HOME & GARDEN

Sod webworms and cutworms no. 5.509

by W.S. Cranshaw[1]

Quick Facts...

Sod webworms and cutworms are common insects in lawns throughout Colorado.

Most sod webworms and cutworms chew on grass blades.

These insects rarely become abundant enough to cause noticeable injury.

Since sod webworm injury is infrequent, always check suspected areas of infestation before applying an insecticide.

Sod webworms are one of the most widely recognized groups of turfgrass pest insects in Colorado. Adult sod webworms are common "lawn moths" that may be disturbed to flight during mowing. The caterpillar stages feed on grass blades and cause injury when abundant.

Various species of cutworms also are common on Colorado lawns, feeding on grass roots or blades. Occasionally, in spring, cutworms also may cause localized problems.

Sod Webworm Appearance and Habits

Several species of sod webworms occur in Colorado. The damaging stage is the caterpillar or larval stage. Typical sod webworm caterpillars have a dark head and their bodies are light brown or gray with dark spotting. Sod webworm infested thatch has silken tunnels produced by the caterpillars. During the day they hide within this webbed tube and at night they move out a short distance to feed. Sod webworms are typically 1 to 1-1/2 inches in length when full grown.

Adult sod webworms are the most commonly observed stage of the insect. They are small, buff-colored "lawn moths" that often rest on grass or shrubbery. Several sod webworm moths have attractive markings with silvery striping. They are weak fliers and when disturbed from these resting places they may fly short distances across a lawn. (**Note:** Several other moths found on lawns are **not** lawn damaging species, including the alfalfa webworm and lucerne webworm.)

The most common sod webworm species (larger sod webworm, *Leach's crambus*) overwinter as partially grown caterpillars. When temperatures rise in spring, the caterpillars resume feeding and become full grown in May and early June. Most lawn injury occurs during this time. The sod webworm caterpillars then change to the pupal stage within the silken tube. Sod webworm pupae rarely are observed since they resemble a small clod of earth.

In approximately one week, sod webworm adult moths emerge from their pupal case to mate and lay eggs. Flights are most common shortly after dark. The female moth flies low over the lawn area and scatters its eggs. Although adult moths have a short life span, usually less than two weeks, female moths can lay up to 60 eggs per evening.

Sod webworms have one to two generations per year in Colorado. When a second generation occurs, peak larval feeding and damage is in July.

One common species of sod webworm, known as the cranberry girdler, feeds on grass roots rather than blades. Cranberry girdler caterpillars feed primarily in September and October, which causes a later season injury than is typical of other sod webworms. Cranberry girdler caterpillars are recognized by their orange head with indistinct body markings.

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Figure 1: Bronzed cutworm larva (F.B. Peairs).

Figure 2: Sod webworm larva (J. Capinera).

Figure 3: Cranberry girdler moth.

Cutworm Appearance and Habits

Cutworms are the caterpillar stage of "miller" type moths. (**Note:** The nuisance "miller moth" of eastern Colorado, the army cutworm described in fact sheet 5.572, *Moths in the home*, is not a turf-damaging species.) The adult moths are inactive by day and may be attracted to lights at night. Cutworm caterpillars reach 2 to 3 inches when full grown. Some species are dull gray or white in color. Others, such as the bronzed cutworm, may be marked with stripes and distinctive coloring.

Bronzed cutworms, the most common cutworm in lawns, overwinter as eggs that hatch in late winter. The cutworm caterpillar stage feeds on the leaves or roots of the grass in spring. In May, bronzed cutworms become full grown, stop feeding and pupate. Several months later, the adult stage emerges and lays eggs in August and September.

Occasionally infestations of the armyworm, a "climbing cutworm" may occur. Since the armyworm does not overwinter in Colorado, infestations depend on flights of the adult moths into the state during the summer. Even though the armyworm is a fairly important pest of wheat and barley, turfgrasses are rarely infested at damaging levels.

Damage

Most sod webworms and cutworms clip and feed on emerging grass blades. During low level infestations, this feeding injury appears as general thinning of lawn areas. With cutworms indistinct circular areas of feeding injury may be noticeable. Heavy sod webworm or cutworm infestations can result in death of turf grasses that have been clipped back repeatedly.

The number of caterpillars required to cause significant turf injury will vary due to several factors. Lawns that are watered adequately and grow vigorously can tolerate high populations of sod webworms and cutworms with little observable injury. Thin lawns that grow poorly may be seriously damaged. It is not uncommon for sod webworm injury to be more noticeable along sidewalks and other areas that are warmer and under more drought stress.

Various thresholds of sod webworm numbers that threaten turf damage have been proposed and range from one to 12 per square foot. The general guideline for most Colorado sod webworm infestations is likely to be in the middle of this range. Since cutworms feed more heavily, suggested treatment thresholds for cutworms would be in the lower end of the range.

Natural Control

Natural controls of sod webworms reduce sod webworm and cutworm populations effectively. Ants, ground beetles, rove beetles and other insect predators are highly effective in controlling sod webworms. Parasites of sod webworms--parasitic wasps, microsporidia and fungal diseases--are also important.

Certain birds are the most obvious predators. Starlings, while rearing young, feed on tremendous numbers of sod webworm and cutworm larvae. Flocks of starlings and blackbirds can eliminate infestations in a short period of time.

Chemical Controls

Insecticide treatments for sod webworms and cutworms should be considered only when caterpillar populations are sufficiently abundant to threaten serious injury. **Routine sod webworm treatments are not recommended.** Sample the thatch for larvae to determine the number of sod webworms. Careful examination of areas suspected of sod webworm or cutworm activity should show the webbing, green fecal pellets, and clipped grass associated with the insect.

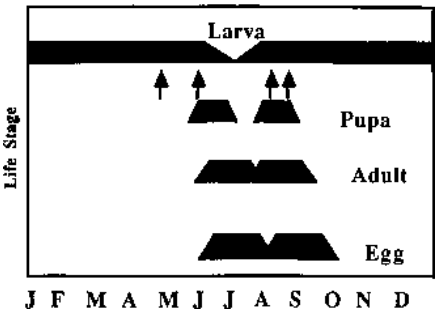

Figure 4: Life stages of the larger sod webworm in Colorado.

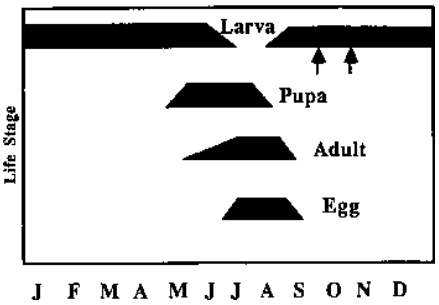

Figure 5: Life stages of the cramberry girdler in Colorado.

Irritants, or "disclosing solutions", also can be used to sample sod webworms and many other turfgrass insects, such as cutworms and billbug adults. These irritants cause the insects to move to the surface of the lawn where they can be counted easily. The most effective irritants involve dilute drenches of the garden insecticide pyrethrins at a dilution of 0.0025 to 0.005 percent applied at a rate of 1 gallon of water per square yard. A less effective, but more available, substitute irritant is 1/4 cup of dry laundry detergent or 1 ounce of liquid detergent per gallon of water.

If infestations of sod webworm or cutworm larvae threaten a lawn area, the insecticides listed in Table 1 can provide control. These insects are controlled relatively easily with insecticides but some attention to application technique can improve effectiveness. Ideally, lawns should be mowed prior to treatment so that less grass area is present to dilute the treated area. Applications should be made during the latter part of the day because sod webworms feed at night. If granular insecticides are used, a **light** (less than 1/8-inch) watering is required to move the insecticide off of the granule.

Biological Controls

The bacterial insecticide, *Bacillus thuringiensis* var. *kurstaki* (Dipel) also is sold for control of sod webworm. Sod webworms and many cutworms are susceptible to *B. thuringiensis*, if it is eaten. However, it may be difficult to apply *B. thuringiensis* insecticides in a manner that allows turf-feeding caterpillars to ingest the insecticide. To increase effectiveness, apply shortly after mowing and late in the day.

Experimental evidence also suggests that insect parasitic nematodes can provide control of cutworms and sod webworms in lawns. These nematodes attack the caterpillar and grub stage of several species of insects but are considered harmless to mammals, birds and plants. Insect parasitic nematodes, primarily *Steinernema carpocapsae*, are available through several garden supply catalogs and some nurseries. A freeze-dried preparation of the nematodes has been marketed with suggested use rates of 15 to 50 million nematodes per 1000 square feet. For more information, refer to fact sheet 5.573, *Insect parasitic nematodes*.

Recovery

Lawn areas that have suffered sod webworm damage should be given extra cultural attention to promote regrowth. Water and fertilization usually allows regrowth of the damaged areas to recover. Where large areas are killed, the dead grass should be raked out, and the area reseeded or resodded.

Table 1: Insecticides labelled for control of sod webworms and cutworms in lawns.

Active ingredient	Trade names	Comments
carbaryl	Sevin	Toxic to earthworms.
diazinon	Diazinon, Spectracide	Hazardous to birds.
chlorpyrifos	Dursban, Chlorban, Ortho-Klor	Some odor associated with chlorpyrifos products.
fluvalinate	Mavrik	May cause respiratory irritation. Commercial use only.
acephate	Orthene	Some odor associated with acephate products.
isofenphos	Oftanol	Liquid formulations for commercial use only.
trichlorfon	Proxol/Dylox	Fast acting but susceptible breakdown at high pH.
bendiocarb	Turcam	Toxic to earthworms.
isazophos	Triumph	Highly toxic. **Restricted use.**

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