

2003-2004 Snow Mold (*Typhula ishikariensis* and *T. incarnata*)

Study A. Tree Tops/Sylvan Resort, Gaylord, MI.

This corporation-sponsored snow mold fungicide field study was conducted during the fall and winter of 2003-2004. Treatments were applied preventively on the Treetops/Sylvan Resort in Gaylord, MI on the dates indicated in Table 1. Treatments were applied to four replicate 6' x 9' creeping bentgrass (*Agrostis palustris*)/annual bluegrass (*Poa annua*) fairway plots where the turf was maintained at approximately 1/2" height of cut. Liquid treatments were applied with a CO₂ backpack sprayer at a pressure of 36 psi and a volume of 100 GPA using a flat-fan, double-nozzle boom, unless otherwise indicated in Table 1. Granular products were pre-weighed and hand-applied.

Permanent snow covered the plots from late December, 2003 through March 31, 2004. The study was rated on April 1, 2004, immediately following snow-cover melt-off. The predominant snow mold species was *Typhula ishikariensis* with lesser amounts of *Typhula incarnata*. Microdochium patch (*Microdochium nivale*) was also observed and was the predominant snow mold on some plots as indicated in Table 1. Interestingly, *T. incarnata* levels were higher in this study this year than in any year in recent memory. In fact, *T. incarnata* actually predominated in some plots often at levels of 30% infections and greater (Table 1.)

As can be seen in Table 1, disease pressure was only moderately severe at Tree Tops this year with our controls exhibiting an average of 70% area infected with snow mold. Disease pressure was also somewhat uneven across the study, leading to variability in the data, except with the most efficacious treatments. As in recent years, tank mixes of standard fungicides of varying chemistries seemed to perform the best. As we occasionally see, PCNB alone did not perform well again this year. The reason for this failure is unclear.

Although turfgrass quality varied significantly from treatment to treatment, little chemical phytotoxicity was evident at the time of the rating. Turfgrass quality ratings are presented in Table 2.

Table 1. Michigan State University Snow Mold Study A Disease Ratings, 2003-2004

Location: Tree Tops/Sylvan Resort, Gaylord, MI

Rating Date: 1-April, 2004

Rating Scale: Percent plot area diseased with *Typhula ishikariensis*, unless otherwise noted in footnotes below.

No.	Treatment and Rate/1000 sq ft ⁷	Interval (Dates)	I	II	III	IV	Mean	LSD (0.05)
47	Chipco 26GT 8 fl oz + Daconil Ultrex 3.2 oz + Turfcide 400 12 fl oz	10/29	0.5	0	0	0.5	0.3	s
5	Lesco 18 Plus 4 fl oz + Manicure Ultrex 5 oz + Revere 4000 8 fl oz	10/29	0.5	0.5	0.3	2	0.8	s
15	Turfcide 400 9 fl oz + Daconil Ultrex 3.7 oz	10/29	3	0.5	0.3	0.3 ²	1.0	rs
46	Chipco 26GT 4 fl oz + Daconil Ultrex 3.2 oz + Turfcide 400 6 fl oz	10/29	1	0.3	10	0.3	2.9	rs
33	A14036 14 oz	10/29	3	10	1	2	4.0	rs
57	Par Flo 4F 8 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Chipco 26GT 4 fl oz	10/29	20	0.3 ²	5	0	6.3	p-s
32	A14036 9.3 oz	10/29	1	3	0.3	30 ¹	8.6	o-s
1	Insignia 20WG 0.9 oz	10/6, 10/29	25	0.5	0.5	10 ¹	9.0	o-s
52	Par Flo 4F 24 fl oz	10/29	25 ¹	0.5 ²	10	1 ²	9.1	o-s
2	Insignia 20WG 0.9 oz + Iprodione Pro 2SE 4 fl oz	10/6, 10/29	30	1	2	5	9.5	o-s
56	Par Flo 4F 8 fl oz + Daconil Weather Stik 6F 5.5 fl oz	10/29	35	1	2	0.5 ²	9.6	o-s
30	Endorse 6 oz + Spectro 8 oz	10/29	12	35 ¹	0.3 ²	1 ²	12.1	n-s
29	Endorse 4 oz + Spectro 8 oz	10/29	50	0.5	0.3 ²	2	13.2	m-s
31	A14036 4.7 oz	10/29	20	2	30 ⁴	3	13.8	m-s
50	Compass 50WP 7.6 g/100m ² + Triticonazole 32mL/100m ²	10/29	30	5 ¹	30 ¹	1 ²	16.5	l-s
38	Daconil Weather Stik 6F 5.5 fl oz + Medallion 0.5 oz	10/29	30 ⁵	30 ¹	7 ¹	0.5	16.9	k-s
26	Spectro WP 4 oz	10/6	35 ¹	20 ²	0.3	20 ¹	18.8	j-s
	Endorse 4 oz + Spectro 4 oz + Alude 5.5 oz	10/29						
45	Compass 50WP 15.2 g/100m ²	10/29	10	20 ²	65 ²	1 ²	24.0	j-s
28	Endorse 4 oz + Spectro 5.5 oz	10/29	70	5	20	2 ²	24.3	i-s
24	Spectro WP 4 oz	10/6	50 ¹	5 ¹	20 ²	25	25.0	i-s
	Endorse 4 oz + Spectro 4 oz	10/29						
25	Spectro WP 4 oz	10/6	20 ¹	85 ²	0	0.5 ²	26.4	i-s

	Endorse 4 oz + Spectro 5.75 oz	10/29							
53	AMV 820 16 fl oz	10/29	3	3 ¹	65 ¹	50 ²	30.3	h-r	
49	Compass 50WP 7.6 g/100m ² + Chipco 26GT 240mL/100m ²	10/29	90 ⁵	12	12	20 ²	33.5	g-p	
27	Endorse 4 oz + Spectro 4 oz	10/29	95	30 ²	10 ²	0.5 ²	33.9	g-p	
39	A13972A 2 oz	10/29	65 ⁵	30	50 ¹	2 ¹	36.8	f-o	
7	Turfcide 400 12 fl oz	10/29	70 ¹	20 ²	60 ²	10 ¹	40.0	e-n	
36	Daconil Weather Stik 6F 3.6 fl oz	10/29	70 ¹	15	30 ⁴	50 ³	41.3	d-n	
44	Compass 50WP 7.6 g/100m ²	10/29	50 ¹	60 ¹	20 ¹	35 ¹	41.3	d-n	
34	Banner Maxx 2 fl oz	10/29	65 ⁴	35 ²	65 ⁴	3	42.0	d-m	
16	UCC-UBI-4317-00 9.6 fl oz	10/29	50	50 ²	30 ²	50 ²	45.0	d-l	
54	PCNB (10G) 7.5 lb	10/29	70	30 ¹	80 ²	5 ¹	46.3	d-k	
4	Lesco Revere PCNB 7.5 lb	10/29	50 ¹	75 ²	40 ¹	25 ¹	47.5	c-j	
37	Heritage 0.4 oz	10/29	50 ¹	10 ¹	70 ⁶	70 ¹	50.0	c-i	
3	Lesco PCNB + Novex 6 lb	10/29	40	50 ²	65 ²	50 ¹	51.3	b-i	
6	Lesco 18 Plus 4 fl oz + Manicure Ultrex 5 oz	10/29	60 ⁵	40 ⁴	35 ⁴	95 ¹	57.5	a-h	
43	Compass 50WP 3.8 g/100m ²	10/29	25 ¹	90 ¹	65 ¹	60 ¹	60.0	a-g	
40	Triticonazole 64mL/100m ²	10/29	75 ³	30 ¹	80 ⁴	75 ³	65.0	a-f	
42	Triticonazole 16mL/100m ²	10/29	45 ⁵	75 ⁴	75 ⁶	70 ⁵	66.3	a-e	
55	AMV 1010 7.5 lb	10/29	95 ⁵	80 ⁴	90 ⁴	1	66.5	a-e	
41	Triticonazole 32mL/100m ²	10/29	85 ⁶	75 ⁶	65 ⁴	50 ⁶	68.8	a-e	
48	Control	10/29	85 ⁵	75 ⁴	70 ¹	50 ¹	70.0	a-d	
58	Healthy Gro (2-5-4) Compost 50 lb	10/29	90 ⁴	75 ¹	50 ²	90 ⁴	76.3	a-c	
51	Chipco 26GT 360mL/100m ²	10/29	85 ⁵	90 ²	65 ¹	80 ¹	80.0	ab	
35	Medallion 50WG 0.33 oz	10/29	90 ¹	80 ⁴	80 ²	85 ⁴	83.8	a	

¹Plot primarily infected with *Typhula incarnata* and *T. ishikariensis*.

²Plot primarily infected with *T. incarnata*.

³Plot primarily infected with *Microdochium nivale*.

⁴Plot primarily infected with *T. incarnata*, *T. ishikariensis*, and *M. nivale*.

⁵Plot primarily infected with *T. ishikariensis* and *M. nivale*.

⁶Plot primarily infected with *T. incarnata* and *M. nivale*.

⁷Rates are product/1000 sq ft unless otherwise noted.

Table 2. Michigan State University Snow Mold Study A Quality Ratings, 2003-2004

Location: Tree Tops/Sylvan Resort, Gaylord, MI

Rating Date: 1-April, 2004

Rating Scale: Turfgrass quality 0-10 where 0=dead, 7=acceptable, 10=excellent.

No.	Treatment and Rate/1000 sq ft ¹	Interval (Dates)	Mean
1	Insignia 20WG 0.9 oz	10/6, 10/29	7.0
2	Insignia 20WG 0.9 oz + Iprodione Pro 2SE 4 fl oz	10/6, 10/29	6.5
3	Lesco PCNB + Novex 6 lb	10/29	5.5
4	Lesco Revere PCNB 7.5 lb	10/29	5.8
5	Lesco 18 Plus 4 fl oz + Manicure Ultrex 5 oz + Revere 4000 8 fl oz	10/29	6.5
6	Lesco 18 Plus 4 fl oz + Manicure Ultrex 5 oz	10/29	3.8
7	Turfcide 400 12 fl oz	10/29	6.0
15	Turfcide 400 9 fl oz + Daconil Ultrex 3.7 oz	10/29	7.3
16	UCC-UBI-4317-00 9.6 fl oz	10/29	5.8
24	Spectro WP 4 oz	10/6	6.0
	Endorse 4 oz + Spectro 4 oz	10/29	
25	Spectro WP 4 oz	10/6	5.8
	Endorse 4 oz + Spectro 5.75 oz	10/29	
26	Spectro WP 4 oz	10/6	6.5
	Endorse 4 oz + Spectro 4 oz + Alude 5.5 oz	10/29	
27	Endorse 4 oz + Spectro 4 oz	10/29	5.5
28	Endorse 4 oz + Spectro 5.5 oz	10/29	5.8
29	Endorse 4 oz + Spectro 8 oz	10/29	6.5
30	Endorse 6 oz + Spectro 8 oz	10/29	6.3
31	A14036 4.7 oz	10/29	6.3
32	A14036 9.3 oz	10/29	6.8
33	A14036 14 oz	10/29	7.0
34	Banner Maxx 2 fl oz	10/29	5.3
35	Medallion 50WG 0.33 oz	10/29	3.3
36	Daconil Weather Stik 6F 3.6 fl oz	10/29	5.0

37	Heritage 0.4 oz	10/29	5.0
38	Daconil Weather Stik 6F 5.5 fl oz + Medallion 0.5 oz	10/29	6.5
39	A13972A 2 oz	10/29	5.5
40	Triticonazole 64mL/100m ²	10/29	3.8
41	Triticonazole 32mL/100m ²	10/29	3.8
42	Triticonazole 16mL/100m ²	10/29	3.5
43	Compass 50WP 3.8 g/100m ²	10/29	4.5
44	Compass 50WP 7.6 g/100m ²	10/29	5.0
45	Compass 50WP 15.2 g/100m ²	10/29	6.8
46	Chipco 26GT 4 fl oz + Daconil Ultrex 3.2 oz + Turfcide 400 6 fl oz	10/29	7.0
47	Chipco 26GT 8 fl oz + Daconil Ultrex 3.2 oz + Turfcide 400 12 fl oz	10/29	6.0
48	Control	10/29	4.0
49	Compass 50WP 7.6 g/100m ² + Chipco 26GT 240mL/100m ²	10/29	5.8
50	Compass 50WP 7.6 g/100m ² + Triticonazole 32mL/100m ²	10/29	6.0
51	Chipco 26GT 360mL/100m ²	10/29	4.5
52	Par Flo 4F 24 fl oz	10/29	7.0
53	AMV 820 16 fl oz	10/29	6.0
54	PCNB (10G) 7.5 lb	10/29	5.3
55	AMV 1010 7.5 lb	10/29	4.3
56	Par Flo 4F 8 fl oz + Daconil Weather Stik 6F 5.5 fl oz	10/29	6.8
57	Par Flo 4F 8 fl oz + Daconil Weather Stik 6F 5.5 fl oz + Chipco 26GT 4 fl oz	10/29	7.3
58	Healthy Gro (2-5-4) Compost 50 lb	10/29	3.5

¹Rates are product/1000 sq ft unless otherwise noted.