turkey carpet under the feet. To such a length does this sometimes go that sheep cannot be kept more than a couple of months on it before every animal is affected by foot-rot. In the end of the year we have seen the expedient tried of putting on for

The number of weeks an advertisement is to be inserted should be clearly stated. When this is not done it will be continued until ordered out, and charged the full time it has been inserted.

a few months an extraordinary stock of hardy wintering sheep for the purpose of bearing it down as far as possible. In some instances we have seen a crop or two of hay cut, the second year's crop being the heaviest, best quality, and easiest to cut. After the first crop has been removed a perceptible decrease in the thickness and sponginess of the surface will be noticeable, and if the second crop is a heavy one, and closely cut, all superfluous sward and moss will have disappeared. The following year the grass will be much cleaner and finer, and the sheep stock can be kept on throughout most of the season. We have seen a lawn so treated let one pound per acre, while the hay crop of the two preceding seasons yielded a profitable return. But, as our agricultural friends are aware, the best of these methods for improving permanent pastures are but half measures, and are not always attended with the desired results.

THE ORIGIN OF NITRATES IN THE SOIL.—In a recent number of Nature, Mr. Robert Warrington supplies a highly interesting resume of the recent researches of Schloesing and Mantz on this question. Artificially nitre is produced by putting ammoniacal matters, such as stable manure, on to soil, when the ammonia becomes oxidised, and the nitric acid so formed unites with the potash in the soil to form a nitrate. When manure is added to the land a similar process of nitrification takes place. All this is well known. The difficulty has been to give a rational explanation of the why and the wherefore. No perfectly satisfactory account has been given, and the one now brought forward by Schloesing is so startling that, though by no means a priori improbable, yet it will need to be very thoroughly investigated before it can be accepted as more than hypothesis. Nitrification, according to the chemists we have named, is the work of a living organism, which thus acts in bringing about a chemical change, just as the yeast plant does in promoting the fermentation of saccharine solutions. Substances and forces which are inimical to living beings, it is stated, stop nitrification: thus chloroform, boiling water, heat, bisulphide of carbon all stop the process; while, on the other hand, the addition of a small quantity of the nitrifying body (the ferment) is sufficient to effect the process. At Rothamstead a solution of ammonium chloride, potassium phosphate, tartaric acid, and calcium carbonate was completely nitrified in a few weeks by the addition of a small quantity of mushroom spawn—that is to say, of soil taken from the fairy ring of a meadow. It is impossible to over-estimate the importance of these researches, which bid fair to modify alike the theory and the practice of manuring.—Gardener's Chronicle.

CARE OF HORSES.—Horses kept in stalls and not doing much work, should be regularly cleaned and fed. Some farmers seem to think that unless a horse is to be taken out to work he does not need cleaning. Such a man to be consistent, ought not to wash himself unless he is going to town? We feed our horses one bushel chopped straw (say eight pounds,) moistened with water and mixed with two quarts of corn meal, to each team, three times a day. They are allowed straw in their racks; but it is a good plan to take it out of the racks at eight o'clock in the morning, and let them have no food before them until noon. Then feed them and remove all that is left in the rack at two o'clock, and feed again at night, letting them have all the straw they will eat until morning. In this way horses that are standing in the stable will eat much more heartily than in the food is before them all the time. If they are worked feed a little more grain or hay. A few rutabagas or carrots may be fed to the horses with great advantage, say half a bushel per day to each team. As spring approaches feed more liberally.—Barrel.

APPLES FOR MEDICINE.—Apples, in addition to being a delicious fruit, make a pleasant medicine. A raw, mellow apple is digested in an hour and a half, while boiled cabbage requires five hours. The most healthy desert that can be placed on the table is a baked apple. If eaten frequently at breakfast, with coarse bread and butter, without meat or fish or any kind, it has an admirable effect on the general system, often removing constipation, correcting acidities and cooling off febrile conditions more effectually than the most approved medicines. If families could be induced to substitute apples, ripe and sound, for pies, cakes and sweets, with which their children are frequently stuffed, there would be a diminution in total sum of doctor's bills in a single year, sufficient to lay in a stock of this delicious fruit for the whole season's use.