



CUTWORMS

Symptoms/Damage:	Damage to leaves, buds, roots; severed stems
When it is a problem:	Summer months
Hosts:	Many including turf
IPM Technique:	Natural predators, handpicking, trash & weed removal, sticky traps, physical barriers, contact, bait, residual insecticides



Introduction: Cutworms are a large, diverse group of nocturnal moths. The larvae spend the daylight hours in the ground or lawns and come out at night to feed. They cause considerable damage to a number of plants, often times severing the stems of seedlings.

Cutworms can be grouped into three categories:

1. “Surface” cutworms do considerable damage on leaves, cutting holes in tomatoes, beans and other vegetable parts. They are notorious for biting off new seedlings, and create damage that is similar to sowbugs, pillbugs and earwigs. The surface cutworms include the black cutworms, *Agrotis ipsilon* (Hufnagel), bronzed cutworms, *Nephelodes minians*, and the dingy cutworm, *Feltia ducens*.
2. “Climbing” cutworms climb into the plants at night to eat the buds, leaves, and fruits of various herbaceous and woody plants. The variegated cutworm, *Peridroma saucia*, is a very destructive pest in this group.
3. “Subterranean” cutworms stay in the ground, feeding on the roots of plants. Included in this group are the pale western cutworm, *Agrotis orthogonia*, and the glassy cutworm, *Crymodes devastator*.

Life Cycle & Description. All cutworms have similar life cycles, varying mostly in the number of generations per year. They overwinter as partially grown larvae in cells in the soil, under trash or in clumps of grass. They come out to feed on spring and summer nights, but remain coiled up in a ball just under the soil surface during the day. When the larvae are fully grown they burrow down several inches into the soil and enter the pupal stage. The pupal stage lasts from one to eight weeks. The adult moths emerge during the night and lay eggs on grass or weeds. The newly hatched larvae feed on the host during the day and hide at the base of the plant or underground. When fully mature at the end of the season they burrow deeper into the soil to overwinter.

The appearance of cutworms varies. The variegated cutworm moth is grayish-brown with dark mottled forewings and a brassy luster. The larva is ashy or light-brown mottled with dark-brown and has a yellow spot in the middle

of each segment. The eggs are small and white, ridged, and laid in irregular masses on foliage and stems. There are generally two generations per year.

The pale western cutworm moth is mottled gray. The larva is greenish-gray with a brown head. Being subterranean they feed at the root collar and below, both day and night, unlike other cutworms that only feed at night.

The black cutworm moth is reddish to brownish-gray with silver patches at the base and tip of the forewing. The larva is gray to brown to nearly black with a broken yellow line on its back and pale line on each side. It also has a shiny appearance. There are from two to four generations per year, depending on how hot the season may be. The hotter the season the faster they grow.

Control. There are a great number of natural predators of cutworms, but some of the predators are pests themselves. Moles and shrews feed on cutworms, but they can cause considerable damage to a lawn or garden with their digging habits. Even earwigs feed on young larvae, but they too can cause other damage.

Handpicking at night is very effective for removal of larvae. Electric light traps are effective against the adult moths. If the infestation is severe, remove all soil surface debris in the fall and cultivate the soil to expose the larvae to the weather and birds. Keep weeds and grass, the natural egg-laying sites, out of the garden. For climbing cutworms, spread a sticky material around the base of the plants to keep the cutworm from climbing onto the plants.

One of the most effective means of exclusion is to use a paper collar. Use a piece of stiff cardboard, old milk carton, or a paper cup without the bottom. Place it around the stem of the plant, about one inch deep into the soil, and two inches above the stem and leave 1-2 inches clearance around the plants. When the plant outgrows the collar it is tough enough to withstand cutworm damage.

Chemical treatments, including *Bacillus thuringiensis* Berlinger (Bt) are variable in their effectiveness. Spraying or dusting with carbaryl (Sevin®) is fairly effective but it is very toxic to bees and not recommended. Baits can be spread in the late afternoon around the plant, but keep the bait off the plant itself. Be sure to read the label for instructions and precautions whenever using chemicals.

By CDFA Entomology; Adapted by S.L. Green.

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