

Again, to be of any value spraying must be done thoroughly. For the spring spray on the dormant wood a coarser spray can be used than that employed in summer spraying, for then the object is only to form a coating over the wood. In summer spraying the object is to thoroughly cover each and every portion of the plant with a fine mist of the spray. Do not drench the plant necessarily, but let every portion be covered with the tiny droplets of the spray.

(d.) Lastly, promptly report and send in for diagnosis any disease with which you are not familiar. Do not wait until it has gained such a foothold that its eradication may prove difficult, if not impossible.

The following are some of the most important diseases of orchard and garden:—

#### APPLE AND PEAR SCAB.

Though apple and pear scab are considered separate species botanically, for our purpose they may be taken together. This is the most widespread and best-known apple-disease. It is especially bad in moist climates; and wet weather at the time the blossoms are bursting, and for some time after, is especially favourable to its development. Some varieties are very much more susceptible than others.

Though best known as a disease of the fruit, leaves, blossoms, and twigs may also be attacked. Upon the fruit small, circular, dark olive-green spots first appear. Later the spots become black in colour, and the outer skin breaks, revealing the fungus beneath. In severe cases the tissues may be puckered to such an extent that the fruit cracks open.

Upon the leaves the fungus is more abundant on the lower surface, where it forms velvety, olive-coloured or black patches, at first circular in outline, but later becoming irregular in shape. The disease may winter over on the dead, fallen leaves. Growing upon the young stems of the fruit, the fungus sometimes causes it to drop prematurely.

#### CONTROL.

Details of control will depend largely upon climate and season. The regular spring or winter spraying of commercial lime-sulphur, diluted 1-0, is of help in controlling the scab. Another should be given just before the blossoms open, with lime-sulphur 1-30, and still a third may be necessary just after the blossoms have fallen.

Prune the trees to admit light and air. When practicable, destroying the old leaves by burning or ploughing under is of value. Orchards with a good air-circulation are less liable to attack.

#### BLACK-SPOT CANKER.

(See Bulletin 34.)

This disease has received various names in different localities, black-spot canker, apple-tree anthracnose, and Pacific Coast anthracnose being the most common. It is a disease peculiar to moist climates, and therefore particularly severe in the Coast districts, though found to a slight extent in the Dry Belt.

Most commonly it makes its appearance in very late fall, but in wet seasons may appear somewhat earlier. A slight darkening of the bark may appear, which later develops into a slightly sunken, dark-coloured circular spot, the bark beneath being soft and spongy. With the coming of the growing season in the spring, the cankered area is rapidly extended, and becomes