



Dollar Spot Suppression on Golf Course Fairways

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OBJECTIVE

To determine the efficacy of standard and experimental fungicides for controlling dollar spot caused by the fungus *Sclerotinia homoeocarpa* on fairway-height creeping bentgrass.

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*) maintained at 0.5 inches. Individual plots measured 3 feet by 5 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 two Teejet AI 8004 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 1.0 gallon of water per 1000 ft². All treatments were initiated on May 23 and subsequent applications were made at 14, 17, 21, or 28-day intervals. 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 2 weeks. 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.

RESULTS AND DISCUSSION

The experimental area was flooded twice in June due to heavy rains, which prevented dollar spot from developing at that time. However, dollar spot pressure was very high in July and August and provided an excellent test of the various treatments. The highest pressure was recorded on the August 13th rating date and all treatments except for 3 reduced dollar spot relative to the non-treated control. Nineteen of the 54 treatments tested were in the most effective tier of dollar spot suppression, denoted by the letter 'v' following the mean disease severity. Effective treatments mostly consisted of fungicides from the succinate dehydrogenase inhibitor (SDHI) including Posterity, Xzemplar, and Lexicon. Fluazinam as Secure, Secure Action, or Traction, also provided effective dollar spot suppression. Turf quality mostly reflected dollar spot severity data and there were 17 treatments providing acceptable turf quality (6 or greater) on the August 13th rating date. No phytotoxicity was observed with any treatment.

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

Treatment	Rate	Application Interval	Application Code ^b	Dollar Spot Severity ^a		
				Jun 22	Jul 18	Aug 13
1 Non-treated control				7.3 a	88.5 a	108.0 a
2 Posterity	0.16 FL OZ/1000 FT2	21 day	DGJMP	0.0b	0.5 n	9.0r-v
3 Daconil Action Posterity Secure Action	0.16 FL OZ/1000 FT2	21 day	DJP DJP GM	0.0b	0.0n	19.0p-v
4 Posterity Heritage Action Primo Maxx Secure Action Primo Maxx Secure Action Primo Maxx Secure Action Primo Maxx	0.16 FL OZ/1000 FT2 0.2 OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.16 FL OZ/1000 FT2 0.2 OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2	21 day	D D G G J J J M M P P	0.0b	1.5 mn	4.8 uv
5 Secure	0.5 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	1.3 n	13.0q-v
6 Secure Action	0.5 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	0.0n	7.3 s-v
7 Secure	0.5 FL OZ/1000 FT2	17 day	DFIKNP	0.0b	0.5 n	55.8 e-k
8 Secure Action	0.5 FL OZ/1000 FT2	17 day	DFIKNP	0.0b	0.5 n	65.8 b-h
9 Secure	0.5 FL OZ/1000 FT2	21 day	DGJMP	0.0b	3.3 mn	30.5 m-r
10 Secure Action	0.5 FL OZ/1000 FT2	21 day	DGJMP	0.0b	0.5 n	34.0 k-q
11 Xzemplar	0.21 FL OZ/1000 FT2	21 day	DGJMP	0.0b	10.8 h-n	21.0 p-v
12 Traction	1.3 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	0.0n	3.3 v
13 Posterity	0.104 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	0.8 n	5.5 tuv
14 A19649B A22063A	0.104 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	14 day	DFHJLNP DFHJLNP	0.0b	0.0n	0.0 v
15 A19649B A22063A	0.0785 FL OZ/1000 FT2 0.24 FL OZ/1000 FT2	14 day	DFHJLNP DFHJLNP	0.0b	1.8 mn	4.5 v
16 A19649B	0.118 FL OZ/1000 FT2	21 day	DGJMP	0.0b	3.3 mn	28.8 n-s
17 A19649B A22063A	0.118 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	21 day	DGJMP DGJMP	0.0b	8.8 j-n	1.3 v
18 Posterity	0.157 FL OZ/1000 FT2	21 day	DGJMP	0.0b	0.3 n	13.0 q-v
19 A19649B A22063A	0.157 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	21 day	DGJMP DGJMP	0.0b	0.0n	1.8 v
20 A19649B A22063A	0.118 FL OZ/1000 FT2 0.359 FL OZ/1000 FT2	21 day	DGJMP DGJMP	0.0b	1.3 n	13.0 q-v
21 A20866A	0.21 FL OZ/1000 FT2	21 day	DGJMP	0.0b	6.3 lmn	48.3 g-o
22 A19649B	0.157 FL OZ/1000 FT2	28 day	DHLP	0.0b	24.3 e-k	58.0 d-j
23 A19649B A22063A	0.157 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	28 day	DHLP DHLP	0.0b	13.3 h-n	51.3 g-n
24 Posterity	0.209 FL OZ/1000 FT2	28 day	DHLP	0.0b	18.5 g-m	58.8 d-i

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

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)

Table 1 (cont). Mean number of dollar spots per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.

Treatment	Rate	Application Interval	Application Code ^b	Dollar Spot Severity ^a			
				Jun 22	Jul 18	Aug 13	
25	A19649B A22063A	0.209 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	28 day	DHLP DHLP	0.0b	14.0h-n	27.5 o-u
26	A20866A	0.21 FL OZ/1000 FT2	28 day	DHLP	0.0b	36.8 c-f	77.0b-e
27	A20866A	0.26 FL OZ/1000 FT2	28 day	DHLP	0.0b	26.8 d-i	74.5 b-f
28	A22070C	1.5 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	0.0 n	13.5 q-v
29	A14212C	1.5 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	10.5 h-n	58.5 d-i
30	A20866A	0.16 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	2.8 mn	39.8 i-p
31	A22070C	1.5 FL OZ/1000 FT2	21 day	DGJMP	0.0b	4.3 lmn	27.5 o-u
32	A22070C	2.21 FL OZ/1000 FT2	21 day	DGJMP	0.0b	0.0 n	18.5 p-v
33	A22070C	3 FL OZ/1000 FT2	21 day	DGJMP	0.3 b	0.0 n	12.8 q-v
34	A14212C	1.5 FL OZ/1000 FT2	21 day	DGJMP	0.5 b	32.0 c-g	67.8 b-h
35	A14212C	2.2 FL OZ/1000 FT2	21 day	DGJMP	0.0b	8.0 k-n	57.8 d-j
36	A14212C	3 FL OZ/1000 FT2	21 day	DGJMP	0.3 b	9.5 j-n	61.0 c-i
37	A22070C	3 FL OZ/1000 FT2	28 day	DHLP	0.0b	23.8 e-k	83.5 bc
38	A14212C	3 FL OZ/1000 FT2	28 day	DHLP	0.0b	45.3 c	85.5 ab
39	Tebuconazole	1.1 FL OZ/1000 FT2	21 day	D	0.0b	37.8 c-f	54.3 e-l
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		G			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		G			
	Pinpoint	0.25 FL OZ/1000 FT2		J			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		J			
	26 GT	3 FL OZ/1000 FT2		M			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		M			
40	Emerald	0.13 OZ/1000 FT2	21 day	P	0.0b	21.3 f-l	85.8 ab
	Tebuconazole	1.1 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		G			
	Pinpoint	0.25 FL OZ/1000 FT2		J			
	26 GT	3 FL OZ/1000 FT2		M			
41	Emerald	0.13 OZ/1000 FT2	Various	P	0.0b	10.3 i-n	28.3 o-t
	Tebuconazole	1.1 FL OZ/1000 FT2		D			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		H			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		H			
	Secure	0.5 FL OZ/1000 FT2		J			
	Pinpoint	0.25 FL OZ/1000 FT2		L			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		L			
	Secure	0.5 FL OZ/1000 FT2		N			
	26 GT	3 FL OZ/1000 FT2		P			
Civitas Pre-Mixed	8.5 FL OZ/1000 FT2	P					
42	Secure	0.5 FL OZ/1000 FT2	Various	N	1.8 b	2.5 mn	35.3 j-q
	Tebuconazole	1.1 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		H			
	Pinpoint	0.25 FL OZ/1000 FT2		L			
	Secure	0.5 FL OZ/1000 FT2		N			
	26 GT	3 FL OZ/1000 FT2		P			

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

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)

Table 1 (cont). Mean number of dollar spots per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.

Treatment	Rate	Application Interval	Application Code ^b	Dollar Spot Severity ^a		
				Jun 22	Jul 18	Aug 13
43	Tebuconazole	1.1 FL OZ/1000 FT2	28 day	D		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D		
	Emerald	0.13 OZ/1000 FT2		H		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		H		
	Pinpoint	0.25 FL OZ/1000 FT2		L	0.0b	27.5 d-h
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		L		86.8 ab
	26 GT	3 FL OZ/1000 FT2		P		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		P		
44	Tebuconazole	1.1 FL OZ/1000 FT2	28 day	D		
	Emerald	0.13 OZ/1000 FT2		H		
	Pinpoint	0.25 FL OZ/1000 FT2		L	0.8b	66.3 b
	26 GT	3 FL OZ/1000 FT2		P		77.0 b-e
45	Maxtima	0.4 FL OZ/1000 FT2	21 day	DGJMP	0.0b	5.5 lmn
46	Xzemplar	0.26 FL OZ/1000 FT2	21 day	DGJMP	1.5b	25.8 e-j
47	Emerald	0.18 OZ/1000 FT2	21 day	DGJMP	0.0b	2.8 mn
48	Banner Maxx	1 FL OZ/1000 FT2	21 day	DGJMP	1.5b	39.0 cde
49	Torque	0.6 FL OZ/1000 FT2	21 day	DGJMP	0.0b	36.8 c-f
50	Navicon	0.85 FL OZ/1000 FT2	21 day	DGJMP	0.0b	13.5 h-n
51	Honor	1.1 OZ/1000 FT2	21 day	FILOR	0.0b	43.8 cd
52	Lexicon	0.47 FL OZ/1000 FT2	21 day	DGJMP	0.0b	1.0 n
53	Traction	1.3 FL OZ/1000 FT2	14 day	DFHJLNP	0.0b	0.0 n
54	Traction	1.3 FL OZ/1000 FT2	21 day	DGJMP	0.0b	1.3 n
				LSD P=.05	2.17	17.15
						22.99

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

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)

Table 2. Mean turfgrass quality per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.

Treatment	Rate	Application Interval	Application Code ^b	Turf Quality ^a		
				Jun 22	Jul 18	Aug 13
1 Non-treated control				7.0b	4.51	4.5 ijk
2 Posterity	0.16 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.3 a-d	5.8 d-g
3 Daconil Action Posterity Secure Action	0.16 FL OZ/1000 FT2	21 day	DJP DJP GM	7.0b	7.5 abc	5.8 d-g
4 Posterity Primo Maxx Secure Action Primo Maxx Posterity Heritage Action Primo Maxx Secure Action Primo Maxx Secure Action Primo Maxx	0.16 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.16 FL OZ/1000 FT2 0.2 OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2 0.25 FL OZ/1000 FT2	21 day	D D G G J J J M M P P	7.5 a	7.8 ab	7.0 ab
5 Secure	0.5 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	6.3 e-h	6.3 b-e
6 Secure Action	0.5 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	7.3 a-d	6.8 abc
7 Secure	0.5 FL OZ/1000 FT2	17 day	DFIKNP	7.0b	7.3 a-d	4.3 jk
8 Secure Action	0.5 FL OZ/1000 FT2	17 day	DFIKNP	7.0b	7.3 a-d	4.3 jk
9 Secure	0.5 FL OZ/1000 FT2	21 day	DGJMP	7.0b	6.8 c-f	5.8 d-g
10 Secure Action	0.5 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.5 abc	6.3 b-e
11 Xzemplar	0.21 FL OZ/1000 FT2	21 day	DGJMP	7.0b	6.0 f-i	5.3 f-i
12 Traction	1.3 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	7.5 abc	6.8 abc
13 Posterity	0.104 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	7.3 a-d	6.0 c-f
14 A19649B A22063A	0.104 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	14 day	DFHJLNP DFHJLNP	7.0b	7.5 abc	7.5 a
15 A19649B A22063A	0.0785 FL OZ/1000 FT2 0.24 FL OZ/1000 FT2	14 day	DFHJLNP DFHJLNP	7.0b	7.3 a-d	7.0 ab
16 A19649B	0.118 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.0 b-e	5.3 f-i
17 A19649B A22063A	0.118 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	21 day	DGJMP DGJMP	7.0b	6.8 c-f	7.0 ab
18 Posterity	0.157 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.0 b-e	5.3 f-i
19 A19649B A22063A	0.157 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	21 day	DGJMP DGJMP	7.0b	7.8 ab	7.5 a
20 A19649B A22063A	0.118 FL OZ/1000 FT2 0.359 FL OZ/1000 FT2	21 day	DGJMP DGJMP	7.0b	7.3 a-d	6.5 bcd
21 A20866A	0.21 FL OZ/1000 FT2	21 day	DGJMP	7.0b	6.3 e-h	5.3 f-i
22 A19649B	0.157 FL OZ/1000 FT2	28 day	DHLP	7.0b	5.8 g-j	4.5 ijk
23 A19649B A22063A	0.157 FL OZ/1000 FT2 0.5 FL OZ/1000 FT2	28 day	DHLP DHLP	7.0b	6.3 e-h	5.5 e-h
24 Posterity	0.209 FL OZ/1000 FT2	28 day	DHLP	7.0b	5.8 g-j	4.3 jk

^aTurfgrass 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).

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)

Table 2 (cont). Mean turfgrass quality per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.

	Treatment	Rate	Application Interval	Application Code ^b	Turf Quality ^a		
					Jun 22	Jul 18	Aug 13
25	A19649B	0.209 FL OZ/1000 FT2	28 day	DHLP	7.0b	6.8c-f	5.8d-g
	A22063A	0.5 FL OZ/1000 FT2		DHLP			
26	A20866A	0.21 FL OZ/1000 FT2	28 day	DHLP	7.0b	4.8kl	4.0k
27	A20866A	0.26 FL OZ/1000 FT2	28 day	DHLP	7.0b	5.8g-j	4.5ijk
28	A22070C	1.5 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	7.0b-e	6.3b-e
29	A14212C	1.5 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	6.0f-i	5.0g-j
30	A20866A	0.16 FL OZ/1000 FT2	14 day	DFHJLNP	7.0b	7.0b-e	5.0g-j
31	A22070C	1.5 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.3a-d	5.5e-h
32	A22070C	2.21 FL OZ/1000 FT2	21 day	DGJMP	7.0b	7.0b-e	6.0c-f
33	A22070C	3 FL OZ/1000 FT2	21 day	DGJMP	7.0b	8.0a	6.0c-f
34	A14212C	1.5 FL OZ/1000 FT2	21 day	DGJMP	7.0b	5.5h-k	4.5ijk
35	A14212C	2.2 FL OZ/1000 FT2	21 day	DGJMP	7.0b	6.5d-g	5.0g-j
36	A14212C	3 FL OZ/1000 FT2	21 day	DGJMP	7.0b	6.5d-g	4.8h-k
37	A22070C	3 FL OZ/1000 FT2	28 day	DHLP	7.0b	5.5h-k	4.8h-k
38	A14212C	3 FL OZ/1000 FT2	28 day	DHLP	7.0b	5.3i-l	4.3jk
39	Tebuconazole	1.1 FL OZ/1000 FT2	21 day	D	7.0b	5.5h-k	4.8h-k
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		G			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		G			
	Pinpoint	0.25 FL OZ/1000 FT2		J			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		J			
	26 GT	3 FL OZ/1000 FT2		M			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		M			
	Emerald	0.13 OZ/1000 FT2		P			
Civitas Pre-Mixed	8.5FL OZ/1000 FT2	P					
40	Tebuconazole	1.1 FL OZ/1000 FT2	21 day	D	7.0b	5.8g-j	4.3jk
	Emerald	0.13 OZ/1000 FT2		G			
	Pinpoint	0.25 FL OZ/1000 FT2		J			
	26 GT	3 FL OZ/1000 FT2		M			
	Emerald	0.13 OZ/1000 FT2		P			
41	Tebuconazole	1.1 FL OZ/1000 FT2	Various	D	7.0b	6.8c-f	6.5bcd
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D			
	Emerald	0.13 OZ/1000 FT2		H			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		H			
	Secure	0.5 FL OZ/1000 FT2		J			
	Pinpoint	0.25 FL OZ/1000 FT2		L			
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		L			
	Secure	0.5 FL OZ/1000 FT2		N			
	26 GT	3 FL OZ/1000 FT2		P			
Civitas Pre-Mixed	8.5 FL OZ/1000 FT2	P					
42	Tebuconazole	1.1 FL OZ/1000 FT2	Various	D	7.0b	6.5d-g	5.3f-i
	Emerald	0.13 OZ/1000 FT2		H			
	Secure	0.5 FL OZ/1000 FT2		J			
	Pinpoint	0.25 FL OZ/1000 FT2		L			
	Secure	0.5 FL OZ/1000 FT2		N			
	26 GT	3 FL OZ/1000 FT2		P			

^aTurfgrass 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).

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)

Table 2 (cont). Mean turfgrass quality per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.

Treatment	Rate	Application Interval	Application Code ^b	Turf Quality ^a		
				Jun 22	Jul 18	Aug 13
43	Tebuconazole	1.1 FL OZ/1000 FT2	28 day	D		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		D		
	Emerald	0.13 OZ/1000 FT2		H		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		H		
	Pinpoint	0.25 FL OZ/1000 FT2		L	7.0b	5.8 g-j
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		L		4.5 ijk
	26 GT	3 FL OZ/1000 FT2		P		
	Civitas Pre-Mixed	8.5 FL OZ/1000 FT2		P		
44	Tebuconazole	1.1 FL OZ/1000 FT2	28 day	D		
	Emerald	0.13 OZ/1000 FT2		H	7.0b	4.51
	Pinpoint	0.25 FL OZ/1000 FT2		L		4.3 jk
45	Maxtima	0.4 FL OZ/1000 FT2	21 day	DGJ	7.0b	6.5 d-g
46	Xzemplar	0.26 FL OZ/1000 FT2	21 day	DGJ	7.0b	5.8 g-j
47	Emerald	0.18 OZ/1000 FT2	21 day	DGJ	7.0b	6.8 c-f
48	Banner Maxx	1 FL OZ/1000 FT2	21 day	DGJ	7.0b	5.0 jkl
49	Torque	0.6 FL OZ/1000 FT2	21 day	DGJ	7.0b	5.3 i-l
50	Navicon	0.85 FL OZ/1000 FT2	21 day	DGJ	7.0b	6.3 e-h
51	Honor	1.1 OZ/1000 FT2	21 day	FI	7.0b	5.3 i-l
52	Lexicon	0.47 FL OZ/1000 FT2	21 day	DGJ	7.0b	7.3 a-d
53	Traction	1.3 FL OZ/1000 FT2	14 day	DFHJ	7.0b	7.0 b-e
54	Traction	1.3 FL OZ/1000 FT2	21 day	DGJ	7.0b	7.0 b-e
LSD P=.05					0.11	0.85
						0.79

^aTurfgrass 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).

^bApplication Code D = May 25th, F=June 5th, G=June 12th, H=June 19th, I=June 22nd (17 day), J=July 3rd, K=July 9th (17 day), L=July 17th, M=July 27th, N=July 30th (17 day), N=July 31st, O=August 9th, P=August 14th, P=August 16th (17 day)