

## Evaluation of fungicides for dollar spot and brown patch control on creeping bentgrass, 2012.

### Host:

Creeping bentgrass (*Agrostis stolonifera* 'Penncross')

### Target Disease/Pathogen:

Dollar spot; *Sclerotinia homoeocarpa*

Brown patch; *Rhizoctonia solani*

Fungicides were evaluated for the control of dollar spot and a natural infestation of brown patch on a 20 yr old 'Penncross' creeping bentgrass green at the University of Missouri Turfgrass Research Facility in Columbia, MO. The soil was a USGA root zone mix. Mowing was performed three times weekly at a height of 0.140 in. Nitrogen was applied using UFlexx 46-0-0 at 0.35 lb N/1000 sq ft on 16 Mar. UMaxx 47-0-0 at 0.4 lb N/1000 sq ft + Knife Plus at 0.01 lb N /1000 sq ft was applied on 4 May. UMaxx at 0.125 lb N /1000 sq ft + Knife Plus at 0.01 lb N /1000 sq ft was applied every two weeks from 18 May to 31 Aug. Plots were 5 ft x 5 ft and arranged in a randomized complete block with four replications. Treatments were applied in water equivalent to 2.0 gal/1000 sq ft with a CO<sub>2</sub>-powered sprayer at 28 psi using TeeJet 8008 nozzles. On 8 June, rye grain (*Secale cereale* L.) infested with three isolates of *Sclerotinia homoeocarpa* was uniformly applied at a volume of 1.52 in<sup>3</sup> per plot using a small broadcast spreader. Inoculum was left on the turf surface for 2 days to enable pathogen establishment. Disease severity and turfgrass quality were assessed every 7 to 14 days from initial symptom development. Disease severity was assessed as visual estimates of the percent symptomatic area and counts of infection centers per 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).

Treatments were initiated on 11 May and applied on various application intervals through 24 Aug (see table below). Dollar spot was first observed in the trial area on 7 Jun. On both 5 Jul and 16 Aug, all treated plots had significantly lower dollar spot severity than the untreated control. Plots treated with Briskway, Briskway alternated with Daconil Action, Iprodione Pro, Interface (high rate) and Bayleton Flo followed by Triton Flo (2 applications) had the lowest dollar spot severity throughout the trial. Plots treated with Bayleton Flo followed by Triton Flo (2 applications) and Torque (3 applications) provided longer residual control than other treatments tested. Brown patch was first observed on 5 Jul. On the 2 Aug rating date, all treated plots had significantly lower brown patch severity than the untreated control. By 14 Sept, brown patch control in all treated plots remained at acceptable levels ( $\leq 5\%$ ), except plots treated with Bayleton Flo alone applied twice in the spring, Daconil Action alone, Secure alone, and Secure + Appear. Turf quality remained at acceptable levels ( $\geq 5$ ) in all treated plots except Bayleton Flo and Interface (low rate) throughout the trial. No phytotoxicity was observed as a result of fungicide treatments.