



2020-2021 Pink Snow Mold Control Evaluation: OJ Noer Turfgrass Research Facility – Madison, WI

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OBJECTIVE

To evaluate fungicides and varying spray volumes for the control of *Microdochium* patch (caused by *Microdochium nivale*) on fairway height turfgrass.

MATERIALS AND METHODS

This evaluation was conducted at the OJ Noer Turfgrass Research and Education Facility in Madison, WI on an 'Alpha' creeping bentgrass (*Agrostis stolonifera*) fairway maintained at a height of 0.5 inches. Individual plots measured 3 ft x 4 ft and were arranged in a randomized complete block design with three replications. Individual treatments were applied at a nozzle pressure of 40 psi using a CO₂-pressurized boom sprayer equipped with two AI80025 Teejet air induction nozzles. All fungicides were agitated by hand and applied in the equivalent of either 1.5, 1.0, or 0.5 gallons of water per 1000 ft². All applications were made on 1 Dec 2020. The experimental plot area was inoculated with *M. nivale*-infested rye grains 24 hours after the fungicide applications were made and then covered with custom made foam board insulation frames and an impermeable Greenjacket cover. The cover and frames were removed on 10 Mar 2021, and disease severity, turf quality, and turf color were evaluated on the same day. 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

Microdochium patch pressure was high under the cover and frames with non-treated controls averaging 66.7% disease. The best performing products were 26GT, Secure, Medallion, Instrata, and Densicor. Secure and Medallion performed best at a water volume of 1.5 gallons and worse at decreasing water volumes. Secure is a contact fungicide and Medallion is a localized penetrant, meaning neither are translocated within the plant xylem. Decreasing water carrier volume appeared to have no effect on Insignia or Heritage TL, a local penetrant and acropetal penetrant, respectively. Turf quality and turf color mostly mirrored disease severity. Phytotoxicity was not observed with any treatment.

Table 1: Mean snow mold severity, turf quality, and turf color were assessed on March 10, 2021 at the OJ Noer Research Facility in Madison, WI.

	Treatment	Rate	Spray Volume ^a	Disease Severity ^b	Turf Quality ^c	Turf Color ^d
1	Non-treated control			66.7a	2.7g	162.3a
2	26 GT	4.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	5.0gh	6.3ab	171.3a
3	Daconil Weatherstik	5.5 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	36.7bcd	4.0ef	163.3a
4	Torque	0.6 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	25.0b-g	4.7def	181.0a
5	Secure	0.5 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	8.3fgh	6.0abc	188.0a
6	Secure	0.5 fl oz/1000 ft ²	1.0 gal H ₂ O/1000 ft ²	10.0e-h	5.7bcd	188.0a
7	Secure	0.5 fl oz/1000 ft ²	0.5 gal H ₂ O/1000 ft ²	31.7b-f	4.7def	182.3a
8	Medallion	2.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	5.0gh	6.3ab	177.3a
9	Medallion	2.0 fl oz/1000 ft ²	1.0 gal H ₂ O/1000 ft ²	13.3d-h	5.7bcd	174.0a
10	Medallion	2.0 fl oz/1000 ft ²	0.5 gal H ₂ O/1000 ft ²	20.0c-h	5.0cde	170.3a
11	Insignia SC	0.7 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	38.3bc	4.3ef	163.7a
12	Insignia SC	0.7 fl oz/1000 ft ²	1.0 gal H ₂ O/1000 ft ²	35.0bcd	4.3ef	171.7a
13	Insignia SC	0.7 fl oz/1000 ft ²	0.5 gal H ₂ O/1000 ft ²	41.7bc	4.0ef	165.3a
14	Heritage TL	2.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	33.3b-e	4.3ef	177.3a
15	Heritage TL	2.0 fl oz/1000 ft ²	1.0 gal H ₂ O/1000 ft ²	48.3ab	3.7fg	178.7a
16	Heritage TL	2.0 fl oz/1000 ft ²	0.5 gal H ₂ O/1000 ft ²	31.7b-f	4.7def	176.3a
17	Instrata	7.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	0.0h	7.0a	190.7a
18	Densicor	0.196 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	5.0gh	6.3ab	185.3a
19	Interface	6.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	21.7c-h	4.7def	180.3a
20	Mirage	2.0 fl oz/1000 ft ²	1.5 gal H ₂ O/1000 ft ²	25.0b-g	4.7def	169.3a
			LSD P=.05	23.74	1.23	20.55

^aAll applications were applied on 1 Dec 2020.

^bMean percent diseased area assessed on March 10, 2021.

^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.