

HOME GROUNDS FACT SHEET

CORNELL

Cooperative Extension
Nassau County



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Rhizoctonia Disease on Turfgrass

Rhizoctonia, known as brown patch in warm weather and yellow patch in cool weather, is one of the first diseases ever identified in turfgrass, and affects virtually all common turf species on Long Island. Brown patch and yellow patch are caused by two different species of Rhizoctonia fungus but symptoms are similar except that they occur at different times of the year and yellow patch may not have any leaf lesions on warm or cool season grasses. Recently we have seen an increase of both forms which probably is weather related.

What to Look For

You won't be able to see the fungus with your naked eye but you will be able to see the lesions, which are brownish and generally on the side of the leaf blade. You may see one or more of the following:

- tip blighting which can last for 1-3 weeks,
- a light brown circular patch, or on closely cut turf a brownish or yellowish ring with a darker border.

These are especially apparent in the early morning.

Kentucky bluegrass may have reddish or whitish spots with dark margins similar to dollar spot yet the lesion will not stretch across the entire blade. In warm weather the size of the patch may increase rapidly over a day or two.

On zoysia grass, rhizoctonia can cause loss of grass in large patches, especially when thatch builds up. Rhizoctonia most often attacks zoysia in spring when the grass breaks dormancy or in autumn just as the grass is becoming dormant. This accounts for samples brought in that appear to have "died" over the winter. On warm season grasses like zoysia you may see leaf sheath and basal rots. Affected plants are easily pulled from their sheaths.

Two to eight weeks after breaking dormancy, the zoysia lawn will begin to have patches with reduced numbers of living tillers and roots will be discolored but not rotted. Patches usually occur in the same place annually. Infected tillers may become orange or yellow beginning with older leaves and moving into younger leaves.

When Do Symptoms Appear?

If you want to predict when it's likely you'll see the warm season form, you can do so with about 81% accuracy if the following parameters are in effect: relative humidity 95% for 10 hours, rainfall of 1" within 36 hours, an average air temp of 68 (minimum 59), and an average soil temp of 70 (minimum 64). Generally the window for this is late spring through late summer.

Control Strategies

Root health and turf density can be seriously affected by Rhizoctonia, which can destroy roots and crowns. The best fungicide for the warm season variety is a cool night—below 59°F. Other strategies include improving drainage, reducing compaction, **not** over fertilizing, avoiding excess soluble nitrogen and by irrigating deeply and infrequently. Also helpful is mowing early in the morning to increase speed of leaf drying, reducing thatch and using organic amendments such as composted poultry litter, compost, and plant and animal meals all of which can stimulate natural antagonists of Rhizoctonia.

There is a slight reduction in Rhizoctonia with the fall use of slow release fertilizers. Early spring fertilization, something we **do not recommend**, seems to increase the disease during its earliest manifestation. Research has proven that returning grass clippings does not significantly increase the incidence of disease.

Yellow patch is seen from autumn through spring and is manifested as light brown, reddish brown or yellow patches or rings. Leaf lesions, as previously mentioned, are often absent.

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