CREEPING BENTGRASS (*Agrostis stolonifera* 'Penncross')
Dollar spot; *Sclerotinia homoeocarpa*
Brown patch; *Rhizoctonia solani*
Blue-green algae; *Prokaryotic cyanobacteria*

D. Earlywine and G.L. Miller
Division of Plant Science
University of Missouri
Columbia, MO 65201

Evaluating Briskway for dollar spot and brown patch control on greens height creeping bentgrass, 2014.

Briskway applications were evaluated for disease control and potential phytotoxicity at the University of Missouri Turfgrass Research Facility in Columbia, MO on a 'Penncross' creeping bentgrass naturally infested with *Sclerotinia homoeocarpa*. 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. Three applications of Daconil Ultrex (3.25 oz/1000 sq ft) were applied on 14-d intervals from 7 May – 3 Jun across the entire trial area to prevent disease occurrence before trial initiation. On 17 Jun, an additional Daconil Ultrex (3.25 oz/1000 sq ft) was made only to plots slated to receive 0.725 and 1.45 fl oz/1000 sq ft of Briskway to prevent disease occurrence before initial applications were made on 1 Jul. 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_2-powered sprayer at 26 psi using TeeJet 8008 flat fan nozzles. Briskway treatments were applied from 17 Jun – 15 Jul, three times at 0.5 or 1.0 fl oz oz/1000 sq ft, or twice at 0.725 or 1.45 fl oz/1000 sq ft on a 14 d interval. These treatments represent low and high rates of Briskway, and a potential high rate spray overlap. 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).

Dollar spot was first observed in the trial area on 3 Jun. From 1 Jul – 12 Aug, all plots treated with Briskway (regardless of timing or application rate) had significantly less dollar spot severity than the untreated control. By 12 Aug, (4 weeks following the final application) dollar spot incidence was lowest in plots treated with two applications of Briskway at 1.45 fl oz/1000 sq ft. Brown patch was first observed on 1 Jul. All treated plots had significantly less brown patch severity than the untreated control from 29 Jul – 26 Aug. No significant differences were noted in brown patch control among Briskway treatments. On 26 Aug, blue-green algae was observed within the trial area following multiple rainfall events. All treated plots had significantly less blue-green algae incidence than the untreated control. Turfgrass quality was high (>7) in Briskway-treated plots until dollar spot incidence reduced quality on 12 and 26 Aug below acceptable levels. Despite the usage rate and frequency, no phytotoxicity was observed within the trial area following any application. Heat stress was notably lower in 2014 than in typical seasons (5th coolest July on record in Columbia, MO).