

year, barley sown on the clay has in many places rotted in the ground, the result of a continuance of cold and wet weather.

The wireworm frequently affects barley very seriously. But if, when the leaf first shows a yellowish hue, it be top-dressed with unleached ashes and thoroughly rolled, that pest will be safely removed. Select plump and clean seed; and, as in every other kind of grain—get your seed off a different variety of soil from your own.

AN OLD COUNTRY MAN.

Paris, 8th June, 1867.

### Plaster of Paris as a Fertilizer.

We have received the following communication, from John Moffat, of Blenheim:—"Would you inform me, through the CANADA FARMER, what you think of Paris Plaster, and what effect it has upon the soil? for, in the Township of Blenheim, especially in the north part of it, there has yet been comparatively little or no plaster sown; and if the old saying is true, that it makes rich fathers but poor sons, then I for one do not wish to commence."

The plaster obtained at Paris, and other places on the Grand River, is of very good quality. How it would act as a manure on the soils of Blenheim, we could only hazard a probable opinion, apart from observation and experience. Plaster is well known among practical farmers in many parts of Canada, and of the United States, to be an exceedingly cheap and efficient fertilizer. In some localities, however, its action is not so manifest, and in others it is nil. The latter, however, must be regarded as exceptional; for experience shows that over large areas of this continent the application of plaster is attended with more or less benefit. Plaster being composed of lime and sulphuric acid (sulphate of lime), substances that enter into the growth of farm crops and animals, any soil naturally deficient in this important substance, must of course have it added artificially, to render such soil in any high degree productive. The rationale of the action of lime, in agriculture, whether carbonate or sulphate, is, in some respects, yet involved in obscurity; to remove which, much patient experiment and observation has to be made, both by practice and science. We should not wait for full scientific explanations, which in so progressive an art as agriculture can seldom be obtained, before we apply substances which, *prima facie*, appear adapted to manuring purposes; and we would therefore advise our correspondent, and other readers in Blenheim, to give Plaster a fair trial. In two or three years, at most, they will be able to form a satisfactory opinion for their future guidance, by carefully noticing the character of each season, the condition of the land and its previous treatment, with such other particulars as experience in farming will suggest. With these precautions, we shall be prepared to hear of favorable results.

The idea that plaster has a strong and peculiar tendency to exhaust the land to which it is applied, arises from an imperfect view of the subject. In soils naturally deficient in sulphate of lime, the adding of that material will of course impart greater vigor to the growing crop, which, being heavier, a larger portion of the other ingredients of plant food, both organic and inorganic, will be extracted from the soil, which thus becomes just so much minus of them. In this way, lime, whether in the form of sulphate or carbonate, may be said to exhaust the soil; for it should always be kept in mind that the larger the produce, the more the soil becomes diminished in the amount of the different substances of plant food which it contains. If a hundred-weight of plaster per acre enable the farmer to grow many hundred pounds more of clover, peas, Indian corn, potatoes, &c., as is not uncommon, it is obvious that by a frequent repeating of this course, the soil must, sooner or later, cease to respond with the same liberal returns. The fault or evil is not in the plaster, which does faithfully its duty, but in the ignorance or niggardliness of the cultivator, who refuses to do his part, by restoring, in the shape of manure, some portion, at least, of those substances which the plaster has been the instrument of enabling the heavy crops to extract from the soil. We may also state that lime not only supplies, directly, a necessary portion of the food of all cultivated crops, but that it acts in many other ways beneficially, some of which science and experiment have not yet fully explained,—mechanically as regards the soil, and chemically too, as regards both soil and plant.

### How to Grow Clover Seed.

F. P. M. wishes to be informed when it is the right time to cut clover to secure a good crop of seed, and the best method of saving it. I will tell my way.

I cut my first crop as soon as it is in full bloom, as it makes better hay than if left longer, and also gives the seed crop a chance to commence growing sooner; for, mind you, "a good crop of seed" often depends upon how early the first crop is taken off.

Let the crop stand till the heads are all, or nearly all, brown, and the stocks have commenced to dry.

I am aware that some of the seed may be beaten out by storms and lost, if left to get dead ripe, but the loss is but small in comparison to the amount of seed that will go through the machine unthreshed, if cut before it is nearly all ripe.

When ripe, I take my "Kirby" mower, put on the platform, and with a boy to drive, and knives sharp, we start. As the machine cuts it, I rake it back on the platform till there is a good fork full, and then rake it off the same as a bundle of wheat, and so on round the field. The next time around, rake off the bunches at the same places as the first time, and so on till the field is done.

If it is likely to rain, draw it immediately, as the seed will take no hurt if the straw is ripe when cut, and there might be some loss if the seed gets wet, as the bunches might have to be turned to dry them, which would shell off some of the seed.

In drawing, drive close to the rows of bunches, pitching on a bunch at a time.

By following this plan, I am able to save my clover seed with but very little loss; but if mown, and then raked and bunched, or the heads picked with a clover "picker," there is a great waste; for, in the former case, a great deal of seed is beaten off, and, in the latter, a great many heads are left unpicked. But, in cutting with a machine, we can graduate the height of the cut according to the height of the clover, thereby saving nearly every head.

The time to thresh is in cold frosty weather, in the winter, as the straw is not so tough, and it is a much easier matter for the machine to save all the seed than it would if threshed in damp weather.

The clover machines in this vicinity thresh the straw, as a wheat machine does wheat straw, and deliver the clean seed in a bag. Sometimes it has to be run through a fanning mill to fit it for market.

The remarks at the head of this article refer to the small kinds of clover. If the mammoth clover is raised, of course no crop can be taken off for hay, but the crop can be pastured off till midsummer, and then allowed to grow up to seed. In all other respects, it is served the same as the smaller clover.

It must be borne in mind that taking a crop of clover seed draws heavily from the soil, and we must act accordingly by sowing plaster in the spring, and, if possible, top-dressing the land the fall previous with good line manure "spread evenly."

Following these directions, F. P. M. ought to raise "a good crop of seed."—*Correspondence of Country Gentleman.*

### A Good Hay-Rigging.

A CORRESPONDENT of the *Country Gentleman* gives the following directions for constructing a serviceable hay-rigging:—

"Allow me to describe the best hay-rigging I ever saw, and on which I have hauled 5,000 pounds of hay. It was constructed as follows, and made of the best white oak:

Two pieces four by four, and sixteen feet long, are placed on the axle and bolster, in the position that the sills of a wagon bed would occupy. Crossing these, and secured to them by suitable bolts, are four pieces four by four, or four deep and three thick, and eight feet long, one at each end; the others between the wheels, and placed so as to clear them. Near the ends of these cross-pieces are mortices, into which eight posts are tenoned, which are three by three square, and of a proper height to make the frame clear the back wheels.

On the top of these posts, and secured by mortices and tenons, is a frame same length as the sills, made of pieces three by three square, the ends secured by suitable irons, to prevent the standards from breaking the tenons.

Four standards, about eight feet long, one in each corner, and two shorter over, one on each side, secured at their bottom ends by suitable irons, fastened to the sills, and resting against the rail, are used. Curved pieces of wood or iron attached to the sill and frame, keep the hay from coming in contact with the wheels, and a few boards answer for a bottom. This rigging is easily loaded and unloaded."

### Best Time to Cut Grass.

In making hay it is important to consider that grasses and other hay-herbage consist for the most part of sub-perennial species, many of which produce their seeds and then die out, but not being allowed to seed, their root-stalks will be perennial. It is, then, of great consequence that grass never be allowed to ripen, or indeed nearly ripen, seed, before being cut for hay, because by so doing the aftermath is much injured on the one hand, while the resulting hay crop will be more woody and less nutritious on the other; and besides, the seeds become wasted, and if carried to the arable leave behind a colony of what, there, are weeds.

We know it is thought that over-ripe grass adds to the bulk of the rick, but when we consider that as the seeds ripen the lower leaves wither and decay, it is certain the increase is, if not altogether doubtful, yet much less than is generally supposed.

Our own experience confirms us in the view that hay made when the rye-grasses are in full flower is the best in quality, and gives quite as great a yield as that cut several days later. In determining this point, we have adopted the following guide:—When the grass torn away at a node gives full evidence of the formation of saccharine matter in the young white base of the torn-off portion it is fit to cut. A short time before this it will be rather bitter than otherwise, and a short time afterwards it will consist of unflavored woody fibre. Should there be any doubt on this point, we would urge our readers to repeat an experiment which we have repeatedly performed, viz., that of testing the specific gravity of an infusion of a given weight of hay; this can be done by the saccharometer in the same manner as a brewer tests the amount of "extract" from malt, and whether we are testing single grasses or their compounds in the rick we shall find that the higher the specific gravity of the sample the greater the amount of feeding matter—"proof"—and the more valuable the produce.

Of course, however timely cut, if there be much wet it will injure the sample, which will lose its extractive matter; but in timely cut, well-made hay the extractive will be in proportion to its quality.—*Gardener's Chronicle.*

SALT AS A MANURE FOR MANGOLDS.—A paper has recently been published in the *Journal of the Royal Society of England* by Professor Voelcker, detailing the result of certain experiments to determine the effect of potash salt and common salt as a manure for mangolds. The conclusion drawn from these experiments is that common salt especially is a valuable fertilizer for this crop, increasing considerably the weight of the mangolds in every case in which it was applied. Professor Voelcker found that "three cwts. of salt per acre gave an increase of five tons eight lbs. of clean mangolds; four cwts., an increase of five tons three cwts. fifty-two lbs.; and eight cwts. of salt, an increase of eight tons fourteen cwts. twenty lbs. per acre." The practice of some farmers in England has been to apply this manure previous to sowing the seed; but Dr. Voelcker did not apply it till after the plants had been hoed and singled, that is, on the 1st of July. It was applied, of course, as a top-dressing. We would recommend an experimental trial to Canadian farmers.

THINNING TURNIPS.—The most common mistakes made in the thinning of the crop are, first, in not commencing to single till the plants have attained a considerable size, and second, in not singling them so regularly that the plants left are at equal distances. When the plants have leaves which measure 1 inch across singling should commence, the person overseeing the workers being strict, so that the plants are singled at equal distances, and that only one is left. There have been various experiments in the cultivation of the Swede to ascertain the most suitable distance between the plants. It has been repeatedly shown that when the conditions were favorable, Swedes singled at the distance of fourteen inches produced a heavier weight of bulbs than where the plants were ten, or where they were twelve inches apart; the greatest distance yielding the heaviest crops. But as all the conditions cannot be usually secured, it is advisable to regulate the distance between the plants so as to suit the several conditions which influence the growth of the turnips. Singling by hand is always advisable where the plants are weak, sickly, and irregular, either owing to the surface of the drills being rough, the ravages of the turnip-fly, or from other causes. The plants of the Swedish variety are more liable to be injured by singling with the hoe than either yellows or whites; and some farmers prefer to single the Swedes by hand. The plants thus sustain no check from the operation of singling, and grow more vigorously than where the plants have been disturbed by the hoe.—*North British Agriculturist.*