

LEAF-CURL (*Eosarces deformans*).

This disease appears to be present wherever peaches are grown. The most characteristic symptom is indicated in the name "leaf-curl." Attacked leaves show an excessive growth in the soft tissues between the veins, causing a pocket-like bulging towards the upper surface. If badly attacked the leaf also curls upon itself. The affected areas have a bleached yellowish or a red colour instead of the normal green, and finally become covered with a greyish bloom due to the formation of a minute velvety layer of spore-sacs. In addition to the leaves, young shoots may be attacked, being thicker and shorter than healthy ones. It was formerly supposed that the fungus was carried over from season to season largely as perennial mycelium in such shoots. We now know, however, that this method of over-wintering is only responsible for a very small proportion of the spring infection. Infection takes place almost, if not entirely, while the resting buds are unfolding in the spring. Where an attack has been severe enough to cause extensive defoliation the new leaves that are put out will remain quite healthy. The spores that cause infection are apparently lodged on the bud-scales, and as soon as these are forced apart sufficiently to allow of the spores being washed against the young leaves inside by rain, infection may take place. Cold, wet weather at this time greatly increases the chances of an epidemic, probably because it keeps the leaves from outgrowing the susceptible stage as rapidly as would otherwise be the case. Accurate data on the relative susceptibility of different varieties are difficult to procure, but it seems to be generally agreed that the Elberta is the most susceptible.

Control.—It has been found that one spraying with any good fungicide will almost entirely control this disease. It is essential, however, that the spraying be thorough, otherwise the spores protected under the edges or amongst the hairs of the bud-scales will not be reached. It is also necessary that the application be made at the right time. If the bud-scales have opened sufficiently to allow of spores being washed by rain against the enclosed young leaves there is danger of infection taking place. Once any green is showing it is too late to prevent some infection. So far as the leaf-curl itself is concerned, good results are obtained if the spraying is concluded a week or two before the buds swell. In most cases, however, the grower has also to combat the peach-worm, and this makes it desirable to modify the spraying so as to make it effective, if possible, for both purposes. Lime-sulphur, winter strength, put on so that the application is completed at, or just before, the time the buds begin to swell, will not only control the leaf-curl, but will destroy many of the over-wintering larvae of the peach-worm.

POWDERY MILDEW (*Sphaerotheca pannosa*).

This forms a white mouldy growth over the young twigs, leaves, and fruit. It usually occurs as spots and patches, but may cover the entire surface. Leaves of affected twigs are pale, narrow, and distorted, giving the twig a ragged appearance. The disease was very serious in the Southern Okanagan last year, a large proportion of the fruit being affected. Fruit with large mildew-spots on it is unsightly and hence unsaleable, but a more serious consequence lies in the fact that rot organisms enter very readily through the affected spots. Hence even slightly affected fruit does not stand up well in transit and such fruit should not be shipped.

Control.—Owing to the sensitive nature of the foliage of the peach, the summer sprays, such as lime-sulphur solution, used on other orchard trees cannot be employed. Where thorough spraying for leaf-curl is carried out, however, mildew is often lessened. Dusting the trees with flowers of sulphur when the dew is on, or after rain, at intervals of ten to fourteen days will reduce it, or self-bolled lime-sulphur may be used. It is claimed for Atomic Sulphur that it is very effective against this disease; 4 to 5 lb. to 40 gallons of water is the strength recommended, to be applied soon after the petals fall, or, at any rate, as soon as the first indications of mildew are observed. Whatever substance is used, special care should be taken to cover the young fruit.