



2014-2015 Snow Mold Control Evaluation Cragun's Golf Resort – Brainerd, MN



Sam Soper, Bruce Schweiger, and Paul Koch, Ph.D.
Department of Plant Pathology
University of Wisconsin-Madison

Andrew Hollman and Dr. Brian Horgan
Department of Horticultural Science, University of Minnesota

OBJECTIVES

To evaluate fungicides for the control of Typhula blight (caused by *Typhula ishikariensis* and *T. incarnata*) and Microdochium patch (caused by *Microdochium nivale*).

MATERIALS AND METHODS

This evaluation was conducted at The Legacy at Cragun's GC in Brainerd, MN on a creeping bentgrass (*Agrostis stolonifera*) golf course fairway maintained at a height of 0.5 inch. Individual plots measured 3 ft x 10 ft (30 ft²), 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. All applications were made on November 7th, 2014. The experimental plot area was not inoculated. There was consistent snow cover on the experimental area from mid-November until mid-March, a total of about 120 days. Disease severity, turf quality, and color were recorded on March 18th, 2015. Disease severity was visually rated as percent area affected, turfgrass quality was visually rated on a 1-9 scale with 6 being acceptable, Normalized Difference Vegetative Index (turfgrass color) was rated using a GreenSeeker NDVI Turf Color Meter® from NTech Industries (Ukiah, CA). Treatment means were analyzed using the Waller Duncan method and are presented in Table 1.

RESULTS AND DISCUSSION

Disease pressure was low at Cragun's in 2014-2015, with non-treated controls averaging 1.3% disease. Speckled snow mold (*T. ishikariensis*) was the only snow mold observed. There were no differences in disease severity amongst the treatments. There were no differences measured using the NDVI meter, though slight differences in turf quality were detected when visually assessed.

Table 1: Mean snow mold severity, turf quality, and turf color assessed on March 18th, 2015 at The Legacy at Cragun's GC in Brainerd, MN.

Treatment	Rate	Application Timing ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d	
1	Non-treated control	Late	1.3a	6.8c	0.400a-d	
2	QP Strobe 50 WG	0.4 oz/1000 ft ²	Late	0.0a	8.0a	0.405a-d
	QP Enclave	4.0 fl oz/1000 ft ²	Late			
	Foursome	0.5 fl oz/1000 ft ²	Late			
3	QP Enclave	6.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.428a
	Foursome	0.5 fl oz/1000 ft ²	Late			
4	QP Enclave	8.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.428a
	Foursome	0.5 fl oz/1000 ft ²	Late			
5	QP Strobe 50 WG	0.4 oz/1000 ft ²	Late	0.0a	8.0a	0.423ab
	QP Tebuconazole	0.6 fl oz/1000 ft ²	Late			
	Foursome	0.5 fl oz/1000 ft ²	Late			
6	Disarm C	5.9 fl oz/1000 ft ²	Late	0.0a	7.0bc	0.390a-d
	Chipco 26GT	4.0 fl oz/1000 ft ²	Late			
7	Disarm T	0.89 fl oz/1000 ft ²	Late	1.3a	6.8c	0.398a-d
8	Disarm 480 SC	0.36 fl oz/1000 ft ²	Late	1.3a	6.8c	0.385a-d
	Daconil Weatherstik	5.5 fl oz/1000 ft ²	Late			
	Chipco 26GT	4.0 fl oz/1000 ft ²	Late			
9	Fiata	6.0 fl oz/1000 ft ²	Late	0.0a	7.5ab	0.370d
	Turficide	6.0 fl oz/1000 ft ²	Late			
10	Instrata	9.3 fl oz/1000 ft ²	Late	0.0a	7.0bc	0.375cd
11	Interface	5.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.408a-d
	Mirage	2.0 fl oz/1000 ft ²	Late			
12	Interface	4.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.413a-d
	Mirage	2.0 fl oz/1000 ft ²	Late			
13	Interface	5.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.403a-d
	Mirage	1.5 fl oz/1000 ft ²	Late			
14	Interface	5.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.400a-d
	Mirage	2.0 fl oz/1000 ft ²	Late			
16	SP102000030109	5.0 fl oz/1000 ft ²	Late	0.0a	7.5ab	0.380bcd
	Mirage	1.5 fl oz/1000 ft ²	Late			
17	SP102000030109	6.0 fl oz/1000 ft ²	Late	0.0a	7.5ab	0.410a-d
	Mirage	1.5 fl oz/1000 ft ²	Late			
18	SP102000030109	8.0 fl oz/1000 ft ²	Late	0.0a	7.5ab	0.408a-d
	Mirage	1.5 fl oz/1000 ft ²	Late			
19	SP102000028297	4.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.405a-d
	Mirage	1.5 fl oz/1000 ft ²	Late			
20	SP102000028297	5.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.425a
	Mirage	1.5 fl oz/1000 ft ²	Late			
21	SP102000028297	6.0 fl oz/1000 ft ²	Late	0.0a	8.0a	0.410a-d
	Mirage	1.5 fl oz/1000 ft ²	Late			
22	Tartan	2.0 fl oz/1000 ft ²	Late	0.5a	7.8a	0.410a-d

^aFungicide treatments were applied on Nov. 7th, 2014.

^bMean percent diseased area assessed on March 18th, 2015.

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

^dColor was assessed using a Greenseeker NDVI Turf Color Meter from NTech Industries®.