

farm, the land devoted to the oat-crop was in the usual state : miserably poor, raw, rough, and altogether disgraceful

My neighbour tells me that the true course of cultivation here should be : three years in grain and three years in *pacage* ! Now, *pacage*, being interpreted, means : land allowed to grow weeds, or anything else it pleases ; and this within a mile of any amount of dung, at ten cents a load, to say nothing of all sorts of refuse—gas-lime, ammoniacal liquor, bituminous coal-ashes, &c.—to be had gratis.

Potatoes, here, seem to be set about seven inches apart in the rows. Too close, I am sure, for it makes hoeing between the sets impossible, and I contend that all potatoes should be so treated as soon as possible after the rows of plants can be seen : the drills should be harrowed down first before the tops appear—with the chain-harrows, if the farmer has them, if not, with a short-toothed common harrow—then the horse-hoe between the drills, to be followed by the hand-hoe between the plants. One hand hoeing should be enough, but the horse-hoe should be kept at work until the earthing up is given.

Don't earth up much. What says Mr. Peter Mackenzie, of Stirling, N. B. ? "On well-drained land three modes of cultivating potatoes were tried, the dung being what is commonly called well-made farm-yard manure. The first was similar to the plan usually adopted, namely, earthing up the crop until the interval between the rows was two or three inches deeper than the roots and dung." This I find to be the common practice here. "The second plan differed only from the first in being less earthed, or what is called by some half-setting up. The third had no earth drawn to the stems of the plants, and the earth was only hoed between the rows. The dunging of the crop and the distance between the rows were equal. When the potatoes were dug, the advantage of the second mode of culture over the first was fully more than one third part of the increase, and better in quality ; for the potatoes grown by the first plan would not bring the same price in market which the second did. The produce of the third plan was nearly equal in bulk with the second but rather inferior in quality, many of the potatoes having their sides greened by being exposed to the light. While growing, the second and third lots had a much more healthy appearance than the first ; and when dug, what remained of the dung that was used was well mixed with the soil ; while the dung of the first lot was dry and little decomposed, clinging in clusters to the roots of the potato plants when they were dug." I have strictly followed this teaching since I first saw it, in 1851, and now, 33 years afterwards, I do not repent. The plan of earthing up potatoes 6 or 7 inches high is bad, because the fibrous roots of the plant extend themselves to a great distance from the set, and by drawing the mould from between the rows to earth up the stems, a great number must be cut off, exposed to the sun, and whitened. The only real benefits to be derived from earthing up are, first, to keep the wind from breaking them down, and thus keeping the stems erect, secondly, to keep the tubers from being exposed to the influence of the weather. The wider the earthing-bank the better, but four inches is high enough. On heavy land, I do not object the use of raw, unfermented dung, barring weed-seeds of course : there is nothing better to bring tenacious soils to a proper state of friability than to apply manure or farmyard dung in as fresh a state as possible, because, while in a state of fermentation in the soil it keeps the pores open, and the soil in a state of activity. On the contrary, dung cannot be too rotten for light soils.

I fear that the heavy rain of the 23rd and 24th of May will prove to have been very injurious to the potato-crop on heavy land. No one likes to draw water-furrows (*rigoles*) across a piece of newly planted potatoes, but on undrained land it is often a proper precaution to take, and this season,

even on Sorel sand, it would have saved something, for in one or two places on the college farm the water stood in the hollows longer than I cared to see it. (1) Another year, a few dollars spent in draining will cure the few *bas-fonds*, and *rigoles* will be unnecessary.

The plant of Belgian carrots here is the most perfect I ever saw. Sown on the 13th of May (not steeped), they were up on the 23rd ; horse-hoed on June 5th ; edge-hoed by two women—the best field-hands I have seen in Canada : they got through 1½ acres in 1½ days, leaving the rows perfectly clean, where 5 weeks before there had been a worn out, foul oat-stubble—horse-hoed again on the 11th ; and now, not a weed to be seen, and only the singling to be done. This will be done with a three inch hoe, leaving bunches to be thinned by hand.

The mangels (steeped) were up in a week from sowing ; they are now fit for the horse-hoe, and the growth of the plant is very rapid. Parsnips and red-carrots are long in coming to the hoe ; but a few days after the fine rain of the 12th will quickly fit them. The oats went in well. Some were sown with the usual quantity of seed to the acre—2½ bushels—the rest with my quantity—4 bushels—We shall see after harvest which gives the better yield.

Lucerne and saintfoin are, both, a good plant. They were sown on the dry light land near the St. Lawrence, after potatoes and corn. Land poor, but suited to the two plants. I hope a heavy top-dressing of dung in the autumn will prove both food and protection.

Mons. Ville, on being asked for advice as to the propriety of purchasing cattle, on entering on a farm, replied : "first grow food for stock, and when that is provided, buy the cattle to consume it." I quite agree with Mons. Ville ; and as, with the exception of newly sown crops, there is nothing growing on this place but couch-grass, which seems to flourish with a certain diabolical vigour, I shall lay no stock until the Hungarian grass is fit to mow, which, as it is just peeping through the ground, will probably be about the middle of August. There are 7 acres of what my predecessor on the farm is pleased to call meadow : it may cut half a ton per acre, but I doubt it.

The land here clearly wants lime and potash. The former can be given in the form of plaster, the latter is a difficulty. Hardwood ashes are worth 40 cents a bushel, and hard to come by. A few bushels of softwood ashes might be collected in the country, and a double dose of them would be beneficial.

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For once in a way, I am in luck. The season is early, the weather is propitious, and the land in good order. But, good heavens, the former cultivators of the College farm must have had a lively idea of their business. I fancy it would be difficult to find a more thoroughly worn out piece of land. Grain, grain, grain, seems to have been the course of cropping, followed by what is called a *pacage*, i. e. the stubble of the last crop of oats left to itself to grow weeds and rubbish—couch-grass principally—on which the unhappy cattle are to feed, and from which they are expected to extract the elements of milk !

The soil is of the lightest, but not incapable of improvement. Sheep will change the whole face of it in a few years. Unfortunately, however, the place is full of dogs. Only last night, an irruption was made into the yard of one of my neighbours, and eight valuable ewes, in lamb, fell a sacrifice to a couple

(1) About one-tenth of an acre was seriously injured by this neglect of water-furrowing. My fault, entirely !