

Dollar Spot (*Rutstroemia floccosum*)

This study was set up in 4 replicates of a random block design with 2' x 6' plots. Treatments were applied using a CO₂ backpack sprayer with a single nozzle boom at 34 PSI and 48 GPA. The host was Emerald creeping bentgrass/annual bluegrass mowed at 3/16". Fertility was applied as needed, with an average of approximately lb nitrogen/1000 ft²/month. The 14-day treatments were applied 8/8, 8/22, 9/5, and 9/17 (except as noted in Table 16). The 21-day treatment was applied on 8/8, 8/28, and 9/17. Data represent mean percent plot area infected (Table 16). Turf quality ratings were also taken using a 0 (worst) - 10 (best) scale, where 7 = acceptable turf quality (Table 17.)

As the data in Table 16 indicate, dollar spot disease pressure was moderate in this study due to a cool, dry summer. However, because the disease pressure was relatively uniform across the study, statistical differences between treatments were highly significant. Emerald alone, and Compass in combination with Bayleton, both performed very well, as did the other DMI fungicides and generics (Banner Maxx, Rubigan AS, Eagle, Propiconazole Pro, Lesco Spectator.) The two season-long program treatments also controlled dollar spot throughout the season. The chlorothalonil generics (Concorde, Echo 720) also managed dollar spot well, although disease was not totally eradicated. The same was true of Daconil Ultrex itself. Least effective treatments included the benzimidazole fungicides Topsin M and Clearys 3336. This failure is attributable to the predominance of benzimidazole-resistant dollar spot strains in the plot area.

As Table 17 indicates, most treatments provided acceptable turfgrass quality, with the two season-long program treatments providing the best turfgrass quality. The only phytotoxicity observed was a leaf-tip bleaching observed in one replicate plot each of the two Concorde/Pentathlon/Aviator treatments. The reason for this selective phytotoxicity is uncertain, but it was observed in early September and it persisted until the end of the study.

Table 16. Dollar spot 2003.

Location: Hancock Turfgrass Research Center, E. Lansing, MI

Rating Scale: Mean % plot area blighted by dollar spot.

Treatment and Rate/1000 sq ft	Interval (Days)	Mean^a Aug 29		Mean Sep 5		Mean Sep 11		Mean Sep 17	
Emerald 70WG 0.18 oz	21	0.0	f	0.0	f	0.0	f	0.0	f
Propiconazole Pro 1.3MC 1 fl oz	14	0.1	f	0.0	f	0.0	f	0.0	f
Emerald 70WG 0.13 oz alt. with Insignia 20WG 0.9 oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Compass 0.15 oz + Bayleton 0.5 oz	14	0.1	f	0.0	f	0.0	f	0.0	f
Compass 0.15 oz + Bayleton 1.0 oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Bayleton 50WP 0.5 oz	14	0.0	f	0.0	f	0.8	f	0.0	f
Bayleton 50WP 1 oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Chipco 26GT 2SC 4 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Eagle WSP 0.6 oz + Fore WSP 6 oz ^b +	6/6	0.0	f	0.0	f	0.0	f	0.0	f
Fore WSP 6 oz +	6/20								
Eagle WSP 0.6 oz + Prostar 1.5 oz +	7/3								
Chipco 26GT 4 fl oz + Fore 6 fl oz +	7/18								
Heritage 0.2 oz + Curalan 50DF 1 oz +	7/31								
Eagle 0.6 oz + Fore WSP 6 oz +	8/15								
Fore WSP 6 oz + Chipco 26GT 4 fl oz +	8/25								
Eagle 0.6 oz	9/11								
Eagle WSP 0.6 oz + Fore WSP 6 oz ^b +	6/6	0.0	f	0.0	f	0.0	f	0.0	f
Daconil 825 SDG 3.2 oz +	6/20								
Eagle 0.6 oz + Prostar 1.5 oz +	7/3								
Daconil 825 SDG 3.2 oz + Chipco 26GT 4 fl oz +	7/18								
Heritage 0.2 oz + Curalan 1 oz +	7/31								
Fore 6 oz + Eagle 0.6 oz +	8/15								
Daconil 825SDG 3.2 oz +	8/25								

Eagle 40SP 0.6 oz	9/11								
Concorde DF 3.2 oz	14	1.4	d-f	0.8	ef	0.8	f	0.0	f
Concorde DF 3.2 oz alt. with Pentathlon DF 6 oz + Aviator 1 oz	14	3.3	d-f	0.0	f	0.0	f	0.0	f
Lesco Spectator 0.36 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Banner Maxx 1 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Lesco 18 Plus 4 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
V-10114 50WD 0.73 oz	14	0.0	f	0.0	f	0.0	f	0.0	f
V-10116 1.67SC 0.22 fl oz	14	0.1	f	0.1	f	0.1	f	0.0	f
V-10116 1.67SC 0.88 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
V-10116 1.67SC 1.32 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Eagle 0.6 oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Echo 720 2 fl oz + PropiMax 0.36 fl oz	14	0.0	f	0.0	f	0.0	f	0.0	f
Emerald 70WG 0.13 oz	14	0.0	f	0.0	f	0.0	f	0.1	f
Rubigan AS 1.5 fl oz	28	0.0	f	0.2	f	0.2	f	0.1	f
V-10116 1.67SC 0.44 fl oz	14	0.0	f	0.0	f	0.0	f	0.1	f
Spectro 4 oz	14	1.4	d-f	0.3	f	0.2	f	0.8	ef
Concorde 3.5 fl oz	14	0.4	ef	0.8	ef	0.3	f	0.9	ef
Dac. Ultrex 3.2 oz	14	0.4	ef	0.6	ef	1.4	f	0.9	ef
Insignia 0.9 oz	14	0.0	f	0.0	f	0.0	f	1.3	ef
Echo 720 3.6 fl oz	14	3.1	c-f	4.9	c-f	3.1	d-f	3.4	d-f
Insignia 20WG 0.9 oz	14	5.1	b-e	5.0	c-f	3.8	c-f	5.0	c-f
Daconil Ultrex 1.6 oz + MacroSorb 2 fl oz	14	3.3	c-f	4.4	c-f	3.1	d-f	5.3	c-f
Topsin-M 70WP 1.4 oz	14	5.1	b-e	11.3	ab	7.5	a-d	5.4	c-f
Daconil Ultrex 1.6 oz	14	6.3	a-c	10.0	a-c	6.1	b-e	7.0	c-e
Concorde 3.5 fl oz alt. with Pentathlon LF 10 oz + Aviator 1 oz	14	4.8	b-f	1.8	ef	2.1	ef	7.8	cd
Cleary 3336 F 2 fl oz	14	6.0	a-d	6.5	b-e	7.0	b-d	8.0	cd
RCS67 4 oz	14	1.1	ef	2.9	d-f	1.6	ef	8.9	cd

Topsin-M 4.5F 1.8 fl oz	14	4.0	b-f	8.4	a-d	8.0	a-c	10.5	bc
Dac 1.6 oz + MacroSorb 2 fl oz + Quelant Minors 1.5 fl oz	14	7.8	a-c	11.3	ab	9.3	ab	10.6	bc
Macrosorb 2 fl oz + Quelant Minors 1.5 fl oz	14	10.1	a	13.5	a	11.8	a	15.8	ab
Control		8.8	ab	10.0	a-c	7.8	a-d	21.3	a

^a Means followed by the same letter do not significantly differ (LSD, p=0.05).

^b These program treatments were initiated on 6/6/03. Subsequent applications were made at roughly 14-day intervals ending with the final applications on 9/12/02.

Table 17. Turfgrass Quality – Dollar Spot Study - 2003.
Location: Hancock Turfgrass Research Center, E. Lansing, MI
Rating scale^a: 10 = best, 0 = worst, and 7= acceptable.

Treatment and Rate/1000 sq ft	Interval (Days)	Mean ^b Aug 29	Mean ^b Sep 5	Mean ^b Sep 11	Mean ^b Sep 17
Emerald 70WG 0.13 oz	14	7.3	7.3	7.3	7.5
Emerald 70WG 0.18 oz	21	7.3	7.0	7.0	7.3
Propiconazole Pro 1.3MC 1 fl oz	14	7.3	7.5	7.5	7.5
Insignia 20WG 0.9 oz	14	6.8	6.8	7.3	7.0
Emerald 70WG 0.13 oz alt. with Insignia 20WG 0.9 oz	14	7.0	7.0	7.0	7.5
Compass 0.15 oz + Bayleton 0.5 oz	14	7.5	8.0	7.3	7.0
Compass 0.15 oz + Bayleton 1.0 oz	14	7.5	7.5	7.5	7.3
Bayleton 50WP 0.5 oz	14	7.3	7.8	7.3	7.0
Bayleton 50WP 1 oz	14	7.8	7.8	7.5	7.0
Chipco 26GT 2SC 4 fl oz	14	7.5	7.5	7.3	7.0
Topsin-M 70WP 1.4 oz	14	6.8	6.3	6.3	6.5
Topsin-M 4.5F 1.8 fl oz	14	7.0	6.3	6.5	6.3
Cleary 3336 F 2 fl oz	14	7.0	6.7	6.8	6.3

RCS67 4 oz	14	6.8	7.3	6.8	6.8
Spectro 4 oz	14	6.8	7.3	7.0	7.0
Eagle WSP 0.6 oz + Fore WSP 6 oz + Fore WSP 6 oz +	6/6 6/20	8.0	8.0	7.8	7.5
Eagle WSP 0.6 oz + Prostar 1.5 oz +	7/3				
Chipco 26GT 4 fl oz + Fore 6 fl oz +	7/18				
Heritage 0.2 oz + Curalan 50DF 1 oz +	7/31				
Eagle 0.6 oz + Fore WSP 6 oz +	8/15				
Fore WSP 6 oz + Chipco 26GT 4 fl oz +	8/25				
Eagle 0.6 oz	9/11				
Eagle WSP 0.6 oz + Fore WSP 6 oz +	6/6	8.0	7.8	7.8	7.8
Daconil 825 SDG 3.2 oz +	6/20				
Eagle 0.6 oz + Prostar 1.5 oz +	7/3				
Daconil 825 SDG 3.2 oz + Chipco 26GT 4 fl oz +	7/18				
Heritage 0.2 oz + Curalan 1 oz +	7/31				
Fore 6 oz + Eagle 0.6 oz +	8/15				
Daconil 825SDG 3.2 oz +	8/25				
Eagle 40SP 0.6 oz	9/11				
Rubigan AS 1.5 fl oz	28	7.8	7.0	7.3	7.0
Concorde DF 3.2 oz	14	7.5	7.8	7.3	7.3
Concorde 3.5 fl oz	14	7.3	7.8	7.5	7.5
Concorde DF 3.2 oz alt Pentathlon DF 6 oz + Aviator 1 oz	14	6.5	8.0	7.0	6.8
Concorde 3.5 fl oz alt. with Pentathlon LF 10 oz + Aviator 1 oz	14	6.0	7.3	7.0	7.0
Lesco Spectator 0.36 fl oz	14	8.0	7.5	7.5	7.5
Banner Maxx 1 fl oz	14	7.3	7.0	7.3	7.3
Lesco 18 Plus 4 fl oz	14	7.3	7.5	7.0	7.0

V-10114 50WD 0.73 oz	14	7.3	7.5	7.3	7.3
V-10116 1.67SC 0.22 fl oz	14	7.0	7.0	7.3	7.3
V-10116 1.67SC 0.44 fl oz	14	7.3	7.3	7.3	7.3
V-10116 1.67SC 0.88 fl oz	14	7.3	7.3	7.3	7.0
V-10116 1.67SC 1.32 fl oz	14	7.5	7.8	7.5	7.8
Insignia 0.9 oz	14	7.8	7.3	7.5	7.8
Daconil Ultrex 3.2 oz	14	6.8	7.5	7.0	7.3
Eagle 0.6 oz	14	7.5	7.5	7.8	7.0
Daconil Ultrex 1.6 oz	14	6.8	6.5	6.8	7.0
Daconil Ultrex 1.6 oz + MacroSorb 2 fl oz	14	6.8	6.8	7.0	6.5
Daconil Ultrex 1.6 oz + MacroSorb 2 fl oz + Quelant Minors 1.5 fl oz	14	7.0	6.0	7.0	7.0
Macrosorb 2 fl oz + Quelant Minors 1.5 fl oz	14	6.5	6.0	6.3	6.5
Echo 720 3.6 fl oz	14	6.5	7.5	6.8	7.0
Echo 720 2 fl oz + PropiMax 0.36 fl oz	14	7.5	8.0	7.5	6.8
Control		6.3	6.5	6.3	6.5

^a Ratings based on color, density, and uniformity.

^b Mean of 4 replicate plots.