

WESTERN SPOTTED CUCUMBER BEETLE *Coleoptera: Chrysomelidae* *Diabrotica undecimpunctata undecimpunctata*

DESCRIPTION

Adults are 6 mm long, yellowish-green with distinct black spots on the wing covers. This species is a subspecies of the southern corn rootworm, *D. undecimpunctata howardi*, which is a serious pest of corn in the central United States. Mature **larvae** of the western spotted cucumber beetle are 14 to 17 mm long. They are white, except the head and last abdominal segment, which are brown.

ECONOMIC IMPORTANCE

Larvae of this pest feed on roots of potatoes, corn, snap beans, immature cole crops, and some other vegetables. On potatoes, feeding injury resembles damage caused by flea beetle larvae. Adults feed on corn silk, pollen, bean leaves, blossoms and developing pods, and pollen of cucurbits. This damage causes inadequate pollination resulting in reduced yields, poor seed set, and considerable wastage in beans at processing plants. Processors dock growers and downgrade quality if the damage from cucumber beetle adults exceeds the equivalent of 1.5 scars ("beetle bites") per 100 pods.

DISTRIBUTION AND LIFE HISTORY

This species occurs throughout western Oregon and Washington. This insect overwinters as a fertilized female. Adults are active during mild periods in the winter, but do not begin laying eggs until early spring. Eggs are deposited in the soil around the bases of host plants. Eggs hatch in seven to 10 days and larvae feed on roots for about three weeks before pupating in the soil. Adults emerge in two weeks and begin feeding on pollen of weeds or early-planted crops. There are two generations each year in the northwest, and three in California.

MANAGEMENT AND CONTROL

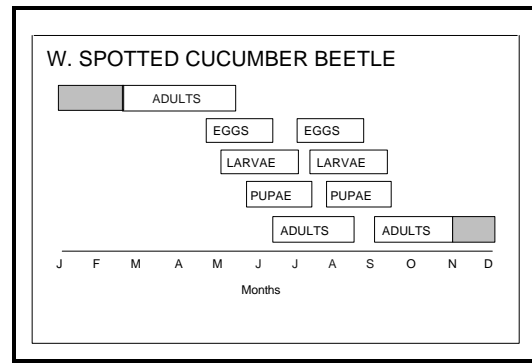
Elimination of weedy areas around the field may help reduce the number of overwintering sites for adults, although adults can readily disperse into adjoining fields in the spring. The economic threshold (the pest density where control procedures should be initiated to prevent the population from reaching the economic injury level) has been set in snap beans at 3.0 beetles per 10 sweeps. To estimate the population of adults, take at least 100 sweep samples in groups of 10 from



Adult



Larva



several different areas of the field. Insecticides are the most common method of preventing damage by this pest, but some snap bean cultivars provide resistance to adult feeding injury, e.g., 'Spartan Arrow', 'Green Isle', 'Resistant Cherokee Wax', and 'Itasca'. 'Blue Crop', 'Blue Max', and 'Bush Blue Lake' have been shown to be the most susceptible snap bean cultivars.

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