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Apple-and-thorn Skeletonizer

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Leaves of untreated apple trees can turn brown by mid-August from the feeding injury of the apple-and-thorn skeletonizer in areas of Idaho where this insect is known to occur. Damage is limited to unsprayed trees that have had poorly timed sprays. Thus, it is not usually seen in commercial blocks of fruit.

The apple-and-thorn skeletonizer's preferred hosts are apple and crab apple trees. It can also be found on cherry, mountain ash, hawthorn and pear trees.

The larvae are pale yellowish-green and become almost ½ inch long when mature. They have many prominent black spots on their sides and backs. The larvae feed in small groups on the undersides of the leaves protected by webs they have spun. The more mature larvae migrate to the top of the leaf and feed there for a few days before rolling the leaf or dropping to the ground on a silk strand or crawling to the trunk where they change into pupae. The pupal period lasts about 10 days.

Fig. 1. Apple-and-thorn skeletonizer larva feeding on a leaf.

Adults of the first and second generation emerge, mate and begin laying eggs in about 5 days. The third generation may overwinter as pupae in the fallen leaves or emerge as adults where they survive the winter in protected places. The next spring, the adults that emerge from overwintering pupae and adults that have spent the winter hibernating begin laying eggs during the bloom period of apples.

The first damage by the larvae can be seen about 2 to 3 weeks after full bloom. Since all overwintering adults do not come out of hibernation at the same time, the first generation larvae occur at different stages of tree development. First generation adults first appear in late June and continue to be present in July. Be this time, the adults of the second generation start emerging, giving no distinct time between generations.

Natural Enemies

Several parasitic wasps have been collected from the apple-and-thorn skeletonizer in Idaho. The major parasite, an apantales wasp, found in Oregon and Washington has not yet been found here. Other natural enemies include lady beetles, lacewings, several predatory bugs and birds.

Fig. 2. External leaf damage from apple-and-thorn skeletonizer.

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Control

The apple-and-thorn skeletonizer has three overlapping generations a year. The adult insect is very mobile and moves from untreated trees to treated trees. Thus, periodic sprays are required to prevent injury to apple tree foliage. The other hosts generally only require a spray if damage caused by the later generations starts occurring in late July or August. On apple trees, the first spray should be applied about 3 weeks after full bloom. The second spray, if necessary, should be applied mid-June. The third spray, if necessary, should be applied in late July.

Insecticides with one of the following active ingredients can be used on apple trees: diazinon, carbaryl, methoxychlor and malathion. Thorough coverage is necessary since the larvae are under a layer of webbing and are usually located within a rolled leaf. Be sure the flower petals have fallen to prevent poisoning bees before applying one of these insecticides.

Trade Names

Trade names are used in this publication to simplify the information presented. Such use does not imply endorsement of any product nor criticism of similar products that are not mentioned.

Chemical Recommendations

The chemical recommendations are based on the best information available at the time of printing. Before using any pesticide, read the instructions on the label. Follow all precautions and restrictions for safe product use.

The grower is responsible for residues on his crops. He also is responsible for drift from his property to adjacent properties or crops.

Pesticide Residues

These outlines for use are based on the best information currently available. If followed carefully, residues should not exceed the tolerance established for any particular chemical. To avoid excessive residues, follow label directions carefully with respect to dosage levels, number of applications and minimum interval between application and reentry or harvest.

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