

II.

THE SOIL OF THE BED.

The most important part of the bed is, doubtless, the layer of soil in which the seedlings will throw out their roots and where they must find the food necessary for a rapid growth. It is important that this soil be light, rich, well tilled, and exempt from disease germs or insect larvae.

When the seed is sown in the open, on a suitable spot, not much change is made in the composition of the soil of the bed.

A bush land is selected, generally a virgin one of great fertility, containing a good supply of humus, of light texture, in a place sheltered from the wind but well exposed to the sun during the greater part of the day.

If the spot selected is of sufficient fertility, all that will be necessary is to make a bush fire over it as already explained.

After the coals are removed, the soil is lightly worked over with a spade, care being taken to mix the remaining ashes with the bulk of the soil as thoroughly as possible. After a good raking to complete the preparation, the bed is ready to be sown, if there is any doubt as to the fertility of the spot, it should be given a good manuring. The manure is spread on top the preceding fall, in a fairly thick layer, or worked in, with a spade, always in the fall. Well decomposed manure gives the best results.

The burning is done in the spring, almost immediately before the bed is prepared.

Although this system has long been in use and often with good results in southern Ontario, it cannot be recommended on account of the fact that it is too easily influenced by climatic conditions. Even in Ontario, the temperature is seldom warm enough in the spring to allow the seedlings growing on these beds to be ready at the beginning of the transplanting season.

Bush soils.—The moulds generally preferred are those found in the bush and consisting of a mixture of soil and decomposed organic matter: pieces of bark, wood, dead leaves, which accumulate under the trees. These bush soils, as they are generally called, are of a spongy nature, light, of a dark colour. They have a great power of absorption for water and keep it a long time. Some are rich in humus but the humus content is very variable and sometimes deceiving. Bush soil containing a large proportion of undecomposed vegetable matter, should be looked upon with suspicion. Such soils are better for growing mushrooms than for raising tobacco seedlings.

Sometimes these bush soils are so coarse that it is impossible to bring them to a sufficient degree of tilth. In this case, it is difficult to level properly the surface of the bed and a very irregular stand is the result. Furthermore, the care of the bed (hoeing, thinning out) is very much harder when the component elements of that part of the bed are coarse and agglomerated.

In the open bed all these difficulties are removed by burning.

When bush soils are to be used just as they are, it is better to choose those containing only a fair amount of organic matter, having a sufficient density and with such a texture that they may be easily reduced, thereby giving a very fine mould.