

Curative fungicide control of dollar spot on creeping bentgrass, 2012.

Host:

Creeping bentgrass (*Agrostis stolonifera* 'Penn A-4')

Target Disease/Pathogen:

Dollar spot; *Sclerotinia homoeocarpa*

Brown patch; *Rhizoctonia solani*

Fungicides were evaluated for the control of a natural infestation of dollar spot on a 6 year old 'Penn A-4' creeping bentgrass green with 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 30 Jul. 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 2, 3, 5, 7, 14, 21, 28, 35, 42, and 49 days after initial application (DAIA). 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).

Fungicide applications were initiated on 11 Jun when dollar spot severity was 7 to 15% throughout the plot area. Significantly lower dollar spot severity was first noted in fungicide treated plots on 16 Jun (5 DAIA). By 18 Jun (7 DAIA), all treated plots had significantly lower dollar spot severity than the untreated control except Emerald (28-d interval). Plots treated with Encartis and Lexicon Intrinsic tended to recover from dollar spot symptoms quicker than other treatments. Minimal differences in dollar spot incidence were noted among treatments by 9 Jul (28 DAIA). Brown patch was first observed on 25 Jun. From 9 Jul to the end of the trial all treated plots had significantly less brown patch severity than the untreated control. Brown patch severity was lower in plots treated with Xzempar, Lexicon Intrinsic, Honor, and Encartis (21 d interval) throughout the trial compared to other treatments tested. From 2 Jul through 30 Jul, turf quality was statistically higher in treated plots compared to the untreated control; however, unacceptable turf quality (≤ 5) was observed in plots treated with Emerald and Encartis on the 17 Jul rating date due to an increase in brown patch severity. No significant phytotoxicity was observed as a result of fungicide treatments.