

# Turf Grass TRENDS



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Rhizoctonia diseases

## Brown patch and its cousins

by Christopher Sann

**R**hizoctonia diseases are perhaps the most studied of all of the diseases that produce symptoms of managed turfgrass. Managers have been dealing with the effects of *Rhizoctonia* infestations for almost as long as they have been managing turfgrass.

The symptoms were first described in scientific literature in 1913 and the pathogen, *Rhizoctonia solani* Kuhn, was first identified in 1914 by C.D. Piper, a research scientist with the USDA and also director of the USGA Greens Section. In 1916-1917 Piper conducted a study that proved that *Rhizoctonia solani* was the pathogen for what had become known as "large brown patch." In 1917, Bordeaux mix was the first fungicide found to be effective at controlling *Rhizoctonia solani* and by the early 1920's was in wide use on golf courses.

### Brown patch and its cousins

Until the early 1980's, *Rhizoctonia solani* was considered to be the only member of a genus of several dozen fungal species that caused brown patch symptoms on turf, but since then at least three other *Rhizoctonia* species have been identified that cause brown patch on as many as 13 different turfgrass species. These additional



Rhizoctonia cerealis or winter brown patch.

Photo provided by Dr. Eric B. Nelson, Cornell University

*Rhizoctonia* species are *Rhizoctonia zeae*, *R. oryzae*, and *R. cerealis* (See photo above).

Further studies have more correctly classified these *Rhizoctonia* species as properly belonging to several other different genera when the teleomorph, or sexual stages, were found and identified. For ease of this discussion and familiarity with the common name, *Rhizoctonia*, will be used.

Below are the accepted or popular names and the correct taxonomic names:

Popular name	Taxonomic name
<i>Rhizoctonia solani</i>	<i>Thanatephorus cucumeris</i>
<i>R. zeae</i>	<i>Waitea circinata</i>
<i>R. oryzae</i>	<i>Waitea circinata</i>
<i>R. cerealis</i>	<i>Epulorhiza</i> spp.

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