1998-99 FUNGICIDE REPORT

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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_2 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

Treatment	Rate per 1000 ft²[b]	Interval (days)	Mean (LSD - .05)[a]
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

[a]Treatments followed by the same letter are not significantly different from each other (Least Significant Differences Test - .05).
[B]R.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

Summer Patch Fungicide Trials, 1999

Fungicide studies for the preventive control of summer patch (Magnaporthe poae) on annual bluegrass (Poa annua) were established on two suburban Detroit golf courses on irrigated fairways which had a history of summer patch infection. All treatments were applied to four replicate 6'x 9' plots prior to disease occurrence (except as cited in the data table), with re-application taking place at protocol intervals. Plot design, application procedures, and equipment were as previously described in this report, except that the application volume was 96 GPA, or as noted in the data table.

Dearborn Country Club, Dearborn, MI

Treatments were initiated on May 10 (65^0) or on June 7 (75^0), or as cited in the data (table 3). The 65^0 treatments were re-applied on June 9 and the 75^0 treatments were re-applied on July 2, except as noted in the data table The study was fertilized on May 10 (22-4-7 at ½ lb N/1000ft^2), June 1 (22-4-7 at ½ lb N/ 1000ft^2), June 21 (22-4-7 at ¼ lbN/1000ft^2), and July 12 (22-4-7 at ¼ lbN/1000ft^2). Disease and quality ratings were taken on August 16, at the peak of disease development.

As the data (table 3) indicate, disease pressure was moderate this year. Under this scenario, most of the treatments gave statistically significant control of summer patch, compared to the untreated control. Many of the standard treatments, such as Sentinel, Heritage, Eagle, and Banner gave virtually complete control of the disease.

3336 F was applied as a curative treatment, alone, and as a component of sequential combination treatments, in early August, when disease pressure was just developing in the control plots. Unfortunately, disease pressure abated in mid-late August, less than a month after disease pressure had become severe enough to test the curative efficacy of 3336 F. This declining disease pressure allowed both the controls and the curatively-treated plots to recover simultaneously, invalidating any recovery data.

No phytotoxicity was observed in the plot area this year.

Table 3. Summer Patch Fungicide Ratings, 1999

Rating Scale: Percent plot area infected
Rating Date: Aug. 16, 1999

Treatment	Rate/1000ft² (formulation)	Interval[a] (Days)	Mean[f]	LSD (5%)
Heritage	0.2 oz	65°, then 14	0	H
3336 F	6 fl oz	14 (curative)	8.5	B-D
Heritage, then 3336 F[b]	0.2 oz 6 oz	75°, then 21 14	0	H
WAC 79, then 3336 F[b]	5 fl oz 6 oz	75°, then 14 14	8.25	B-E
Compass[d]	0.2 oz	75°, then 14	2.5	D-H
Compass + Banner MAXX[d]	0.25 + 2 fl oz	75°, then 21	3	C-H
Banner Maxx[d], then Compass[cd]	4 fl oz 0.25 oz	75° (one app) 14	1.5	E-H
Banner Maxx[d], then Compass[cd]	4 fl oz 0.25 oz	75° (one app) 28	3.75	C-H
Compass[d]	0.4 oz	75°, then 28	3.5	C-H
Compass	0.25 oz	75°, then 14	2.5	D-H
Compass[e]	0.25 oz	75°, then 14	4.25	C-H
Compass	0.25 oz	75°, then 28	3.25	C-H
Compass[e]	0.25 oz	75°, then 28	5.75	B-H
Eagle	0.6 oz	75°, then 14	0	H
Eagle	1.2 oz	75°, then 28	0.75	GH
Chipco Triton	0.5 fl oz	75°, then 28	8.5	B-D
Chipco Triton	1 fl oz	75°, then 28	8.5	B-D
Chipco Triton	1.5 fl oz	75°, then 28	4.25	C-H
TADS 12529	4.25 g	75°, then 28	12	AB
TADS 12529	8.5 g	75°, then 28	9.5	A-C
Heritage	0.2 oz	75°, then 28	0.75	GH
Sentinel	0.25 oz	75°, then 28	1.25	F-H
Bayleton	2 oz	65°, then 28	8	B-F
Banner Maxx	4 fl oz	75°, then 28	0.5	H
Control	—	—	16.25	A
Chipco Triton	0.5 fl oz	65°, then 28	5	C-H
Chipco Triton	1 fl oz	65°, then 28	4.5	C-H
Chipco Triton	1.5 fl oz	65°, then 28	6.5	B-H
TADS 12529	4.25 g	65°, then 28	7.5	B-G
TADS 12529	8.5 g	65°, then 28	6	B-H
Heritage	0.2 oz	65°, then 28	2.25	D-H
Heritage	0.4 oz	75°, then 28	0	H

[a] Reapplication interval
[b] 3336 F treatments at 14 day intervals replaced Heritage and WAC 79 when disease appeared in controls.
[c] Compass applied 28 days after initial Banner MAXX application.
[d] Applied in 3 gallon/ 1000 ft² spray volume.
[e] Applied in 4 gallon/1000 ft² spray volume.
[f] Treatments followed by the same letter are not significantly different from each other (Least Significant Differences Test - .05).

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 (65^0 F at 2 " soil depth) and on June 4 (75^0 F at 2" soil depth). The 65^0 treatment was re-applied on June 9, while the 75^0 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 ft^2 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) CO_2 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).