



2019-2020 Snow Mold OJ Noer Research Facility – Madison, WI

Kurt Hockemeyer, Reid Melton, and Paul Koch, Ph.D.
Department of Plant Pathology
University of Wisconsin-Madison

OBJECTIVE

To evaluate various spray adjuvants for their effect on controlling *Microdochium* patch (*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 10 ft and were arranged in a randomized complete block design with four replications. Individual treatments were applied at a nozzle pressure of 40 psi using a CO₂-pressurized boom sprayer equipped with two AI8004 Teejet air induction nozzles. All fungicides were agitated by hand and applied in the equivalent of 1.5 gallons of water per 1000 ft² on 18 Nov 2019. The experimental plot area was inoculated with *M. nivale*-infested rye grains 24 hours after the fungicide applications were made and then double-covered with two permeable Evergreen covers. The covers were removed on 23 Mar 2020, and disease severity, turf quality, and turf color were evaluated. 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 quite high under the covers, with non-treated controls averaging 52.5% disease. Though Torque reduced disease severity relative to the non-treated control, none of the adjuvants applied along with Torque provided any additional disease suppression. 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 23, 2020 at the OJ Noer Research Facility in Madison, WI.

	Treatment	Rate	Disease Severity ^a	Turf Quality ^b	Turf Color ^c
1	Non-treated control		52.5a	3.5c	176.0e
2	Torque	0.6 fl oz/1000 ft2	20.0b	4.8bc	221.3de
3	Torque PX 656	0.6 fl oz/1000 ft2 1.4 fl oz/1000 ft2	18.0b	5.0b	277.0a-d
4	Torque Pen-A-Trate ECO	0.6 fl oz/1000 ft2 0.125% v/v	18.8b	5.0b	236.5cde
5	Torque Pen-A-Trate ECO	0.6 fl oz/1000 ft2 0.5% v/v	22.5b	4.0bc	235.5cde
6	Torque Border 2.0	0.6 fl oz/1000 ft2 0.375% v/v	22.5b	4.8bc	223.3de
7	Torque Border 2.0 Sync	0.6 fl oz/1000 ft2 0.375% v/v 0.125% v/v	26.3b	5.0b	223.3de
8	Torque Sync	0.6 fl oz/1000 ft2 0.125% v/v	23.8b	4.8bc	217.5de
9	Torque Aqualock	0.6 fl oz/1000 ft2 8.0 fl oz/1000 ft2	23.8b	4.3bc	245.8bcd
10	PS1	8.0 fl oz/1000 ft2	0.0c	7.0a	310.5ab
11	PS2	8.0 fl oz/1000 ft2	0.0c	7.0a	314.0a
12	PS1 BSK-101	8.0 fl oz/1000 ft2 32 fl oz/100 gal	0.0c	7.0a	322.8a
13	PS2 BSK-101	8.0 fl oz/1000 ft2 32 fl oz/100 gal	0.0c	7.0a	297.5abc
		LSD P=.05	17.8	1.29	65.0

^aMean percent diseased area assessed on March 23, 2020.

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

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