

# SCSL Digital Collections

## Brown Patch and Large Patch Diseases of Lawns

Item Type	Text
Rights	Copyright status determined to be in the public domain on April 27, 2020 by United States Supreme Court ruling (Georgia et al., Petitioners v. Public.Resource.Org, Inc. : 590 U.S. __ (2020))
Download date	2024-10-08 12:21:49
Link to Item	<a href="https://dc.statelibrary.sc.gov/handle/10827/50209">https://dc.statelibrary.sc.gov/handle/10827/50209</a>

## **Brown Patch & Large Patch Diseases of Lawns**

### **Introduction**

The beauty of a lawn can be quickly destroyed by brown patch or large patch, which are serious fungal diseases (each caused by different strains of *Rhizoctonia solani*) that can affect all South Carolina lawn grasses. Disease can develop rapidly when daytime temperatures are warm (75 to 90 °F) and humid, nighttime temperatures are above 60 °F, and there is an extended period of leaf wetness. Generally symptoms of brown patch begin on cool-season grasses (tall fescue, ryegrass, bluegrass and bentgrass) during the late spring. It may also occur on these grasses during warmer periods of the winter months. Warm-season grasses (St. Augustinegrass, zoysiagrass, Bermudagrass and centipedegrass) most commonly are affected by large patch (formerly also known as brown patch) during the early spring and late fall.

### **Symptoms**

Symptoms of brown and large patch diseases may vary greatly with the type of grass and soil conditions. The diseases usually cause thinned patches of light brown grass that are roughly circular in shape. These areas range in diameter from a few inches to several feet. Often the center of the patch will recover, resulting in a doughnut-shaped pattern.

When disease conditions are favorable, large areas of the lawn may be uniformly thinned and eventually killed with no circular patch being evident. This type of pattern is commonly seen on infected St. Augustinegrass grown in shady, moist locations.

Close inspection of cool-season grass blades reveals small, irregular, tan leaf spots with dark-brown

borders. Bentgrass may not show individual lesions, but leaves will turn brown and shrivel. Infected warm-season grasses rarely have leaf spots but instead have rotted leaf sheaths near the soil surface.

### **Grasses Commonly Affected**

All types of warm-season or cool-season lawn grasses grown in South Carolina can be affected by large patch or brown patch, respectively. There are no turfgrass species entirely resistant to these diseases currently available. Brown patch is the most common and important disease of tall fescue in the Southeast. In most cases affected areas are able to recover, but tall fescue lawns less than a year old can be completely killed. Large patch is the most common disease affecting centipedegrass.

### **Prevention & Treatment**

The best way to prevent brown patch or large patch in the home lawn is by following good lawn care practices. This is much easier and less expensive than the use of fungicides and can be very effective.

- Avoid high rates of nitrogen fertilizer on cool-season grasses in the late spring and summer. Avoid high nitrogen rates on warm-season grasses in mid to late fall or in early spring. The disease-causing fungus readily attacks the lush growth of grass which nitrogen promotes. Avoid fast-release forms of nitrogen fertilizer.
- Irrigate grass only when needed and to a depth of 4 to 6 inches (generally 1 inch of irrigation water per week), but do not subject the lawn to drought conditions. Water early in the morning. This disease can spread fast when free moisture is present, especially greater than 10 hours.

- Avoid spreading the disease to other areas. Remove clippings if the weather is warm and moist to prevent spread to other areas during mowing.
- Keep lawns mowed on a regular basis to the proper height for the grass species you are growing. Lower than optimum mowing height can increase disease severity.
- Provide good drainage for both surface and subsurface areas. Correct soil compaction by core aeration. Prevent excessive thatch buildup.
- Have the soil tested, and apply lime according to test recommendations. Disease may be more severe if the soil pH is less than 6.0.

Fungicides can be difficult to rely upon for controlling brown patch and large patch in the home lawn, but regular applications can vastly improve appearance. A good "rule of thumb" to follow on either cool- or warm-season grasses is to initiate fungicide sprays when nighttime low temperatures reach 60 °F. Stop applications when nighttime lows are forecast to be below 60 °F for five consecutive days. Typically, applications are made at 14- to 28-day intervals, depending upon the fungicide. If disease is severe enough to warrant chemical control, select one of the following fungicides listed in Table 1. It will help in disease control to alternate fungicides used with subsequent applications to prevent a buildup of resistance to a fungicide. Slightly better control may be obtained by a liquid fungicide application rather than by granular application. Granular fungicides must be irrigated after application (follow label directions).

**Table 1. Fungicides for Control of Brown Patch & Large Patch on Home Lawns**

<b>Fungicides</b>	<b>Examples of Brands</b>	<b>Form of Product Available</b>
Azoxystrobin <sup>1</sup>	Heritage G Maxide Dual Action Disease Killer (discontinued, but may be purchased on internet)	Granules 0.31% Granules 0.31%
Myclobutanil	Spectracide Immunox Lawn Disease Control Spectracide Immunox Lawn Disease Control RTS <sup>2</sup> Ferti-lome F-Stop Lawn Fungicide Lebanon Eagle 0.62G Specialty Fungicide	Granules 0.39% RTS <sup>2</sup> 2.00% Granules 0.39% Granules 0.62%
Propiconazole	Ferti-lome Liquid Systemic Fungicide II Bonide Infuse Systemic Disease Control RTS <sup>2</sup> Bayer Advanced Fungus Control for Lawns	RTS <sup>2</sup> 1.55% RTS <sup>2</sup> 1.55% Granules 0.51% & RTS <sup>2</sup> 2.42%
Thiophanate methyl <sup>1</sup>	Scotts Lawn Fungus Control Lesco T-Storm 2G Systemic Fungicide for Turf & Ornamentals Bonide Infuse Systemic Disease Control (NOT the same active ingredient as in Bonide Infuse RTS <sup>2</sup> )	Granules 2.30% Granules 2.08%  Granules 2.08%
Triadimefon	Lebanon Turf Fungicide contains 1% Bayleton	Granules 1.00%

<sup>1</sup> Resistance to the fungicide by the brown and large patch fungi will develop from continued exclusive use of either azoxystrobin or thiophanate methyl. Always alternate either of these fungicides with one of the others. Follow directions on product label for use. In general, azoxystrobin will control brown and large patch for 28 days. The other four fungicides will control the diseases for 14 days. Irrigate according to label directions after application of granular products.

<sup>2</sup> RTS = Ready to Spray (a hose-end sprayer)

Landscape professionals should consult the [2012 Pest Control Guidelines for Professional Turfgrass Managers](#) for recommendations.

---

Pesticides updated by Joey Williamson, HGIC Horticulture Extension Agent, Clemson University, 01/13. Revised by Joey Williamson, HGIC Horticulture Extension Agent, Clemson University, 03/11. Originally prepared by Nancy Doubrava, HGIC Information Specialist, and James H. Blake, Extension Plant Pathologist, Clemson University. 06/99.

---

This information is supplied with the understanding that no discrimination is intended and no endorsement by the Clemson University Cooperative Extension Service is implied. All recommendations are for South Carolina conditions and may not apply to other areas. Use pesticides only according to the directions on the label. All recommendations for pesticide use are for South Carolina only and were legal at the time of publication, but the status of registration and use patterns are subject to change by action of state and federal regulatory agencies. Follow all directions, precautions and restrictions that are listed.