

Evaluation of fungicides for the control of large patch on a golf course zoysiagrass fairway, 2010-2011.

Host:

Zoysiagrass (*Zoysia japonica* 'Meyer')

Target Disease/Pathogen:

Large Patch; *Rhizoctonia solani*

Fungicides were evaluated for the control of a natural infestation of large patch at Columbia Country Club in Columbia, MO on 'Meyer' zoysiagrass. The soil was a Mexico silt loam. Mowing was performed two to three times weekly at a height of 0.75 in. Plots were 10 ft × 10 ft and were arranged in a randomized complete block with four replications. Preventive treatments were applied singly on 16 Sep, or had a second application on 14 Oct. Some treatments also included a curative spring application on 26 Apr. Treatments were applied in water equivalent to 2.0 gal per 1000 sq ft with a CO₂-powered sprayer at 25 psi using TeeJet 8008 nozzles. Disease severity and turfgrass quality were assessed every 7 to 14 days from initial symptom development. Disease severity was assessed as a visual estimation of the percent symptomatic area within the 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).

Large patch symptoms were first observed on 14 Oct 10 in all plots, and again in the spring on 20 Apr 11. Following spring greenup, disease severity was moderate and not statistically different among treatments. Applications of Triton Flo at the high rate (16 Sep and 14 Oct 10), Heritage (16 Sep and 14 Oct 10), Disarm at the high rate (16 Sep and 14 Oct 10, and 26 Apr 11), ProStar (16 Sep 10), followed by the high rate of Triton Flo (14 Oct 10 and 26 Apr 11), and ProStar (16 Sep 10), with a high rate of Triton Flo (26 Apr 11) tended to provide better large patch suppression than other treatments. A rate response, although not significant, was noted with Disarm treatments as plots treated with the higher rate tended to suppress large patch severity. Plots treated with the high rate of Triton FLO (16 Sep and 14 Oct 10) and Disarm at the high rate (16 Sep and 14 Oct 10, and 26 Apr 11) showed little to no large patch incidence throughout the study. Turf quality also tended to be higher in plots treated with the high rate of Triton FLO and high rate of Disarm compared to other fungicide treatments. No phytotoxicity was observed following any application.