2016-2017 Sports Turf Snow Mold Control Evaluation: Wausau West High School – Wausau, 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 athletic field turfgrass.

MATERIALS AND METHODS

This evaluation was conducted at Wausau West High School in Wausau, WI on a Kentucky bluegrass (*Poa pratensis*) football field maintained at a height of 3 inches. Individual plots measured 3 ft x 10 ft and were arranged in a randomized complete block design with four replications. Individual liquid treatments were applied at a nozzle pressure of 40 psi using a CO_2 pressurized boom sprayer equipped with two XR Teejet AI8004 VS nozzles. Individual granular treatments were applied using mason jar shakers. All liquid fungicides were agitated by hand and applied in the equivalent of 1.5 gallons of water per 1000 ft^2. Applications were made on 15 Nov 2016. The experimental plot area was not inoculated. There was consistent snow cover on the experimental area from December until mid-March, a total of nearly 90 days. Disease severity, turf quality, and color were measured on March 23, 2017. 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

Non-treated controls averaged 62.5%, indicating disease pressure on the treatment area was significant in 2016-2017. There was a mix of both *M. nivale* and *T. incarnata* observed on the plots, though the majority of the symptoms were caused by M. nivale. All treatments but two reduced disease severity relative to the non-treated control, though the most effective disease suppression was provided by Banner MAXX, TM 4.5F, Headway, and Tartan. In general, liquid-applied applications were more effective then granular-applied. Phytotoxicity was not observed with any treatment.

Table 1: Mean snow mold severity, turf quality, and turf color were assessed on March 23, 2017 at Wausau West High School in Wausau, WI.

	Treatment	Rate	Application Timing[a]	Disease Severity[b]	Turf Quality[c]	Turf Color[d]
1	Non-treated control			62.5a	3.0f	95.3e
2	Banner Maxx	4 fl oz/1000 ft2	Late	10.0cd	6.3bc	155.3b
3	Trinity	2 fl oz/1000 ft2	Late	61.3a	3.0f	102.5de
4	TM 4.5F	3.5 fl oz/1000 ft2	Late	0.0d	7.8a	150.1b
5	Headway	3 fl oz/1000 ft2	Late	3.0cd	7.3ab	180.8a
6	Tartan	2 fl oz/1000 ft2	Late	0.0d	8.0a	199.3a
7	Velista	0.7 oz/1000 ft2	Late	58.8a	3.3ef	116.4cde
8	Prophesy G	5 lbs/1000 ft2	Late	36.3b	4.3de	104.1de
9	Headway G	5 lbs/1000 ft2	Late	22.5bc	5.0d	131.8bc
10	Pillar G	3 lbs/1000 ft2	Late	18.8bcd	5.3cd	120.1cd
			LSD P=.05	19.9	1.19	24.12

[a]Treatments were applied on Nov 15th, 2016

[b]Mean percent diseased area assessed on March 23rd, 2017.

[c]Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

[d]Color was assessed using a FieldScout CM1000 Chlorophyll Meter from Spectrum Technologies, Inc.