

2018-2019 Snow Mold Control Evaluation: Wausau Country Club – Schofield, WI



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OBJECTIVE

To evaluate fungicides for the control of Typhula blight (caused by *Typhula incarnata*) and Microdochium patch (caused by *Microdochium nivale*) on golf course turfgrass.

MATERIALS AND METHODS

This evaluation was conducted at Wausau Country Club in Schofield, WI on a creeping bentgrass (*Agrostis stolonifera*) and annual bluegrass (*Poa annua*) golf course fairway maintained at a height of 0.5 inches. Individual plots measured 3 ft x 10 ft and were arranged in a randomized complete block design with four replications. Individual treatments were applied at a nozzle pressure of 40 p.s.i using a CO₂-pressurized boom sprayer equipped with two XR Teejet AI8004 VS nozzles. All fungicides were agitated by hand and applied in the equivalent of 1.5 gallons of water per 1000 ft². Granular applications were made by evenly spreading a pre-weighed amount of product over the designated plots. Early applications were made on 15 Oct 2018 and late applications were made on 8 Nov 2018. The experimental plot area was not inoculated. Snow cover was present from mid-January through mid-April, a total of approximately 90 days. Disease severity, turf quality, and color were measured on 2 Apr 2019. Disease severity was visually rated as percent area affected, turfgrass quality was visually rated on a 1-9 scale with 6 being acceptable, and chlorophyll content (turfgrass color) was rated using a FieldScout CM 1000 Chlorophyll Meter from Spectrum Technologies, Inc. (Aurora, IL). Treatment means were analyzed using Fisher's LSD method and are presented in Table 1.

RESULTS AND DISCUSSION

Very low levels of disease were observed on the experimental area. There was no snow present until mid-January, and heavy ice was present on the plots for several weeks before that and persisted until mid-April. There was significant ice injury present on the plots which made rating turf quality and turf color difficult. It is not recommended that results from this study are used to gauge the performance of the products tested due to the ice injury present.

Table 1: Mean snow mold severity, turf quality, and turf color were assessed on April 2, 2019 at Wausau Country Club in Schofield, WI

	Treatment	Rate	Application Timing ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d
1	Non-treated control			6.3a	6.5a	127.5g-s
2	Premion	8.0 fl oz/1000 ft ²	Late	0.0a	7.0a	121.0k-s
	Foursome	0.5 fl oz/1000 ft ²				
3	Previa	4.0 fl oz/1000 ft ²	Late	2.5a	6.8a	124.0i-s
	Premion	10.0 fl oz/1000 ft ²				
4	Foursome	0.5 fl oz/1000 ft ²	Late	0.0a	7.0a	129.3e-s
	Previa	5.5 fl oz/1000 ft ²				
5	Premion	10.0 fl oz/1000 ft ²	Late	0.0a	7.0a	132.3c-s
	Foursome	0.5 fl oz/1000 ft ²				
6	Secure	0.5 fl oz/1000 ft ²	Late	0.0a	7.0a	119.0l-s
	Concert II	5.5 fl oz/1000 ft ²				
7	Turfcide	8.0 fl oz/1000 ft ²	Late	0.0a	7.0a	129.3e-s
	Foursome	0.5 fl oz/1000 ft ²				
8	Concert II	8.3 fl oz/1000 ft ²	Late	0.0a	7.0a	136.8a-q
	Turfcide	8.0 fl oz/1000 ft ²				
9	Foursome	0.5 fl oz/1000 ft ²	Late	0.0a	7.0a	134.3b-s
	Previa	5.5 fl oz/1000 ft ²				
10	Turfcide	8.0 fl oz/1000 ft ²	Late	2.5a	6.8a	132.5c-s
	Foursome	0.5 fl oz/1000 ft ²				
11	Previa	4.0 fl oz/1000 ft ²	Late	2.5a	6.8a	140.3a-o
	Turfcide	6.0 fl oz/1000 ft ²				
12	Foursome	0.5 fl oz/1000 ft ²	Late	0.0a	7.0a	129.5d-s
	AND18131 4-way	6.6 lb/1000 ft ²				
13	AND18148 3-way	6.6 lb/1000 ft ²	Late	0.0a	7.0a	136.5b-r
14	Prophecy	2.5 lb/1000 ft ²	Early	0.0a	7.0a	111.5rs
	AND18131 4-way	6.6 lb/1000 ft ²	Late			
15	AND12147	6.67 lb/1000 ft ²	Late	3.8a	6.5a	111.0s
16	A13705V	4.5 fl oz/1000 ft ²	Late	0.0a	7.0a	134.0b-s
	A19188B	1.0 fl oz/1000 ft ²				
17	Par	0.37 fl oz/1000 ft ²	Late	0.0a	7.0a	128.0e-s
	A13705V	2.6 fl oz/1000 ft ²				
	A19188B	1.0 fl oz/1000 ft ²	Late	0.0a	7.0a	128.0e-s
	Turfcide	6.0 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				

^aEarly treatments applied on Oct 15, 2018 and late treatments applied on Nov 8, 2018

^bMean percent diseased area assessed on Apr 2, 2019.

^cQuality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

^dColor was assessed using a FieldScout CM1000 Chlorophyll Meter from Spectrum Technologies, Inc.

Table 1(cont): Mean snow mold severity, turf quality, and turf color were assessed on April 2, 2019 at Wausau Country Club in Schofield, WI

	Treatment	Rate	Applicatio Timing ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d
18	A15457K	0.24 fl oz/1000 ft ²	Late	0.0a	7.0a	125.8g-s
	A17856B	1.88 fl oz/1000 ft ²				
	Turficide	6.0 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
19	A15457K	0.24 fl oz/1000 ft ²	Late	0.0a	7.0a	146.3a-j
	A17856B	1.88 fl oz/1000 ft ²				
	Daconil Wthrstk	5.5 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
20	A15457K	0.24 fl oz/1000 ft ²	Late	0.0a	7.0a	145.8a-k
	A17856B	1.88 fl oz/1000 ft ²				
	Secure	0.5 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
21	A15457K	0.24 fl oz/1000 ft ²	Late	0.0a	7.0a	152.8a-f
	A17856B	1.88 fl oz/1000 ft ²				
	Banner Maxx	2.0 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
22	A19649B	0.16 fl oz/1000 ft ²	Late	0.0a	7.0a	161.8a
	Par	0.37 fl oz/1000 ft ²				
23	A22835A	2.87 fl oz/1000 ft ²	Late	2.5a	6.8a	153.0a-e
	Par	0.37 fl oz/1000 ft ²				
24	A22835B	2.87 fl oz/1000 ft ²	Late	2.5a	6.8a	130.5d-s
	Par	0.37 fl oz/1000 ft ²				
25	A22835C	2.87 fl oz/1000 ft ²	Late	0.0a	7.0a	150.5a-g
	Par	0.37 fl oz/1000 ft ²				
26	A22835D	2.87 fl oz/1000 ft ²	Late	0.0a	7.0a	157.0abc
	Par	0.37 fl oz/1000 ft ²				
27	A15457K	0.236 fl oz/1000 ft ²	Late	0.0a	7.0a	154.5a-d
	A17856B	1.88 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
28	A19188B	1.0 fl oz/1000 ft ²	Late	1.3a	7.0a	133.5b-s
	A17856B	2.61 fl oz/1000 ft ²				
	Par	0.37 fl oz/1000 ft ²				
29	Traction	1.3 fl oz/1000 ft ²	Late	1.3a	7.0a	122.5j-s
	26/36	4.0 fl oz/1000 ft ²				
30	Traction	1.3 fl oz/1000 ft ²	Late	0.0a	7.0a	138.3a-p
	26/36	8.0 fl oz/1000 ft ²				
31	Pinpoint	0.31 fl oz/1000 ft ²	Late	0.0a	7.0a	115.5o-s
	Tourney	0.44 fl oz/1000 ft ²				
	Rotator	0.5 fl oz/1000 ft ²				
32	Fludi 50	0.495 oz/1000 ft ²	Late	0.0a	7.0a	110.8s
33	QP Ppz	6.5 fl oz/1000 ft ²	Late	0.0a	7.0a	124.8h-s

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^dColor was assessed using a FieldScout CM1000 Chlorophyll Meter from Spectrum Technologies, Inc.

Table 1(cont): Mean snow mold severity, turf quality, and turf color were assessed on April 2, 2019 at Wausau Country Club in Schofield, WI

	Treatment	Rate	Application Timing ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d
34	Chloro 720	5.5 fl oz/1000 ft2	Late	2.5a	6.8a	119.8l-s
35	Profile 200	6.3 fl oz/1000 ft2	Late	0.0a	7.0a	129.5d-s
36	Fludi 50	0.495 oz/1000 ft2	Late	0.0a	7.0a	120.0l-s
	QP Ppz	6.5 fl oz/1000 ft2				
37	Fludi 50	0.495 oz/1000ft	Late	2.5a	6.8a	129.3e-s
	Chloro 720	5.5 fl oz/1000 ft2				
38	Chloro 720	5.5 fl oz/1000 ft2	Late	2.5a	6.8a	122.8j-s
	QP Ppz	6.5 fl oz/1000 ft2				
39	Chloro 720	5.5 fl oz/1000 ft2	Late	0.0a	7.0a	111.8qrs
	Fludi 50	0.495 oz/1000 ft2				
40	QP Ppz	6.5 fl oz/1000 ft2	Late	0.0a	7.0a	128.0e-s
	Instrata II A	1.92 fl oz/1000 ft2				
	Instrata II B	0.236 fl oz/1000 ft2				
41	Pedigree	5.5 fl oz/1000 ft2	Late	1.3a	6.8a	126.8g-s
42	Pedigree	6.6 fl oz/1000 ft2	Late	1.3a	6.8a	138.3a-p
43	Pedigree	4.4 fl oz/1000 ft2	Late	1.3a	6.8a	120.5l-s
	Banner Maxx	2.0 fl oz/1000 ft2				
44	Pedigree	5.5 fl oz/1000 ft2	Late	0.5a	7.0a	124.5h-s
	Banner Maxx	2.0 fl oz/1000 ft2				
45	Pedigree	6.6 fl oz/1000 ft2	Late	1.3a	6.8a	129.3e-s
	Banner Maxx	2.0 fl oz/1000 ft2				
46	Dexter Xcel	13.8 fl oz/1000 ft2	Late	0.0a	7.0a	157.3abc
	KFD-391-01	0.5 fl oz/1000 ft2				
47	Tebuzol	0.9 fl oz/1000 ft2	Late	0.0a	7.0a	123.0j-s
	KFD-112-02	1.35 fl oz/1000 ft2				
48	Pegasus DFX	3.25 oz/1000 ft2	Late	0.0a	7.0a	139.8a-o
	KFD-380	0.81 fl oz/1000 ft2				
49	KFD-112-02	1.35 fl oz/1000 ft2	Late	0.0a	7.0a	117.8n-s
	Pegasus DFX	3.25 oz/1000 ft2				
50	Trinity	1.0 fl oz/1000 ft2	Late	0.0a	7.0a	118.0m-s
51	Trinity	1.0 fl oz/1000 ft2	Late	0.5a	7.0a	127.8f-s
	Daconil Ultrex	3.2 oz/1000 ft2				

^aEarly treatments applied on Oct 15, 2018 and late treatments applied on Nov 8, 2018

^bMean percent diseased area assessed on Apr 2, 2019.

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Table 1(cont): Mean snow mold severity, turf quality, and turf color were assessed on April 2, 2019 at Wausau Country Club in Schofield, WI

	Treatment	Rate	Application Timing ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d
52	Daconil Wthrstk	5.5 fl oz/1000 ft2				
	Interface	6.0 fl oz/1000 ft2	Late	0.0a	7.0a	158.5ab
	Mirage	2.0 fl oz/1000 ft2				
53	Daconil Wthrstk	5.5 fl oz/1000 ft2				
	Interface	3.0 fl oz/1000 ft2	Late	0.0a	7.0a	143.0a-m
	Tartan	1.0 fl oz/1000 ft2				
54	Affirm	0.88 oz/1000 ft2	Late	0.0a	7.0a	115.5o-s
55	Affirm	0.88 oz/1000 ft2	Late	0.0a	7.0a	137.8a-p
	Mirage	2.0 fl oz/1000 ft2				
56	Heritage TL	2.0 fl oz/1000 ft2	Late	0.0a	7.0a	134.5b-s
57	Instrata	11.0 fl oz/1000 ft2	Late	0.0a	7.0a	120.8k-s
58	Instrata	9.3 fl oz/1000 ft2	Late	0.0a	7.0a	122.5j-s
59	Instrata	7.0 fl oz/1000 ft2	Late	0.0a	7.0a	113.5p-s
	Turfcide	6.0 fl oz/1000 ft2				
60	Interface	6.0 fl oz/1000 ft2	Late	0.0a	7.0a	157.0abc
	Mirage	2.0 fl oz/1000 ft2				
61	Interface	6.0 fl oz/1000 ft2	Late	0.0a	7.0a	136.8a-q
	Daconil Wthrstk	5.5 fl oz/1000 ft2				
62	Interface	6.0 fl oz/1000 ft2	Late	0.0a	7.0a	130.5d-s
	Secure	0.5 fl oz/1000 ft2				
LSD P=.05				3.11	0.33	25.23

^aEarly treatments applied on Oct 15, 2018 and late treatments applied on Nov 8, 2018

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