

Evaluation of fall fungicide applications for large patch control on zoysiagrass, 2012-2013.

Host:

ZOYSIAGRASS (*Zoysia japonica* ‘Meyer’)

Target Disease/Pathogen:

Large Patch; *Rhizoctonia solani* AG2-2 LP

Fungicides were evaluated for control of large patch at the University of Missouri Turfgrass Research Facility in Columbia, MO on ‘Meyer’ zoysiagrass. Mowing was performed one to two times weekly at a height of 0.75 in. No fertilizer applications were made during the trial period. Plots were 5 ft × 10 ft and arranged in a randomized complete block with four replications. Plots were inoculated on 12 Sep by placing 1.52 in³ of rye grain (*Secale cereale* L.) infested with *Rhizoctonia solani* AG2-2 LP under a metal plate until mid Apr. All treatments, except Headway G (4.0lb/ 1000 sq ft) were applied in water equivalent to 2.0 gal per 1000 sq ft with a CO₂-powered sprayer at 26 psi using TeeJet 8008 nozzles. Applications of Headway G were applied by hand using a shaker bottle, and watered in with 0.2 in of irrigation immediately following application. Disease severity and turfgrass quality were assessed every 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 Fisher’s Protected LSD (P=0.05).

In the fall of 2012, an early outbreak of large patch was observed in the trial area on 28 Sept. Large patch was first observed again the following spring on 1 May. During May, all treated plots had significantly lower large patch severity than the untreated plots until 12 Jun. On 12 Jun, a significant increase in large patch severity was noted in plots treated with EXP4 and Tartan (2.0 fl oz) compared to other treatments. On that same date, no significant differences in large patch severity were observed in plots treated with Tartan (2.0 fl oz/M) compared to the untreated control. Large patch severity tended to be lowest throughout the trial period in plots treated with EXP2. Turf quality remained at acceptable levels (≥ 5) throughout the rating period in plots treated with EXP1, EXP2, and Headway G. No phytotoxicity was observed as a result of any fungicide treatment.