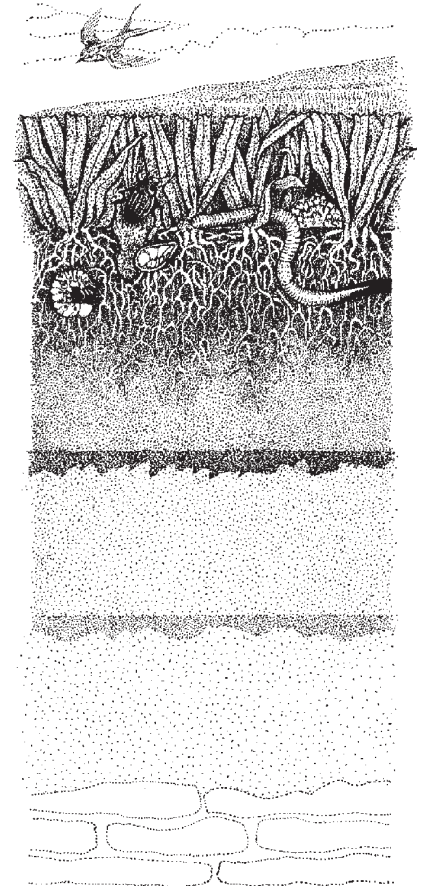


# CUTT

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## Biology And Control Of Pythium Root And Crown Rot Diseases

**O**ver the past few years, Pythium root and crown rots (PRR) have become more of a problem on highly managed turfgrasses nationwide. The disease complex is characterized by a root and crown decay leading to a thinning or eventual loss of an established turfgrass stand. Although the occurrence of this disease has been most frequently associated with established, highly maintained bentgrass/annual bluegrass putting greens on golf courses, it can also be a serious problem on highly managed home lawns and newly seeded areas. The disease can be quite damaging to many of the commonly planted turfgrass species, but it is particularly severe on ryegrasses, bentgrasses and bluegrasses (*Poa annua* and *P. pratensis*). ■

While Pythium species can be readily isolated from healthy as well as diseased turfgrass roots and crowns, a number of different Pythium species associated with turfgrasses have been shown to be pathogenic. Some strains of *Pythium aphanidermatum*, *P. graminicola*, *P. myriotylum*, *P. aristosporum*, *P. periplocum*, *P. vanterpoolii* and *P. arrhenomanes* have been shown to be pathogenic to turfgrass roots under warm (75-85° F) conditions, while strains of *P. graminicola*, *P. vanterpoolii*, *P. torulosum*, *P. aphanidermatum* and *P. aristosporum* have been shown to be pathogenic under cool (45-60° F) conditions. All species require prolonged wet periods to induce severe disease development.

Early symptoms of PRR may be visible in the spring immediately after snow melt, but are most common in the early spring (Mar - May). Symptoms, however, may be evident at any time throughout the growing season and disease activity may continue into late autumn. From observations of the disease in the Northeastern U.S. over the past several years, it appears that particular sites are more prone to PRR damage in early spring and late autumn, while other areas experience the problem primarily in warmer parts of the season. This is perhaps related not only to variation in the native complex of pathogenic Pythium species

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