

AGRICULTURAL GUIDE

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Insect control

Elm leaf beetle

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The elm leaf beetle is an annual pest on elm tree foliage, especially Chinese or Siberian elms, throughout the state. Also, the beetles may become a household nuisance by migrating into homes and buildings during the fall months.

Life Cycle

Eggs are laid in groups of 10 to 30 on the underside of leaves. They are pointed, orange-yellow and about $\frac{1}{16}$ inch long.

The larva is the most destructive life stage of the beetle. When full grown, it is about $\frac{1}{2}$ inch long and has a dull yellow color with two black stripes.

The pupa, or the stage in which the larva changes to an adult, is usually found around the base of elm trees. It is about $\frac{1}{4}$ inch long and is bright orange-yellow.

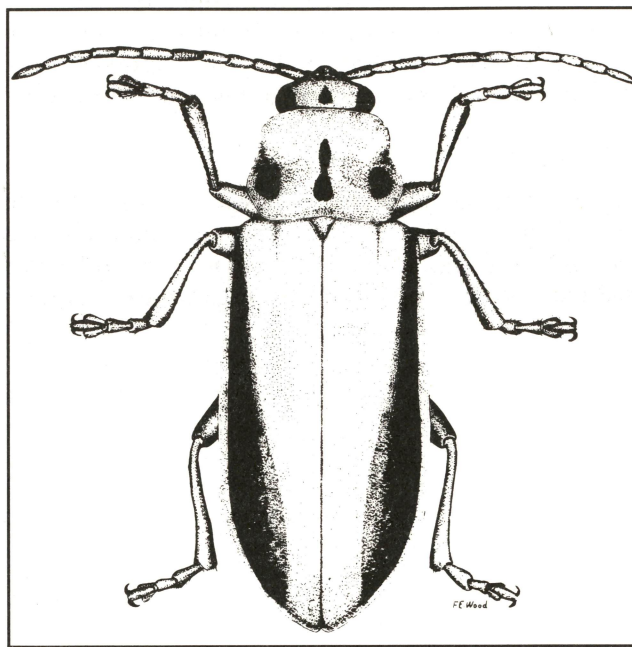
The adult beetle is about $\frac{1}{4}$ inch long, yellowish to olive green, with a black stripe along each side of the wing covers. These stripes are sometimes indistinct in the dark olive forms. The eyes are black, and there are four black spots on the thorax.

The elm leaf beetle passes the winter as an adult under the bark of trees, or in sheds, barns or houses. It is not harmful to humans, other animals, dwellings or household contents, but it is considered a nuisance inside the home.

As the days cool in the early fall, the adult beetles seek shelter. They crawl into homes and other buildings through cracks and holes in and around screens, windows and door facings.

When the days warm up in the spring and the trees begin to leaf out, the adult beetles begin their annoying movement about and leave the house. They fly to the nearest elm tree and begin feeding on the new leaves. At this time they lay eggs which hatch in about a week. The larvae feed for two or three weeks, then drop or crawl to the base of the tree where they pupate. After about 10 days the adults emerge.

Successive generations continue throughout the summer and into the fall when the adults, seeking



shelter for hibernation, again invade the home. There are usually three generations in the northern half and four generations in the southern half of the state each year.

Control

The first step in preventing entry into the home is to control these beetles at their source—elm trees.

On trees

Thorough coverage of all foliage is necessary. Therefore, it is essential that spray equipment of sufficient size and capacity be used to enable coverage of the tallest trees.

Read the label on the insecticide container and use only those formulations which list the pest you wish to control and the site where you wish to apply the insecticide. Certain formulations of the following insecticides applied as sprays may be used:

- Carbaryl (Sevin) at the rate of 1.0 lb. (2 lbs. 50% or 1 $\frac{1}{4}$ lbs. 80% carbaryl wettable powder) per 100 gallons of water, or 2 tablespoons 50% or 80% carbaryl wettable powder per gallon of water.
- Or methoxychlor at the rate of 1.0 pound (2 pounds 50% methoxychlor wettable powder) per 100 gal-

lons of water, or 1 tablespoon per gallon of water. Spider mites may build up following repeated use of this insecticide.

- Or acephate (Orthene) at the rate of $2\frac{1}{3}$ quarts of the 15.6% emulsifiable concentrate formulation per 100 gallons of water or $1\frac{1}{2}$ tablespoons per gallon of water.

A community-wide control program is more effective when sprays are applied to protect the trees from the first generation larvae. When only a few trees are sprayed, later generations of beetles moving from unsprayed trees frequently will reinfest sprayed trees, thus making additional spray applications necessary.

In the house

Make the house as tight as possible in an effort to prevent entry. Stuff cotton in sash cord channels, and use calking compound to fill in cracks around doors and windows and all other openings large enough for

insects to go through.

For control of the beetles crawling on and into buildings, spray the exterior foundation, outside walls of the house, around window wells, and around other exterior points of entry with carbaryl (Sevin).

Use household sprays or aerosols containing pyrethrins to kill those beetles which get into the house. Repeated applications will be necessary. Vacuum or sweep up and burn or otherwise destroy the dead beetles.

Cautions

Insecticides are poisons and should be handled with care. Read and follow label recommendations and directions. Store pesticides safely and out of reach of small children. Carefully, promptly and properly dispose of unused portions of diluted sprays and empty containers.