

Caterpillars (Sod Webworms, Loopers & Armyworms)

by

Tom Weissling & John L. Cisar

Tropical sod webworms, grass loopers, and fall armyworms are pests of southern warm-season turfgrasses. These are insects that undergo complete metamorphosis, that is they have an egg stage, several larval stages, a pupal stage, and an adult stage. Most people are familiar with the larval stage or the caterpillars which feed on turf. Adults do not feed on foliage.

The Insects

Tropical Sod Webworm: [Tropical sod webworm larvae](#) have a dark yellowish-brown head and the body is greenish with several black spots. When mature, the larvae reach a length of about 3/4 of an inch. Adults are small and brown. Moths can be found at rest during the day in shrubbery next to lawns. At dusk, adults become active and females fly over turf laying eggs on grass blades. At 72 F, tropical sod webworms take 12 weeks to go from egg to adult, but at 78 F, the adult stage is reached in half that time. Tropical sod webworm larvae feed at night and coil up to rest on the soil surface during the day. Tropical sod webworm activity begins in April and continues through the fall in the southern portions of Florida, completing 4 generations.

Fall Armyworm: [Fall armyworm larvae](#) are greenish when they first hatch. As the larvae grow and mature they become dark brown with a light stripe on their back and dark stripes on their sides. Mature caterpillars reach a length of about 1 1/2 inches. The front wings of fall armyworm moths are dark gray with light and dark spots and a white spot near the wing tip while the hindwings are white. Fall armyworm moths are larger than sod webworm adults with a wingspan of about 1 1/2 inches.

The fall armyworm can be found year round in locations with mild winters, such as along the Gulf coast. Each year, moths migrate northward. In south Florida, fall armyworm can do a great deal of damage in the spring. Eggs are laid on turf and the newly hatched larvae scatter in search of food. The larvae have a healthy appetite and can be found feeding day and night but are most active near dusk and dawn.

Grass Loopers: The [larvae of striped grass loopers](#) may be cream, blue-gray, brown, black, or orange in color. They also have a light stripe along the middle of their back. This narrow stripe runs along the entire length of the larvas body. When mature, the larvae are longer and more slender than those of the fall armyworm. Grass looper movement is different than that of the sod webworm and fall armyworm. They move like an inch worm, looping up the middle of their body then extending forward. Grass loopers are pests from time to time in the spring, summer and fall, but not nearly as much of a problem as the tropical sod webworm or fall armyworm.

Their Damage

The larvae of these insects are equipped with sharp mandibles adapted to chew on turfgrass leaf blades. Young larvae are small and are only able to rasp the leaf surface, but as they grow, feeding damage is characterized as skeletonizing. Damage at this point often goes unnoticed but at close inspection appears as a small (2 - 3 foot diameter) grayish area. As larvae mature grow, they begin to

notch the margin of the grass blades which gives the grass a ragged appearance. At this point, general thinning or reduced leaf density of the turf areas is often noticed and, if left unchecked, brown-patchy areas are clearly visible.

How to Find Them

Confirm the presence of an insect pest before making pesticide applications. As mentioned above, damage often goes unnoticed until larvae are mature. Suspect turf areas should be monitored for the presence of caterpillars. Visually inspect the turf for feeding damage, or signs of the caterpillars. Greenish, pelletized excrement is a good indicator of feeding activity. If caterpillars are not readily seen, try using a soapy water flush over an area where activity is suspected. Mix 1-2 ozs. of dish detergent in 2 gallons of water and **soak into a turf area** of approximately four square feet. The soap solution increases the activity of the caterpillars and they can be more easily seen and counted. Monitoring should be conducted once a week.

The **action threshold** for the tropical sod webworm is 5 - 8 caterpillars per square foot, while the AT for the fall armyworm is 3 - 4 per square foot.

How to Get Rid of Them

The first step to the management of lawn caterpillars is prevention. Three cultural practices are recommended that will promote a healthy lawn. First, use a slow-release, complete fertilizer, and apply it only 3 - 4 times per year. Frequent applications of water-soluble nitrogen lead to succulent growth that is aesthetically pleasing, but is very attractive to pests. For example, tropical sod webworm female moths are attracted to dark green turf for egg laying...a condition created by the overuse of nitrogen. Secondly, water conservatively...do not overwater, or underwater. When irrigating, apply about $\frac{3}{4}$ to 1 inch of water. Lastly, mow turf areas frequently enough that no more than $\frac{1}{3}$ of the leaf height is removed. In addition, keep cutting blades sharp.

There are several general predators such as spiders and ground beetles that will eat caterpillars in your lawn. In addition, the **striped earwig** is a good predator of tropical sod webworm. A common parasite of the tropical sod webworm is an ichneumonid wasp. These beneficial insects can often be seen flying over lawns in search of larvae.

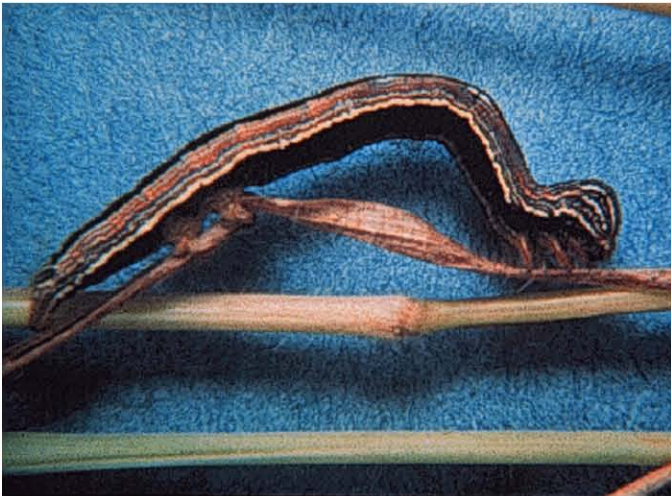
Many products are labeled for caterpillar control including Sevin, Dursban, and Diazinon. A biocontrol agent, *Bacillus thuringiensis* (BT), is available commercially. Worms treated with BT stop feeding within a day or so and die within a week. Consult with your cooperative extension service office for local recommendations.



Tropical Sod Webworm Larvae



Fall Armyworm Larvae



Larvae of Striped Grass Loopers



Notch the Margin of the Grass Blades



Soak into a Turf Area



Striped Earwig