

NOTE: THE FOLLOWING INFORMATION IS OFFERED AS A GUIDE FOR PROSPECTIVE CHALLENGES TO MANAGING SEASHORE PASPALUM. ALL TURFGRASSES ARE SUBJECTED TO INSECT, DISEASE, AND WEED PRESSURES. PROPER MANAGEMENT IS THE KEY TO SUCCESS. YOU MUST CHECK ALL LABELS OF THE PESTICIDES TO BE USED ON THIS GRASS FOR LEGAL AND PROPER USE. MENTION OF A PARTICULAR PRODUCT IS NOT AN ENDORSEMENT OF THAT PRODUCT BUT REFLECTS WHAT IS KNOWN AT THE PRESENT TIME. ENVIRONMENTAL INTERACTIONS, INCLUDING SALINITY THAT IMPACT SPECIFIC SITES, MAY GIVE VARIABLE RESULTS IN THE USE OF SOME PRODUCTS.

RAPID BLIGHT

(summary and citations can be found in Carrow & Duncan. 2011. Best Management Practices for Saline and Sodic Soils: Assessment and Remediation. CRC Press, Boca Raton, FL. Section 17.6.2. "Predisposition to diseases").

Rapid blight

(Labyrinthula terrestris [D.W. Bigelow, M.W. Olsen and Gilb.]

Does not directly affect or cause disease on seashore paspalum, but this grass can be a primary or secondary summer or warm season grass host or when ultradwarf hybrid bermudagrass is planted on greens or when cool season grasses are overseeded during the winter time frame. The pathogenicity issue occurs when paspalum is overseeded with cool season grasses that have low salinity tolerance and are susceptible to the organism. This organism causes high rates of disease with elevated sodium levels in saline irrigation water, especially in water that is low in calcium concentrations. Stress induced by water deprivation has not been a factor in rapid blight disease development. Salinity tolerance of turfgrasses is correlated with rapid blight tolerance.

Labyrinthula is in the marine slime mold family and prefers EC_w > 2.0 dS/m (1280 ppm TDS) and usually within the range of 2-10.5 dS/m (1280-7770 ppm

TDS). The following cool season grasses (*Poa annua*, *Poa trivialis*, *Lolium perenne*, *Agrostis tenuis*, *Agrostis palustris*) are susceptible. Some cultivars of hard fescue, intermediate ryegrass, and redtop are also susceptible.

Turfgrass symptoms resemble Microdochium patch and Take-all patch initially, and gypsum plus pyraclostrobin and mancozeb fungicide applications reduced the severity of the symptoms. Leaf symptoms can range from water-soaked yellow-browning or bronzing discoloration to eventual red leaves. Preventative fungicide treatments (trifloxystrobin, mancozeb, pyraclostrobin) coupled with salinity reduction and planting more salt tolerant cultivars are suggested management strategies. Additional information on the *Labyrinthula* organism can be found in Olsen, 2007, Yadagiri and Kerrigan, 2010, and Douhan et al., 2009.

Bermudagrass and seashore paspalum are confirmed hosts for the organism. The disease is associated with irrigation water containing EC_w >1.5 dS/m or TDS>960 ppm coupled with poor drainage and elevated accumulated salinity in the soil (Olsen et al., 2011). Blending perennial ryegrass, *Poa trivialis*, Chewings fescue, velvet bentgrass and colonial bentgrass (all susceptible under high disease pressure and elevated salinity) with slender creeping red fescue and alkaligrasses (both are tolerant species) for cultural control.

Suggested Fungicides (ROTATE MODE-OF-ACTION CHEMISTRIES)

Armada/ Tartan (triadimefon + trifloxystrobin)

Interface™ (iprodione + trifloxystrobin)

CITATIONS

Yadagiri, K. and J.L. Kerrigan. 2010. Histopathology of 'rapid blight', a disease caused by *Labyrinthula terrestris* on cool-season turfgrasses. *Phytopathology* 100(6), suppl.1:S204.

Olsen, M. W. 2007. *Labyrinthula terrestris*: a new pathogen of cool-season turfgrasses. *Molecular Plant Pathology* 8(6):817-820.

Douhan, G.W., M.W. Olsen, A. Herrell, C.Winder, F.Wong, and K. Entwistle. 2009. Genetic diversity of *Labyrinthula terrestris*, a newly emergent plant pathogen, and the discovery of new Labyrinthulid organisms. *Mycological Research* 113(10):1192-1199.

Olsen, M.W., D. Kopec, and J. Gilbert. 2011. Turfgrasses evaluated for tolerance to rapid blight. *Golf Course Management* 79(7):86-90.

Olsen, M.W., D.M. Bigelow, M.J. Kohout, et al., 2004. Rapid blight: a new disease of cool-season turf. *Golf Course Management* 72:87-89.