

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 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

necessary because take-all patch symptoms are often dispersed. Treatments were applied with a CO backpack sprayer at 32 psi and volume of 96 GPA. Both golf courses were monitored for disease ² beginning in April 1999 in the hope that the spring take-all outbreaks of the two previous years would be observed again this year.

The plot areas were fertilized lightly (May through September) and a granulated lime product (Nutralime) was applied monthly in an attempt to increase take-all patch severity. When no spring/early summer disease activity was observed, we initiated preventive applications in mid-August in an attempt to obtain disease control data during the cool weather of the fall, when take-all outbreaks are common.

The study areas were sprayed with low rates of Daconil Ultrex as needed to manage dollar spot.

Whittaker Woods Golf Course, New Buffalo, MI.

Despite a multi-year history of take-all patch in this plot area, no disease was observed in this study this year. Therefore, no data was available. No phytotoxicity was observed from any treatment in this study this season.

Lynx Golf Course, Otsego, MI.

As at Whittaker Woods, no disease occurred on this perennially infected fairway this season. In late May, however, a disease outbreak was observed on a nearby fairway and a curative fungicide study was quickly established. The plots were rated for existing disease and treatments were applied once, on May 28. Curative data was collected 14 days later (Table 2).

As the data indicates, disease pressure abated after the treatments were applied, with the control plots recovering at approximately one-half the rate of the most efficacious treatment. Under these circumstances, many of the products tested (Chipco Triton, Compass, Heritage, TADS 12529) provided statistically significant turf recovery compared to the untreated control. Mild phytotoxicity was noticed in the Banner MAXX (3 oz/1000ft²) treatment plots, which probably explains the lack of recovery in this normally efficacious treatment. Many treatments (TADS 12592, Chipco Triton), appeared to be more efficacious curatively when used at the lower rates. We have no explanation for this result, since no phytotoxicity was observed associated with these treatments.

Table 2. Take-All Patch Curative Fungicide

Rating Scale: Mean percent recovery/treatment from pre-treatment disease levels.

Rating Date: June 11, 1999

<u>Treatment</u>	<u>Rate/1000ft²^b</u>	<u>Mean % Recovery / (LSD-.05)^{ac}</u>
Chipco Triton	0.5 fl oz	88.5 A
Compass + Banner MAXX	0.25 oz + 2 fl. oz.	78.5 AB
Compass + Banner MAXX	0.2 oz + 2 fl oz	74.5 ABC
Compass	0.25 oz	72.0 ABC
TADS 12529	4.25 gm	69.0 ABC
Heritage	0.545 lb ai/A	64.8 BC
Chipco Triton	1 fl oz	64.5 BCD
Banner MAXX	3 fl oz	62.0 BCD
TADS 12529	8.5 gm	54.5 CD
Control	—	42.0 D

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

^b Rates are formulated product, unless cited otherwise.

^c Mean of 4 replicate plots.