

## Sod Webworms in Turf

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There are numerous species of sod webworms in the United States, however the two most common species that attack cool-season turfgrass are the bluegrass and the larger sod webworm. Sod webworms are highly destructive pests of lawns, and are also important pests of athletic fields, cemeteries, golf courses, and parks. Damage to turf is caused by feeding of the larval, caterpillar or "worm," stage whereby damage shows up as small dead patches of grass among healthy grass. Sod webworm caterpillars are relatively small larvae that damage turf with their chewing mouthparts by clipping-off grass blades and shoots. They live in silk-lined tunnels at or near the soil-thatch interface. These caterpillars are cream to gray or green in color with many dark spots spaced evenly over the body. The adults are small, dull-colored moths that have a large snout and their wings are folded close to their body.



**Sod Webworm Adult**



**Sod Webworm Caterpillar**

**Plants Attacked and Damage** Sod webworms attack and feed on most of the common cool-season turfgrass species including creeping bentgrass, fine-leaf and tall fescues, Kentucky bluegrass, and perennial ryegrass. However, there are improved cultivars of perennial ryegrass that have meaningful resistance. Damage caused by sod webworms typically first appears in late spring with a second generation occurring in mid-late summer. Sod webworm damage usually begins as general thinning, followed by small patches of brown, closely-cut grass. A more thorough look reveals silk-lined tunnels in the soil-thatch interface. Green fecal pellets are commonly found near the entrance of a burrow. As feeding damage intensifies, damage often coalesces into large irregular patches of brown. Sod webworms prefer sunny sites, south-facing slopes, or along sidewalks, where turf is hot and dry. Rarely are shaded turf areas attacked. The most severe damage usually occurs in July and August when temperatures are hot and the grass is experiencing drought stress and is not growing vigorously. Early symptoms of sod webworms may be masked if turf is dormant from drought stress. Consequently, sod webworm damage is often mistaken for heat or drought stress. Turf damaged by sod webworms may be slow to recover without sufficient rainfall or irrigation and fertilization. Symptoms of fungal pathogens such as brown patch and *Fusarium* may also be mistaken for sod webworm damage. Adult sod webworm moths do not cause damage to turf.

**Life Cycle** Sod webworms overwinter as partially-grown larvae in silk-lined tunnels in the thatch or soil. They resume feeding in the spring, grow rapidly, pupate (transform into adults), and emerge. Newly emerged adults then mate and soon after females start laying eggs within one day. Egg laying typically occur at or near dusk and continues for a few hours. Moths usually live for about two weeks, and each female can lay approximately 60 eggs per night and as many as several hundred eggs during her lifetime. Eggs typically hatch in about one week and caterpillars usually complete their development in 4-7 weeks. A complete life cycle (egg to adult) typically requires 6-10 weeks. Most species of sod webworms have two to three generations per year depending on geographic latitude.



**Control** Controls should be directed towards the caterpillars, and not the adult moths. However, moth flight may be used as an indicator for predicting subsequent caterpillar infestations (10-14 days after peak flight) and the optimal time to make a control application. Sod webworms are relatively easy to control with insecticides. Since most sod webworm caterpillars feeding occurs at night, it is best to apply control treatments in the late afternoon or early evening. This management strategy will minimize the potential volatilization and photodegradation, as well as potential exposure to humans and animals. Additionally, liquid sprays often work more effectively than granules. However, when using liquid sprays, it is necessary to withhold irrigation and mowing for at least 24 hours to ensure that insecticide residues remain on the turf foliage to maximize efficacy. There are numerous carbamates, organophosphates, and pyrethroids that are labeled for use against sod webworms. There are also two relatively new types of insecticides, halofenozide (an insect growth regulator) and spinosad (a bacterial based product) that are effective against sod webworm caterpillars. As an alternative to conventional insecticides, so-called "biorational" products can also be used to control sod webworms. Products like entomopathogenic nematodes, azadirachtin or neem (a botanical insecticide), and products containing *Bacillus thuringiensis* (Bt) are labeled for use against sod webworms. These products work best against young larvae, and should be applied before sod webworm caterpillars are large enough to cause damage. Biorational products are sensitive to heat and sunlight, thus they should be applied late in the day.

**For pesticide recommendations:** See UW-Extension Bulletin A3714 or contact your County Extension Agent.

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