

LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn



Ground pearl

Description

Ground pearls, *Margarodes spp.* (Homoptera: Coccidae), are common turfgrass insect pests in Louisiana. Nymphs and female adults injure turfgrass by sucking plant juices from the roots. Injury appears as irregular scattered patches of weakened, thin turfgrass, which turns yellow, then brown and eventually dies. Injury is typically observed during hot, dry periods in the summer. Turfgrass rarely grows back in injured areas. Hybrid bermudagrass and centipedegrass are most susceptible.

Identification

If conditions are favorable in Louisiana, ground pearls can complete one generation in a year. Nymphs that overwinter in the soil as cysts can emerge in the spring and mature to adults. In early summer, female adults lay eggs with nymphs emerging about two weeks later. Nymphs attach themselves to roots in the soil using their mouthparts and begin forming cysts around their bodies. In these cysts they will mature into adults. Nymph cysts resemble a very small pearl and range from white to yellow in color. Adults females are small, soft-bodied and pink in color. They are about one-sixteenth of an inch in length. Male adults are gnat-like and rarely seen. If conditions are unfavorable, ground pearl nymphs can live in the soil as cysts for several years before completing their life cycle.



Figure 1. Ground pearls

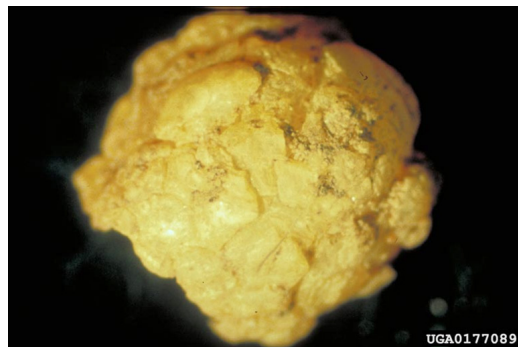


Figure 2. Ground pearl nymph in cyst

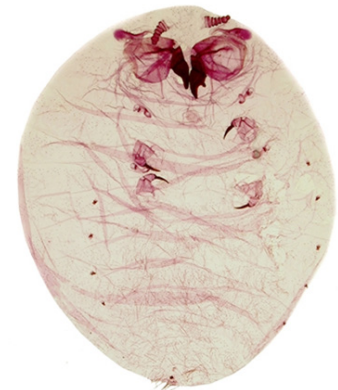


Figure 3. Ground pearl female adult

Indicators of Insect Presence

All life stages occur in the soil. Therefore, ground pearls are very difficult to observe.

- Removing an area of turfgrass and digging up soil is the only option for observing infestations.

Nymphs feed on roots and form small “pearls,” or cysts, on roots.

- Look for cysts in the soil around roots to a depth of 6 inches.

- Cysts will be most abundant close to the boundary between injured and healthy turf.

Injury appears in irregular scattered patches of thinning yellow or brown turfgrass.

Most injury occurs during drought periods and can eventually lead to turfgrass death.

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

Because of the soil depth at which ground pearls are found, insecticide applications are typically ineffective. The use of insecticides when not needed may result in killing any naturally occurring enemies of ground pearls. Keeping turfgrass healthy is very important. Healthy turfgrass can better withstand ground pearl infestation, but stressed turfgrass is more susceptible to ground pearl injury and may be killed.

It is important to note that ground pearls can exist in the soil for long periods of time — sometimes for years. Therefore, seeding, sprigging or sodding an area of turfgrass that has died from ground pearl injury can result in the new turfgrass being negatively affected by the existing ground pearl infestation.

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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