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Agriculture.

For the "Agriculturist."

VICTORIA COUNTY NOTES.

The heat of the last few weeks has dimmed the prospects for heavy crops. The grain crop will be good average...

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...

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...

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 adapted 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 this business than Ontario. It is a better grazing country, better watered and the fall feed is longer. These gentlemen are better 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 favor of us, 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 will not be able to compete with the large, well bred animals of the other side. 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 market. The small, unthrifty cattle, of which so large a proportion are found on Canadian farms, are quite unfitted for export 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 \$5 per 100 lbs. Sheep ranged from \$8 per head down to \$3. Spring Lambs from \$1 down to \$1.25. Calves from \$14 down to \$2. Many thousands of these animals were sold in the Toronto market during the month, and the vast loss to the farmers from the inferior character of so large a proportion of the stock sold might be set 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.

AGRICULTURE THE TRUE BASIS OF A NATION'S WEALTH. TERMS: \$1.50 per year, in Advance.

VOL. 1. 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.

BREEDING SHORTHORNS FOR BEEF.

Let us assume, then, that our ideal bull, now under scrutiny, has shown a full development of all the positive points—the eye well open, clear and placid; the action alert and spirited; the touch elastic and soft; and above all, the wide and deep chest, which gives plenty of play for large vital organs—all these together indicate the possession of a sound and vigorous constitution. Then the wide shoulders, flat crops, round body, broad loins and hips, and the hind quarters long level deep, and square, all together vouch for the presence of abundant beef, the excellence of which is verified by the mellowness it reveals to the touch. The bones of the bull under inspection should, throughout his entire frame, be as small and compact as possible in proportion to the weight of muscle they bear. The finer the bone of any beef animal the better, if it only fills the destined purpose. Moreover the bone of any race of cattle improved by breeding is much stronger in proportion to its size than that of the scrub. The latter is coarse and porous, the former solid and compact. The fineness of bone manifests itself in several particulars which our short-horn bull ought to display, modified of course by the effects of his masculinity. Let us see. Is his leg, which is well muscled and tapering above the knee and hock-joints, small and delicate below them? Is the tail, which turns at right angles at the extremity of a well-extended ramp, fine and slender? Is the head small, broad between the eyes, and tapering toward the muzzle? Is the entire body smooth round, and flowing in outline? If our bull passes muster in all these important particulars, he is unquestionably a fine-boned animal.—National Live Stock Journal.

The Rural New Yorker has the following to say of the grange, and farmers in public life:

The grange has done an excellent work in bringing together the people of rural neighborhoods. The social features of the Order are without doubt those of greatest importance. It has, doubtless, added dignity to the farmers' calling; but it has done this chiefly by arousing his social nature stimulating his intellect, and thus making the farmer more deserving of public approbation. It is idle to say that the people ought to seek from their farm, their representatives in high official station. When farmers prepare themselves for public duties, the fact is not likely to be long overlooked. They can only do this by performing all the duties of their present position—not only on the farm, but in society, in the church and in the political assembly. Thus they will be men among men, and if they are qualified for public station, the fact will not long be overlooked. That high offices are so poorly filled is chiefly because so few really fit men present themselves. It does not disprove this, that many able men keep in the background; that is just what such men should do.

TOMATOES.—French method.—Tomatoes are raised by the French in this manner:—As soon as a cluster of flowers is visible they top the stem down to the clusters, which soon push strongly and produce another cluster of flowers each. When these are visible the branch to which they belong is also topped down to their level, and this is done five times successively. By this means the plants become stout dwarf bushes not above eighteen inches high. In order to prevent their falling over sticks of string are stretched horizontally along the rows so as to keep them erect. In addition to this, all laterals whatever are nipped off. In this way the ripe crop is directed into the fruit, which acquire a beauty, size, and excellence unattainable by other means.

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 it 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 of 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 and 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.

A WORD ON PRUNING.—A correspondent of the Milk Letting 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 frequently 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 habit. In a sucking pig but a fortnight old, that has never left the sty he 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 had plaster as a fertilizer. The manner in which he used it may be somewhat forgotten. 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 which you can 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. 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 curvy favors with the rich or great. If you must do something of the kind, just curvy 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 composition 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 "wisely 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 at any more than is required for their good, but if it is only at long intervals they often neglect their duty. For salting young calves the best arrangement I know of is to place rock salt in suitable boxes, or half barrels, where they can have easy access to it, and under a cover, so as to protect it from wasting by rain. This avoids both excess 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 stirring 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 same cultivation the soil is kept moist rather 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 tilted 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 are 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 crop 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, etc. 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 talls 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 they are afflicted by foot-rot. In the end of the year we have seen the expedient trial of putting on for

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 for season's grazing at an increase of 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 oxidized, 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 not mere chemical process; it 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 spaw—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 quart 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 say 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.—Rural.

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 sweetmeats, 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.