

LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn



Mole cricket

Description

Mole crickets (Orthoptera: Gryllotalpidae) are common turfgrass insect pests. There are three species present in Louisiana: the northern mole cricket (*Neocurtrilla hexadactyla* Perty), the tawny mole cricket (*Scapteriscus vicinus* Scudder) and the southern mole cricket (*Scapteriscus borellii* Giglio-Tos). Mole crickets burrow below the soil surface, breaking up plants and causing roots to dry out, eventually killing the turfgrass. Some species feed on leaves and roots as well. Injured turfgrass appears as broken-up pieces of turf with mounds of soil. Injury typically occurs in mid-to-late summer and again from late winter to early spring.

Identification

In Louisiana, mole crickets can complete one generation each year; however, tawny mole crickets may have more than one generation per year. After overwintering deep in the soil, adults emerge for mating in late winter. Females lay eggs in the soil, and nymphs emerge about two to three weeks later. Nymphs are most active during the summer and go through several nymphal stages before maturing into adults. As temperatures cool, nymphs move deeper into the soil for overwintering. Mole crickets have golden-brown, hardened bodies with large, flattened, oval-shaped heads and black, beady eyes. They have two claw-like forelegs adapted for digging. Nymphs resemble adults but are wingless. However, adults are larger in size and have wings.



Figure 1. Mole cricket nymphs and adult



Figure 2. Mole cricket burrows



Figure 3. Mole cricket turfgrass injury

Indicators of Insect Presence

Nymphs and adults typically reside in the soil and are active at night.

- Pull back injured turfgrass and look for mole crickets hiding in their tunnels during the day.
- In the spring, prior to mating, adults can be seen flying in large numbers at night.

Turfgrass feels spongy and roots may be destroyed, rendering the turfgrass more susceptible to environmental stresses.

- Look for mounds of soil piled on top of the turfgrass.
- Tunnels can be more than 20 feet in length.

Most injury occurs in late summer, fall and early spring.

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. In wet conditions drench a 1-square-foot area with soapy water. In dry conditions drench a 4-square-foot area. 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 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, 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. Mole crickets are attracted to light, so in the spring consider turning off outdoor lights for two hours beginning at dusk to prevent attraction of mole crickets to the lawn.

Chemical Control Practices

In addition to cultural practices, insecticide applications may be required to achieve effective insect control. Treat with insecticides when mole cricket injury is excessive. 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
bifenthrin
deltamethrin
dinotefuran
imidacloprid
imidacloprid + bifenthrin
indoxacarb
lambda-cyhalothrin
thiamethoxam

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 1. John C. French Sr., Retired, Universities: Auburn, GA, Clemson and U of MO, Bugwood.org
Figures 2 & 3. Ronald Strahan, Associate Professor, School of Plant, Environmental and Soil Sciences

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