

Evaluating multiple fungicides for brown patch control in tall fescue, 2011.

Host:

Tall fescue (*Lolium arundinaceum* 'Rembrandt')

Target Disease/Pathogen:

Brown Patch; *Rhizoctonia solani*

Fungicides were evaluated for control of brown patch at the University of Missouri Turfgrass Research Facility in Columbia, MO on 'Rembrandt' tall fescue. Mowing was performed one to two times weekly at a height of 3.0 in. One application of Urea (46-0-0) was applied at 1.0 lb N/1000 sq ft on 12 May to promote brown patch development. Plots were 5 × 10 ft and arranged in a randomized complete block with four replications. Treatments were applied in water equivalent to 2 gal per 1000 sq ft with a CO₂ powered sprayer at 25 psi using TeeJet 8008 nozzles. On 27 June, 25 cc of rye grain infested with the brown patch pathogen was placed in the center of each plot. A clear 5 fl oz plastic cup was placed over inoculum, and left on the turf for 3 d to incubate the pathogen. Disease severity and turfgrass quality were assessed every 7-14 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).

Preventive applications of Heritage TL (1.0 and 2.0 fl oz/M), Heritage G (3.0 and 4 lb/M), Headway (1.5 and 3.0 fl oz/M), Disarm 480 (0.18 and 0.36 fl oz/M), Disarm G (2.3 and 4.6 lb/M), Pillar G (3.0 lb/M – 14 d interval & 28 d interval), Armada (1.5 oz/M), Velistra (0.5 oz/M) and Eagle 20EW (1.115 fl oz/M) were initiated on 16 May. Brown patch symptoms were first observed on 7 June. By 27 June, fungicide treated plots had significantly lower brown patch severity than untreated plots, and remained lower till 8 Aug. By 8 Aug, brown patch severity remained significantly lower in plots treated with Heritage TL (1.0 and 2.0 fl oz/M), Heritage G (4.0 lb/M) Disarm 480 (0.18 and 0.36 fl oz/M), Pillar G (3.0 lb/M) (28 d), Armada WDG (1.5 oz/M), and Velistra (0.5 oz/M) compared to the untreated control. Plots treated with Disarm 480 (0.18 and 0.36 fl oz/M) exhibited significantly lower brown patch severity than plots treated with Disarm G (2.3 and 4.6 lb/M). No significant differences in brown patch control were noted in plots treated with Pillar G (3.0 lb/M) at a 14 d interval or 28 d interval. On 25 Jul, turf quality remained above acceptable levels (>5) in all treated plots except Disarm G. By 8 Aug, no significant differences in turf quality were noted among all treatments. No phytotoxicity was observed from any fungicide treatment following application.