

1998-99 FUNGICIDE REPORT
J.M. Vargas, Jr., A. R. Detweiler and N. M. Dykema
Department of Botany and Plant Pathology
Michigan State University

Melting Out Fungicide Trial, 1999

The 1999 melting out (*Dreschlera poae*) fungicide trial was conducted at the Hancock Turfgrass Research Center on the MSU campus in E. Lansing, MI on irrigated Kenblue Kentucky bluegrass (*Poa pratensis*) turf maintained at 1 ½ " height of cut. The study area was fertilized in late 1998 at 1 lb nitrogen per 1000 sq ft and on May 31, 1999 and June 9 at 0.125 lb nitrogen per 1000 sq ft.

Treatments were applied to 4 replicate plots in a random complete block design using a CO powered backpack small plot sprayer operating at 32 PSI and a volume of 48 GPA. We utilized a double nozzle boom with 8002E flat fan nozzles. Preventive applications were made initially on May 9, with subsequent applications being made at the intervals cited in the data table.

At the time of the rating (June 17, 1999), the 10 day treatment had been applied four times (5/9, 5/20, 5/29, 6/8), the 14 day treatments had been applied three times (5/9, 5/23, 6/5), and the 21 day treatments had been applied twice (5/9, 5/29).

As the data indicates (table 1), all treatments gave statistically significant control of melting out when compared to the untreated controls. Disease pressure was moderate this year due to a warm, relatively dry spring. Therefore, treatment separation related to subtle rate and interval differences was not evident.

No quality differences were evident, nor was any phytotoxicity observed at any time during the study duration.

Table 1. Melting Out Ratings – 1999

Rating Scale: 1 = less than 10% of leaves infected, with no thinning or discoloration, 10 = 100%of leaves infected with severe thinning and browning.

Rating Date: June 17, 1999

<u>Treatment</u>	<u>Rate per 1000 ft^{2b}</u>	<u>Interval (days)</u>	<u>Mean (LSD - .05)^a</u>
Ch. 26GT	4 fl oz	21	1.3 A
Polyoxorim-Zn	4 oz	14	1.3 A
Polyoxorim-Zn	8 oz	14	1.3 A
Daconil Ultrex	3.7 oz	10	1.5 A
Polyoxorim-Zn	8 oz	21	2.0 A
Polyoxorim-Zn + non-ionic surfactant	4 oz + 0.25%v/v	14	2.0 A
Compass	0.15 oz	14	2.0 A
Compass	0.1 oz	14	2.0 A
Control	—	—	4.5 B

^aTreatments followed by the same letter are not significantly different from each other (Least Significant Differences Test - .05).

^bR.ates are formulated product.

TAKE-ALL PATCH FUNGICIDE TRIALS, 1999

The 1999 take-all (*Gaeumannomyces graminis*) fungicide studies were established on irrigated creeping bentgrass (*Agrostis palustris* Huds.) fairways on the Whittaker Woods Golf Course in New Buffalo, MI, and on the Lynx Golf Course in Otsego, MI. The duplicate studies were laid out in a randomized complete block design with 4 replications, and a plot size of 6' x 18'. This larger plot size was

Twin Beach Golf Club, W. Bloomfield, MI

The study described above was duplicated on the Twin Beach Golf Club on an irrigated annual bluegrass fairway that has a history of disease. Treatments were applied initially on May 10 (65° F at 2" soil depth) and on June 4 (75° F at 2" soil depth). The 65° treatment was re-applied on June 9, while the 75° treatments were re-applied on July 6, except as noted in the data table. Because the plot area appeared fertile in May, fertilizer was first applied on June 21 (22-4-7 at ¼ lbN/1000ft²). The same fertilizer treatment was re-applied on July 6 and August 2.

Unfortunately, summer patch disease did not develop in this study this year. The reason for this lack of disease is unclear, since we experienced adequate heat stress and the fairway was comprised primarily of annual bluegrass. Therefore, no data was available from this study. No phytotoxicity was observed in this study.

DOLLAR SPOT FUNGICIDE TRIAL, 1999

This test was conducted at the Hancock Turfgrass Research Center, E. Lansing, MI on an irrigated Pennlinks creeping bentgrass, simulated, putting green. Plots were mowed at 0.25" and were fertilized at approximately 3/8 lb. nitrogen per 1000 ft² per month. The study was laid out in 4 replications of 2'x6' plots in a random block design. Applications were made using a hand held single nozzle (TeeJet 8002E) CO₂ sprayer operating at 33 PSI and a volume of 48 GPA.

As of the 9/22 rating in the table below, the 14 day treatments had been applied four times (8/2, 8/16, 8/31, 9/14), the 21 day treatments had been applied three times (8/2, 8/25, 9/14) and the 28 day treatments had been applied twice (8/2, 8/31). Exceptions are noted in the table. As the disease ratings indicate, most of the standard products performed well under the moderate disease pressure we experienced this season. Data were subjected to analysis of variance and the LSD test (.05).

No chemical phytotoxicity was observed this year, and turf quality was actually enhanced in some treatments (table 4).

Table 4. Dollar Spot Ratings, 1999.

Treatment	Rate ^b	Int. ^a (Days)	Mean % Dollar Spot ^c , LSD - .05, (Mean Turfgrass Quality - 0 = worst, 10 = best, 7=acceptable) ^d			
			8/24	8/31	9/14	9/22
Lynx 45WP	0.278 oz	14	7 DE	10 BC (6.8)	0.1 G (7.8)	0 F (7.3)
Lynx 45WP	0.556 oz	21	0.3 FG	0.4 BC (7.5)	0 G (7.5)	0 F (7.8)
Lynx + Dac. Ultrex	0.278 oz	14	0 G	0 E (8.3)	0 G (8.0)	0 F (7.8)
	+ 1.82 oz					
Bayleton 50WP	0.25 oz +	14	0.1 FG	0 E (7.8)	0 G (8.0)	0 F (7.8)
+ Dac. Ultrex	1.82 oz					
Lynx 45WP	0.278 oz +	21	5.1 EF	2.6 DE (6.5)	0 G (8.0)	0 F (7.5)
+ Heritage	0.2 oz					
Bayleton 50W	0.25 oz +	21	0.1 FG	0.1 E (7.8)	0 G (7.8)	0 F (7.3)
+ Heritage	0.2 oz					
Spectro 90WG	4 oz	14	0.3 FG	0.1 E (7.5)	0 G (8.0)	0 F (8.0)
WAC 79	10 fl oz	14	11 CD	11.8 BC(6.5)	9.3 E (6.8)	9.3 DE (6.5)
WAC 79	5 fl oz	14	26.3 A	27.5 A (5.8)	17.5 BC (6.0)	18.5 AB (6.8)
WAC 79	5 fl oz +	14	16.3 B	15.0 B (6.5)	13.8 CD (6.8)	16.3 B (6.8)
+ 3336F	2 fl oz					
WAC 79	5 fl oz +	14	0.4 FG	0.9 E (7.3)	0 G (7.8)	0 F (7.5)
+ Dac. Ultrex	1.98 fl oz					
GX-611 720 F	4.2 fl oz	14	0.5 FG	0 E (7.8)	0 G (8.0)	0 F (8.0)
Eagle	0.5 oz	14	0 G	0 E (8.0)	0 G (8.3)	0 F (7.8)
Eagle	0.6 oz	14	0 G	0 E (7.5)	0 G (8.0)	0 F (7.8)
Eagle	1 oz	28	0.1 FG	0.9 E (7.5)	0 G (8.0)	0 F (7.8)
Maximum	8 oz	14	0 G	0 E (7.8)	0 G (8.0)	0 F (7.8)
Chipco Triton	0.5 fl oz	14	0 G	0 E (7.3)	0 G (7.8)	0 F (7.3)
Chipco Triton	1 fl oz	14	0 G	0 E (7.5)	0 G (8.0)	0 F (7.8)
Ch. 26 GT	4 fl oz	14	0 G	0 E (7.0)	0 G (7.0)	0 F (7.0)
Ch .Al. Sign.	8 oz	14	12.5BC	14.8 B (8.8)	10.3 DE(7.5)	1.3 CD (7.3)
Ch. 26 GT.	4 fl oz +	14	0 G	0 E (7.8)	0 G (8.5)	0 F (8.3)
+ Ch. Al. Sign	8 oz					
Eminent125SL	2 fl oz	14	0 G	0 E	0 G (7.8)	0 F (7.8)
Eminent125SL	4 fl oz	14	0 G	0 E	0 G (8.0)	0 F (8.0)
Eminent125SL	4 fl oz	21	0 G	0 E	0 G (7.5)	0 F (8.0)
Echo 75 WDG	4.2 oz	14	0 G	0 E	0 G (8.5)	0 F (8.0)
Thalonil 4L	6.2 fl oz	14	0 G	0 E	0 G (7.8)	0 F (8.0)
Dac. Ultrex	3.8 oz	14	0 G	0 E	0 G (8.5)	0 F (8.0)
Dac. Ultrex	3.8 oz +	14	0 G	0 E	0 G (8.5)	0 F (8.0)
+ Heritage	0.2 oz					
Control	—	—	27.5 A	26.3 A	22.5 A (6.5)	A (6.8)

^a Re-application interval.^b Rates represent formulated product.^c Average of 4 replicate plots.^d Treatments followed by the same letter are not significantly different from each other (Least Significant Differences Test - .05).