

itself. At the present time we are fortunate in still being free from a considerable number of diseases which growers elsewhere have to contend with. How long we are to retain this advantageous condition depends very largely on the intelligent interest shown by the grower, as no inspection service that is ordinarily possible is sufficient to keep a continuous oversight of such a large area. In the case of leaves or leafy twigs, lay them out between pieces of newspaper or blotting-paper, and close the package with two pieces of stiff cardboard. Soft fruits, succulent stems, or vegetables liable to be crushed in transit should be sent in wooden or tin boxes. If a number are sent together, each should be wrapped in oiled paper or similar waterproof material. Put your name and address on the outside of the package and send it to the Plant Pathologist, Court-house, Vancouver, together with a letter giving as much information about the extent of the disease, the plants affected, when first observed, etc., as you can.

ALFALFA.

LEAF SPOT (*Pseudopeziza medicaginis*).

Apparently found wherever this crop is grown, but not as yet reported serious. Appears as small, irregular to circular, dark-brown to black spots, chiefly on the leaves, the upper surfaces being most affected. The spots may be so numerous as to involve almost the entire leaf-surface. Badly attacked leaves turn yellow and fall prematurely, so that the yield, when the crop is cut for hay, may be much reduced. Spores are produced in minute fruit-bodies formed in the affected spots.

Control.—No satisfactory means of control are known. When the indications are that the disease is going to be severe enough to produce considerable defoliation if the crop is allowed to stand until the usual cutting-time, it would be advisable to cut earlier, thus avoiding some loss. If the first cutting is affected, but cut early, subsequent cuttings may outgrow the disease.

DODDER. (See under "Clover.")

DOWNY MILDEW (*Peronospora trifoliorum*).

A serious disease of alfalfa and related plants in Europe, and also recorded from widely separated sections of America. It appears as large yellowish blotches on the upper surface of the leaf, often involving the entire leaflet. The under-side of these spots is covered by a fuzzy growth of spore-bearing branches (conidiophores) of the fungus, becoming purplish when old. In this Province so far the disease is chiefly of interest in having been found only at one of the driest localities of the Dry Belt, whereas downy mildews are usually associated with moist climates.

WILT OR SCLEROTINIOSE (*Sclerotinia trifoliorum*).

The fungus attacks the stems at or near the level of the ground, producing a local rotting, followed by a wilting of the parts above. If the base of such a stem is examined it will be found covered with a white mouldy growth, and, in this, small irregular nodules of resting mycelium (sclerotia). These are white when first forming, but black when mature. The disease is worst under wet soil conditions, the plants often being killed out in wet spots in the field. No satisfactory control measures are known, but heavy wet soils should be avoided and rotation practised where the disease has occurred. So far the disease is not serious, but it has been found both at the Coast and in the Interior.

CROWN-GALL (*Urophlyctis alfalfa*).

This disease is quite distinct from the crown-gall found on various kinds of fruit-trees and bushes, and is due to a different type of parasite. So far it has not been found in this Province, but since it is a serious disease, and has been recorded from a number of places in Oregon and California, it is advisable to give some account of it here, in order that growers may be on the look-out for its appearance.