
IPMINFO

Integrated Pest Management for the Home Environment

TITLE

CUTWORMS

Symptoms/Damage:	Damage to leaves, buds, roots, severed stems.
When it is a problem:	Summer months. Hosts: Many crops.
IPM Techniques:	Natural predators, handpicking, trash and 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 dichondra, coming out at night to feed. They cause considerable damage to a number of crops, often severing the stems of seedling plants and producing more damage than actual feeding.

The 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, damage that is similar to that of sowbugs, pillbugs, and earwigs. The surface cutworms include the black cutworms, *Agrotis ipsilon* (Hufnagel), bronzed cutworm, *Nephelodes minians* (Guenee), and the dingy cutworm, *Feltia ducens* (Walker).
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* (Hubner), 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* (Morrison), and the glassy cutworm, *Crymodes devastator* (Brace).

Life Cycle and 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 June, July, and August. The eggs are laid during the night on grass or weeds. The newly hatched larvae then burrow underground. When cold weather comes, 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, ribbed, 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 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 a pale line on each side. It also has a shiny appearance. There are from two to four generations per year.

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. Earwigs feed on young larvae, but they too can cause other damage.

Handpicking at night is very effective for removal of larvae. Electronic light traps are effective against the adult moths. If the infestation is severe, remove all soil surface debris to 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 plant to keep the cutworm from climbing onto it.

Spreading wood ashes around the base of the plant and soaking the area with water will create a barrier to the larvae. 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, leaving a half-inch clearance away from the stem. When the plant outgrows the collar, it is tough enough to withstand cutworm damage.

Chemical treatments vary in their effectiveness. Spraying or dusting with carbaryl is fairly effective, but it is very toxic to bees. Baits can be spread in the late afternoon around the plant, but keep the bait off the plant itself. Before seeding, the soil can be treated with diazinon or carbaryl worked into the top four inches of soil. Be sure to read the label for instructions and precautions whenever using chemicals.

Bibliography

Gardener's Bug Book. C. Westcott, 1973

General and Applied Entomology, V.A. Little, 1963

Sunset New Western Garden Book, 1979.