Brown patch control from foliar and granular fungicides on tall fescue, 2012.

Host:
Tall fescue (*Schedonorus arundinaceus* syn. *Festuca arundinacea* 'Rembrandt')

Target Disease/Pathogen:
Brown patch; *Rhizoctonia solani*

Sprayable and granular fungicide formulations were evaluated for control of brown patch at the University of Missouri Turfgrass Research Facility in Columbia on 'Rembrandt' tall fescue. Mowing was performed two times weekly at a height of 3.0 in. One application of Urea (46-0-0) was applied at 1.0 lb N/1,000 sq ft on 12 May to promote brown patch development. Plots were 5 ft × 10 ft and arranged in a randomized complete block with four replications. Sprayable treatments were applied in water equivalent to 2.0 gal/1,000 sq ft with a CO_2-powered sprayer at 28 psi using TeeJet 8008 nozzles. Granular treatments were applied evenly over the plot area by hand using a shaker bottle. Following application, only granular treatments were immediately watered-in with 0.2 in. of irrigation applied by hand with a hose and shower nozzle. On 8 June, 1.83 in^3 of rye grain (*Secale cereale* L.) infested with *Rhizoctonia solani* 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).

Preventative applications were initiated on 22 May at an approximate 14, 21, and 28 d interval. Brown patch symptoms were first observed on 3 Jul. On all rating dates, fungicide treated plots had significantly lower brown patch severity than untreated plots. No statistical differences were detected in brown patch control among the fungicide treatments. On 11 Sept, 28 d after the final application, plots treated with Torque, Pillar G, and Program 1 had brown patch severity ≥ 5%. No phytotoxicity was observed from any fungicide treatment. On 31 Jul, no significant differences in turf quality were observed in treated plots compared to the untreated control. Due to brown patch incidence, Pillar G and Torque treated plots exhibited lower turf quality among the treatments tested on 11 Sept. In this study, granular fungicide formulations performed similarly to sprayable fungicides in controlling brown patch on tall fescue.