

Evaluation of two fungicide programs for disease control on creeping bentgrass, 2012.

Host:

Creeping bentgrass (*Agrostis stolonifera* 'Penncross')

Target Disease/Pathogen:

Dollar spot; *Sclerotinia homoeocarpa*

Brown patch; *Rhizoctonia solani*

Two fungicide programs were evaluated for disease control on a 20 yr old 'Penncross' creeping bentgrass putting green planted in a USGA root zone mix at the University of Missouri Turfgrass Research Facility in Columbia, MO. Mowing was performed three times weekly at a height of 0.140 in. Nitrogen was applied using UFlexx 46-0-0 at 0.35 lb N/1000 sq ft on 16 Mar. UMaxx 47-0-0 at 0.4 lb N/1000 sq ft + Knife Plus at 0.01 lb N /1000 sq ft was applied on 4 May. UMaxx at 0.125 lb N /1000 sq ft + Knife Plus at 0.01 lb N /1000 sq ft was applied every two weeks from 18 May to 31 Aug. Plots were 5 ft × 5 ft and arranged in a randomized complete block with four replications. Treatments were applied in water equivalent to 2.0 gal/1000 sq ft with a CO²-powered sprayer at 28 psi using TeeJet 8008 nozzles. Disease severity and turfgrass quality were assessed every 14 days from initial symptom development. Disease severity was assessed as visual estimates of the percent symptomatic area and counts of infection centers per plot. Turfgrass quality was evaluated using a 1 to 9 scale (9=best, 5=acceptable) based on color, density, and uniformity. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t-test (k=100).

Dollar spot symptoms were first observed on 11 Jun. Throughout the season, both program 1 and 2 resulted in acceptable dollar spot control (0-0.3%) and had statistically lower dollar spot severity compared to the untreated control. Brown patch was first observed on 25 Jun. Similar to dollar spot efficacy, plots treated with programs 1 and 2 had no incidence of brown patch throughout the season. No differences were noted in disease control among the two fungicide programs. Turf quality tended to be slightly higher in program 2 treated plots compared to program 1; however, no statistical differences were observed. During the summer stress period and drought conditions, all fungicide programs significantly improved turf quality compared to the untreated control. No phytotoxicity was observed as a result of fungicide treatments.