



## Ability of Fungicides to Promote Turfgrass Health

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### OBJECTIVE

To determine the efficacy of Banol and Nortica fungicides for promotion of turfgrass health.

### MATERIALS AND METHODS

The study was conducted at the O. J. Noer Turfgrass Research and Education Facility on a stand of creeping bentgrass (*Agrostis stolonifera* 'Penncross') maintained at 0.100 inches. Individual plots measured 3 feet by 10 feet and were arranged in a randomized complete block design with four replications. Treatments were applied at a nozzle pressure of 40 p.s.i. using a CO<sub>2</sub> pressurized boom sprayer equipped with two XR Teejet 8004 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 2 gallons of water per 1000 ft<sup>2</sup>. All treatments were initiated on May 14<sup>th</sup> and subsequent applications were made at 28 day intervals. Approximately 0.25 inches of irrigation were applied to the treatments within 1 hour of application to move the fungicides down into the root zone. Number of dollar spot foci and turfgrass quality (1-9, 9 being excellent, 6 acceptable, and 1 bare soil) were visually assessed every 2 weeks. Turf quality and disease severity were subjected to an analysis of variance and means separated using the Waller-Duncan test (P = 0.05). Results of disease severity and turfgrass quality ratings can be found in table 1 and 2, respectively.

### RESULTS AND DISCUSSION

Disease suppression was not the primary focus of this trial, however dollar spot pressure was high throughout most of the summer and affected the overall quality of the plot area. Applications of Emerald were made in mid-July and late August to suppress dollar spot, however significant dollar spot was still present as non-treated controls averaged over 100 dollar spot foci per plot throughout much of the summer. The August 12<sup>th</sup> rating date is one of the few where there was not significant dollar spot present, and there was no increase in turfgrass quality observed with the treated plots relative to the non-treated. It should be noted, however, that Madison, WI experienced a remarkably cool and dry summer that did not place significant stress on the plants and may not have allowed an opportunity for the fungicides to increase turfgrass health relative to a non-treated area.

**Table 1. Mean number of dollar spots per treatment at putting green height at the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2014.**

Treatment	Rate	Application Interval	Dollar Spot Severity <sup>a</sup>			
			Jul 1	Aug 12	Aug 27	
1	Non-treated control		109.0a	10.8a	444.0a	
2	Banol	2.0 FL OZ/1000 FT2	28 Day	103.3a	15.3a	350.0a
3	Banol Nortica WP10	2.0 FL OZ/1000 FT2 12.9 OZ/1000 FT2	28 Day	111.3	9.3a	368.3a
4	Nortica WP10	12.9 OZ/1000 FT2	28 Day	81.5a	10.5a	419.8a

<sup>a</sup>Dollar spot severity assessed as number of dollar spot infection centers per plot. Means followed by the same letter do not significantly differ (P=.05, Waller Duncan).

**Table 2. Mean turfgrass quality at putting green height the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2014.**

Treatment	Rate	Application Interval	Turfgrass Quality <sup>a</sup>			
			Jul 1	Aug 12	Aug 27	
1	Non-treated control		5.0a	5.8a	4.0a	
2	Banol	2.0 FL OZ/1000 FT2	28 Day	5.0a	5.5a	4.3a
3	Banol Nortica WP10	2.0 FL OZ/1000 FT2 12.9 OZ/1000 FT2	28 Day	5.0a	6.0a	4.3a
4	Nortica WP10	12.9 OZ/1000 FT2	28 Day	5.0a	6.0a	4.0a

<sup>a</sup>Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Waller Duncan).