

Handling Sod Webworm

Healthy turfgrass is an irresistible draw to a variety of insect pests. It can usually sustain some level of infestation without much visible damage. Environmental conditions such as heat or drought, however, can exacerbate insect damage. Voracious pests weaken the already weather-stressed turf, sometimes damaging it to the point that it never recovers.

The key to good insect control is not to let cracks in your turf's defenses ever become wide enough for a bug to slip through. Proper fertilization, adequate watering and drainage, regular aeration and topdressing, careful variety selection, and close attention to mower cutting heights go a long way in keeping turf healthy and able to withstand moderate pest infestations.

But even with the best cultural practices in place, insects do sometimes get the upper hand. That's when chemical controls become necessary. Familiar, broad-spectrum insecticides are available to regain control over most turf pests.

A working knowledge of the biology of common turf insect pests is critical for turf professionals to select appropriate control strategies. In the next three issues of *sportsTURF*, "Chemical Log" will focus on a specific insect pests, including some of the cultural, mechanical, and chemical options available to control them.

Sod webworm

Sod webworm (*Crambus* spp.) is the larval stage of plain-looking white-to-brown moths. The pests range across North America but are usually most damaging to turf in the eastern, south-eastern, and midwestern United States.

At dusk in late spring and early summer, newly emerged adult females take to the air seeking patches of lush grass on which to distribute their loads of tiny, off-white eggs. Each is capable of producing up to 200 eggs. Females frequently deposit their eggs in the same locales, a habit that concentrates damaging larvae populations in patches scat-

tered across fields and fairways. Larvae hatch from days to two weeks later.

Sod webworms vary in color from grayish brown to dingy white and grow to a length of about an inch. As first and second instars, caterpillars limit their feeding to a single blade of grass, eating only tender tissue between the veins. This early skeletonizing is slight and usually goes unnoticed.

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As the caterpillars mature they begin constructing silk-lined tunnels through the thatch at the soil line. Their appetite increases and they begin grazing over larger areas. Maturing larvae devour whole blades of grass at a time. They sever leaves at the crown and pull them into tunnels to eat.

At this point, damage becomes apparent. Irregular brown patches about the size of a quarter or half-dollar develop around tunnel entrances, giving turf a "pockmarked" appearance. Because this symptom is characteristic of several turf pests, however, a positive identification is necessary for accurate diagnosis.

First, look for missing — not just dead — blades within the damaged area. Next, examine the thatch; look for sod webworm tunnels with larvae inside, green excrement pellets (frass), or holes pecked by birds in search of a webworm snack.

Soil drenches of soapy water bring caterpillars to the surface so they can be counted. Populations of as few as one worm per square foot are enough to warrant treatment if turf is stressed by other factors. Healthy turf can tolerate two to three worms per square foot.

Depending on the species, sod webworms go through between six and 20 instars before reaching maturity. When they do, they leave their tunnels, burrow into the soil a short distance away, and spin the cocoon in which they pupate. In about two weeks, adult moths emerge to begin laying a second generation.

Controlling Sod Webworm

Sod webworms are most damaging to turf when temperatures are high and water is scarce. But because turf growth slows under these stresses, webworm damage is usually not apparent until the damaged grass resumes growth. It is important, therefore, to keep turf adequately irrigated during hot, dry periods and to regularly aerates areas at risk of compaction.

Because webworms dwell in the thatch layer, regular dethatching will help eliminate their natural habitat. Experts recommend that thatch should be no thicker than 1/2-inch to 3/4-inch thick.

Several varieties of tall fescue and perennial ryegrass contain fungi, called endophytes, that actually repel sod webworms and other insect pests, including armyworms, cutworms, billbug larvae, and chinch bugs. These endophytic grasses should be considered for areas where sod webworms are chronic pests.

Severe sod webworm infestation requires chemical control. Adult sod webworm moths do not eat grass, so instead of applying pesticide at the first sight of moth activity, wait a few days until larvae hatch and begin eating. □

Editor's Note: Provided as a service by Rhône-Poulenc, formulator of Chipco brand products, including broad spectrum Sevin. Look for Chinch Bug control in next month's "Chemical Log."