



Resurgence of Dollar Spot After Fungicide Cessation on Putting Greens

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OBJECTIVE

To determine which fungicides cause a resurgence of dollar spot caused by the fungal pathogen *Clariireedia jacksonii* after fungicide applications have ceased.

MATERIALS AND METHODS

The study was conducted at the O. J. Noer Turfgrass Research and Education Facility on a stand of 'Pennncross' creeping bentgrass (*Agrostis stolonifera*) maintained at 0.125 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 psi using a CO₂-pressurized boom sprayer equipped with one Teejet AI9508EVS nozzle. 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 14 May 2025, and subsequent applications were made at 14-, 21-, or 28-day intervals. The final application of all fungicide treatments was made in mid to late July. Number of dollar spot foci per plot and turfgrass quality (1-9, 9 being excellent, 6 acceptable, and 1 bare soil) were visually assessed every two weeks through the end of September. Turf quality and disease severity were subjected to an analysis of variance and means separated using Fisher's LSD ($P = 0.05$). Results of disease severity and turfgrass quality ratings can be found in Table 1 and 2, respectively. Area under the disease progress curve (AUDPC) and area under the turf quality curve (AUTQC) were calculated using the trapezoidal method and summarize the whole season disease severity and turf quality and are included in tables 1 and 2, respectively.

RESULTS AND DISCUSSION

Dollar spot pressure was very high throughout much of the summer with nontreated controls averaging 366 infection centers per plot on Jul 23. Dollar spot damage remained high over the next two months in the nontreated control plots and increased in many of the fungicide-treated plots. Though the control provided by most treatments broke down relatively quickly, disease severity did not approach the non-treated control in any except treatment except for Heritage, which is not labeled for dollar spot control. Turf quality mirrored disease severity.

Table 1. Mean number of dollar spots per treatment at greens height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2025.

Treatment	Rate	Application Interval	Application Code ^a	Dollar Spot Severity ^b July 23 rd	Dollar Spot Severity Aug 20 th	Dollar Spot Severity Sep 17 th	Dollar Spot Severity AUDPC ^c
1 Nontreated Control				366.8a	367.3a	360.8ab	29884.8a
2 Daconil Weatherstik	5.5 fl oz/1000 ft ²	14 day	BDFHJL	37.0ef	112.3d	264.0cde	13699.0d-g
3 Fore Rainshield	8.0 oz/1000 ft ²	14 day	BDFHJL	184.5c	216.8b	321.3bc	20772.5c
4 26 GT	4.0 fl oz/1000 ft ²	14 day	BDFHJL	39.5ef	192.5bc	287.0cde	15197.0def
5 Secure	0.5 fl oz/1000 ft ²	14 day	BDFHJL	18.8ef	113.0d	246.5de	12381.3d-g
6 3336F	4.0 fl oz/1000 ft ²	14 day	BDFHJL	133.3d	194.5bc	314.0bcd	21469.0bc
7 Banner Maxx	2.0 fl oz/1000 ft ²	14 day	BDFHJL	0.3f	28.3e	106.5f	5691.0h
8 Torque	1.1 fl oz/1000 ft ²	14 day	BDFHJL	4.8f	92.8de	267.5cde	10757.3g
9 Densicor	0.196 fl oz/1000 ft ²	14 day	BDFHJL	4.0f	102.5d	253.8cde	11613.0fg
10 Heritage TL	2.0 fl oz/1000 ft ²	14 day	BDFHJL	235.0b	245.8b	394.0a	25046.0b
11 Insignia SC	0.7 fl oz/1000 ft ²	14 day	BDFHJL	42.3ef	98.0d	232.8e	11957.8efg
12 Emerald	0.18 oz/1000 ft ²	28 day	BFJ	34.8ef	149.5cd	273.8cde	16066.8d
13 Posterity	0.32 fl oz/1000 ft ²	28 day	BFJ	2.8f	126.3d	233.3e	12596.5d-g
14 Xzemplar	0.26 fl oz/1000 ft ²	28 day	BFJ	32.8ef	139.5cd	276.3cde	15613.5de
15 Kabuto	0.7 fl oz/1000 ft ²	21 day	BEHK	59.5e	220.5b	297.0b-e	20060.3c
LSD P=.05				50.48	65.12	71.29	3764.4

^a Application code: B = May 14, D = May 29, E = Jun 5, F = Jun 12, H = Jun 26, J = Jul 10, K = Jul 17, L = Jul 24

^b Dollar spot rated as number of dollar spot infection centers. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

^cArea under the disease progress curve (AUDPC) was calculated using the trapezoidal method.

Table 2. Mean turf quality ratings per treatment at greens height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2025.

Treatment	Rate	Application Interval	Application Code ^a	Turf Quality ^b July 23 rd	Turf Quality Aug 18 th	Turf Quality Sep 16 th	Turf Quality AUTQC ^c
1 Nontreated Control				4.0d	3.8d	4.3bc	499.1j
2 Daconil Weatherstik	5.5 fl oz/1000 ft2	14 day	BDFHJL	5.3b	4.8b	4.5abc	592.5cde
3 Fore Rainshield	8.0 oz/1000 ft2	14 day	BDFHJL	4.5cd	4.3c	4.3bc	535.3ghi
4 26 GT	4.0 fl oz/1000 ft2	14 day	BDFHJL	5.3b	4.8b	4.0c	583.4c-f
5 Secure	0.5 fl oz/1000 ft2	14 day	BDFHJL	5.3b	5.0ab	4.8ab	611.4bcd
6 3336F	4.0 fl oz/1000 ft2	14 day	BDFHJL	4.3d	4.0cd	4.0c	510.9ij
7 Banner Maxx	2.0 fl oz/1000 ft2	14 day	BDFHJL	5.0bc	5.3a	5.0a	568.5efg
8 Torque	1.1 fl oz/1000 ft2	14 day	BDFHJL	6.8a	5.0ab	4.8ab	652.9a
9 Densicor	0.196 fl oz/1000 ft2	14 day	BDFHJL	6.5a	5.3a	5.0a	661.0a
10 Heritage TL	2.0 fl oz/1000 ft2	14 day	BDFHJL	4.3d	4.0cd	4.0c	514.3ij
11 Insignia SC	0.7 fl oz/1000 ft2	14 day	BDFHJL	5.0bc	5.0ab	4.8ab	616.8bc
12 Emerald	0.18 oz/1000 ft2	28 day	BFJ	5.0bc	4.0cd	4.3bc	552.3fgh
13 Posterity	0.32 fl oz/1000 ft2	28 day	BFJ	7.0a	5.0ab	4.8ab	646.6ab
14 Xzemplar	0.26 fl oz/1000 ft2	28 day	BFJ	5.5b	4.3c	4.3bc	580.1def
15 Kabuto	0.7 fl oz/1000 ft2	21 day	BEHK	5.0bc	4.0cd	4.3bc	530.0hij
LSD P=.05				0.66	0.5	0.57	35.98

^a Application code: B = May 14, D = May 29, E = Jun 5, F = Jun 12, H = Jun 26, J = Jul 10, K = Jul 17, L = Jul 24

^b 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, Fisher's LSD).

^c Area under the turfgrass quality curve (AUTQC) was calculated using the trapezoidal method.