

or well supplied with humus, continued working with the spring-tooth or pulverizer being all that is necessary at this season. Aeration of the more tenacious soils is rather more difficult, but the first rule is not to work such soils when they are wet. The best cultivation tools for such soils are the plough and disk harrow. A shallow ploughing and immediate disking aerate heavy soils to a much greater depth than would be possible with lighter implements.

Cultivation under the tree is just as, if not more, important than on the open land. Extension disks make this possible. A thorough working of the whole surface soil will also suppress weeds and conserve moisture. During cultivation, damage is often done to trees by horse-harness, swingletrees, &c. This may be reduced to a minimum by the use of special orchard harness. There are several types to be had, all being designed to eliminate projections, which are the main cause of the damage.

SPRAYING.

Spraying-requirements for the present period are not many, but they are exacting, as only timely and thorough applications will be effective. Timely, because though there may appear to be a liberal deposit of material remaining on the trees most of this is residue, the efficiency of which, from a protection point of view, has passed away. A renewal of the sprays is therefore necessary to afford continued freedom from fungi and insects. Thorough, because the fruit is rapidly developing and exposing new surface. New wood and foliage are being added, and unless these are sprayed they are exposed to attack. Applications at twenty-one-day intervals are usually sufficient to meet requirements.

Stone-fruits will require lime-sulphur, 1-125, plus atomic sulphur, 6 lb., for brown-rot, plus nicotine, 1 pint, if black or green aphid are present. As the season is approaching for leech on plums and cherries, keep a good lookout and apply arsenate of lead, 1½ lb. per 100 gallons, should this pest appear. If the fruits are near the picking stage it is undesirable that they should be stained with arsenate, and hellebore powder, ½ oz. per gallon, should be used instead. Hellebore should be boiled for 20 minutes in a small quantity of water to prepare it for mixing.

Apples, pears, and quinces will require arsenate of lead, 1½ lb. to 2 lb. per 100 gallons, for codlin-moth, leaf-roller, and other caterpillars; lime-sulphur, 1-100, for fungi; 6 lb. atomic sulphur per 100 gallons for powdery mildew; and nicotine, 1 pint per 800 gallons, for leaf-hopper. These may be mixed, but in such a case the milk of 2 lb. of fresh-slaked lime per 100 gallons should be added. Under some unfavourable conditions as to variety, weather, or locality, lime-sulphur may not be effective in controlling black-spot, and bordeaux, 3-4-40, must then be used.

GRAFTS.

Look over grafts which were worked this season. If union has taken place, indicated by growth of the scion, sever the ties to allow expansion of the wood, but do not remove the covering.

HARVESTING AND PACKING STONE-FRUITS.

The earliest varieties of stone-fruit will soon be ready for harvest. Some definite turn towards maturity is required, but otherwise the fruits should be picked when firm. Most stone-fruits ripen to full condition very rapidly when packed in cases, and firm condition at picking-time will naturally contribute to the arrival of the fruit at its destination in good order. Such picking can best be done by going over the trees from time to time and gathering only such fruits as have reached the requisite stage of maturity. Uneven maturity in a packed case of stone-fruit is a serious though common fault detrimentally affecting the price realized. In the very early part of the season the choicest peaches are worth special packages, such as trays or punnets enclosed in a crate. At all times the fruit should be evenly sized and graded. Even with plums, the larger sizes find a better sale if packed separately from the jumble pack, this invariably applying to the main crop.

Care should be taken to protect picked fruit from the direct rays of the sun. When exposed a considerable rise in flesh-temperature takes place, some scald, and much soft rot, also wilt due to loss of moisture.

—W. M. Rice, Orchard Instructor, Hastings.