LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn

Fall armyworm

Description

The fall armyworm, *Spodoptera frugiperda* J.E. Smith (Lepidoptera: Noctuidae), is a common insect pest in turfgrass throughout Louisiana. Before maturing into adult moths, fall armyworm caterpillars can cause injury to turfgrass. Larvae feed on leaf blades and leave behind thin, bare patches of turfgrass. Larval feeding can devastate a lawn in one night. Although most turfgrasses are susceptible, bermudagrass is commonly targeted by fall armyworms. Turfgrass injury is often observed from June to November.

Identification

In Louisiana, the fall armyworm can complete four or more generations in a year. Females can lay eggs on many different surfaces, including grass blades. Eggs are covered with scales, and larvae emerge from eggs within several days, depending on the temperature. In the summer, larvae can mature into adult moths in less than two weeks but take longer as temperatures cool. Mature larvae are thick and range from tan to green to brownish black in color. They are distinguishable by longitudinal stripes along their bodies and an upside-down Y-marking on the front of the face. Larvae curl into a C-shaped ball when disturbed. They can spread through the lawn by crawling.

Figure 1. Fall armyworm larvae

Figure 2. Fall armyworm adult moth

Figure 3. Fall armyworm turfgrass injury

Indicators of Insect Presence

Fall armyworms feed throughout the day or night but are most active in the morning or after dark.

— Look for bits of chewed leaves or green fecal pellets.

Armyworms' larval stages determine how they injure turfgrass.

— Younger larvae feed on the undersides of leaves, resulting in skeletonized leaves.

— Mature larvae can chew entire leaves.

The presence of birds feeding in the lawn may indicate an infestation.

Adult moths are attracted to lights at night.

Larval populations begin in late spring, and injury can appear from summer to fall.

January	February	March	April	May	June	July	August	September	October	November	December

Injury common Injury occasional Injury rare

Flush Test

Use the flush test to determine whether certain insects are present in the lawn. Mix 1 tablespoon of lemon-scented soap per 1 gallon of water. Slowly pour the soapy water onto healthy grass surrounding the injured areas. Drench a 1-square-foot area with soapy water if wet conditions exist. Drench a 4-square-foot area if dry conditions exist. Then, for five to 10 minutes, closely watch the area to see if insects come to the surface. Repeat as desired in other areas to better determine insect presence.

Cultural Control Practices

One way to reduce insect injury and accelerate turfgrass recovery is to maintain a healthy lawn through proper fertilization and irrigation and regular mowing. Never apply more than 1 pound of nitrogen per 1,000 square feet per application, and always follow soil test recommendations for proper fertility. Irrigate as needed while taking rainfall into account. Mow regularly, but never remove more than one-third of the leaf blade height at one mowing. Thatch can develop over time and may need to be reduced through vertical mowing. Compaction can form more quickly on finer texture soils and in areas where there is high traffic. Dethatching or aeration need to be performed in late spring to summer when the turfgrass is actively growing. Properly maintaining a lawn through these cultural practices promotes dense and vigorous turfgrass and can increase tolerance to insect injury.

Chemical Control Practices

In addition to cultural practices, insecticide applications may be required to achieve effective insect control. Treat with insecticides when fall armyworm injury is excessive or large numbers of larvae are found during the flush test. When using any insecticide, you must follow the manufacturer's labeled directions concerning all application parameters.

For more information regarding insecticides for turfgrass insect pests please reference the Louisiana Insect Pest Management Guide at the LSU AgCenter website, www.lsuagcenter.com.

Insecticide Active Ingredients
acephate
azadirachtin
Bacillus thuringiensis
bifenthrin
chlorantraniprole
clothianidin
halofenozide
carbaryl
spinosad
tau-fluvinate

To submit insect samples for identification send to:

Dr. Dennis Ring
404 Life Sciences, Department of Entomology
Baton Rouge, LA 70803

Need more information? Visit www.lsuagcenter.com to contact your local LSU AgCenter Extension Parish Office.

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Figure 3. Ronald Strahan, Assistant Professor, School of Plant Environmental and Soil Sciences

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