



Curative Fungicide Applications for Dollar Spot Management

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INTRODUCTION

To determine the efficacy of standard and experimental fungicides for the curative management of dollar spot caused by the fungus *Sclerotinia homoeocarpa*.

MATERIALS AND METHODS

The study was conducted at the O. J. Noer Turfgrass Research and Education Facility in Madison, WI on a stand of creeping bentgrass (*Agrostis stolonifera*) maintained at a cutting height of 0.5 inches. Individual plots measured 3 ft by 10 ft and were arranged in a randomized complete block design with four replications. Treatments were applied at a nozzle pressure of 40 psi using a CO₂ pressurized boom sprayer equipped with two Teejet AI 8004 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 1.5 gallons of water per 1000 ft². All treatments were initiated on July 17th once dollar spot developed throughout the experimental area. Disease severity (number of dollar spot foci) and turfgrass quality (1-9, 9 being excellent, 6 acceptable, and 1 bare soil) were assessed at 0, 8, and 16 days after application. Turf quality and disease severity were subjected to an analysis of variance and means were separated using Fisher's LSD (P = 0.05). Results of the disease severity and turfgrass quality ratings can be found in table 1 and 2, respectively.

RESULTS AND DISCUSSION

High dollar spot pressure had developed throughout all research plots before all treatments were applied. Significant differences in dollar spot were evident eight days after treatment as plots started to heal from disease. All treatments significantly reduced dollar spot severity on July 25, with Maxtima and Lexicon providing the best curative control. On August 2, Maxtima, Xzemplar, and Lexicon provided the best control of dollar spot. Only Maxtima and Lexicon provided acceptable turf quality on the August 2 rating date. No phytotoxicity was observed with any treatment.

Table 1. Mean number of dollar spots per plot at fairway height at the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2018.

Treatment ^b	Rate	Dollar Spot Severity ^a			
		July 16	July 25	August 2	
1	Nontreated Control	286.5 -	146.3 a	120.8 a	
2	Maxtima	0.4 fl oz/1000 ft ²	254.5 -	20.3 c	11.0 cd
3	Xzemplar	0.26 fl oz/1000 ft ²	258.5 -	78.8 b	32.0 bcd
4	Emerald	0.18 oz/1000 ft ²	217.0 -	77.3 b	43.5 bc
5	Lexicon	0.47 fl oz/1000 ft ²	230.5 -	12.8 c	4.8 d
6	Torque	0.6 fl oz/1000 ft ²	268.5 -	58.8 b	50.3 b
7	Banner Maxx	1 fl oz/1000 ft ²	247.8 -	72.8 b	88.3 a
LSD P=.05			83.84	30.92	37.45

^aDollar spot was visually assessed as number of dollar spot infection centers per plot. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

^bAll treatments were applied on July 17th

Table 2. Mean turfgrass quality per plot at the OJ Noer Turfgrass Research and Education Facility in Madison, WI during 2018.

Treatment ^b	Rate	Turfgrass Quality ^a			
		July 16	July 25	August 2	
1	Nontreated Control	3.5 -	4.5 c	4.0 d	
2	Maxtima	0.4 fl oz/1000 ft ²	3.5 -	6.8 a	6.5 a
3	Xzemplar	0.26 fl oz/1000 ft ²	3.8 -	5.3 b	5.3 b
4	Emerald	0.18 oz/1000 ft ²	3.8 -	5.3 b	5.5 b
5	Lexicon	0.47 fl oz/1000 ft ²	4.0 -	7.0 a	7.0 a
6	Torque	0.6 fl oz/1000 ft ²	3.5 -	5.8 b	5.0 bc
7	Banner Maxx	1 fl oz/1000 ft ²	3.5 -	5.3 b	4.5 cd
LSD P=.05			0.77	0.66	0.74

^aTurfgrass quality was visually assessed on a 1 – 9 scale with 1 being bare dirt, 6 being acceptable, and 9 being exceptional. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

^bAll treatments were applied on July 17th