



Vegetable Weevil

Coleoptera: Curculionidae, *Listroderes difficilis* Germain (often misidentified as *L. costirostris* Schönherr)

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Description Adult weevils are a dull, gray-brown color, and about 6–8 mm (0.25–0.32 inch) long. Adults are somewhat bristly in appearance due to their stout hairs and dense scales on the body. Usually there is a set of dark diagonal markings framing a lighter colored V-shape on the wings, but these may wear off with age. Antennae are elbowed and there is a short, stout snout at the front of the head.



Dorsal view of adult vegetable weevil, *Listroderes difficilis*. (Jennifer C. Giron Duque, University of Puerto Rico, Bugwood.org)



Adult vegetable weevil, *Listroderes difficilis*. (Jennifer C. Giron Duque, University of Puerto Rico, Bugwood.org)

Newly-hatched larvae are slender and pale with a dark head capsule. Larvae turn greenish as they feed and mature. Mature larvae measure about 14 mm (0.55 inch) long, acquire a greenish color, and are segmented, C-shaped grubs.

Common Host Plants Polyphagous with a wide host range including many cole crops (turnip, collard, mustard, and others); tomato, potato; carrot, beet, radish, turnip, beans; tobacco; many weeds and some ornamentals.

Damage Both larvae and adults feed on foliage, buds, and roots of host plants. On fleshy roots, larvae may graze the outer surface before boring into the root. Larvae also feed on crowns and lower stems of host plants. Larval feeding on foliage initially begins as small round holes, which are then enlarged to a more irregular shape. Continued feeding may leave the foliage skeletonized. Adults feeding on stems close to the ground may girdle or cut through the stem entirely. Damage by vegetable weevil is often most severe on young plants. However, vegetable weevil is not considered as important of a pest species as it once was. Chemical treatments for other pests appear to have reduced the impact of vegetable weevil.



Vegetable weevil larvae (*Listroderes difficilis*) on bok choy. (Debbie Roos, North Carolina Cooperative Extension)



Feeding damage by vegetable weevil larvae (*Listroderes difficilis*) on bok choy. (Debbie Roos, North Carolina Cooperative Extension)

Distribution Native to South America, now found in the southern United States, California, Oklahoma, Arizona

Life History Females are parthenogenetic and males are not known for this species. Eggs are laid on the plant crown or otherwise near the soil line beginning in late summer and sometimes into early spring. Egg and larval development is gradual over several months. Mature larvae enter the soil to pupate over the winter and adults emerge the following spring. There is a single generation per year and adult weevils may live 1–2 years.

Adults and grubs are more active at night, retreating to the soil or under leaf litter during the day. Adults aestivate during the summer months in plant debris near field edges. Because adults rarely fly, they are usually found in spots near the edges of fields rather than throughout the entire field. Like many weevils, adult vegetable weevils feign death when disturbed, often dropping off the host plant.

Cultural Control Adults aestivate in the summer in garden residue; removing crop debris may reduce their survival during the hot months. Weed control around plots or fields may reduce alternate hosts and refuges for vegetable weevil. If vegetable weevil is a known concern in a field, rotate susceptible crops with less favored crops and avoid planting susceptible crops adjacently. Soil cultivation and tillage after harvest will destroy pupae in the soil before adults emerge in the spring.

Organic/Biological Control Neem oil and pyrethrins are options for organic control of vegetable weevil. Insecticidal soaps can be used against vegetable weevil larvae in home gardens. Certified organic growers should always check that an organic method is approved by their certifier. No commercial biological control agents are available for vegetable weevil at this time, although a range of generalist predators may feed on the larvae opportunistically.

Chemical Control Adult vegetable weevils rarely fly and may be found in clumped aggregations around field borders. Spot treat foliage for vegetable weevil where found with a registered insecticide. Chemical controls for other defoliating pests generally limit damage from vegetable weevil as well. As with all pesticides, follow the label instructions carefully with regards to rates and precautions.