

LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn



Large patch

Description

Large patch, formerly known as brown patch, is a serious disease of turfgrass in Louisiana. The disease is caused by the soilborne fungus *Rhizoctonia solani*, and symptoms typically appear as large circular or irregular patches of yellow to brown turfgrass. The pathogen does not usually kill the grass but causes a rot at the base of the leaf sheaths, which results in the separation of leaves from the crown of the plant. Large patch develops rapidly under cooler temperatures and wet conditions and is most often observed in Louisiana during the spring and fall. St. Augustine grass, centipedegrass, bermudagrass, seashore paspalum, zoysiagrass and cool-season turfgrasses used for overseeding are susceptible to this disease.



Circular patches of large patch in St. Augustinegrass.

Optimal Environmental Conditions

- Large patch develops rapidly when optimal nighttime temperatures range from 60 to 75 degrees Fahrenheit and daytime temperatures do not exceed 85-90 degrees Fahrenheit. However, the disease can still develop when conditions are less than optimal.
- Large patch affects turfgrasses growing in areas surrounded by trees, shrubs and fences, which hinder air movement and prevent the grass from drying rapidly after rain or irrigation.
- Avoid late-afternoon watering. Irrigate lawns early in the morning to allow the turfgrass leaves to dry.
- Excessive nitrogen applications or applications made during suitable environmental conditions for large patch should be avoided.



Large patch in St. Augustinegrass lawn.

Signs and Symptoms

- Medium to large irregularly shaped or circle-shaped patches form. Patches can become large and quite extensive if not treated.
- St. Augustine grass exhibits a yellowish cast at the leading edge of the patch, whereas centipedegrass has a reddish cast.
- Fungus infects the leaf sheath near the soil. Leaves can easily be pulled off the stem. Fungus does not affect the roots.
- Turfgrass appears thinned and sunken. Look for an increased presence of weeds within the patches.

Cultural Control Practices

One way to reduce disease incidence and accelerate turfgrass recovery is to maintain a healthy lawn through balanced fertilization and irrigation and regular mowing. Follow these simple guidelines:

- Never apply more than 1 pound of nitrogen per 1,000 square feet for an application, and always follow soil test recommendations for proper fertility. Large patch symptoms are exacerbated with excess nitrogen application. Slow-release fertilizers with a balanced amount of nitrogen and potassium are recommended.
- Irrigate lawns as early as possible in the morning while taking rainfall into account. Water deeply and as infrequently as possible without causing drought stress.
- Improve internal soil drainage and reduce compaction by aerating the lawn regularly.
- Minimize the amount of shade and improve air circulation over the lawn.
- Raising mowing height will help the turfgrass to recover.
- Do not mow lawns when wet. Mow diseased areas last because disease may spread to healthy areas with infected grass clippings.
- Washing lawn mowers to remove grass clippings may help reduce the spread of the disease.
- Excessive thatch can negatively affect turfgrass growth and provide a suitable environment for *R. solani*. Dethatching may be necessary to improve turfgrass growth.

Chemical Control Practices

In addition to cultural practices, fungicide applications may be required to achieve effective disease control. Always check fungicides labels for site application restrictions. When selecting products, homeowners must purchase fungicides that are labelled and recommended for residential lawns. **When using fungicides, always remember to follow the label rates and frequency of application.**

Fungicides used to manage large patch are sold under various trade names. They contain these active ingredients.

Fungicide Active Ingredients
azoxystrobin
captan
maneb
mancozeb
myclobutanil
propiconazole
tebiconazole
thiophanate-methyl

To submit turfgrass samples for disease identification, send to the Plant Diagnostic Center.

For information on sample collection and submission guidelines visit:

www.lsuagcenter.com/PlantDiagnostics

Plant Diagnostic Center
302 Life Sciences Building
LSU Campus
Baton Rouge, LA 70803

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

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