

of local poisoning. All investigators agree that it is not due to a fungous or other parasite.

The disease has been under observation for a number of years, and these and other theories have been put forward by different investigators to explain its cause. None, however, have been universally accepted, and no certain control measures have been so far discovered.

The following suggestions, however, have been put forward, and if followed can only result in benefit to the orchard and a saving of money to the grower: Endeavour, in so far as possible, to maintain an even moisture-supply throughout the season. Discourage heavy wood-growth and light yields of large sappy fruit. Late and excessive irrigation and clean cultivation should be avoided. Cover crops should be grown, and in extreme cases it may even be necessary to put the orchard in sod for a time. Do not give trees a too heavy winter pruning, and see that the orchard is given proper drainage.

WATER-CORE.

Water-core thrives in those districts where the fruit-pit is most prevalent. Like the fruit-pit, this disease is not due to any organism. Many varieties are affected. Hyslop Crab, Ribston Pippin, King of Tompkins County, and Wagener being among the worst.

Hard, watery areas appear in the flesh of affected apples at the core and extending outward from it. Small areas of this watery tissue may be scattered throughout the fruit, sometimes near enough to the outside to be visible at the surface. The seed-cavities usually contain liquid, and the intercellular spaces, instead of containing air, are filled with a watery fluid. Water-cored apples may appear perfectly normal when picked, the trouble only appearing after the fruit has been in storage for some time, when the affected areas will turn brown and the fruit rapidly break down.

The same remedies suggested for the control of the fruit-pit are also recommended for this disease.

FIRE-BLIGHT.

(See Circular 23.)

This has been known for some years as a serious disease of pears, apples, and quinces. In British Columbia it has so far been most serious as a disease of apple-trees.

Blossoms, young fruit, twigs, limbs, and trunk may be attacked. The disease appears at blossoming-time as a "blossom-blight." The germ of the blight, carried to the blossoms by bees or other insects, multiplies rapidly in the nectaries of the flowers, and may later spread down into adjoining twigs. Tips, blossoms, and leaves will be seen to wilt, becoming dark brown or black, and finally shrivel up, presenting a scorched appearance. The bark at first has a water-soaked appearance, but later becomes hard and dry. Young, rapidly growing shoots are specially affected, aphides and other sucking-insects being among the agents which carry the disease to the twigs. Where the disease is active, blisters will appear on the bark, through which a thick, gummy substance will ooze, at first light yellow in colour, but later becoming dark red or brown. The disease may enter the main limbs or trunk by passing down a twig or water-sprout. There it may form a canker of limited extent around the base of the shoot. In this case there is usually a clear line of demarcation between the healthy and diseased tissue, and when the disease