

***Pythium* root rot**  
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Many golf course putting greens across Nebraska have symptoms of a relatively new root disease, *Pythium* root rot. This disease, common in sand-based root zones, resembles early on-set of drought, with the turf sunken, thinning and discolored. The grass is generally unresponsive to fertilizer inputs. While appropriate temperatures are important for disease development, overly wet soils appear to be the single most important factor for root infection by *Pythium* species. As a result, cultural practices that improve surface drainage and limit overly wet soils (regular cultivation/venting, sand topdressing, and judicious irrigation) will increase the resiliency of turf, and can limit disease severity. Researchers studying this disease, routinely apply light rates of irrigation to encourage this disease. Make sure your turf is dry before deciding to add more water. It might make the situation worse.



**Figure 1.** A creeping bentgrass putting greens with thinning from *Pythium* root rot (left) and *Pythium* oospores in a creeping bentgrass root (right).

*Pythium* root infections are more difficult to diagnose without laboratory inspection, but general turf decline is an early symptom. They can reduced overall rooting and root hair production. Cyazofamid and pyraclostrobin are most efficacious for *Pythium* root diseases, and should be sprayed in 4 to 6 gallons of water per 1,000 sq. ft or watered into the soil immediately following application. Fosetyl-Al (and other phosphite products) provide reasonable control under low disease pressure, but should be mixed or rotated with other products for maximum efficacy. These products are truly systemic, and should be applied to foliage in 1 to 5 gallons of water per 1,000 sq. ft. Allow phosphites to dry on leaves after application, but irrigation should follow whenever tank-mixed with other products. Researchers at North Carolina State University are extensively studying *Pythium* root diseases, and recommend a rotation of pyraclostrobin, cyazofamid, fosetyl-Al + propamocarb, and fosetyl-Al + mefenoxam every 21-28 days if applied preventively (the interval should be reduced to every 14-28 days if applied curatively).

For more info on this disease, visit the North Carolina State University page located [here](#).

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