

Rhizoctonia Brown Patch

Turf

Pest
Fact
Sheet **44**

Introduction

Rhizoctonia brown patch is a common fungal disease of all commonly cultivated lawngrasses. It develops most readily at temperatures between 80-85°F. In addition to ideal temperatures and humid weather, heavy applications of nitrogen fertilizer favor disease development. Brown patch is characterized by roughly circular areas which may be a few inches to several feet in diameter.

Description

On close-cut grass, such as golf and bowling greens, Rhizoctonia brown patch appears as light brown irregularly-shaped areas ranging from a few inches up to 2 feet in diameter. The coloration of these patches is at first a purplish green, but they rapidly fade to light brown as the leaves dry out.

Where high mowing is practiced, i.e., on home lawns, park lawns, and golf course fairways, the diseased areas range from 2 feet to 50 feet in diameter. These patches of light brown grass are more or less circular in outline and usually are closely oppressed to the soil surface, creating a sunken or "pocket" effect.

The chief distinguishing feature of Rhizoctonia brown patch appears during periods of warm, humid weather, when dark, purplish "smoke rings", 1/2 to 2" wide, may border the diseased areas. The "smoke rings" are more pronounced in the hours of early morning, usually fading by the middle of the day.

Disease Cycle

The causal fungus survives from year to year in the form of resting structures within infected grass tissue or on the surface of the soil. The fungus is also capable of existing as a soil inhabitant for long periods in the absence of susceptible grass. Growth of the pathogen from the winter resting stage occurs when air temperatures reach 64°F.

Fungus penetration of the leaves may take place when the average daily air temperature reaches 73°F. Invasion of the leaf tissue occurs through leaf pores and wounds produced by mowing. Infection and disease development are slow at this temperature. However, when the air temperatures reach 80-85°F, particularly at 100% relative humidity, optimum conditions for infection are present and the fungus may completely blight a large area of turf within a period of 6 to 8 hours. When the air temperature reaches 90°F, parasitic activity of the fungus stops.

Although the disease may occur at low humidities, rainy weather and a saturated atmosphere (100%

relative humidity) greatly speed disease development. Free moisture must be present on the leaves for the fungus to spread rapidly to healthy plants.

Control

Fungicide applications can be made from July to September. Turfgrass species and varieties show different levels of susceptibility to Rhizoctonia brown patch. A preventive fungicide program is necessary to effectively control this disease on the highly susceptible species. Apply the first spray immediately after the first day the daytime temperatures are 80°F or above and condition of high humidity prevail. Avoid high nitrogen fertility. Do not mow wet turf. Reduce thatch if thicker than 2". Water early in the day.

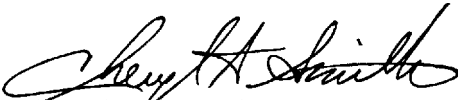
Registered fungicides include: Daconil, Dithane, Fungo, Rubigan, Chipco 26019, Maneb, PCNB, Banner, Bayleton, Twosome, Cleary's 3336, Thiphane methyl.

Summary

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| 1. Causal Agent: | Fungus |
| 2. Plant Parts Attacked: | Leaf tissue |
| 3. Major Symptoms: | Circular brown patches bordered by dark "smoke rings" |
| 4. First Noticeable Symptoms: | Mid to late summer following hot, humid weather conditions with prolonged minimum night temperatures above 65°F |
| 5. Spray Program: | Preventive fungicide sprays |

Stop! Read the label on every pesticide container each time before using the material. Pesticides must be applied only as directed on the label to be in compliance with the law. All pesticides listed in this publication are contingent upon continued registration. Contact the Division of Pesticide Control at (603) 271-3550 to check registration status. Dispose of empty containers safely, according to N.H. regulations.


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