

# Curative Fungicide Applications for Dollar Spot Management



Sam Soper, Bruce Schweiger and Paul Koch, Ph.D.  
Department of Plant Pathology  
University of Wisconsin - Madison

## 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* 'Penncross') maintained at a cutting height of 0.125 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 p.s.i. using a CO<sub>2</sub> pressurized boom sprayer equipped with two Teejet AI8004 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 July 23<sup>rd</sup> once dollar spot developed throughout the experimental area. A subsequent application was made 14 days after the initial application. Number of dollar spot foci per plot, turfgrass quality (1-9, 9 being excellent, 6 acceptable, and 1 bare soil), and normalized difference vegetation index (NDVI) were assessed every 2 weeks. Turf quality and disease severity were subjected to an analysis of variance and means were separated using the Waller-Duncan test (P = 0.05). Results of the disease intensity and turfgrass quality ratings can be found in table 1 and 2, respectively.

## RESULTS AND DISCUSSION

There was significant dollar spot present for the initial application of this trial on July 23<sup>rd</sup>, with most plots averaging approximately 200 infection foci per plot. One week later, all treatments had significantly reduced dollar spot relative to the non-treated control. Though not statistically higher than the other treatments, Emerald had noticeably more dollar spot relative to the other fungicides. Two weeks following the initial application, treatments such as Velistar, Secure, and Xzemplar were providing excellent suppression of dollar spot and acceptable turfgrass quality. Phytotoxicity was not observed with any treatment.

**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 23	Aug 1	Aug 13
1	Non-treated control		185.8a	274.3a	196.5a
2	Velista	0.5 OZ/1000 FT2	201.3a	32.5b	10.8b
3	Secure	0.5 FL OZ/1000 FT2	177.5a	16.5b	21.5b
4	Velista Secure	0.5 OZ/1000 FT2 0.5 FL OZ/1000 FT2	223.5a	1.5b	0.3b
5	Velista Daconil Ultrex	0.5 OZ/1000 FT2 3.2 OZ/1000 FT2	227.0a	10.8b	23.5b
6	Emerald	0.18 OZ/1000 FT2	217.3a	84.0b	18.3b
7	Xzemplar	0.26 FL OZ/1000 FT2	189.0a	19.3b	3.5b
8	Chipco 26GT	4.0 FL OZ/1000 FT2	165.3a	54.0b	66.8b

<sup>a</sup>Dollar spot severity was visually assessed as number of dollar spot foci per plot. Plots were 30 ft<sup>2</sup>. Means followed by the same letter do not significantly differ (P=.05, Waller Duncan).

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

Treatment	Rate	Application Interval	Turfgrass Quality <sup>a</sup>		
			Jul 23	Aug 1	Aug 13
1	Non-treated control		4.8a	3.5b	4.3b
2	Velista	0.5 OZ/1000 FT2	5.0a	5.0a	6.0a
3	Secure	0.5 FL OZ/1000 FT2	4.8a	5.0a	5.8a
4	Velista Secure	0.5 OZ/1000 FT2 0.5 FL OZ/1000 FT2	4.3a	5.3a	7.0a
5	Velista Daconil Ultrex	0.5 OZ/1000 FT2 3.2 OZ/1000 FT2	4.5a	5.3a	5.8a
6	Emerald	0.18 OZ/1000 FT2	4.3a	4.8a	6.0a
7	Xzemplar	0.26 FL OZ/1000 FT2	5.0a	5.0a	6.5a
8	Chipco 26GT	4.0 FL OZ/1000 FT2	5.0a	5.0a	5.5a

<sup>a</sup>Turfgrass 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, Waller Duncan).