



Turfgrass Diseases
Brown Patch and Take-All Root Rot Diseases on
St. Augustinegrass Lawns

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Rhizoctonia brown patch and the Take-All Root Rot fungus are common problems on St. Augustinegrass lawns in Texas. The activity of both diseases is influenced by weather conditions and by turfgrass management practices that encourage disease activities. Rhizoctonia blight (aka brown patch) is active in fall and spring, but is primarily a problem in the fall. Take-All Root Rot (TARR) disease on St Augustinegrass is not so familiar to homeowners but has increasingly appeared on lawns during the past decade. The TARR disease is also active during the transition seasons when soil temperatures are in the 60 to 65 degree range.

Rhizoctonia blight (Brown Patch):

The fungi causing Rhizoctonia blight primarily attacks the base of the leaf blade causing roughly circular patches with symptoms of yellowing and wilting turf to appear. An easy test to determine the presence of this disease is to pull on affected leaf blades in areas of lawns that display symptoms and determine if the leaves are diseased. When Rhizoctonia blight is active, leaf blades can easily be pulled away from the St. Augustinegrass stolons and display a basal rot of the leaf sheath at the point of attachment to the stolons.

Brown patch symptoms usually appear as circular patterns on lawns when night-time temperatures drop below 70 and soil moisture levels are high. Very rarely will brown patch actually kill the affected turfgrass plants. The disease generally only attacks the leaf blades and the stems (stolons) remain green and roots will remain white and active.

Take-All Root Rot:

The fungi causing Take-All Root Rot initially attacks the root system of the affected turfgrass plants and eventually works its way into the stolons and crown (growing points) of the plant. Symptoms for this disease include: stems (stolons) that pull up from the ground easily, similar to grub damage, brown to black roots, and small dark spots on the stems. Unlike white grubworm damage where roots are cut off by insect chewing, the TARR disease causes roots to remain attached to stolons and become withered and brown.

Under a microscope, the roots and runners reveal dark fungal strands with hyphopodia (loped, fungal attachments) which anchor the fungus onto its host plant. These dark fungal strands can be observed using a hand lens to examine stolons in affected areas of turf.

Unlike Brown patch, the Take-All Root Rot fungi can commonly destroy large areas of turfgrass. Patches of Take-All Root Rot are usually irregular in shape and can involve large areas of turf. Although this disease is primarily active when soil temperatures are cool, effects of the fungus activity can extend into the summer period where turf becomes yellow, thinned and weak growing during the hot periods of the year.

Disease Prevention:

While both of these diseases attack most turfgrasses, they are primarily a problem on St. Augustinegrass. The real key to controlling these two diseases, especially Take-All Root Rot, is to prevent stress in the turfgrass plants. Common stress problems found in turfgrass sites include: Excess shade; Thatch; Soil compaction; Poor drainage; Improper use of herbicides; Over fertilization; Excess supplemental irrigation.

Cultural Controls:

Management practices include:

Aerate to prevent soil compaction problems.

Avoid excess stimulation of excess top growth with too much nitrogen fertilizer.

Water deeply and infrequently.

Use herbicides carefully and sparingly.

Monitor grass on regular basis.

Provide for good drainage.

Topdressing with peat: For Take-All Root Rot Control, research at the Texas A&M Research Experiment Station in Dallas showed that topdressing at a rate of 1 bale of peat moss (approximately 3.8 cu. ft.) per 1000 sq. ft. of turf area was sufficient to protect turf for 2 years. The acidity in the peat moss (pH = 4.4) was shown to suppress the fungi causing the take-all root rot.

Fungicide Control:

Take All Root Rot (timing of application critical) -

- Spectracide immunox
- Ferti-lome Systemic or Ortho Lawn Disease Control (Propiconazole)

Brown Patch –

- Turfcide (PCNB)
- Spectracide immunox
- Ferti-lome Systemic or Ortho Lawn Disease Control (Propiconazole)
- Hi-Yield Maneb (Mancozeb)
- Green Light Broad Spectrum (Bayleton)
- Fung-Away

Follow all label directions and water in chemicals when label directs.

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