

CREeping BENTGRASS (*Agrostis stolonifera* 'Penncross')  
Brown patch; *Rhizoctonia solani*  
Dollar spot; *Sclerotinia homoeocarpa*

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#### **Evaluation of fungicides for brown patch and dollar spot control on greens height creeping bentgrass, 2014.**

Fungicides were evaluated for preventative brown patch control at the University of Missouri Turfgrass Research Facility in Columbia, MO on a 'Penncross' creeping bentgrass green. The green contained a 12-in sand root zone over a drained subgrade. Mowing was performed at a height of 0.13-in., three and five times weekly from 2 Apr to 7 Jun and 7 Jun to 19 Sep, respectively. Nitrogen was applied at 0.20 lb N/1000 sq ft on 18 Apr. and every 3 wks thereafter at 0.39 lb N/1000 sq ft from 16 May to 29 Aug. Revolution® (6.0 fl oz/1000 sq ft) was applied every 28-d starting on 16 May. Plots were 5 × 5 ft and arranged in a randomized complete block design with four replications. Treatments were applied in water equivalent to 2 gal/1000 sq ft with a CO<sub>2</sub>-powered sprayer at 26 psi using TeeJet 8008 flat fan nozzles. Preventative fungicide applications were applied from 22 May – 14 Aug on a 14-d interval. On 30 May, 1.52-in<sup>3</sup> of rye grain (*Secale cereale* L.) infested with *Rhizoctonia solani* was broadcast across each plot. A clear 5 fl oz plastic cup was randomly placed over 6-10 rye grains within each plot, and left on the turf for 3 days to encourage infection. Dollar spot occurred during the trial period as a result of natural infection. Disease severity and turfgrass quality were assessed every 14-d from initial symptom development. Brown patch was assessed as a visual estimate of the percent symptomatic area and dollar spot was quantified as 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. Phytotoxicity was evaluated using a 0 to 9 scale with 0 = none, ≥ 2 = unacceptable discoloration, and 9 = total plot necrosis. Data were subjected to analysis of variance and means separation using Fisher's Protected LSD test ( $P=0.05$ ).

A natural occurrence of dollar spot was noted on 22 May in the trial area. From 17 Jul – 18 Sept, plots treated with Affirm alone and untreated control plots had significantly higher dollar spot counts per plot than other treatments. On 18 Sept, residual dollar spot control ( $\leq 12.0$  counts per plot) was observed in all treated plots except those treated with Affirm alone. Brown patch was first observed on 19 Jun within the trial area. From 17 Jul – 18 Sept, all treated plots had significantly less brown patch severity compared to the untreated control. No significant differences in brown patch control were noted among treatments until 18 Sept, 5 weeks following the final application. On 18 Sept, plots treated with Torque + Spectro 90 alternated with Affirm had significantly less brown patch severity than plots treated with Affirm alone. Throughout the trial period, no brown patch symptoms were observed in plots treated with Torque + Spectro 90 alternated with Affirm. From 17 Jul – 18 Sept, turf quality was significantly lower (due to high dollar spot incidence) in plots treated with Affirm alone than other tested treatments. Throughout the trial period, acceptable turf quality was noted in plots treated with Torque + Spectro 90 with or without Anuew alternated with Affirm and Torque alone. From 31 Jul – 28 Aug, significant phytotoxicity (bronzing /discoloration) was observed in plots treated with Anuew + Torque + Spectro 90 alternated with Anuew + Affirm.