

Preparing a Sod Field for Barley.

EDITOR CANADA FARMER:—Could you or any of your readers inform me as to the best mode of preparing a sod field for barley? Soil, a clay loam.

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If it had been earlier in the year, the proper way to have gone about preparing a sod field for barley would have been to have lightly ploughed it, reversing the sod, and then give it a deep ploughing. But so late in the year as this, the sod will not rot, if reversed. So we should say, plough deep and leave the soil rough through the winter. In spring, harrow, cultivate and sow your barley. Can any one tell a better way?

Securing the Buckwheat Crop.

Buckwheat should be cut when the grain is still in the dough state, and that means when some of the grains are not even so far advanced as that. If allowed to get ripe, it will shed and not only will the grain be lost, but the ground will be reseeded with a plant that is hard to get out. When cut, set it up at once in loose sheaves tied at the top so as to shed the rain. Moulding is thus prevented as the air can get through, and yet the grain will not be dried so fast but that it can mature and ripen properly. Do not let it lie on the ground or in swaths, as the dust and dirt will get on it, and the quality of the flour will be injured.

With regard to the threshing of buckwheat, a correspondent of the *Rural World* says that it must be done when the straw, and more especially the kernel, is as dry as possible, otherwise the kernels adhere quite tenaciously to the parent stem; but when perfectly dry, it drops at the slightest touch. The methods of threshing are either with the flail or threshing machine, but never by tramping with horses (as has been erroneously stated), as the kernel is too brittle to bear even a man's weight, unless in a thick body; and the weight of a horse must necessarily crush to powder much of it. No place is as good as a clean barn floor, although many use a good green sward; but in the latter case much of necessity is lost in the grass.

If to be threshed with a flail, set the gavels on end close enough to touch; commence thrashing on the top, and do not allow the gavel to fall over on its side, as a delay is thus occasioned by the kernels becoming protected from the flail by the thick butts of the stalks. If the straw is perfectly dry, but little turning is necessary.

The nicest way, however, if there is much to thresh, is to use a threshing machine. Remove most of the teeth from the concave, and take a slow motion; four to six horses are enough to run the thresher. My word for it, you will be delighted both with the speed and manner in which the work will be done.

One way as to hauling the gavels. I have found the best way is to put your hay rack on a sled or low truck, then with a three (or more) tined hay or manure fork, lift the gavel from the ground, placing it in the same upright position on the rack; fill the interstices with a second tier of gavels, and when you arrive at the threshing place, the gavels may be removed without tangling and placed on the floor or feeder. If the gavels become tangled, much loss of seed by shelling is inevitable.

Applying Too Much Lime to the Soil.

A writer in the *Mark Lane Express* states that an instance occurred in the case of three farmers from Suffolk, who took a tract of land of about 600 acres near Sligo, where lime was said to be indispensable in the soil. In a letter from one of them, after they had been there a few years, he stated that they were about to abandon their holdings, as the land would not grow wheat for want of lime, of which there was none to be obtained in the neighborhood, while the soil contained not a particle of that material, and there was none within reasonable reach of their farms. In such cases as this, the application of lime required to be renewed frequently, because either lime or marl will sink in almost any soil, especially light, so that the process of renewing the application of these materials is very expensive.

There is, however, a drawback to this favorable account of the effects of the application of lime to the soil—namely, that it is possible to over-lime. The soil will produce larger crops for a certain number of years, after which the return falls away until it becomes less than before the

lime was applied, so that it appears to have exhausted instead of enriching the soil. In accounting for this adverse effect of what is admitted on all hands to be a benefit, chemists state that lime acts on all the organic parts of the soil, by which it is rendered more serviceable to the growth of plants. On the other hand, the proportion of organic matter in the soil gradually diminishes under the prolonged action of the lime, and thus the soil becomes less rich in those substances of organic origin on which its fertility to a certain extent depends. The same effect is produced on the mineral matter in the soil, when there is abstracted from it a more abundant supply in proportion with its immediate effect *per se*.

Unless, therefore, an adequate proportion of those matters are supplied in other manures, the soil will necessarily become exhausted to such an extent as to counteract or neutralize the action of the lime. The way, therefore, to prevent this effect is to manure largely with farm-yard manure and saline substances, and thus return or repay to the soil whatever may have been extracted too speedily or too copiously from it.

Burying Roots.

There is one way of burying roots so that frost will not get at them, and that is, the placing of layers of straw between the layers of earth with which they are covered. It is necessary to be more careful with potatoes than with other roots, as they will not stand the slightest frost without being injured. Potatoes should be laid in compact heaps and covered carefully with straw. Over the straw put about eight inches of earth, and over the earth a good thick layer of straw. Over all, put six or eight inches of earth. Frost will go through almost any thickness of earth alone, but it will not penetrate far below the non-conducting straw. The earth should not be packed any harder than will suffice to keep it in place. By using straw and earth combined, time is saved in uncovering when the roots are wanted to be got at. If the snow is blown from the heaps during the winter, and the cold is very intense, it will be well to cover them with a coating of coarse manure.

SEEDS OF WEEDS.—It has been estimated that one plant of the red poppy bears 50,000 seeds; one sow-thistle, 19,000; one corn-cockle, 2,500, the charlock, 4,000, a ground-sell, 6,500, and the black mustard, 1,200. Old gardening books recommend any person who entered a garden to pull up whatever weed he saw near him. If he is a benefactor of his race, who causes two blades of grass to grow where but one formerly flourished, the man who pulls up only one weed has at least equal claims on our respect. He sets free a large space of land for useful cultivation.

TIGHT BARN.—It has been the custom to side up barns with green boards so that in shrinking they will leave wide cracks for the access of air to hay mows. An important principle has been here overlooked. Fermentation, like combustion, requires oxygen to carry it on. Many farmers have learned that manure will not ferment when well trodden so as to exclude the air, and that it seldom ferments when thrown where the cattle can tread upon it. The class above all others interested in grass and hay is dairymen. They have ascertained by experiments directed by science that hay will keep better in clap-boarded or battened barns than in the open stack. That the heating will be so moderate as to only dry out the hay without moulding. If it is a fact that hay may thus be safely put into a large mow in a tight barn less cured than ordinary usage requires, it is a very important fact for farmers, as it will enable them to gather their hay crop quite independent of the vicissitudes of the weather, for even when hay is in the cock, the exterior surface is injured by rain or dew.—*Rural Home*.

REDUCING BONES WITHOUT SULPHURIC ACID.—At the spring meeting of the Georgia State Agricultural Society, an essay was read by Professor White, of the State Agricultural College, on the subject of bone manures. In the course of the essay he said that it has been generally understood that bone could be reduced to a useful agricultural condition by the use of either ashes or barnyard manure, and that in this way the farmer might manufacture his own soluble phosphate. Knowing that Dr. Robert Batty, formerly of Rome, now of Atlanta, who is a thorough chemist, had experimented very fully with the different ways of reducing bones without sulphuric acid, Prof. White asked his opinion in regard to them. His reply, in substance, was that he had been entirely successful in reducing bones to powder by both ashes and stable manure, but that when reduced they were comparatively valueless, as the phosphoric acid was still insoluble, and that, therefore, he had reluctantly abandoned the experiment. The subject is important, but is still unsettled. That nature has some way of converting bones into plant-food is evident. How is it that a grape-vine will eat up a whole bone in a short time? What is the acid acting so powerfully in this case?

DESTROYING CANADA THISTLES.—An old Canadian farmer stated to a *Country Gentleman* correspondent after many years' experience on different farms, that the best mode of destroying these agricultural pests is to cut them on the three longest days of the year. He declared this to be a sure cure, and he would have published it himself had he been able to write.

REMEDY FOR THE TURNIP FLY.—Mr. E. Umbers, of Wappenbury, Leamington, communicates to the *Mark Lane Express*, the following remedy or preventive, declaring that it has been regularly used by himself and friends for the last thirty years, and that he has never known an instance of failure during that period, when the seed was properly prepared. Receipt:—To 1 gallon of chamber-lyo add 2 ounces of tincture of assafetida. Soak the seed in this mixture twenty-four hours, and dry it in the shade. It is very necessary to attend strictly to the drying—the object being for the seed to absorb the liquor, which takes a considerable time, if done properly in the shade; the sun's rays or drying winds prove fatal to the receipt. Care must also be taken to have the chamber-lyo free from slops. The gallon mentioned in this receipt will prepare 16 pounds of seed.

VALUE OF THE BARLEY CROP.—Fears are often expressed that barley may not be a paying crop this year, because the price was high last season. This may be so if the crop is grown solely for sale to the brewers, who require a fine sample, good color, etc., and the demand is to a great extent capricious. But why depend on the market altogether? Barley can be turned into pork as well as corn. It is excellent feed for horses, and poultry, and barley meal will make beef. Why not feed the crop if it cannot be profitably sold, or at least a part of it. With two strings to the bow, the breaking of one may be risked, and so we would not hesitate to grow barley, although the brewers may not want it. As it requires good farming to grow this crop, and clean culture, it is not likely that the market can long be depressed below a paying point. As a feeding material barley stands very high, ranking very nearly as high as corn. When ground into meal, and fed with cooked potatoes, it makes sweet and excellent pork, and as a grain for horses it surpasses oats, and is more healthful as a steady feed than corn.—*American Agriculturist*.

LIME AS A DRESSING FOR LAND.—Lime acts in several capacities applied to the land. It binds light soils, and renders lighter heavy ones. This from the fact that it is intermediate between the two; that is, it has greater cohesive power than sandy soils, and less than clay. It is valuable also for the mineral elements it possesses, and also for its power of entering into combination with elements already in the soil. Like gypsum, it should be tried on soils, to discover its effects, before using largely; for upon some soils it is more inert than upon others. Marly soils, containing carbonate of lime, in drying easily fall into powder, from the fact that the lime in an extremely-divided state, and, in shrinking, perfectly divides the clayey particles with which it is in contact. On cold, heavy soils, this effect is clearly apparent. So, mixed with sandy soils, it gives considerable tenacity to the whole. Carbonate of lime—limestone burned and air-slacked—is soluble to a considerable degree in the water of the soil, for this water holds considerable carbonic acid. Thus, besides its mechanical effects, it also exercises other forces, and, through its solubility, becomes intimately mixed with the soil. We advise you to try liming to the extent of say 30 bushels per acre, and note the effect. If favorable, the quantity may be increased to 200 bushels per acre, as experience may dictate.—*Chicago Tribune*.

EXPERIENCE WITH SWAMP MUCK.—In the fall of 1869 I dug from what had been the bed of a creek, supplied with water from the highlands above, but for the last few years the stream had been dry, except occasionally when there was an unusual amount of surface water, about 150 cart loads of muck, which ranged from two to five feet in depth. This muck was thrown up as dug, in heaps of about six loads each. In September, 1870, I drew this muck and applied it to grass ground, putting on 25 loads per acre, spreading broadcast. The fall was very dry, but where I applied this top-dressing the grass by the middle of October was as green as in June, forming a good aftermath for the coming winter. The soil was a gravelly loam. I have used this same dressing on moister soils without much effect. I have also used muck which had been spread in the barn-yard, and mixed with the dropping during the summer with about the same results as that from the heaps. It will be borne in mind that the muck in the heaps had become well pulverized by the action of heat and frost during the previous season. From my experience in this matter I came to these conclusions. First, that this muck was equal as a top-dressing on dry gravelly loam to about 75 per cent. of common barnyard manure; second, that it did not pay to spread it in the yard, except as an absorbent of the liquids which would otherwise go to waste. This muck was taken from what was formerly a black ash swamp, which is much superior to that taken from hemlock or spruce swamps. I have used muck several times since with similar results.—*Cor. Boston Cultivator*.