

Encartis, Xzemplar, and Emerald for curative dollar spot control on fairway height creeping bentgrass, 2013.

Host:

CREEPING BENTGRASS (*Agrostis stolonifera* 'Penneagle II')

Target Disease/Pathogen:

Dollar spot; *Sclerotinia homoeocarpa*

Fungicides were evaluated for disease control at the University of Missouri Turfgrass Research Facility in Columbia, MO on 'Penneagle II' creeping bentgrass. Mowing was performed two times weekly at a height of 0.650 in. Nitrogen was applied using UMAXX™ (47-0-0) at 0.25 lb N/1000 sq ft + Knife Plus (12-0-0) at 0.01 lb N /1000 sq ft on 23 and 30 May. UMAXX™ (47-0-0) at 0.25 lb N/1000 sq ft + Ferromec (10-2-4) + micros at 0.01 lb N /1000 sq ft were applied every 2-3 weeks from 14 Jun to 19 Sept. Plots were 5 ft × 5 ft and arranged in a randomized complete block design with four replications. Treatments were applied in water equivalent to 2 gal per 1000 sq ft with a CO₂ powered sprayer at 26 psi using TeeJet 8008 nozzles. On 13 May, rye grain (*Secale cereale* L.) infested with three isolates of *Sclerotinia homoeocarpa* was uniformly applied at a volume of 1.52 in³ per plot using a small broadcast spreader. Inoculum was left on the turf surface for 2 days. Disease severity and turfgrass quality were assessed every 14 days from initial symptom development. Disease severity was assessed as a visual estimate 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 using Fisher's Protected LSD (P=0.05).

Treatments were initiated on 30 May when dollar spot severity was 3.5-5.8% throughout the plot area and continued until 22 Aug on 14, 21, or 28 d intervals. From 13 Jun (two weeks after initial application) to the end of the season, dollar spot infection centers per plot were significantly lower in all treated plots compared to the untreated control. On 27 Jun, plots treated with more than one fungicide application (Encartis and Xzemplar at 14 and 21 d intervals) had statistically lower dollar spot severity than plots that only had one application by that date (28 d interval). From 11 Jul to 19 Sept, acceptable dollar spot control (< 5 dollar spot infection centers per plot) was observed in all treated plots. Turf quality improved along with disease control. From 11 Jul to 19 Sept, turf quality was significantly higher in treated plots compared to the untreated control. During the same time period, no differences in turf quality were noted among treatments tested. No phytotoxicity was observed as a result of fungicide treatment.