

Dollar Spot Control Evaluation for Sipcam Agro USA

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Introduction

The objective of this trial was to test the performance of various fungicides on a creeping bentgrass/annual bluegrass putting green for the suppression of dollar spot.

Materials and Methods

Research was conducted at the Iowa State University Horticulture Research Station, Ames, Iowa, on a Penncross creeping bentgrass (*Agrostis stolonifera*) putting green. Experimental units were 5 ft by 10 ft. Plots were mowed at 0.125 in. with a John Deere Triplex mower six days a week. Irrigation was applied as necessary to facilitate optimal growing conditions. Treatments were applied using a CO₂-pressurized backpack sprayer with TeeJet 8004XR nozzles calibrated to apply two gallons water carrier/1,000 ft². Treatments and timings are presented in Table 1. Ratings for disease suppression (visually), turfgrass color, quality, and any injury to turfgrass from applications (visually). Ratings were made on a 1-9 scale with 1 = poor or brown turf, 9 = optimum turfgrass quality or dark green turf, and 6 = minimum acceptable. Dollar spot lesions were counted on each plot.

Results and Discussion

There were differences on several rating dates in dollar spot control between treatments (Table 2). On June 25, the low rate of SA-0650004 had a lower infection rate than the untreated check (UTC). On July 9, Echo 720 had the greatest amount of dollar spot lesions

compared with all treatments except both rates of SA-0011411 and the UTC. All dollar spot rates decreased July 23 with Echo Dyad ETQ and the low rate of SA-0650004 having fewer lesions than Daconil Action. Fall dollar spot activity was best controlled with Echo Dyad ETQ, which had less dollar spot September 3 compared with SA-0011411 at both rates, Echo 720, and the UTC. The low rate of SA-0650004 also offered lower dollar spot than many of the other treatments. On the final rating (2 weeks after the last application), Daconil Action and the low rate of SA-0650004 offered lower dollar spot lesions than the UTC. Both Echo Dyad ETQ and the low rate of SA-0650004, had lower dollar spot lesions all season on average compared with the check and Daconil Action (the industry check).

Turfgrass color was greater on Daconil Action, SA00011411 (high rate), Echo 720, and Echo Dyad ETQ than the check July 9 (Table 3). All treatments offered increased color compared with the UTC July 23. There were no differences in turfgrass color for the growing season when averaged across the entire season.

There were no differences between treatments on any rating dates (Table 4). Although the turfgrass quality fluctuated between rating dates, each rating date did not have any differences within them.

It appears from the data that the 1.5 fl oz/per 1,000 ft² rate of SA-065004 and the Echo Dyad ETQ offered the greatest control of dollar spot in this study compared with other treatments, including the check. Most other products did not differ from each other. There

were few differences in turfgrass color, quality, and vigor. The small outbreak of brown patch did note the Echo Dyad ETQ did not control the brown patch as much as the other treatments tested. It will be interesting to repeat this study next year on the native soil putting green, which gets a greater amount of dollar spot pressure than the sand-based green had this past year.

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Table 1. Fungicide products and rates for dollar spot control trial in Ames, Iowa, 2020.

Type	Treatment name	Rate	Rate unit
Fung	SA-0650004	1.5	fl oz/1,000 ft ²
Fung	SA-0650004	3.0	fl oz/1,000 ft ²
Fung	Daconil Action	3.5	fl oz/1,000 ft ²
Fung	SA-0011411	4.0	fl oz/1,000 ft ²
Fung	Echo 720	3.6	fl oz/1,000 ft ²
Fung	Echo Dyad ETQ	5.0	fl oz/1,000 ft ²
Fung	SA-0011411	2.0	fl oz/1,000 ft ²
Chk	Untreated check		

Table 2. Visual count of dollar spot lesions (numerical count) for various fungicides and rates applied on a 14-day interval to a creeping bentgrass/annual bluegrass putting green, Ames, Iowa, 2020.

Treatment	Rate (fl oz/M ^a)	Rating date									
		5/28	6/12	6/25	7/9	7/23	8/6	8/19	9/3	9/17	Mean
SA-0650004	1.5	0	0	0.9	3	0.7	0	0	2.3	2.6	1.1
SA-0650004	3	0	0	2.2	4.6	2	0	0	3.6	6.4	2.1
Daconil Action	3.5	0	0	3.3	4.9	2.8	0.3	0	3.7	3.3	2.0
SA-0011411	4	0	0	3.4	6.2	2.6	0.4	0	4.7	10.0	3.0
Echo 720	3.6	0	0	4.1	8.4	2.6	0.4	0	4.6	9.9	3.3
Echo Dyad ETQ	5	0	0	1.9	1.6	0.1	0	0	1.7	5.3	1.2
SA-0011411	2	0	0	2.4	5.5	2.0	0	0	4.0	7.8	2.4
Check	0	0	0	4.3	5.4	1.7	0	0	3.5	6.6	2.4
	LSD (0.05)	0	0	2.8	2.8	1.9	0.8	0	1.3	3.2	0.7

^aM = 1,000 ft²

Table 3. Turfgrass color ratings (1-9; 6 is acceptable) for various fungicides and rates applied on a 14-day application to a creeping bentgrass/annual bluegrass putting green, Ames, Iowa, 2020.

Treatment	Rate (fl oz/M ^a)	Rating date									Mean
		5/28	6/12	6/25	7/9	7/23	8/6	8/19	9/3	9/17	
SA-0650004	1.5	8	9	8.8	8.3	7.8	8.8	8.8	8.8	9	8.6
SA-0650004	3	8	9	9	8.3	8	9	9	9	9	8.7
Daconil Action	3.5	8	9	8.5	8.5	8	9	9	9	9	8.7
SA-0011411	4	8	9	8.8	8.5	8	9	9	9	9	8.7
Echo 720	3.6	8	9	9	8.5	7.8	9	9	9	9	8.7
Echo Dyad ETQ	5	8	9	9	8.5	8	9	9	9	9	8.7
SA-0011411	2	8	9	9	8	7.8	9	9	9	9	8.6
Check	0	8	9	8.5	7.5	7.3	8.8	8.8	9	9	8.4
	LSD (0.05)	0	0	0.6	0.9	0.5	0.3	0.3	0.3	0	0.3

^aM=1,000 ft²**Table 4. Turfgrass quality ratings (1-9; 6 is acceptable) for various fungicides and rates applied on a 14-day interval to a creeping bentgrass/annual bluegrass putting green, Ames, Iowa, 2020.**

Treatment	Rate (fl oz/M ^a)	Rating date									Mean
		5/28	6/12	6/25	7/9	7/23	8/6	8/19	9/3	9/17	
SA-0650004	1.5	9	9	8	7.5	7.3	8.5	8.5	8.5	8.5	8.3
SA-0650004	3	9	9	8.5	7.5	7.8	8.8	8.8	8.8	8.8	8.5
Daconil Action	3.5	9	9	8.5	8.3	7.8	9	9	9	9	8.7
SA-0011411	4	9	9	8.5	8.3	8	9	9	9	9	8.8
Echo 720	3.6	9	9	8.8	8	8	9	9	9	9	8.8
Echo Dyad ETQ	5	9	9	8.8	8.5	7.8	9	9	9	9	8.8
SA-0011411	2	9	9	8.8	8.5	7.5	8.8	8.8	8.8	8.8	8.6
Check	0	9	9	7.8	7.3	7.3	9	8.8	9	9	8.4
	LSD (0.05)	0	0	1.2	1.6	0.9	0.6	0.6	0.6	0.6	0.6

^aM=1,000 ft²