

Turf Grass TRENDS



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An overview

Pythium diseases of turfgrasses

by Dr. Eric B. Nelson

Of all the pathogens causing diseases on turfgrasses, the *Pythium* species are perhaps the most versatile. They cause diseases on nearly all the managed turfgrass species, affecting all the organs of those turfgrass plants. They infect both young and mature turfgrass stands under an extremely wide range of temperatures. Furthermore, these pathogens can cause significant problems on low maintenance as well as on high maintenance turf.

One of the characteristics of *Pythium* infes-

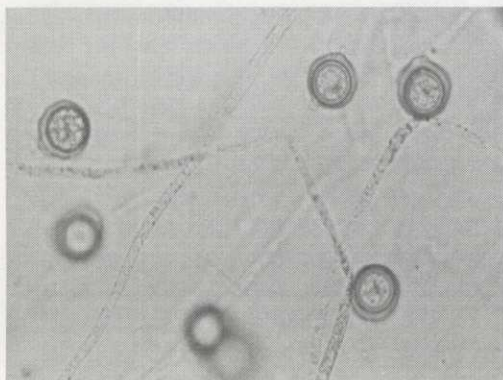


Photo provided by Dr. Eric B. Nelson, Cornell University

Typical oospores of a *Pythium* species.

tations of turfgrasses, is that the symptoms the pathogens cause can appear quite suddenly, whether that symptom be a root-rotting disease under snow cover or foliar blighting disease under hot, humid conditions.

This rapid onset of symptoms, sometimes within less than 24 hours, combined with the fact that there are only a limited number of fungicides and control strategies that are effective against these pathogens, have made *Pythium* diseases the dread of many turfgrass managers. Regardless of the conditions under which the many *Pythium* diseases develop, the explosive

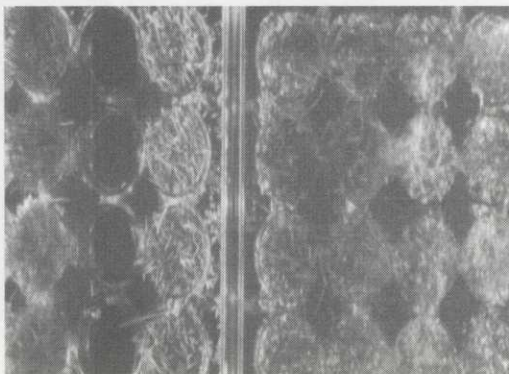


Photo provided by Dr. Eric B. Nelson, Cornell University

Damping-off of creeping bentgrass seedlings.

potential for growth of these diseases often makes the correct diagnosis and implementation of appropriate management strategies difficult, but extremely important.

Versatility characterizes *Pythium* spores

The versatility of these pathogens can be partially attributed to the diversity of spores produced

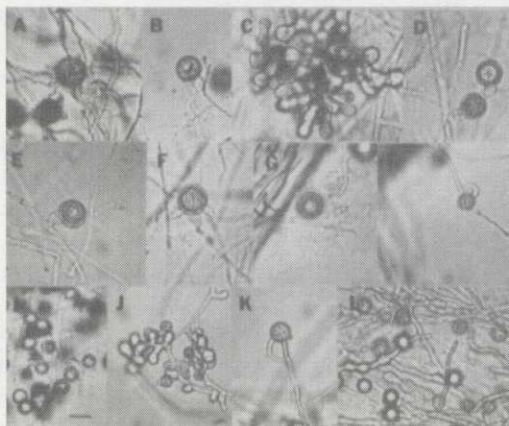


Photo provided by Dr. Eric B. Nelson, Cornell University

Oospores and sporangia of *Pythium* species:

A,B,C = *P. graminicola* H,I,J = *P. torulosum*
D,E = *P. aphanidermatum* K,L = *P. vanterpoolii*
F,G = *P. aristosporum*

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