

The most desirable soil for the cultivation of this root is a sandy loam free from stagnant water—one easily worked to a considerable depth, notwithstanding that a heavier crop may occasionally be obtained from a clay loam.

Early in the fall the land intended for turnips should receive a heavy coating of farmyard manure, and be deeply ploughed; cross-ploughed in the spring about the end of May or beginning of June, harrowed and rolled until a fine tilth is secured. Getting the soil into a finely divided state is a matter of the highest importance, especially in our country, for at the planting season the sun will have become very powerful, and we have frequently hot drying winds, which, unless the land be harrowed immediately after the plough, will penetrate to nearly the full depth of the furrow.

It is a well established fact that all soils have the power of absorbing and retaining to a greater or less degree a certain amount of moisture, and the more finely divided and thoroughly pulverized the land, the greater amount of moisture will it absorb and retain.

By thus treating the land two or three weeks before sowing, the seeds of foul weeds will be afforded an opportunity to sprout, and may, by the use of the cultivator, be easily destroyed previous to drilling.

Among the several kinds of artificial manure which may be used with advantage upon the turnip crop are bones, superphosphates, and guano. One of the chief benefits derived from an application of those manures is caused by the fact that they possess in an easily soluble form, nearly all the constituents required by the plant, and thereby cause a vigorous growth and carry it quickly into the rough leaved state, at which stage it is free from the attacks of the fly.

It would be very difficult to state absolutely when is the best time to sow, inasmuch as soils and seasons vary. On clay or clay loam perhaps the most desirable time is from the 5th to the 15th of June, and on sandy loams from the 10th to the 20th of that month. The quantity of seed required per acre will also vary with the weather. In damp weather on sandy soils 2 lbs is ample, and on clay loam and in weather ordinarily dry it will be well to sow 3 lbs or even more.

The depth of the seed should be from 1 to 1½ inches below the surface.

It is better for plants to come up thickly, for they grow faster than when thin, and are more apt to escape the ravages of the fly; and moreover, they require immediate attention as soon as they are large enough to thin.

Sowing upon drills is altogether preferable to sowing on the level; not only can a much larger crop be produced, but the weeds are far more easily destroyed.

The distance between the drills should be from 26 to 30 inches, and the plants should be left, by thinning, 12 to 15 inches apart.

When a good braird has been secured, the great secret of success is in stirring the soil frequently when dry, and keeping the ground perfectly free from noxious weeds.

THE ADULTERATION OF SEEDS.

The *Scottish Farmer* says that the proverbial feat of driving a coach and six through an Act of Par-

liament seems in a fair way of being exemplified in regard to the "Adulteration of Seeds Act," passed by the British Legislature in 1869. Farmers must look sharp when purchasing seeds, especially clover.

The only systems of adulteration contemplated and provided against by the provisions of this Act, are the mixing with "old killed, or dyed seeds." It seemed not to have occurred to the framers of the Bill, that other modes of adulteration were practised by experts in the art, although *sanded* samples and clever imitations in paste were previously in the market.

The adulteration of seeds with sand is now largely, ingeniously, and increasingly practised, admits of no doubt. Some samples of white clover seed from Germany are mixed to the extent of from ten to fifteen per cent. with prepared or "doctored" sand, and colored sand for mixing with clover is now an article of commerce in that country.

Samples of colored sand have been recently received from Germany, by an extensive seedsman in Scotland, accompanied by a letter, of which the following is a copy:

"Gentlemen:—I beg to offer you, as per inclosed pattern, about 300 cwt., of sand used for mixing clover seed, at the very low price of 10s. 6d. per cwt., bag included, f. o. b. here, cash by handing bill, of lading.

"I make a large business in England, and as I suppose you want it also, I shall be glad to receive your kind orders.

"Delivery could be effected about four or five weeks after ordering. You can receive the sand also in colors for white or red seed. Waiting your answer, I am Gentlemen yours respectfully."

The *Scottish Farmer* says that a good test for discovering the proportion of sand in a sample is to stir or shake the seed in a vessel of water, when the quartz or sand will be seen to fall to the bottom, and a few repetitions of the operation, if dexterously performed, will leave the sand alone, as the seeds, being lighter, are poured off with the water. Trying to chew a few seeds is also a ready mode of ascertaining whether they are mixed with sand or not as all know the disagreeable sensation sand produces when caught between the teeth.

CULTIVATION OF BARLEY.

Of late years, the breadth of land over which barley has been sown has steadily increased in Canada, until its area has encroached greatly upon the old fall wheat crop. The principal varieties of barley are the two-rowed and six-rowed, the former cultivated largely in Europe, but little in this country. It is also both a winter and spring grain, but is sown only at the latter season in Canada.

To secure a good crop of barley a judicious choice of seed is essential. In choosing our seed, we cannot do better than follow the advice of Loudon, who says:—"The best is that which is free from blackness at the tail, and is of a pale lively yellow, intermixed with a bright whitish cast, and if the rind be a little shrivelled, so much the better, as it indicates thin skin." Barley may be sown upon a grass or clover ley, if such be cleaned plowed in the fall, or after roots. Thorough pulverization of the soil is an essential element in the successful culti-