Bayer Fungicides to Control Snow Mold on Putting Greens in Montana, Idaho, and Washington 2012-2013

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Snow mold control trials were conducted at 3 locations in the Intermountain Region of the PNW, on a research green at the WSU Turfgrass and Agronomy Research Facility in Pullman, WA, a green at Meadow Lake Resort Golf Course in Columbia Falls, MT, and a practice green at the City of McCall Golf Course in McCall, ID. The research green at Pullman is a pure stand of 'T-1' creeping bentgrass grown on an USGA specification constructed putting green, the green at Columbia Falls is a mixed stand of 'Penncross' creeping bentgrass and annual bluegrass, and the practice green at McCall is a mixed stand of 'Penncross' creeping bentgrass and annual bluegrass. Individual treatment plots were 6' x 7' with four replications in a randomized complete-block design. Treatments were applied 29 Oct 12, 2 Nov 12, and 14 Nov 12 at McCall, Columbia Falls, and Pullman, respectively. Fungicides were applied at 80 GPA with a bicycle-wheeled CO_2 pressurized (40 psi) sprayer with 11008 flat fan TeeJet nozzles. At Pullman, snow cover was intermittent, totaling approximately 40 days. Columbia Falls had snow cover totaling approximately 110 days from December 2012 to the third week of March 2013. Continuous snow cover lasted from the beginning of December 2012 through the first week of April 2013 (approx. 130 days) at McCall. Individual plots were evaluated for pink (*Microdochium nivale*) and/or gray (*Typhula spp.*) snow mold disease severity (% area infected), turfgrass quality rated on a scale from 1 to 9; 9 = excellent and 6 = acceptable, and color rated on a scale from 1 to 9; 9 = dark green on 8 Mar 13 at Pullman, 28 Mar 13 at Columbia Falls, and 23 Apr 13 at McCall.

At Pullman, the Check had approximately 16% of the area infected with pink snow mold (Table 1). All treatments resulted in very good to excellent snow mold control. Treatments with Interface and/or Tartan had turf quality the same as Instrata + PAR and these treatments were significantly higher compared to Instrata alone. Figs. 1 and 4 show the fungicide treatments in rep 3.

At Columbia Falls, the Check had approximately 29% of the area infected with both pink (65%) and gray (35%) snow mold (Table 2). All treatment resulted in complete snow mold control. However, Interface + Triton FLO treatments had significantly higher turfgrass quality compared to Instrata 9.3 fl oz/M. Figs. 5 and 6 show the fungicide treatments in rep 2.

The study conducted at McCall, ID was not rated since there was no disease present in any of the treatments, including the check. In addition, there were no observable differences in turfgrass quality between any of the treatments.

Overall, at Pullman, Interface 3 fl oz/M + Tartan 1 fl oz/M resulted in slightly better disease control, although not significantly, compared to Interface at 6 fl oz/M or Tartan 2 fl oz/M applied alone. In addition, there was no difference in turfgrass quality among these treatments. Both Instrata treatments resulted in excellent disease control however the addition of PAR resulted in turfgrass quality equal to the Interface and/or Tartan treatments. At Columbia Falls, the Interface 4 or 5 fl oz/M + Triton FLO 0.85 fl oz/M resulted in excellent control of both pink and gray snow mold with turfgrass quality significantly higher compared to Instrata 9.3 fl oz/M.

Table 1. The effect of fungicides on a 'T-1' creeping bentgrass green to control pink snow mold at the WSU Turfgrass and Agronomy Research Center in Pullman, WA. Rated on 8 Mar 2013

Treatment	Rate (fl oz/M)	Snow mold (% area infected)	*Turfgrass quality
Instrata (fludioxonil + propiconazole + chlorothalonil) + PAR (proprietary pigment concentrate)	7 0.37	0.0 b**	5.4 a
Instrata (fludioxonil + propiconazole + chlorothalonil)	7	0.0 b	4.1 b
Interface (iprodione + trifloxystrobin) + Tartan (triadimefon + trifloxystrobin)	3 1	0.6 b	5.3 a
Tartan (triadimefon + trifloxystrobin)	2	0.9 b	5.3 a
Interface (iprodione + trifloxystrobin)	6	1.3 b	5.3 a
Check	0	16.5 a	2.4 c

*Turfgrass quality was rated on a scale from 1 to 9; with 9 = excellent.

**Means within columns followed by the same letter are not significantly different. LSD P = 0.05.

Fig. 1. Snow mold fungicide treatments on a creeping bentgrass green at the WSU Turfgrass and Agronomy Research Center in Pullman, WA. Rated on 27 Mar 2012.

Fig. 2. Snow mold fungicide treatments on a creeping bentgrass green at the WSU Turfgrass and Agronomy Research Center in Pullman, WA. Rated on 8 Mar 2013.

Fig. 3. Snow mold fungicide treatments on a creeping bentgrass green at the WSU Turfgrass and Agronomy Research Center in Pullman, WA. Rated on 8 Mar 2013.

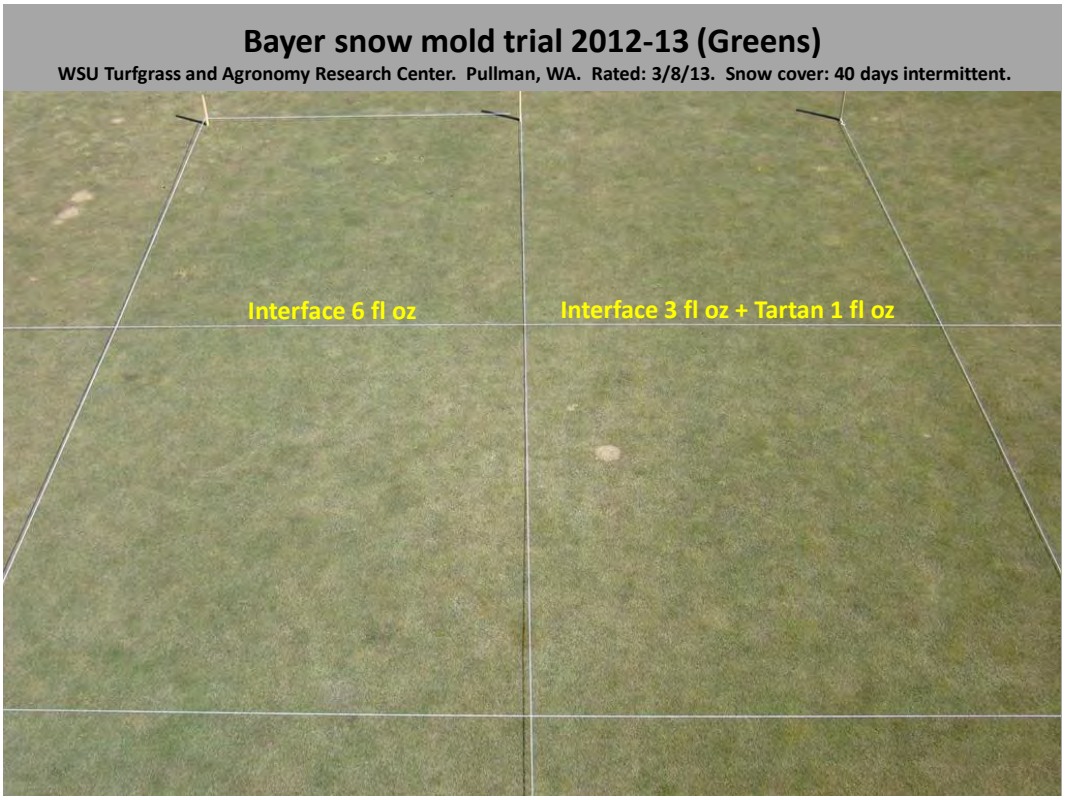

Fig. 4. Snow mold fungicide treatments on a creeping bentgrass green at the WSU Turfgrass and Agronomy Research Center in Pullman, WA. Rated on 8 Mar 2013.

Table 2. The effect of fungicides on a 'Penncross' creeping bentgrass/annual bluegrass green to control pink and gray snow mold at Meadow Lake golf course in Columbia Falls, MT. Rated on 28 Mar 2013.

Treatment	RATE (fl oz/M)	Snow mold (% area infected)	*Turfgrass quality	**Turfgrass color
Interface (iprodione + trifloxystrobin) + Triton FLO (triticonazole)	4 0.85	0.0 b	7.0 a	7.0 a
Interface (iprodione + trifloxystrobin) + Triton FLO (triticonazole)	5 0.85	0.0 b	7.0 a	7.0 a
Instrata (fludioxonil + propiconazole + chlorothalonil)	9.3	0.0 b	5.5 c	5.5 b
Check	0	29.0 a	2.0 c	5.5 b

*Turfgrass quality rated 1 to 9; 9 = excellent.

**Turfgrass color rated 1 to 9; 9 = dark green.

***Means within columns followed by the same letter are not significantly different. LSD *P* = 0.05.

Fig. 5. Snow mold fungicide treatments on a creeping bentgrass/annual bluegrass green at Meadow Lake Resort Golf Course in Columbia Falls, MT. Rated on 28 Mar 2013.

Fig. 6. Snow mold fungicide treatments on a creeping bentgrass/annual bluegrass green at Meadow Lake Resort Golf Course in Columbia Falls, MT. Rated on 28 Mar 2013.