

Turfgrass Disease Management Report 1988-89

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Snow Mold Fungicide Trial - 1988-89

Boyne Highlands Resort, Harbor Springs, MI

The 1988-89 snow mold fungicide studies were conducted at the Boyne Highlands Resort in Harbor Springs, MI on an irrigated Penncross (*Agrostis palustris*)/annual bluegrass (*Poa annua*) fairway which was mowed at $\frac{1}{2}$ " height of cut. Treatments were applied preventively to 6' x 9' plots in three replications of a random block design on November 2, 1988. Liquid applications were made with a CO₂ small-plot sprayer at 30 PSI and 48 gal/A (except as noted on data table). Granular treatments were pre-weighed and applied by hand.

The plots were rated as soon as the snow cover melted off on April 5, 1989.

Several commercially available fungicides once again managed snow mold in northern Michigan (Table 1). They included Calo-clor, Calo-gran, Scotts FF II, and Daconil 2787 + Chipco 26019. Terrachlor 50 DF, Terrachlor 75 WP, and Chipco 26019 also worked this season, but we have experienced erratic results with these fungicides over the years. It would appear the mercury fungicides will face a tough time in the up-coming EPA re-registration hearings. This may be a good time to start experimenting with alternative fungicides for snow mold management in case cancellation of the mercury fungicide does occur.

No phytotoxicity was observed at the time of the rating.

Kentucky Bluegrass Melting-Out Fungicide Study - 1989

Hancock Turfgrass Research Center

The 1989 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 $1\frac{1}{2}$ " height of cut. The study was set up in three replications of a random block design with a 3'x6' plot size. All treatments were applied with a CO₂ small-plot sprayer at 30 PSI and a volume of 48 gal/A. The plot area was fertilized dormant in late 1988 (1 lb. N/1000 ft²) and at the rate of $\frac{1}{2}$ lb. N/1000 ft² on 5/15 (except as noted on data table).

Treatments were initiated preventively on May 13, with subsequent treatments being applied on 14, 21, and 28 day schedules as noted on the data tables. The plots were rated on June 20, at which time the 14 day treatments had been applied three times (5/13,5/27,6/10), the 21 day treatments had been applied twice (5/13,6/5) and the 28 day treatments had been applied twice (5/13,6/10). Disease pressure was moderately severe this year with the controls exhibiting approximately 60% of maximum disease levels.

As the data table (Table 2) shows, the standard fungicides (Daconil 2787, Chipco 26019, Vorlan) continued to perform well against melting-out disease in comparison to the untreated controls. The experimental fungicides (CGA-455, SDS 66518, EXP 10069A, EXP 10072A, etc) also gave significant control of this disease at the 5% level of significance.

No phytotoxicity or "greening effect" was noted during the course of this study or at the time of data collection.

Summer Patch Fungicide Studies - 1989

As a result of our previous (1987-88) research, as well as information being generated at other universities, we again decided to attempt preventive control of summer patch (*Magnaporthe poae*) in our fungicide field trials for the 1989 season. Preventive studies were established on irrigated, annual bluegrass (*Poa annua*) fairways on two golf courses in Michigan where disease was present in previous years. All treatments were applied prior to disease occurrence in three replications of a random block design utilizing a 6'x9' plot size. The fairways were maintained at ½" cutting height and were fertilized at ½# N/Mo (except as noted on the data tables). These areas were treated for weed and insect pests, however, no fungicides, other than those being tested, were applied to the studies.

Applications were made foliarly using a CO₂ small-plot sprayer at 30 PSI and a volume of 48 gal/A. Application intervals and frequencies were altered from contract protocols when necessary to conform to a preventive, two-application format.

In general, summer patch disease pressure was only moderately severe this year. Temperatures were quite mild and we received timely rainfall which, along with irrigation, prevented severe drought stress in summer patch-infested areas. Standard treatments applied in May and June generally gave good control of summer patch through August, in contrast to last summer when the extreme heat and drought led to greater disease pressure and a mild loss of control of summer patch by July.

Table 2. Kentucky Bluegrass Melting-out Fungicide Trial - 1989

Hancock Turfgrass Research Center, MSU, East Lansing, MI
 Disease rating scale: 0=no infected leaves, 10=100% of leaves infected^a
 Plots rated on 6/20/89

Treatment	Rate ^c /1000 ft ²	Interval	I	II	III	AVE	DMR (.05) ^a
CGA-455	28 gm ai	21 day	1	2	1	1.3	F
Dac 2787	3 fl oz	14 day	1	1	2	1.3	F
Dac 2787	6 fl oz	14 day	2	1	2	1.6	EF
Ch 26019 (F)	4 fl oz	21 day	3	2	1	2.0	DEF
Ch 26019 (WP)	2 oz	21 day	3	2	1	2.0	DEF
CGA-455	7 gm ai	21 day	1	3	2	2.0	DEF
CGA-455	14 gm ai	21 day	2	2	2	2.0	DEF
SDS 66518 (90%)	3.5 oz	14 day	2	1	3	2.0	DEF
Vorlan + Fungo	1 oz + 1 oz	21 day	2	3	2	2.3	CDEF
Vorlan	2 oz	21 day	2	3	2	2.3	CDEF
SDS 66518 (90%)	1.75 oz	14 day	3	2	2	2.3	CDEF
EXP 10069A	5 lbs	21 day	3	2	2	2.3	CDEF
EXP 10072A	5 lbs	21 day	3	2	2	2.3	CDEF
Prochloraz	1.88 oz ai	21 day	3	2	2	2.3	CDEF
Vorlan + Fungo	2 oz + 2 oz	21 day	2	3	3	2.6	BCDEF
Dac 2787	5.3 oz	21 day	3	2	3	2.6	BCDEF
SDS66518XY2	1.85 oz	14 day	1	3	4	2.6	BCDEF
Vorlan	1 oz	21 day	2	3	4	3.0	BCDEF
EXP 10069A	2.5 lbs	21 day	3	3	4	3.3	BCDE
EXP 10072A ^b	2.5 lbs	21 day	4	4	3	3.6	BCD
Lesco 011092	3 fl oz	21 day	4	4	3	3.6	BCD
SDS66518XY1	2 oz	14 day	2	5	5	4.0	BC
SDS 66608	5 oz	28 day	5	4	4	4.3	B
SDS 66608	7.5 oz	28 day	5	5	3	4.3	B
Control (unfertilized) ^b	---	---	8	5	5	6.0	A
Control	---	---	7	6	6	6.3	A

^aTreatments followed by same letter are not significantly different from each other at the 5% level.

^bThese treatments were not fertilized on 5/15.

^cRates listed are formulation unless listed as active ingredient (ai).