

out soils there will be found a sufficient quantity of potash to answer the demands of our crop. I firmly believe that potash is the last of the valuable constituents of our soils to be exhausted by cropping. A good dressing of farmyard dung contain about 250 lbs. of pure anhydrous potash!

Superphosphate of lime, whether made from bones or from our own *apatite*, is a valuable addition to the other fertilising materials I have mentioned. Speaking of the quantity to be used, I should rather like to be allowed to reckon it by the contents in phosphoric acid than by the owt.; for, the strength varies too much to admit of our saying: I put so many owt. of superphosphate to the acre. For potatoes, I should apply about 40 lbs. of phosphoric acid to the imperial acre, which would be equal to about 500 lbs. of the Capelton "plain superphosphate." This, added to 200 lbs. of nitrate of soda, and scattered over the dung after it is spread in the drills, would probably pay well for itself. If you aim at a very full crop, and can stand the outlay, I strongly recommend an additional 200 lbs. of nitrate of soda, to be sown over the crop just after the haulm is shaking hands across the rows.

The preparation of the land for potatoes—and this will hold good of the root-crop in general—should begin immediately after harvest. The field chosen should be one that has borne a grain crop—the last of the rotation,—and the stubble should be broken up as soon as possible, either with the plough, which is the worst, or the grubber, which is the best implement for the purpose. The plough is the worst, because it cuts the couch-grass, our worst enemy, into small lengths and buries it; the grubber is the best, because it drags the couch-grass out of the land and leaves it on the surface. Will no spirited man import one of *Coleman's drag harrows* to serve as a model? It is by far the best grubber extant, except the *Ducie cultivator*, but the latter requires 4 heavy horses to work it.

After passing the grubber both ways, along and across the piece, harrow and harrow again, rake the weeds together, get them off the land, and plough it in good form for the winter. A furrow 8 x 11 inches will do on most soils. I need not insist on the necessity of careful water-furrowing.

When spring arrives, cross-ploughing, grubbing, and harrowing will get the land into a fit state for drilling up. For the ordinary kinds of potatoes planted in this province, such as the Early rose, Beauty of Hebron, &c., 24 inches between the drills will be ample space. (1) Then lay out the dung in heaps taking three drills at a time, for spreading is more easily done this way than if five drills are taken. Scatter, next, the artificials; then plant the sets a foot apart, at least two eyes to each, which will take about 16 bushels to the acre, and cover in at once.

*Cultivation.*—Just before the young shoots are making their appearance through the drill-tops, harrow along the drills, and repeat the operation until the implement is likely to injure the plants. Then, set the horse-hoe to work and keep it going. Hand-hoeing along the row on each side, with a stroke between each two plants is not expensive: a good workman will easily get over an acre a day.

Earth-up before the haulm is too long: nothing looks worse than trampled haulm in a potato-field. The earthing should be very flat at top and not piled up high as we usually see here. Jensen's plan of high-earthing as a preventive of the disease does not seem to have made many converts.

The Aspinwall potato-planter does its work perfectly.

Many useful attachments to the tail of the double-mould-board plough assist greatly in getting up the crop.

Carry the haulm off the piece before beginning to plough out the tubers.

(1) *Champtons* take much wider spaces.

Harrow the land after the potatoes are picked up into the carts, but don't leave the field in that state for the winter, as some wiseacre advised in a late number of one of the U. S. agricultural papers, plough it into good shape in October, and leave it well water-furrowed for the spring-crop.

Change the seed often: at least, every three years. For sets, I prefer moderate-sized whole potatoes, about the size of a large egg. Select these at harvest time, and let them green by exposure, taking care not to allow them to get touched by the frost.

Paris-green the last hatch of beetles as carefully as the first.

The Bouillie-bordelaise—lime and copper—does not seem to have answered so well as it was expected to do. Early planting is the great opponent of the disease.

Never plant potatoes in damp places. Such a sight as Mr. Daignault's field at Laachine in 1890 I never saw: the horses splashing up the water as they were ploughing out the tubers. And the man had been a farmer all his life! The yield was 40 bushels to the acre, of which nine-tenths were rotten!

Grain, sown down with grass-seeds, should follow the potato-crop, unless the land may be wanted for silo-corn or sugar-beets.

Remember, that if you sell your potatoes off the farm you are in honour bound to repay the land for the loan. Other fallow-crops are (or ought to be) consumed on the spot, but potatoes are, in nine cases out of ten, exported, and they are, in consequence, properly called an exhaustive crop.

If every set of potatoes planted yielded a pound of tubers, there would be, at the distance above recommended, between 300 and 400 bushels to the imperial acre! In strictness, 21,800 lbs., which is equal to about 390 English bushels. And yet our province hardly produces 100 bushels to the acre!

I am glad to see, by the bye, that my old friend, Mr. Wm. Hale, of Sherbrooke, has won the prize for the best acre of potatoes grown in the Dominion of Canada. A letter from Mr. Hale to the *Weekly Star* on the subject is unfortunately crowded out this month, but it shall appear in the June number of the Journal.

*Mangels.*—The mangel-crop should be put in as soon as possible after the land gets dry enough to work kindly. No fear of its going to seed here. Orange-globe, though better in quality, does not produce the same amount of digestible nutrients to the acre as the long red. Cultivation the same as for the potato up to the time of sowing. Roll after the drills are split over the dung. Sow about 5 lbs. of seed to the acre, having previously soaked and sprouted it. A few turnip-seeds among the mangel-seed will show the rows in 6 or 7 days, and enable you to start the horse-hoe to work. Single to from 10 to 12 inches in the row, pulling down the drills as much as possible. After the second hoeing, give a dressing of 200 lbs. of nitrate of soda to the acre. Any one who sows mangels without nitrogen, in some form, in addition to a liberal dose of farmyard dung, commits a great error. All other expenses are the same, except a little more labour in harvesting, which, I suppose, nobody will object to. No superphosphate. Salt is good for this plant.

*Carrots.*—White Belgians are the best for field culture. I never saw any good from using artificials for this crop. Cultivation for mangels, except that they should be singled at 5 or 6 inches apart. *Parsnips* require very thick seeding: 6 lbs. will not be too much to allow to the acre, and 4½ or 5 lbs. of carrot-seed. Singling same as carrots, or perhaps an inch farther apart. No good to try artificials for parsnips.