

Ontario Department of Agriculture

FRUIT BRANCH

THE APPLE MAGGOT

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SUMMARY.

For over twenty years the Apple Maggot or Railroad Worm has been recognized as a pest of apples in Ontario. From time to time it has appeared in large numbers in infested orchards and has caused serious losses, in some instances amounting to the entire crop. Up to the present the insect has been found in most of the southern counties extending from the Ottawa River on the east to Lake Huron and the Detroit River on the west, and it is highly probable that it occurs in all counties where apples are grown. Fortunately, the total number of infested orchards is small, probably less than five per cent. in any county and much less than one per cent. in the province as a whole.

It is worthy of note that well-cared-for orchards which are properly sprayed are, as a rule, free or almost entirely free from this pest.

The adult insects commence to emerge from the soil in late June and early July, and continue to emerge for about seven weeks. They are blackish, two-winged flies, a little smaller than house-flies. The abdomen of the female is crossed by four white bands, and that of the male by three. The wings have conspicuous dark markings, arranged as shown in Fig. 3. Several days after emergence the female fly begins egg-laying. By means of a sharp sting-like ovipositor she inserts her eggs beneath the skin of the apple. The eggs hatch in five to six days and the larvae or maggots derived from them tunnel their way here and there through the flesh of the apple, leaving behind them trails of dead brown tissue. The larvae become mature when the fruit is ripe, by which time it has usually fallen. The larvae then leave the apples, enter the soil and change to the pupal stage, in which stage the winter is passed. Most of the pupae transform to flies the following summer. However, a certain percentage of them remain in the soil until the second summer and then emerge as flies at the usual time.

Injury is caused chiefly by the maggots tearing the apple pulp with their hook-like mouth parts and absorbing the juices. Pulp affected in this manner becomes brown and tough; hence the term "woody" which is frequently applied to maggot-infested apples. Badly infested fruit may become so honeycombed with larval tunnels that it will break down into a rotting mass.

The wounds made in the apple by the flies in ovipositing and the killing of tissues by maggots working near the skin, may give rise to malformations.

Serious loss may also be caused by the tendency of infested apples to drop prematurely.