

be begun by the 15th October to save them from the first frosts; swedes and turnips from the 15th October to the 1st November. When we remember that on an arpent of land 20,000 mangels or turnips have to be handled, and often more, a method of working rapidly at this job will diminish its cost considerably, so it is indispensable to learn the most expeditious mode of procedure. We will, therefore, describe as briefly as possible the method of harvesting these crops in England and in some other European countries.

The labourer, with his right hand, takes the mangel by the neck, and when he has pulled it up, he seizes the bulb with his left and twists or wrings off the leaves with his right hand. No knife must be used, for fear of cutting the fleshy part of the neck; it would bleed, if cut, and the mangel would not keep. Swedes and turnips are also pulled by the neck, but with the left hand; then, a stroke of a knife cuts off the root, and a half-turn to the right brings the leaves forwards when the labourer separates them with one blow of his knife; and drops the swede or mangel at his feet so that a row of roots is formed as he goes along. (I prefer throwing them into small heaps of half a cartload each. A. R. J. F.)

Before pulling sugar-beets, long-red-carrots and parsnips, we must pass a common plough, without the mould-board, on each side of the rows, and sometimes, even, under them, and then proceed as above. The whole neck of the sugar-beet must be cut off, as not the vestige of a leaf must remain.

#### THE WHITE BELGIAN CARROT.

This sort of carrot demands from 4 lbs. to 5 lbs. of seed to the arpent, to be put in about an inch deep, and, like its congenus, on drills about 20 inches apart. (1)

Carrots are to be singled, when the leaves are about 3 inches high, with a hoe  $2\frac{1}{2}$  inches wide, and should be left, when finished, about 5 or 6 inches apart. Their cultivation is more difficult than that of the mangel, as the operations connected with it require most delicate care. The harvesting of this crop is too simple to need description, and need not begin before 1st November. (Rather late. A. R. J. F.)

In conclusion, I recommend those who are in the same predicament as M. Guévremont, and desire to embark in the cultivation of roots, to make their first attempt on a piece that has grown potatoes the previous year. M. Forland approves of this, and he knows by experience the advantage of it, but only on the express condition that the cultivation of the potato-crop was perfect. He says that in general this is not the case; the land is very often left full of weeds, of the worst kind, a fault that cannot possibly occur if the instructions for the cultivation of this crop that I have given above are strictly adhered to. In France, sugar-beets often follow the potato-crop, and I see no reason why, in certain cases, the same practice should not obtain here. The land, then, will receive all the attention requisite; all the operations of sowing, hand- and horse-hoeing, and working, will be executed with punctuality, even if they do not seem to be absolutely necessary; and, thus, dealing with a soil already pulverised, cleaned, and manured, the farmer cannot fail to succeed, and satisfied with the results obtained, and with the experience he has gained, he will pursue with ardour the exploitation of this, to him, new source of profit.

This essay, Mr. President, is very far from being complete: the value of roots as cattle-food, the importance of the sugar-beet as the raw material of the sugar-factory, the value of the pulp in the economy of the farm, the cost of production, the crop obtained, the profits realised, the employment of artificial manures, the advantage derived from ploughing in

green-crops, the improvement of the soil by means of hood-crops and their importance in the rotations pursued on our farms, are all questions closely allied to one another. The Messrs. Guévremont, who are present, can enlighten you more on these matters than I can pretend to do, for their explanations will be the more acceptable in that they have in their favour that authority which practical experience alone can give.

ADOLPHE BRUNEAU.

(From the French.)

#### RHUBARB "VICTORIA."

FOR SALE.—A large quantity of Rhubarb Plants, the largest and the finest kind known.

Address: PRACTICAL AGRICULTURAL SCHOOL,  
For Deaf Mutes, Mile-End (near Montreal) P. Q.

#### Price of Fertilisers.

The price of artificial manures is a matter that wants looking into. Is there any reason why they should cost ten dollars a ton more here than they cost in the States? Ammonia, in the form of sulphate, is worth in Montreal \$3.20 a ton containing 25 lbs. of ammonia = 12.8 a pound. Phosphoric acid is valued by the Directors of the agricultural experiment stations in the States at 6 cts. a pound for soluble and reverted—available—and the insoluble is hardly worth speaking about, as it is, comparatively speaking, useless, is present in all well made fertilisers in very trivial quantities, and can be bought for a couple of cents a pound in finely ground Carolina-rock: in our own apatite, I need hardly repeat, when undissolved, it is valueless for any crop. Potash—potassium oxide—is taken to be worth  $4\frac{1}{2}$  cents a pound.

In the following tables, I shall take the above valuations and compare them with the selling prices in Montreal, giving the average of the guaranteed analyses from the published list of an importer:

#### No. 1. Compound general fertilisers:

Phosphoric acid (soluble and precipitated).....	10 %	\$12.00
Ammonia.....	2 %	5.12
Potash.....	$1\frac{1}{2}$ %	1.06
		18.18
Balance.....		9.82

\$28.00 the selling price.

#### No. 2. Cereal compound fertiliser:

Phosphoric acid (soluble and available).....	10 %	\$12.00
Ammonia.....	3 %	7.68
Potash.....	2.12 %	1.80
		21.48
Balance.....		11.52

33.00 the selling price.

#### No. 3. Compound root fertiliser:

Phosphoric acid (soluble and available).....	9 %	\$10.80
Ammonia.....	4 %	10.24
Potash.....	$7\frac{1}{2}$ %	6.38
		27.42
Balance.....		9.58

37.00 the selling price.

(1) Horse-hoe would not work to advantage in such a narrow space.  
A. R. J. F.