AN INDEPENDENT NEWSLETTER FOR COOL SEASON TURF MANAGERS

Turf Grass TRENDS

Premier Issue

Pythium root rot

A growing problem on high maintenance turf

by Dr. Eric B. Nelson

IN RECENT YEARS, Pythium-related root and crown rot damage to highly managed turfgrasses has become increasingly recognized as a major, nationwide problem. The contributing causes are easier to identify than to actually correct, because:

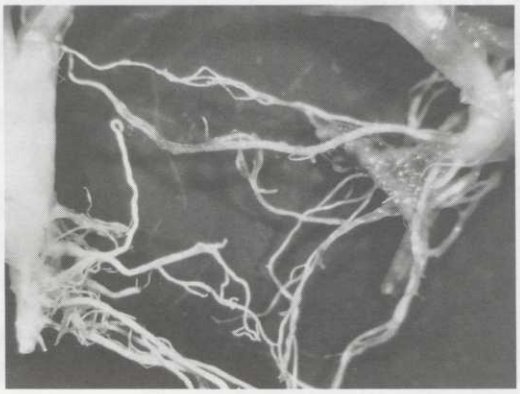
- PYTHIUM-CAUSED DISEASE is difficult to diagnose on the basis of simple field observations.
- OUR PRESENT KNOWLEDGE about specific Pythium species is still quite limited.
- THERE ARE SEASONAL, weather-related conditions and site-specific variables that must be sorted through.

However, even given these difficulties and limitations, there are a number of corrective actions that turf managers can take today, and promising additional remedies are under development. The first step is to get a clearer understanding of the disease.

Disease effects and affected grasses

CHARACTERIZED by both root and crown decay, this disease complex leads to a substantial thinning, and the possible loss of, established turfgrass stands. Although most frequently associated with established highly maintained bentgrass/annual bluegrass putting greens on golf courses, it is also widespread on highly managed home lawns and newly seeded areas as well.

At eye level, damage caused by Pythiums can be obvious and extensive, but the problem has grown because of a host of complexities that affect both the diagnosis of the disease and effective treatment of it.



Pythium damaged root and crown. At first, Pythium damage may be evident in the crown, but not in the roots. In severe cases, however, the root systems are greatly reduced in volume and vigor. They may also appear discolored. The crowns of infected plants may also appear water-soaked and discolored.

Although most turfgrass species are susceptible to Pythium root rot damage, they vary in their tolerance to infection. Bluegrasses *(Poa annua* and *P. pratensis),* ryegrasses, and bentgrasses are species that are particularly susceptible to infection.

Conditions and symptoms vary

EARLY SYMPTOMS OF PYTHIUM ROT may be visible immediately after snow melt, but are more common in the spring (March–May). Symptoms, however, may be evident at any time throughout the growing season, and disease activity may continue into late autumn. Observations of the disease in the Northeast indicate that particular sites are more prone to Pythium root rot damage in early spring and late autumn, while other areas experience the problem primarily in warmer parts of the season—with little or no damage at other

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