UNIVERSITY of NEW HAMPSHIRE
COOPERATIVE EXTENSION

Turf

Rhizoctonia Brown Patch

Pest Fact Sheet 44

Introduction
Rhizoctonia brown patch is a common fungal disease of all turf grasses. It develops most readily at temperatures between 80-85^{0}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 greens, Rhizoctonia brown patch appears as light brown irregularly-shaped areas ranging from a few inches up to 2 feet in diameter. The color of these patches appears first as a purplish-green which fades rapidly to light brown as the leaves dry out.

On taller turf (e.g., 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. The areas of dead grass may create 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 early morning, usually fading by the middle of the day. "Smoke rings" are more common on close-cut grass.

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 living in the soil for long periods in the absence of susceptible grass.

Air temperatures of 80-85^{0}F and 100% relative humidity provide optimum conditions for infection – severe damage can occur when humidity levels are high and night temperatures are above 68^{0}F. Under these conditions, the fungus may completely blight a large area of turf within a period of 6 to 8 hours. When the air temperature reaches 90^{0}F, parasitic activity of the fungus stops.

Cultural control
Avoid high nitrogen fertility. Do not mow wet turf. Water early in the day. Remove thatch if thicker than 2 inches.

Chemical control
Consult your county Extension Educator (see county office telephone listing on reverse side) for specific pesticide recommendations.

Summary

Causal agent	Fungus
Plant parts attacked	Leaf tissue
Major symptoms	Circular brown patches bordered by dark "smoke rings"
First noticeable Symptoms	Mid- to late summer following hot, humid weather conditions with prolonged minimum night temperatures above 65^0F
Cultural control	Avoid high nitrogen fertility. Don't mow wet turf. Water early in the day. Remove thatch if thicker than 2".
Spray Program	Preventive fungicide sprays

UNH Cooperative Extension County Office Telephone Numbers

Belknap (603) 527-5475	**Carroll** (603) 539-3331	**Cheshire** (603) 352-4550	**Coos** (603) 788-4961	**Grafton** (603) 787-6944
Hillsborough Goffstown (603) 641-6060	**Merrimack** (603) 796-2151	**Rockingham** Brentwood, NH 03833 (603) 679-5616	**Strafford** (603) 749-4445	**Sullivan** (603) 863-9200

Stop! *It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. If unsure of registration staus of a particular pesticide product, contact the NH Division of Pesticide Control at (603) 271-3550. Store pesticides in their original containers in a locked cabinet or shed away from food. Dispose of unused pesticides or empty containers safely, according to NH regulations. If you suspect pesticide poisoning, call the New Hampshire Poison Control Center at 1-800-562-8236.*

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