2000-2001 TURFGRASS PATHOLOGY REPORT
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2000-2001 SNOW MOLD (*TYPHULA ISHIKARIENSIS* AND *T. INCARNATA*)

Studies A and B

Two corporation-sponsored snow mold fungicide field studies were conducted during the fall and winter of 2000-2001. Treatments were applied to Study A on the Treetops/Sylvan Resort in Gaylord, MI and Study B on the Boyne Highlands Resort in Harbor Springs, MI on the dates indicated in Tables 1-2, respectively. Treatments were applied preventively to four replicate 6' x 9' creeping bentgrass (*Agrostis palustris*)/annual bluegrass (*Poa annua*) fairway plots where the turf was maintained at approximately ½" height of cut. Liquid treatments were applied with a CO_2 backpack sprayer at a pressure of 36 psi and a volume of 100 GPA using a flat-fan, double-nozzle boom. Granular products were pre-weighed and hand-applied.

Studies A and B were rated on 9-April, 2001 immediately following snow-cover melt-off. The predominant snow mold species was *Typhula ishikariensis* at Treetops and *Typhula incarnata* at Boyne Highlands. Microdochium patch (*Microdochium nivale*) was observed at both locations and was the predominant snow mold on some plots as indicated in each table.

As can be seen in Tables 1 and 2, disease pressure was severe at Treetops and moderate at Boyne Highlands. Disease pressure was relatively heavy, likely due to the long winter and extended snow cover. Under the severe disease conditions at Treetops, many treatments, including some standards, failed to provide adequate disease control. Under the less severe disease conditions at Boyne Highlands, many treatments provided adequate disease control. Mild phytotoxicity was observed in a few treatments, as indicated in the data tables.

Table 1. Snow Mold Study A.

Treetops/Sylvan Resort, Gaylord, MI **Rating Date: 9-Apr-2001** **Rating Scale: Percent plot area diseased with a combination of *Microdochium nivale, Typhula ishikariensis* and *T. incarnata* unless otherwise noted.**						
Treatment and Rate	**Appl date(s)**	**I**	**II**	**III**	**IV**	**Mean[b]**
Ch 26GT 4 fl oz + Dac Ultrex 5.5 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	0	0	0	3	0.8 a
Ch 26GT 4 fl oz + Prostar 3.75 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	2	2	1	0.3	1.3 a
Lynx (45 WP) 2.22 oz + Turfcide 400 12 fl oz	30-Oct	7	2	3	1	3.3 a
Ch 26GT 8 fl oz + Dac. Ultrex 4 oz + Turfcide 400 12 fl oz	30-Oct	0.3	7	7	3	4.3 a

Spectro (90WDG) 5 oz	28-Sep	5	5	7	7	6.0 ab
Defend (4F) 12 fl oz	30-Oct					
Turfcide 400 9 fl oz + Dac. Ultrex 3.64 oz	30-Oct	5	10	3	10	7.0 ab
Fore Rainshield (80 WP) 8 oz + Turfcide 400 12 fl oz	30-Oct	5	12	10	2	7.3 ab
Spectro (90 WDG) 8 oz	28-Sep	12	5	5	10	8.0 a-c
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz	30-Oct					
Bayleton (50WP) 2 oz + Turfcide 400 12 fl oz	30-Oct	15	7	5	5	8.0 a-c
Spectro (90WDG) 5 oz + Nutri Grow 3 fl oz	28-Sep	15	15	3	2	8.8 a-d
Defend (4F) 12 fl oz	30-Oct					
Turfcide 400 9 fl oz + Fore (80W) 8 oz	30-Oct	15	7	3	10	8.8 a-d
Ch 26GT 4 fl oz + Dac. Ultrex 4 oz + Turfcide 400 6 fl oz	30-Oct	5	15	5	12	9.3 a-d
Spectro (90 WDG) 5 oz	28-Sep	10	15	7	10	10.5 a-e
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz	30-Oct					
Spectro (90 WDG) 8 oz	28-Sep	12	7	12	12	10.8 a-f
Defend (4F) 12 fl oz	30-Oct					
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz + Nutri Grow 3 fl oz	30-Oct	7	20	10	7	11.0 a-f
Eagle (40 WSP) 0.6 oz + Turfcide 400 12 fl oz	30-Oct	7	7	20	12	11.5 a-g
Spectro (90 WDG) 8 oz + Nutri Grow 3 fl oz	28-Sep	12	5	7	30	13.5 a-g
Defend (4F) 12 fl oz	30-Oct					
Turfcide 400 12 fl oz	30-Oct	20	15	10	10	13.8 a-g
Defend (4F) 12 fl oz	30-Oct	25	7	15	12	14.8 a-h
Spectro (90 WDG) 4 oz + Defend (4F) 8 fl oz	30-Oct	15	30	12	3	15.0 a-h
Medallion (50 WG) 0.5 oz + Banner Maxx 3 fl oz	30-Oct	12	12	20	20	16.0 a-i
Spectro (90 WDG) 4 oz + Defend (4F) 8 fl oz + Nutri Grow 3 fl oz	30-Oct	20	10	12	25	16.8 a-i
Dac Weather Stik 5.5 oz + Heritage 0.4 oz + Banner Maxx 2 fl oz	30-Oct	25[a]	20	25	20	22.5 b-j
Anderson TeeTime 10-0-14 6.66 lbs	30-Oct	7	40	25	25	24.3 c-j
Scotts F + FII 2X	30-Oct	40	40	7	15	25.5 d-j
Ch 26GT 4 fl oz + Heritage 0.4 oz + Turfcide 400 6 fl oz	30-Oct	20	20	35	30	26.3 e-k
L-0405 6 lbs	30-Oct	30	40	7	30	26.8 e-k
Medallion (50 WG) 0.5 oz	30-Oct	15	25	35	35	27.5 f-l
Dac Weather Stik 5.5 oz + Heritage 0.4 oz	30-Oct	40[a]	40	15	30	31.3 h-m
Heritage 0.4 oz + Banner Maxx 2 fl oz	30-Oct	40[a]	20	35	30[a]	31.3 h-m
Ch. 26GT 4 fl oz + Signature 4 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	10	35	50	35	32.5 i-m
Turfcide 400 9 fl oz + Teremec SP 4.5 oz	30-Oct	35	40	20	35[a]	32.5 i-m
Lebanon LF2 8 lbs	30-Oct	30	35	40	35	35.0 j-m
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	35	25	30	60	37.5 j-m
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz + PCNB (75 WP) 4 oz	30-Oct	15[a]	35	85	20	38.8 j-n
Medallion (50 WG) 0.5 oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	25	30	75	40	42.5 k-o
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz +	30-Oct	50	40	40	40	42.5 k-o

Dac. Weather Stik (6F) 3.6 fl oz						
Medallion (50 WG) 0.5 oz - Gowan (50 WG)	30-Oct	25	50	40	60	43.8 l-o
Ch. 26GT 4 fl oz + Signature 4 oz	28-Sep, 30-Oct	70	30	20	70	47.5 m-o
Ch 26GT 4 fl oz + Prostar 3.75 oz + Signature 4 oz	28-Sep, 30-Oct	80[a]	70[a]	30[a]	40[a]	55.0 n-p
Ch. 26GT 4 fl oz + Prostar (70WP) 3.75 oz	28-Sep, 30-Oct	75[a]	85[a]	15	60[a]	58.8 o-q
Ch. 26GT 4 fl oz + Ch. Triton 1 fl oz	28-Sep, 30-Oct	85[a]	75[a]	70	30	65.0 p-r
L-0406 6 lbs	30-Oct	95	65	80	60[a]	75.0 q-s
Teremec SP 9 oz	30-Oct	90	70	75	70	76.3 rs
Dac Weather Stik 5.5 oz	30-Oct	75[a]	95	75	80	81.3 r-t
Banner Maxx 4 fl oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	90[a]	85[a]	85	70	82.5 st
Manhandle 10 oz	30-Oct	85[a]	90	80	75[a]	82.5 st
Prostar 3.75 oz + Ch. Triton 1 fl oz	28-Sep, 30-Oct	98	90	80	95[a]	90.8 st
Control		98	98	85	95	94.0 t

[a]Disease present is Microdochium patch only.
[b]Treatment means followed by the same letter are not significantly different (LSD, p = 0.05).

Table 2. Snow Mold Study B.

Boyne Highlands Resort, Heather G.C., Harbor Springs, MI
Rating Date: 9-Apr-2001
Rating Scale: Percent plot area diseased with a combination of *Microdochium nivale*, *Typhula ishikariensis* and *T. incarnata* unless otherwise noted.

Treatment and Rate	Appl date(s)	I	II	III	IV	Mean[c]
Fore Rainshield (80 WP) 8 oz + Turfcide 400 12 fl oz	30-Oct	0	0	0	0	0.0 a
Turfcide 400 9 fl oz + Dac. Ultrex 3.64 oz	30-Oct	0	0	0	0	0.0 a
Ch 26GT 4 fl oz + Dac. Ultrex 4 oz + Turfcide 400 6 fl oz	30-Oct	0	0	0	0	0.0 a
Lynx (45 WP) 2.22 oz + Turfcide 400 12 fl oz	30-Oct	0.3	0	0	0	0.1 a
Spectro (90 WDG) 4 oz + Defend (4F) 8 fl oz + Nutri Grow 3 fl oz	30-Oct	0.3	0	0.3	0.3	0.2 a
Spectro (90 WDG) 8 oz	28-Sep	0	0	0.5	0.5	0.3 a
Defend (4F) 12 fl oz	30-Oct					
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz + Nutri Grow 3 fl oz	30-Oct	0	1[a]	0	0	0.3 a
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz + PCNB (75 WP) 4 oz	30-Oct	0.5 (0.3[a])	0.5	0	0	0.3 a
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz + Dac. Weather Stik (6F) 3.6 fl oz	30-Oct	0.3[a]	0	0.5[a]	0.3[a]	0.3 a
Turfcide 400 9 fl oz + Teremec SP 4.5 oz	30-Oct	0	0	1	0.3	0.3 a
Ch 26GT 4 fl oz + Heritage 0.4 oz + Turfcide 400 6 fl oz	30-Oct	0.5[a]	0.3	0.3	1	0.5 a

Dac Weather Stik 5.5 oz + Heritage 0.4 oz + Banner Maxx 2 fl oz	30-Oct	1[a]	0.3[a]	0.3[a]	0.5[a]	0.5 a
Spectro (90WDG) 5 oz + Nutri Grow 3 fl oz	28-Sep	1	0.5	0.3	0.3	0.5 a
Defend (4F) 12 fl oz	30-Oct					
Spectro (90 WDG) 4 oz + Defend (4F) 8 fl oz	30-Oct	0	0.3	0	2	0.6 a
Eagle (40 WSP) 0.6 oz + Turfcide 400 12 fl oz	30-Oct	0	2	0.3	0	0.6 a
Scotts F + FII 2X	30-Oct	0	3	0	0	0.8 a
Ch 26GT 4 fl oz + Dac Ultrex 5.5 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	3[b]	0	0	0	0.8 a
Ch 26GT 4 fl oz + Prostar 3.75 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	0	0	0	3	0.8 a
Medallion (50 WG) 0.5 oz + Banner Maxx 3 fl oz	30-Oct	0.5	1	0	2	0.8 a
Spectro (90 WDG) 8 oz	28-Sep	0	0.3	3	0	0.8 a
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz	30-Oct					
Bayleton (50WP) 2 oz + Turfcide 400 12 fl oz	30-Oct	0	3	0.3	0	0.8 a
Ch. 26GT 4 fl oz + Signature 4 oz + Turfcide 400 8 fl oz	28-Sep, 30-Oct	1	2	0	0.5	0.9 a
Ch 26GT 4 fl oz + Prostar 3.75 oz + Signature 4 oz	28-Sep, 30-Oct	0	0.5	0.5[a]	3[a]	1.0 ab
Turfcide 400 12 fl oz	30-Oct	0.3	0.3	1	3	1.1 ab
Turfcide 400 9 fl oz + Fore (80W) 8 oz	30-Oct	0	0	0	5	1.3 ab
Dac Weather Stik 5.5 oz + Heritage 0.4 oz	30-Oct	3[a]	2[a]	0.3[a]	0.3[a]	1.4 ab
Dac Weather Stik 5.5 oz	30-Oct	5[a]	0.3[a]	1[a]	0.3[a]	1.6 ab
Ch 26GT 8 fl oz + Dac. Ultrex 4 oz + Turfcide 400 12 fl oz	30-Oct	7	0	0	0	1.8 ab
Spectro (90 WDG) 5 oz	28-Sep	0	2	2	5	2.3 a-c
Spectro (90 WDG) 6 oz + Defend (4F) 8 fl oz	30-Oct					
Defend (4F) 12 fl oz	30-Oct	7 (3[a])	0	0	2	2.3 a-c
Heritage 0.4 oz + Banner Maxx 2 fl oz	30-Oct	5 (4.8[a])	0.5[a]	0.5	3 (2[a])	2.3 a-c
Ch. 26GT 4 fl oz + Prostar (70WP) 3.75 oz	28-Sep, 30-Oct	1[a]	1[a]	7[a]	0.3	2.3 a-c
Anderson TeeTime 10-0-14 6.66 lbs	30-Oct	7	0	2	0.5	2.4 a-c
Spectro (90 WDG) 8 oz + Nutri Grow 3 fl oz	28-Sep	0.5	0.5	0	10	2.8 a-c
Defend (4F) 12 fl oz	30-Oct					
Lebanon LF2 8 lbs	30-Oct	10	1	0.5	0.3	2.9 a-c
Teremec SP 9 oz	30-Oct	3[a]	2	12[a]	2	4.8 a-d
Medallion (50 WG) 0.25 oz + Banner Maxx 2 fl oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	2 (0.3[a])	5	10 (2[a])	2	4.8 a-d
Banner Maxx 4 fl oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	5[a]	0.3[a]	2[a]	12 (2[a])	4.8 a-d
L-0405 6 lbs	30-Oct	5	0.3	20	0.25	6.4 a-d
Ch. 26GT 4 fl oz + Ch. Triton 1 fl oz	28-Sep, 30-Oct	12[a]	15[a]	0.5[a]	0	6.9 a-d
Medallion (50 WG) 0.5 oz	30-Oct	7	15	5	15	10.5 a-d
Manhandle 10 oz	30-Oct	25	10	5	7	11.8 b-d

		(5[a])		(3[a])	(0.5[a])	
Prostar 3.75 oz + Ch. Triton 1 fl oz	28-Sep, 30-Oct	5[a]	10[a]	7[a]	30[a]	13.0 cd
Medallion (50 WG) 0.5 oz + CGA 245704 (50 WP) 0.66 gm	30-Oct	30	0	0.5	25	13.9 de
Spectro (90WDG) 5 oz	28-Sep	1	2	0.5	55	14.6 de
Defend (4F) 12 fl oz	30-Oct					
Ch. 26GT 4 fl oz + Signature 4 oz	28-Sep, 30-Oct	25 (2[a])	2[a]	20 (1[a])	15 (2[a])	15.5 de
Control		3[a]	40[a]	30b (7[a])	25	24.5 ef
Medallion (50 WG) 0.5 oz - Gowan (50 WG)	30-Oct	25	10	0	80	28.8 f
L-0406 6 lbs	30-Oct	40 (5[a])	30 (5[a])	25 (3[a])	30	31.3 f

[a]Disease present is Microdochium patch only. When represented in ( ), the Microdochium patch is part of the total disease rating.
[b]Superficial infection.
[c]Treatment means followed by the same letter are not significantly different (LSD, p = 0.05).

MELTING OUT (*DRESCHLERA POAE*)

This study was set up on Kenblue Kentucky bluegrass at the Hancock Turfgrass Research Center, East Lansing, MI. The study consisted of four replicates of each treatment set up in a randomized complete block design with plots measuring 3' x 9' with 1' alleys. Plots were mowed at 2.5". Treatments were applied preventively beginning on May 3 using a CO_2 backpack sprayer at 34 PSI with two 8002E flat fan nozzles. Subsequent applications for 14-day treatments were made on May 18 and May 31, for 21-day treatments on May 23, and for 28-day treatments on May 31. The spray volume used was 48 gallons/acre. In addition to dormant fertility in the fall of 2000, urea fertilizer was applied on June 3 at a 1/8 # nitrogen/1000 ft^2. Plots were rated on a 0-10 scale where 0 = no disease and 10 = 100% of the leaves infected (Table 3). Data were analyzed with ANOVA and means were separated with LSD (p = 0.05). No phytotoxicity was observed in this study this season.

As the data in table 3 indicate, all treatments gave statistically significant control of melting out. again, as we saw last year, disease pressure was relatively light.

Table 3. Melting Out.

Hancock Turfgrass Research Center, East Lansing, MI **Rating Date: June 12, 2001** **Rating Scale: 0-10 where 0 = best, 10 = worst, 3 = acceptable.**						
Treatment Rate/1000 sq ft	**Interval (days)**	**I**	**II**	**III**	**IV**	**Mean (LSD[a])**
Insignia 0.9 oz	28 day	2	2	2	2	2.0 a
Insignia 0.5 oz	14 day	2	1	3	3	2.3 a
Honor 0.2 oz	28 day	2	3	3	2	2.5 a
Chipco 26GT 4 fl oz	21 day	3	2	3	2	2.5 a
Honor 0.2 oz	14 day	2	3	4	3	3.0 a
Control (Fertilized)	--	6	5	5	4	5.0 b

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