

Evaluation of fall and spring fungicide applications for large patch control on fairway height 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. Treatments 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. 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).

Large patch was first observed on 3 Oct, however no significant differences in large patch severity were observed among treatments. Cool temperatures slightly delayed zoysiagrass green up in spring 2013. Large patch symptoms were first observed on 1 May in the trial area. All treated plots had significantly lower large patch severity than the untreated control on all rating dates. On 12 Jun, all treated plots receiving a curative application on 13 May had significantly lower large patch severity than plots treated with only two fall applications of Heritage WDG. On that same date, no differences in large patch severity were noted among plots treated with two fall applications of Heritage WDG and two fall applications of Triton Flo. Large patch severity was also >5% in plots with Heritage TL (ABC), ProStar (A) + Triton FLO (B) + Triton FLO (C), and ProStar (A) + Triton FLO (C) on 12 Jun. Turf quality remained at acceptable levels (≥5) in treated plots, except for those treated with Heritage WDG (AB). No phytotoxicity was observed as a result of any fungicide treatment.