



Moss Control in Wisconsin: A Step in the Right Direction

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In the July/August 2005 issue of *The Grass Roots* we discussed the biology of silvery-thread moss (*Bryum argenteum*), why it competes so aggressively with intensively managed creeping bentgrass, and why it is so hard to control both chemically and culturally (Koch 2005). This past summer we tested the efficacy of different moss control programs that had reported success in other parts of the country. Some of the treatments had great success, others had limited success, and others had no observable differences from the control plot. The trick to all

this is correlating what was successful on our research plots to successful moss control on your putting greens, which will ultimately be up to you to decide for yourself.

The Experiment

This experiment was conducted at the O.J. Noer Turfgrass Research and Educational Facility in Verona, Wisconsin during the summer of 2005. The research plot was mowed daily at 0.125 inches, fertilized with 3 # N/M, and was watered twice daily. Due to the variable encroachment of moss in the research green, experimental

plots had to be set up around areas of the green already infested with moss. Individual 3' X 5' plots were arranged in a randomized complete block design in areas that had more than 20% moss cover. All seven treatments were replicated three times and first applied on June 23rd except for Quicksilver, which was first applied on July 6th. Treatments were applied using a CO₂-powered boom sprayer, with XR Teejet 8004 nozzles at 40 psi. Repeat applications were made every two weeks until the final application on September

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1st, for a total of six applications. Plots were rated for percent moss cover, phytotoxicity (with 1 being extreme phytotoxicity and 9 being none), and quality (with 6 being acceptable quality and 9 being excellent.) Special thanks go out to Jeff Wilson of Blackwolf Run and Bob Gosewehr of Mee-Kwon Park for supplying the Quicksilver and Bioboost, respectively.

The Results

Statistically significant moss reductions were present only in the Daconil/Fore/Spotrete treatment when compared to the untreated check on September 9th (See Table

1). The Daconil/Fore/Spotrete tank mix provided exceptional moss reduction, reducing percent moss cover to 0% by the end of the trial. Due to the fungicidal qualities of the D/F/S mix, it also provided the highest quality turfgrass overall. Quicksilver colored the moss a dark black color, but there was relatively little re-growth of the bentgrass over the dead moss patches, leaving those blocks pitted and unsightly. The rate of Quicksilver used may have stunted bentgrass re-growth, where a lighter rate at a 10-day interval may have allowed better bentgrass stolon growth and hence

better overall recovery. The Daconil/Fore/Spotrete and Junction treatments consistently clogged spray nozzles while Bioboost at the high rate was extremely phytotoxic to the turfgrass, and was discontinued after four applications. Future moss studies will look at different rates and spray intervals of Quicksilver in the hopes of achieving better moss control with that product.

References

Koch, P., Abler, S., and Jung, G. 2005. An Introduction to Moss Control in Wisconsin. *The Grass Roots*. July/August. 34(4): p 9,11. 🌱



Figure 1: Moss damage due to the Daconil/Fore/Spotrete tank mix. Notice the bright orange discoloration of the moss, but healthy green grass surrounding the moss. This picture was taken on June 24th, the day after the first application.



Figure 2: Moss damage due to Quicksilver. Notice the dark discoloration of the moss, with slight phytotoxic tip burn on some of the surrounding leaf blades. This picture was taken on July 22nd, one day after its second application.

Treatment	Rate						
		% Moss	Phyto	Quality	Phyto	Quality	% Moss
		6/24*	6/24*	6/24*	8/5*	8/5*	9/1*
1 Untreated Control		30	9a	7.7a	9a	6.7b	28.3a
2 Bioboost (High Rate)	13 FL OZ/GAL	38.3	3b	3b	1.7d	1.3d	X
3 Bioboost (Low Rate)	6.5 FL OZ/GAL	33.3	7a	6.7a	6.7b	5.7b	6.7ab
4 Junction	5 OZ/M	31.7	8.7a	7a	7.3ab	6b	26.7a
5 Daconil	3.2 OZ/M						
Spotrete	4 OZ/M						
Fore	4 OZ/M	31.7	9a	6.7a	9a	7.7a	0b
6 Quicksilver	0.15 FL OZ/M	36.7	9a	6.7a	5.3c	4c	30a
7 Dawn Ultra	4 FL OZ/GAL	38.3	7.3a	6a	8ab	6.3b	15ab
LSD		NS	1.7	1.6	1.3	0.7	15.8
*Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)							

Table 1. Percent Moss, Phytotoxicity, Moss Discoloration, and Turf Quality at the OJ Noer Turfgrass Research and Education Facility