

Bayer Fungicides Used to Control Snow Mold on Putting Greens in Idaho and Washington 2009-2010

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July 20, 2010

Snow mold control trials were conducted at 3 different locations in the Intermountain Region of the PNW, on a practice green at the City of McCall Golf Course in McCall, ID, on a nursery green at the Chewelah Golf and Country Club in Chewelah, WA, and on a research green at the WSU Turfgrass and Agronomy Research Center (TARC) in Pullman, WA. The practice green at McCall is a stand of creeping bentgrass/annual bluegrass, the nursery green at Chewelah is a push-up green covered with 3" to 4" of sand with a mixed stand of 'Pennncross' creeping bentgrass and annual bluegrass, and the research green at Pullman is a pure stand of 'T-1' creeping bentgrass grown on an USGA specification putting green. Individual treatment plots were 6' x 7' with three replications in a randomized complete-block design. Treatments were applied 25 Oct 09, 2 Nov 09, and 18 Nov 09 at McCall, Chewelah, and Pullman, respectively. Fungicides were applied at 80 GPA with a bicycle-wheeled CO₂ pressurized (40 psi) sprayer with 11008 flat fan TeeJet nozzles. At Pullman, snow cover was intermittent and in general light throughout the winter. Continuous snow cover lasted from the first of December 2009 through the first of March 2010 (approx. 100 days) at Chewelah and from the first of December 2009 to 19 April 2010 at McCall (approx. 138 days). At McCall, snow was not allowed to melt naturally compared to the other 2 sites. On April 19 approximately 1 to 1.5 feet of snow was mechanically removed from the green and plots were rated 2 days later. Individual plots were evaluated for pink (*Microdochium nivale*) and/or gray (*Typhula spp.*) snow mold disease severity (% area infected) and turfgrass quality (rated on a scale of 1-9; 9 = excellent and 6 = acceptable) on 17 Mar 10 at Pullman, 19 Mar 10 at Chewelah, and 21 Apr 10 at McCall.

At Pullman all Interface treatments resulted in complete snow mold control (Table 1). However, there was a significant increase in turf quality with the 6 fl oz/M rate compared to the 4 fl oz/M rate of Interface.

At Chewelah, all fungicide combination treatments resulted in complete or nearly complete control of both pink and gray snow mold (Table 2). Several fungicide combinations, all of which contain at least one product with StressGuard, resulted in higher turfgrass quality compared

to Instrata applied at either the 9.3 or 11 fl oz/M rates. Figure 1 shows a non-treated Check compared to Interface 6 fl oz/M + Triton FLO 0.85 fl oz/M treatment.

At McCall, all fungicide combination resulted in nearly complete snow mold control (Table 3). Surprisingly, there was very little snow mold in any of the check plots, even though there was sufficient snow cover (138 days) for disease development. Tartan 2 fl oz + Daconil Ultrex 5 oz/M had the highest overall turfgrass quality. But for the most part, all fungicide treatments had acceptable (≥ 6) turfgrass quality and were significantly better than the non-treated Check.

Overall, Interface at 4, 5 or 6 fl oz/M rate at Pullman resulted in complete snow mold control, with turfgrass quality increasing with increased rates. Under longer snow cover at Chewelah and McCall, all fungicide combinations resulted in complete or nearly complete snow mold control. Several treatments had significantly higher turfgrass quality compared to Instrata at either the 9.3 or 11 fl oz/M rates.

Table 1. The effect of increased rates of Interface on turfgrass quality and to control snow mold on a research green at the WSU Turfgrass and Agronomy Research Center (TARC) in Pullman, WA. Rated 17 Mar 2010.

Fungicide treatment	Rate (fl oz/M)	Snow mold disease (% area infected)	Turf quality (rated 1-9)
Check	0	7.3 a*	4.3 c
Interface (Iprodione + Trifloxystrobin)	4	0.0 b	5.0 bc
Interface (Iprodione + Trifloxystrobin)	5	0.0 b	5.3 ab
Interface (Iprodione + Trifloxystrobin)	6	0.0 b	6.0 a
Instrata (Fludioxonil + Propiconazole + Chlorothalonil)	7	0.0 b	4.3 c
Tartan (Triadimefon + Trifloxystrobin)	2	0.0 b	5.3 ab

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

Table 2. The effect of various Bayer fungicide combinations on turfgrass quality and to control snow mold on a practice green at the Chewelah Golf and Country Club in Chewelah, WA. Rated 19 Mar 2010.

Fungicide treatment	Rate (fl oz or oz/M)	Snow mold disease (% area infected)	Turf quality (rated 1-9)
Check	0	23.3 a*	2.7 d
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	4 fl oz 0.85 fl oz	0.0 b	6.0 ab
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	5 fl oz 0.85 fl oz	1.0 b	6.2 a
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	6 fl oz 0.85 fl oz	0.0 b	6.3 a
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	4.5 fl oz 0.25 oz	0.0 b	5.7 ab
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	5.4 fl oz 0.25 oz	0.0 b	6.0 ab
Tartan (Tradimefon + Trifloxystrobin) + Daconil Ultrex (Chlorothalonil)	2 fl oz 5 oz	0.7 b	6.0 ab
Instrata (Fludioxonil + Propiconazole + Chlorothalonil)	9.3 fl oz	0.0 b	5.0 bc
Instrata (Fludioxonil + Propiconazole + Chlorothalonil)	11 fl oz	0.0 b	4.3 c
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	4.5 fl oz 0.2 oz	0.0 b	5.7 ab

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

Figure 1. A view of a non-treated Check compared to Interface 6 fl oz/M + Triton 0.85 fl oz/M at the Chewelah Golf and Country Club in Chewelah, WA on 19 Mar 2010.

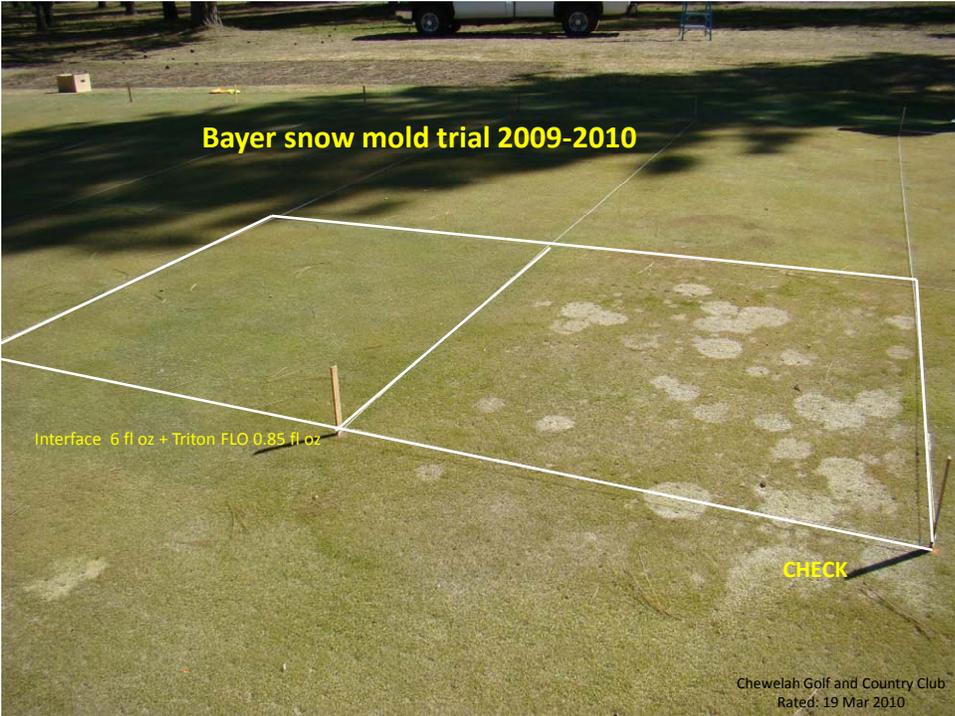


Table 3. The effect of various Bayer fungicide combinations on turfgrass quality and to control snow mold on a practice green at the City of McCall Golf Course in McCall, ID. Rated 21 Apr 2010.

Fungicide treatment	Rate (fl oz or oz/M)	Snow mold disease (% area infected)	Turf quality (rated 1-9)
Check	0	8.0 a*	5.3 d
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	4 fl oz 0.85 fl oz	0.3 b	6.3 bc
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	5 fl oz 0.85 fl oz	0.0 b	6.7 ab
Interface (Iprodione + Trifloxystrobin) + Triton FLO (Triticonazole)	6 fl oz 0.85 fl oz	0.3 b	6.3 ab
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	4.5 fl oz 0.25 oz	0.3 b	6.0 c
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	5.4 fl oz 0.25 oz	0.3 b	6.0 c
Tartan (Tradimefon + Trifloxystrobin) + Daconil Ultrex (Chlorothalonil)	2 fl oz 5 oz	0.0 b	7.0 a
Instrata (Fludioxonil + Propiconazole + Chlorothalonil)	9.3 fl oz	0.0 b	6.0 c
Instrata (Fludioxonil + Propiconazole + Chlorothalonil)	11 fl oz	0.0 b	6.0 c
Reserve 4.8SC (Chlorothalonil + Triticonazole) + Compass (Trifloxystrobin)	4.5 fl oz 0.2 oz	0.3 b	6.7 ab

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