

1999-2000 Snow Mold Sensitivity Study Sentryworld (Penneagle Nursery)

J. S. Gregos and G. Jung
Department of Plant Pathology

INTRODUCTION

To evaluate the snow mold pathogens sensitivity to different chemistries of fungicides labeled for their control.

EXPERIMENTAL METHODS

This evaluation was conducted at Sentryworld, Stevens Point, WI on creeping bentgrass maintained under golf course tee management conditions, at 0.375-inch cutting height. Individual plots, 3 ft x 16 ft, were arranged in a split block design with three replications. Treatments were applied with a CO₂-powered boom sprayer, using XR Teejet 8005 VS nozzles, at 30 psi, in water equivalent to 2 gal per 1000 sq ft. The 3-ft x 16-ft plots were split into 3 ft x 4-ft sub-plots. These sub plots were inoculated with *T. incarnata*, *T. ishkariensis* and *Microdochium nivale*. Another sub-plot was left uninoculated. Applications were made on October 19, 1999. Inoculations were made on November 17, 1999. Percent snow mold damage was evaluated on February 29, 2000 and March 24, 2000. Data obtained was subjected to analysis of variance and LSD was used to determine significant differences between treatment means.

DISCUSSION

From the observations this spring, it was evident that the inoculation of *Microdochium nivale* was unsuccessful. Both of the inoculation of *T. ishkariensis* and *T. incarnata* did work and significant amounts of damage occurred. However, there was a significant amount of damage caused by *T. ishkariensis*, which was not from the artificial inoculation. The data of the second rating date shows that certain chemicals have reduced activity on *T. ishkariensis*. Below is a chart grouping the chemical based on their ability to control *T. ishkariensis*. This data is vital for developing a snow mold program where *T. ishkariensis* is present. This includes regions of Wisconsin north of the city of Portage

Prostar	GOOD
Sentinel	GOOD
Bayleton	GOOD
Banner Maxx	OK
Rubigan	OK
Daconil WeatherStik	OK
Chipco 26 GT	OK
Eagle	OK
Turfcide	OK
Heritage	POOR
Vorlan	POOR
Chloroneb	POOR
Fore	POOR
Fungo Flo	POOR

Table 1. 1999-2000 Snow Mold Sensitivity Trial – Sentryworld

Trt#	Treatment	Pathogen	Form.	Rate	Rate Unit	% Damage 2-29-00		% Damage 3-24-00	
						Avg.		Avg.	
1	Chipco 26 GT	M. nivale	2 F	8.0	FL OZ/1000 ft2	38.3	A-H	26.7	D-L
2	Chipco 26 GT	T. incarnata	2 F	8.0	FL OZ/1000 ft2	13.3	F-K	10.0	J-P
3	Chipco 26 GT	T. ishikariensis	2 F	8.0	FL OZ/1000 ft2	16.7	D-K	18.3	G-P
4	Chipco 26 GT	Uninoculated	2 F	8.0	FL OZ/1000 ft2	30.0	A-J	26.7	D-L
5	Banner Maxx	M. nivale	1.24 EC	4.0	FL OZ/1000 ft2	5.0	JK	6.7	L-P
6	Banner Maxx	T. incarnata	1.24 EC	4.0	FL OZ/1000 ft2	3.3	JKI	10.0	J-P
7	Banner Maxx	T. ishikariensis	1.24 EC	4.0	FL OZ/1000 ft2	3.3	JK	21.7	F-O
8	Banner Maxx	Uninoculated	1.24 EC	4.0	FL OZ/1000 ft2	3.3	JK	5.0	M-P
9	Bayleton	M. nivale	25 WG	4.0	OZ/1000 ft2	1.7	JK	1.7	OP
10	Bayleton	T. incarnata	25 WG	4.0	OZ/1000 ft2	1.7	JK	3.3	NOP
11	Bayleton	T. ishikariensis	25 WG	4.0	OZ/1000 ft2	3.3	JK	3.3	NOP
12	Bayleton	Uninoculated	25 WG	4.0	OZ/1000 ft2	1.7	JK	1.7	OP
13	Daconil WS	M. nivale	6 F	11.0	FL OZ/1000 ft2	41.7	A-F	11.7	I-P
14	Daconil WS	T. incarnata	6 F	11.0	FL OZ/1000 ft2	38.3	A-H	15.0	H-P
15	Daconil WS	T. ishikariensis	6 F	11.0	FL OZ/1000 ft2	51.7	AB	18.3	G-P
16	Daconil WS	Uninoculated	6 F	11.0	FL OZ/1000 ft2	50.0	ABC	20.0	F-P
17	Prostar	M. nivale	70 WP	4.5	OZ/1000 ft2	0.0	K	3.3	NOP
18	Prostar	T. incarnata	70 WP	4.5	OZ/1000 ft2	0.0	K	1.7	OP
19	Prostar	T. ishikariensis	70 WP	4.5	OZ/1000 ft2	1.7	JK	0.0	P
20	Prostar	Uninoculated	70 WP	4.5	OZ/1000 ft2	1.7	JK	1.7	OP
21	Heritage	M. nivale	50 WG	0.4	OZ/1000 ft2	36.7	A-I	30.0	B-J
22	Heritage	T. incarnata	50 WG	0.4	OZ/1000 ft2	43.3	A-E	43.3	A-E
23	Heritage	T. ishikariensis	50 WG	0.4	OZ/1000 ft2	23.3	B-K	30.0	B-J
24	Heritage	Uninoculated	50 WG	0.4	OZ/1000 ft2	25.0	A-K	31.7	A-I
25	Rubigan	M. nivale	2 SC	8.0	FL OZ/1000 ft2	11.7	G-K	20.0	F-P
26	Rubigan	T. incarnata	2 SC	8.0	FL OZ/1000 ft2	8.3	IJK	15.0	H-P
27	Rubigan	T. ishikariensis	2 SC	8.0	FL OZ/1000 ft2	18.3	D-K	23.3	E-N
28	Rubigan	Uninoculated	2 SC	8.0	FL OZ/1000 ft2	11.7	G-K	25.0	E-M
29	Sentinel	M. nivale	40 WG	.33	OZ/1000 ft2	3.3	JK	8.3	K-P
30	Sentinel	T. incarnata	40 WG	.33	OZ/1000 ft2	1.7	JK	5.0	M-P
31	Sentinel	T. ishikariensis	40 WG	.33	OZ/1000 ft2	3.3	JK	6.7	L-P
32	Sentinel	Uninoculated	40 WG	.33	OZ/1000 ft2	3.3	JK	5.0	M-P
33	Vorlan	M. nivale	50 WG	2.0	OZ/1000 ft2	36.7	A-I	40.0	A-F
34	Vorlan	T. incarnata	50 WG	2.0	OZ/1000 ft2	18.3	D-K	21.7	F-O
35	Vorlan	T. ishikariensis	50 WG	2.0	OZ/1000 ft2	43.3	A-E	36.7	A-G
36	Vorlan	Uninoculated	50 WG	2.0	OZ/1000 ft2	23.3	B-K	25.0	E-M
37	Fungo Flo	M. nivale	4.5 F	2.0	FL OZ/1000 ft2	38.3	A-H	48.3	ABC
38	Fungo Flo	T. incarnata	4.5 F	2.0	FL OZ/1000 ft2	40.0	A-G	51.7	A
39	Fungo Flo	T. ishikariensis	4.5 F	2.0	FL OZ/1000 ft2	40.0	A-G	40.0	A-F
40	Fungo Flo	Uninoculated	4.5 F	2.0	FL OZ/1000 ft2	23.3	B-K	36.7	A-G
41	Turfcide 400	M. nivale	4 F	12.0	FL OZ/1000 ft2	15.0	E-K	20.0	F-P
42	Turfcide 400	T. incarnata	4 F	12.0	FL OZ/1000 ft2	13.3	F-K	18.3	G-P
43	Turfcide 400	T. ishikariensis	4 F	12.0	FL OZ/1000 ft2	25.0	A-K	23.3	E-N
44	Turfcide 400	Uninoculated	4 F	12.0	FL OZ/1000 ft2	11.7	G-K	15.0	H-P
45	Chloroneb	M. nivale	65 WP	7.5	OZ/1000 ft2	35.0	A-I	38.3	A-G
46	Chloroneb	T. incarnata	65 WP	7.5	OZ/1000 ft2	40.0	A-G	50.0	AB
47	Chloroneb	T. ishikariensis	65 WP	7.5	OZ/1000 ft2	25.0	A-K	36.7	A-G
48	Chloroneb	Uninoculated	65 WP	7.5	OZ/1000 ft2	21.7	C-K	33.3	A-H
49	Eagle	M. nivale	40 WG	1.2	OZ/1000 ft2	10.0	H-K	8.3	K-P
50	Eagle	T. incarnata	40 WG	1.2	OZ/1000 ft2	21.7	C-K	10.0	J-P
51	Eagle	T. ishikariensis	40 WG	1.2	OZ/1000 ft2	23.3	B-K	20.0	F-P
52	Eagle	Uninoculated	40 WG	1.2	OZ/1000 ft2	28.3	A-K	10.0	J-P
53	Fore	M. nivale	80 WP	8.0	OZ/1000 ft2	53.3	A	40.0	A-F
54	Fore	T. incarnata	80 WP	8.0	OZ/1000 ft2	45.0	A-D	28.3	C-K
55	Fore	T. ishikariensis	80 WP	8.0	OZ/1000 ft2	51.7	AB	40.0	A-F
56	Fore	Uninoculated	80 WP	8.0	OZ/1000 ft2	40.0	A-G	31.7	A-I
57	Check	M. nivale				41.7	A-F	46.7	A-D
58	Check	T. incarnata				41.7	A-F	31.7	A-I
59	Check	T. ishikariensis				43.3	A-E	43.3	A-E
60	Check	Uninoculated				21.7	C-K	31.7	A-I
LSD (P = 0.05)						29.83		21.08	
CV						80.92		58.96	

Means followed by the same letter do not significantly differ (P = 0.05)