

Cultivation.—During the early part of the season frequent cultivation is necessary to conserve moisture and keep down weeds. The stems of the mangel plant, however, are very brittle, and after they have attained a height of about 2 feet horse cultivation should cease. If weeds persist later, the hand hoe should be used.

Time to Harvest.—Harvesting should be commenced as soon as the most mature seed clusters have turned light brown. At this stage a great deal of the seed may look quite green, yet, on examination even the most green will be found quite hard in the centre and will ripen thoroughly in the stock.

Harvesting.—A good, sharp garden spade is a most satisfactory tool to use for cutting the seed crop. The extreme top of the root is cut off with a quick slanting blow, and the stalks are gathered by hand and tied in small sheaves. A man with a spade then butts the sheaves; that is, cuts the tops of the roots from the ends of the stalks. The sheaves are then stood up in rather open stocks. One man using the spade and two men binding and stooking should harvest one-half acre per day.

The crop should remain in stock until the seed is quite dry and hard. Mangel seed shatters easily and the sheaves should, therefore, be handled gently. In hauling from the field it is advisable to place several stocks on a large square sheet and tie the four corners together, thus making a large bag which may be hauled to the barn and emptied. Six sheets 12 feet square, filled to capacity, will make a fair load for an ordinary team.

Threshing and Cleaning.—Small quantities may be threshed with a flail, or the seed stripped from the stalks by hand.

Larger quantities can be threshed with an ordinary threshing machine. The machine should be fed slowly and the wind cut down as low as possible.

After threshing, the seed should be spread over a floor to a depth of not more than 8 inches until thoroughly dry. If bagged or piled deeply, when even the least bit damp, the seed heats quickly.

Mangel seed may be partially cleaned with a fanning mill, but bits of stem are often about the same size and weight as a seed cluster and cannot be separated readily by either wind or screen. A simple machine, consisting of an inclined canvas belt running over rollers set in a rack, with a hopper arrangement to drop the seed on the belt, will, however, do excellent work by friction. The bits of stem are usually somewhat flattened and when the belt is made to run over the rollers they stick to the canvas and are carried over the upper end while the seed clusters, which are more or less round, roll down the incline, thus effecting the separation.

For plans of such a machine, which is simple enough for anyone handy with tools to make, apply to the Dominion Agrostologist, Central Experimental Farm, Ottawa.

COST AND REVENUE.

An experiment with a view of determining the net profit of mangel seed produced per acre was carried out during 1915 by the Division of Forage Plants. The figures, as given below, are based on results obtained from a field one acre in size.

The total cost of growing one acre of mangel seed was \$79.70. The seed produced amounted to 1,134 pounds, which, it may be explained, is only an average yield.

With a wholesale price of 13 cents a pound, the revenue realized amounted to \$147.42, with a net profit of \$67.68.

SUBVENTIONS.

As an inducement to the growing of field root and vegetable seeds in Canada, the Dominion Government is willing to aid seed growers by cash subventions, full particulars of which can be obtained from the Seed Branch, Department of Agriculture, Ottawa. It may be stated here, however, that the purpose is to encourage selected seed, and only bona fide growers of such seed are eligible to receive the subventions.