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THE APPLE MAGGOT OR RAILROAD WORM.

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The apple maggot or railroad worm, *Rhagoletis pomonella* Walsh, is a serious pest of apples in Connecticut. The maggot tunnels in the ripening fruit, causing it to decay. It usually attacks the less acid and early maturing varieties, often rendering the fruit worthless. In certain seasons it also infests the late maturing and acid varieties like Greening and Baldwin. Sweet and subacid varieties are commonly attacked and the fruit ruined by this insect.

This is a native American insect which formerly bred in the wild thorn and in blueberries and huckleberries. The adult is a two-winged fly, with dark cross bands on the front wings, which emerges early in July and feeds for two or three weeks on drops of moisture on the leaves and fruit before laying eggs. The female has a sharp ovipositor with which she punctures the skin of the fruit and lays an egg in the pulp, just beneath the skin. This egg is whitish and elongated and hatches in from two to six days, when the young maggot begins to tunnel through the pulp of the fruit. They make little headway until the fruit ripens and becomes soft, then they increase rapidly in size and the injured fruit decays, the pulp becoming a brownish spongy mass. Sometimes the tunnels extend close to the skin and show from the outside, but in other cases there is no external evidence that the fruit is infested, though on cutting open, it may be found worthless. When mature the maggot leaves the apple and goes about an inch into the soil and pupates. There is probably a partial second brood, and development may proceed in fruit in storage if the temperature is sufficiently high.

Control Measures.

Formerly it was recommended that all drops be gathered and destroyed and that late cultivation be practiced to kill the pupae in the soil. Now it is known that spraying the trees with arsenate of lead (1 to 2 lbs. of the dry powder in 50 gallons of water) during July will prevent serious injury from this pest, as the flies feed upon the poisoned moisture on the foliage and are killed before they lay eggs. One application should be made about July 4th or earlier for early varieties, and another about July 25th, or three weeks after the preceding application.

Some Connecticut orchardists are already spraying several times after the trees blossom. Thus the apple maggot spray given the first week of July will control the second brood of the apple and thorn skeletonizer, and the second treatment should control the second brood of codling moth.

In case later applications are made to control sooty blotch on winter varieties, lead arsenate may also be included as an additional protection against the apple maggot.