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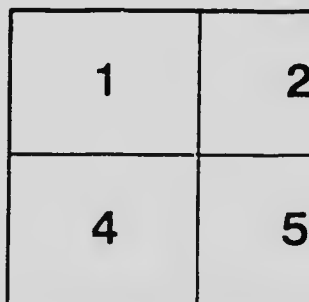
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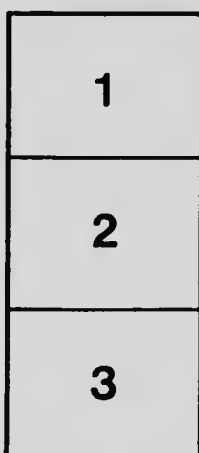
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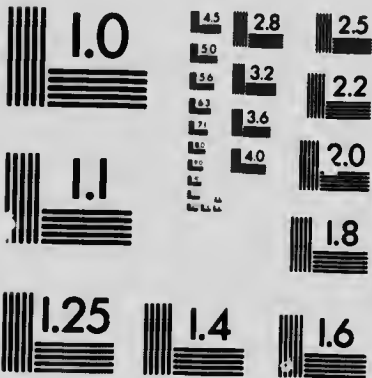
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PROVINCE OF BRITISH COLUMBIA.

DEPARTMENT OF AGRICULTURE
(HORTICULTURAL BRANCH).

THE LESSER APPLE-WORM

(*Laspeyresia prunivora* Walsh). ;

CODLING-MOTH

(*Cydia pomonella* Linn.).

OWING to the similarity of the larva or caterpillar of the lesser apple-worm to that of the codling-moth, fruit-growers should become familiar with the appearance of each of these "worms." It is not an easy matter to make a definite determination in the field; hence, if there is any doubt, specimens should be sent immediately to officials of the Department of Agriculture. The two larvæ, when full-grown, are easily separated.

Fruit-growers of British Columbia are fortunate in having only a few isolated instances where the codling-moth is known to occur. It is sufficient, to prove this assertion, to draw attention to the published statements of Dr. A. L. Melander, Entomologist of the Pullman Agricultural Station, who claims that the codling-moth exacts an annual tax of \$200,000 on the yield of 1,500 car-loads of apples in the State of Washington, and to the record of Professor H. . Wilson, formerly of the Corvallis Experiment Station, who states that the annual loss amounts to 25 per cent. of the total crop in Oregon.

In view of these statements and of many others which could be quoted, it is urgently necessary for all fruit-growers in the Province

of British Columbia to keep a watchful eye open for any sign of doubtful injury and to report the same immediately.

The two larvæ may be separated in the following manner:—

Lesser Apple-worm.

Shape: Fusiform, i.e., tapering towards each end, broadest along the middle segments.

Colour: Pink in young stages; flesh colour when nearly full-grown.

Size: When full-grown, about $\frac{3}{8}$ inch long.

Microscopic structures: Terminal segment of body with a brown comb-like structure, varying from 5-7 teeth.

Codling-moth.

More even width throughout.

Young stages, white with a shade of pink; half-grown (or when of same size as lesser apple-worm larva), dirty white, marked with black dots; full-grown, pinkish-white, with more or less prominent tubercles.

When full-grown, about $\frac{3}{4}$ inch long.

Terminal segment without a comb; rounded and covered with several prominent spines.

The work of the two larvæ varies also, although instances have been observed of the injury to fruit being so closely similar that the identity of the "worms" could not be definitely determined. Both larvæ feed on the fruit of the apple, entering through the calyx or through the side and burrowing to the core.

As a general rule, the larva of the lesser apple-worm feeds extensively on the flesh of the apple as it penetrates towards the core, while the codling-moth larva forms a more direct channel. It appears that the lesser apple-worm develops a trifle later than the codling-moth in the spring and continues feeding a little longer on the fruit in the autumn, otherwise the life-histories of the two moths are very similar. In this way the lesser apple-worm develops proportionately more "side-hole" entries than the codling-moth, which, especially with the first spring generation, enters more particularly through the calyx. This variation of habit in the two worms is not to be regarded as a definite rule in all sections of the Province, inasmuch as in cooler and

moister sections the number of "side-hole" entries equal, if they do not exceed, the calyx entries.

The control of the codling-moth may be dealt with in another circular. The control of the lesser apple-worm necessitates special



Damage to
the apple
The direct

to apple by the lesser apple-worm. The injury resembles codling-moth larva, but it will be noticed that the lesser feeds more on the surface of the fruit around the calyx. larva. If entrance is made through the calyx, usually passes e of the fruit. (Author's illustration.)

attention to the ordinary arsenical orchard sprays a few weeks after the petals fall, at approximately a time when the winter apples are 1 inch in diameter. Wherever systematic orchard spraying is practised the lesser apple-worm is not a serious pest. Its importance to the growers of British Columbia lies in its closer resemblance to the codling-moth, which is a pest of first magnitude in apple- and pear-growing sections.

Victoria, B.C., issued March, 1918.

This circular has been prepared by R. C. Treherne, Field Officer for British Columbia, Entomological Branch, Dominion Department of Agriculture, at the request of the Horticultural Branch.

Copies of this circular may be obtained free of charge on application to the Horticultural Branch, Department of Agriculture, Victoria, B.C., or from local branch offices of the Department.

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