

### **Evaluation of Velist and Heritage for preventative brown patch control on tall fescue, 2015.**

Fungicides 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. 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. Treatments were applied in water equivalent to 2.0 gal/1,000 sq ft with a CO<sub>2</sub>-powered sprayer at 28 psi using TeeJet 8008 nozzles. On 5 Jun, 1.83-in.<sup>3</sup> of rye grain (*Secale cereale* L.) infested with *Rhizoctonia solani* AG2-2 IIIB was broadcast across each plot. In the center of each plot, an additional 0.61-in.<sup>3</sup> of inoculum was covered with a clear 5 fl oz plastic cup and left on the turf for 3 days to encourage infection. 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, 6=acceptable) based on color, density, and uniformity. Data were subjected to analysis of variance and means separation using Fisher's Protected LSD (P=0.05).

Preventative applications were initiated on 21 May and applied on either a 21- or 28-d interval until 16 Jul. Brown patch was first observed on 4 Jun within the trial area. On 18 Jun, plots treated with Velist (0.5 oz/1000 sq ft) on a 28-d interval had similar brown patch severity to the untreated control. Throughout the month of July, all treated plots had significant less brown patch severity than the untreated. On 30 Jul, all treated plots had lower brown patch severity than plots treated with Velist (0.3 oz/ 1000 sq ft) 21-d. Two weeks later on 13 Aug, plots treated with Velist (0.3 and 0.5 oz /1000 sq ft) 28-d intervals and Heritage had significantly less brown patch severity than other treatments. Due to a decline in residual control, no differences in brown patch severity were noted between fungicide treatments and the untreated control on the final rating date (27 Aug). No significant differences in turfgrass quality were noted between fungicide treatments and the untreated control until 18 Jun. On 2 Jul, plots treated with Velist (both rates) 21-d intervals had significantly higher turfgrass quality than plots treated with Velist (high rate) applied on a 28-d interval. On 30 Jul, plots treated with Velist (both rates) on the 21-d interval had unacceptable turfgrass quality (<6), and statistically lower turfgrass quality than other fungicide treatments. From 13 through 27 Aug, turfgrass quality was unacceptable in all treated plots regardless of application interval. No phytotoxicity was observed within the trial area.