

shallow. I believe the gang-plough to be the best implement for the ploughing of land in spring. One of the best crops of barley that I have seen in Canada was sown upon the bare winter fallow, covered with the gang plough, and crossed with the harrows. A most important point, too often overlooked, is the use of the roller. It should be used *after* the plants are well through the ground; it presses the soil round the roots, and destroys many insects. I have often seen fields of young barley which looked yellow and sickly restored to perfect greenness by the pressure of the roller.

From two to three bushels to the acre is the usual allowance of seed.

C. E. W.

Turnip Culture.

A paper on this subject was read by Mr. John Weir, Jr., of Flamborough, before the Ancaster Farmers' Club. Although the turnip sowing season has not yet arrived, we should arrange our plans to secure a good braird and quick growth of roots. The paper was listened to with marked attention, and read as follows:—

To cultivate turnips successfully, a good deal of labour and attention are indispensable, and perhaps, were we possessed of a thorough practical knowledge of their culture, and that proper mode of treatment exactly suited to the requirements of our climate, we should not so often hear of a want of success.

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.

Harrowing the Fall Wheat.

Owing to the running together of our heavier lands by the mechanical influence of the snow and spring rains, our wheat fields often come out of the winter season in that state most expressively described as hide-bound. In the old country, they even go so far as to hoe the wheat between the drills. Such a plan, where labour is scarce and the season short, would be impracticable; but a free use of the harrow over our wheat in the spring has a very beneficial effect.

When spring has fairly set in, and the land has become sufficiently dry to allow the harrow teeth to work through the soil without clogging, let the harrow be passed freely through the wheat. The crust which tightly encircles the wheat plant is thus broken, and the coronal root has an increased freedom given to it to extend in every direction to seek for its proper food, and obtain a good foothold upon the soil. This operation may be performed with advantage upon almost any kind of soil, the weight of the harrow being greater or less according to the consistency of the soil in which it may be worked. It is especially adapted to the stirring of wheat that has

been sown by hand, and upon the heavier soils. The harrows not only break the crust of the earth, but drawing the fresh mould upon the wheat plant, they thus give a perfect top dressing.

Many have been "scared" at the appearance presented by their wheat field after the operation, but as long as the scarifying of the wheat has not been so severe as to tear out a great number of the plants, it will have the desired effect of pulverizing the upper soil, and will most certainly tend to give a rapid start to the growing plant. It should, however, be executed when the plant begins to re-vegetate, and personal care and supervision must determine that point. If the work be done when the plants are yet torpid they may be rotted, and if done too late their growth may be checked.

There is yet another great advantage in the operation. If we intend to seed down our wheat, after this harrowing is the time to sow our grass seeds. They will fall in a good bed, and the next smart shower will cover and sprout them.

Tapping Maple Trees

Much injury is often ignorantly and thoughtlessly inflicted on sugar maple trees by excessive tapping, and various negligent practices in connection with the operation. As a guard against such malpractice the following hints from one of our American exchanges may be useful:—

1. Use nothing larger than a three-fourth inch auger or bitt. One-half to five-eighths of an inch is best.

2. Do not open the trees until they will un equally well on all sides.

3. Select the thriest part of the tree that is farthest from an old orifice.

4. Never put more than one spout to a tree that is less than one foot in diameter, nor more than one bucket to one less than 18 inches in diameter.

5. Never bore trees more than once in a season, but freshen them once, or any time after a long and hard freeze.

6. Never leave the spouts in the trees a single day after they have finally done running. The quicker the orifices dry, the less they decay.

The following facts should be remembered:—

The root of a tree will sometimes run more than the body. A healthy tree runs in proportion to the size of its top, and should be opened with respect to its capacity for production. Trees in open grounds, with spreading tops, discharge more and much sweeter water than those in a forest.

A patent has been taken out by a Mr. Stewart, of Edinburgh, for the construction of India rubber wheels, which are said to be extremely durable, and suitable for even rough roads and extremes of climate.