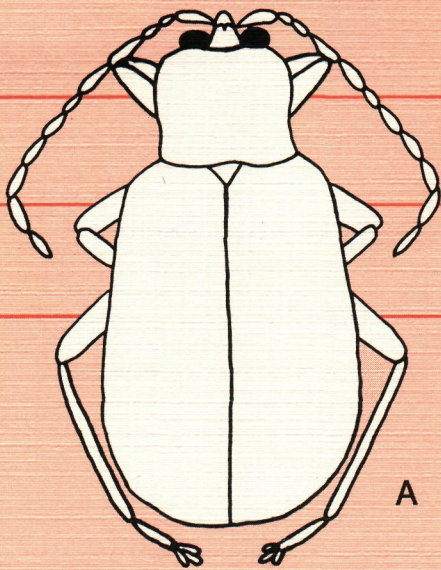


Protecting Field And Forage Crops From Leaf Beetles



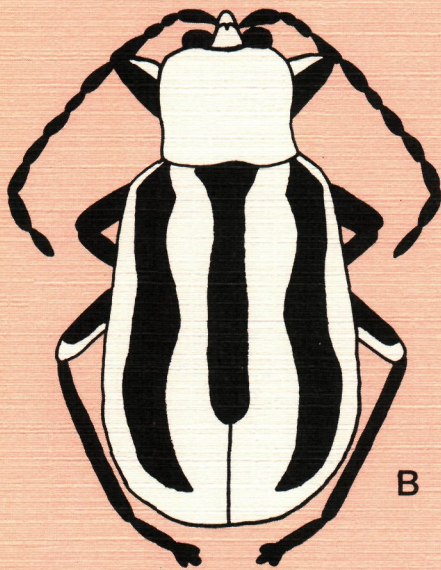
A

Some leaf beetles have become numerous enough over the past few years to be of concern to Michigan growers of field and forage crops. These are all medium-sized — about 1/4 inch long — hard-shelled beetles with long antennae (feelers). They are active runners and fly readily when disturbed. They chew holes through the leaves of many crops, feed on tassels and silks of corn, and eat the flowers and pods of legumes, such as dry beans and soybeans.

Corn rootworms can be severe pests of corn. (Their special control in this crop is discussed in Extension bulletin E-736, "Protecting Corn From Corn Rootworms.") They can damage alfalfa, dry beans, soybeans and other crops by feeding on the leaves and flowers during August and September. They have been most damaging in areas of fields immediately adjacent to heavily infested corn fields. The northern corn rootworm beetle (Fig. A) is yellow or green without dark markings. The western corn rootworm beetle

(Fig. B) is yellow or red and usually has three black stripes down its back. The size of the stripes varies from small spots at the base of the wing to stripes nearly covering the whole wing. The hind tibia (shins) of the western corn rootworms are dark brown to black.

Two species of *cucumber beetles* also occur. Both of them overwinter as adults and can appear in damaging numbers throughout the season. The larvae (young) of the spotted cucumber beetle feed on the roots of a large number of plants. They even feed on corn roots, though this is rare in Michigan, and are sometimes called the southern corn rootworm. Spotted cucumber beetles are yellow or green with distinctive black spots on their backs (Fig. C). The larvae of the striped cucumber beetle feed on the roots of cucurbits — squash, melons and cucumbers — but the adult beetles chew the leaves of many other crops. The beetles are yellow with three black stripes down their backs (Fig. D). The



B



C

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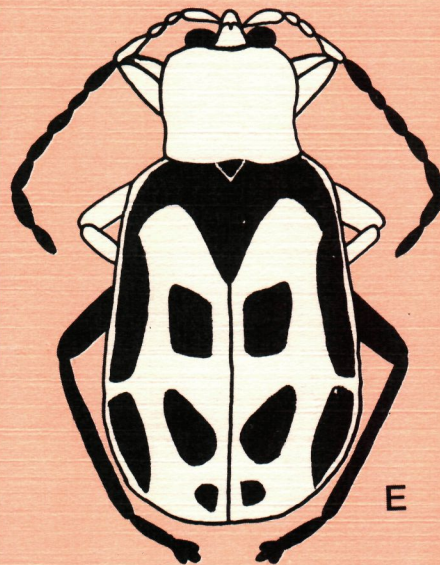
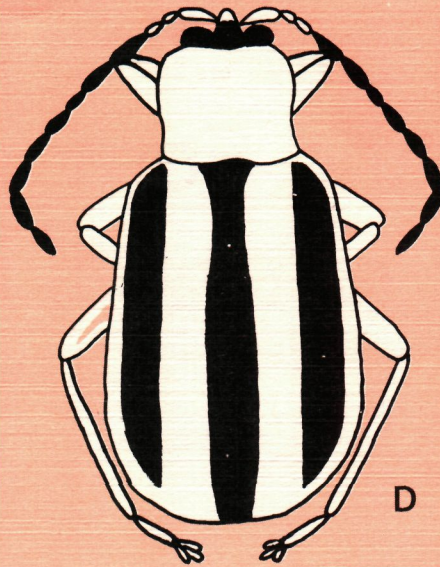
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striped cucumber beetle strongly resembles the western corn rootworm beetle, but the hind tibia of the striped cucumber beetle are white rather than dark as in the western corn rootworm beetle.

The *bean leaf beetle* was rare in Michigan 20 years ago, but it has increased to threatening numbers in our southernmost counties over the past few years. The larvae feed on the roots and the adult beetles feed on the leaves, flowers and pods of alfalfa, dry beans, soybeans and other legumes. The bean leaf beetles are yellow or red and their typical markings are shown in Fig. E. The beetles are variable, however, with some nearly unmarked and others having four dark stripes down the back.

The *cereal leaf beetle* was a pest of small grains and, more rarely, corn for years. Parasites introduced from Europe have kept cereal leaf beetle numbers very low for the past decade. The beetle is still around, however. (Information on this pest is presented in Extension bulletin E-738, "Integrated Cereal Leaf Beetle Control.") Other leaf beetles occasionally feed on crops. None of these others has been numerous enough to be of concern — as yet.



LEAF BEETLE CONTROL

Check fields for any threat from leaf beetles by simply looking for holes in the leaves and for the beetles themselves. A spray of insecticide is recommended only where beetles have damaged one-fourth or more of the foliage. The beetles, especially the corn rootworms, are often found only in areas of a field. Only the infested area and a 20-foot swath around it need be treated. The beetles are active and will come into contact with the insecticide. Complete coverage of the plants with spray, therefore, is not needed, and 10 gallons of mixed spray per acre, applied with ground equipment, is sufficient for effective control.

The special recommendations for control of corn rootworms in corn are given in Extension bulletin E-736, "Protecting Corn from Corn Rootworms." The insecticides currently recommended for the leaf beetles in other crops are given in Extension bulletin E-1582, "Chemical Control of Insects and Nematodes in Field And Forage Crops." The insecticide carbaryl — sold under the brand names Savit and Sevin — is effective against leaf beetles and can be used in corn, dry beans, legume hays, soybeans and sugarbeets. Apply carbaryl at 1 quart of the 4 lb/gal flowable formulation, 1-1/4 lb 80 percent wettable powder, or 2 lb 50 percent wettable powder per acre.

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