

Horticulture.

EDITOR—D. W. BEADLE, CORRESPONDING MEMBER OF THE
ROYAL HORTICULTURAL SOCIETY, ENGLAND.

THE KITCHEN GARDEN.

Preparing the Ground.

Most of our kitchen gardens are quite small and designed to supply the family only. These are most conveniently tilled by hand, and it is the object of this paper to give some suggestions as to the manner of putting the soil in such gardens in proper condition for receiving the seed. Assuming that all that is requisite in the way of drainage has been attended to in accordance with our previous suggestions, and the garden laid out, the next step will be to dig over the beds.

Beginning at one side of the bed, next to the walk, throw out the earth to the depth of one spit, throwing the soil into the walk. This will leave a small trench open across the bed. Begin now in the bottom of this trench and dig up the subsoil to the depth of the spade, turning it over and breaking it up as loose as possible, yet leaving it at the bottom of the trench. Now turn over another spit of the surface soil, throwing it into the opposite edge of the open trench, and pulverizing it with a stroke of the digging fork. This will form a slope running from the bottom of the trench first opened and rising a little above the previous level of the bed. When this has been done across the bed, a second trench will have been opened, the bottom of which should be dug up and turned over, making it as loose as possible, but the earth thrown down into the bottom of the trench in the same way as before; now throw from the wheel-barrow a good dressing of the compost, prepared as previously directed, upon the side of the slope which was formed by the surface soil, and proceed to cover it by another spit of the surface soil, turned over and broken up. In this way proceed over the bed, breaking up the sub-soil at the bottom of each trench, but not mingling it with the surface soil, and covering each slope of the surface soil with a good dressing of compost, to be in its turn covered with the next spit from the surface.

When the bed has been dug over, a trench will be left open at the end of the bed opposite to the place of beginning. This will be filled with the earth that was taken out of the trench first opened and thrown, for the time being, into the walk, which will need to be taken up in the wheel-barrow, and carried to the opposite side.

In this manner all the beds should be dug over, and the surface soil mingled thoroughly with the compost. No one of these items is unimportant. The breaking up of the sub-soil facilitates drainage, admits of the downward growth of the roots, supplies moisture in time of drouth, and brings to the surface supplies of mineral plant food, very important to vegetable growth.

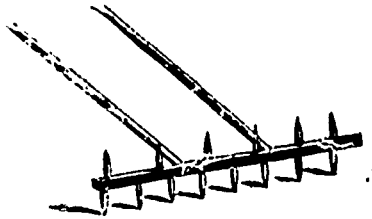
When to Sow Seeds.

Having dug over the beds in this manner, the surface should be raked quite smooth, and all lumps of earth, stones, etc., removed. The soil is now prepared to receive the seed as soon as the proper season for sowing each has arrived. It is desirable to sow the seed shortly after the ground is got in readiness, hence the gardener should prepare first those beds in which he intends to sow his radish, lettuce, peas, spinach, onion, parsnip, carrot and beet seed, for these can be sown as soon as the thermometer indicates during the day an average temperature of 45° in the shade. Afterwards when the temperature has

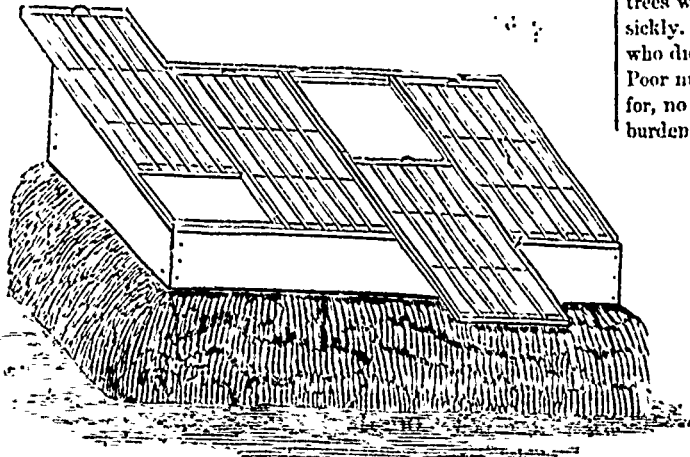
risen to an average of 60° in the shade, he may safely plant beans, corn, melons, squash, and cucumbers.

How to make the Drills.

The usual method of sowing seeds is to scatter them in shallow drills. We give an engraving showing the most convenient form of an implement for making these marks or drills. There are two sets of teeth, one on each side of the main bar, one set twelve inches apart, the other set nine inches apart. It is used by first stretching a line tightly across the bed, then set the outer teeth against the line and



draw the marker steadily along the line. Having drawn it once across the bed, the out-side mark will now receive the outer tooth, and the instrument be drawn back to the opposite side of the bed. It will be at once seen that with such an instrument, seeds may be sown in drills either nine or twelve or eighteen or twenty-four inches apart as circumstances require.



The Cold-Frame.

Some vegetables are best grown by starting the seed in close bed or frame, and when the plants have attained the proper size, and the weather has become suitable, transplanting into the garden. This is the plan usually pursued in our climate with the tomato, lima-beans, melons, celery, early cabbage and cauliflower. The accompanying cut will show the form of such a frame at a glance. It is a simple board frame, ten or twelve inches high at the back, and seven or eight in front, having a covering of sashes, which in this way receive sufficient pitch to carry off the rain. This is placed over a bed of rich, finely pulverized, mellow soil in some sheltered spot. By means of the sashes the air is excluded, the heat of the sun retained and the moisture rising from the soil confined. This may be used during the latter part of April, and after keeping the sashes closed for a few days the soil will become warm enough to receive the seed, which may be sown in shallow drills. Care will be needed to keep the young plants supplied with a moderate amount of moisture and an abundance of fresh air, lest the plants become long, lank, weakly things, unfit for the purposes intended. Those not accustomed to the care of plants in frames are very apt to water them too freely and keep them too close. The sashes should be drawn off during the day when the sun shines, in whole or in part, according to the temperature. The object is to keep up a degree of heat during the day, but a few degrees greater than that maintained at night when the sashes are closed, and in this way to shelter the young plants from severe and sudden changes, thus promoting a steady, healthy and robust growth.

THE ORCHARD.

Preparation of the Soil.

It is surprising that so little attention is given to the proper preparation of the soil, for the reception of fruit trees. After what has been said on this subject in previous volumes of the CANADA FARMER, and by every experienced writer on the subject of planting fruit trees, it was to be expected that there would have been a decided reform—our readers need not be startled at the word, a *great reform* in the practice of our planters. To thrust a tree into a hole in a soil, or other hard unpulverized ground, very much as one would set a fence post, has been, and yet is, the common method of planting a tree. Is it any wonder that the trees so frequently die during the first summer after planting? Or if they do chance to keep alive, that their life is a continual struggle, kept up for a few seasons, tree after tree going down in the conflict, until at last the few survivors, with the planter himself, wear a look of dejection and despair.

The writer was once consulted by a neighbor with regard to his young orchard. It did not thrive. The trees had been planted three years. A number of them had died, the remainder put forth a few leaves but made no growth. He said that he believed there must have been something wrong with the trees when he bought them, they must have been sickly. We never saw a disappointed tree planter who did not throw the blame on the nursery man. Poor nursery men, they have smarts enough to answer for, no doubt; quite enough of their own without burdening them with those of the purchaser. We

went with our friend and examined his orchard. We found the soil a strong clay, and the trees standing in grass. It appeared, on inquiry, that the land had been seeded down the year before the trees were planted, that a hole was dug just large enough to get the trees into the ground, and the grass had remained ever since. At our suggestion he prepared a piece of ground, obtained a fresh lot of trees, planted them on it, took care of them after they were planted, and three years after he had a fine,

vigorous young orchard. The difference in the treatment had caused all the difference in the results. Put it down as an axiom in tree-planting, that the labor expended in properly preparing the ground for the reception of the trees will be fully repaid by their health and growth, and that no subsequent attention can compensate fully for the neglect of proper previous preparation.

Taking for granted that the suggestions as to perfect drainage, &c., given in the first number of this volume, have been well considered and duly heeded, the next step will be to prepare the ground by ploughing, and, if need be, by rolling and harrowing, so as to make it mellow. It is as important to young trees that they be planted in soil that has been thoroughly pulverized and made quite mellow, as it is to the grain to be sown on a mellow seed bed, if strong and healthy growth is to be secured and a remunerative crop harvested.

An excellent method of preparing the land for an orchard is to summer fallow it, giving it repeated ploughings and cross ploughings, and if the soil be what may be termed shallow, breaking up the bottom or subsoil thoroughly with the subsoil plough. If the soil abound in clay, so that it is full of lumps, these should be broken down with a heavy roller or clod-crusher. In short the ground should be loosened up, exposed to the influence of the atmosphere, made mellow, light and friable just as for a crop of grain. An intelligent cultivator makes his calculations before hand, and having decided to plant an orchard in a particular field, will cultivate it with reference to what he is going to do. He will first summer-fallow that field, ploughing as deep as the soil will admit,