

first, but hardening in the air it becomes dark red or brown. The leaves borne on such shoots have the characteristic scorched appearance. In many cases the disease is confined to the twig form and spreads no farther.

Frequently, however, it enters the main limbs or trunk by passing down twigs or water-sprouts. The bark will take on the water-soaked appearance and the gummy exudate ooze from the affected part in large drops. Sometimes a canker of limited extent is formed around the base of the shoot down which the disease has passed. As the organism gradually dies out the bark loses its water-soaked appearance, and, becoming hard and tough, shrinks away from healthy portion, frequently forming a crack or fissure between. In the apparently sound tissue outside this area a few germs may lurk to carry over the disease until another year. A further spread of the disease down the limbs or trunk, however, may sometimes occur. Extensive cankered areas will be developed, and from cracks in the diseased tissue the yellow gum will drip abundantly. Sometimes a canker will appear considerably farther down on the limb than any other, while the bark between is, to all external appearances, perfectly healthy. Upon cutting away the bark, however, a fine line of diseased tissue will be found connecting the two. The form of the disease that affects main limbs and trunk is called "body-blight."

In most of the fruit-growing regions of the East body-blight of the apple rarely occurs, and then only in the form of cankers around the base of a shoot. In some districts it is not considered worth while to cut out the disease in apple-trees during the growing season, so rarely does it extend beyond the current season's growth. In these same districts the body-blight may be a serious menace to pear-orchards; so that while twig-blight may be found in pears and body-blight in apples, the reverse is the rule. In some parts of the Western States and in British Columbia, however, body-blight is commonly found upon all apple-trees. Certain varieties have suffered most severely from this form of the disease. Some cases have come under our observation in which the disease spread so rapidly down the trunk that the tree was soon girdled and its death accomplished in a single season.

A rot of the immature and occasionally of the mature fruit is also caused by the pear-blight organism, the disease entering by way of the stem or through an insect puncture. Fruit so affected turns brown or black as if bruised, and a whitish, slimy substance exudes from the skin.

SUSCEPTIBILITY OF VARIETIES.

It is a fact of common observation that a considerable variation exists in the degree of susceptibility of the different varieties to the blight. In the Summerland district during the past season the Spitzenberg showed the highest percentage of infection—about 50 per cent.* The disease was most severe in this variety, rapidly passing down from the smaller shoots into the main limbs and trunk. Following close upon the Spitzenbergs came Wageners and Transcendent crabs, which were attacked in much the same manner. Jonathans showed about 25 per cent. infection, but the disease in this variety was, for the most part, confined to the twigs and smaller branches, very few being so badly attacked as to call for removal. Practically all varieties were attacked more or less. Those showing a degree of resistance nearest approaching immunity were McIntosh Red, Grimes Golden, and Yellow Newtown.

In the pears the disease was confined almost entirely to Bartletts. Quince-trees were practically all attacked, but twig-infection only was found.

* Figures secured from Mr. Simms, Fruit Inspector.