

Influence of Winter Covers on Snow Mold Severity: A Summary of Year 1

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Last year the WGCSA funded our study to examine the influence of winter covers on snow mold severity. The study was conducted at Bass Lake Golf Course near Antigo, WI with Dave Van Auken as our host. (Thank you Dave for hosting us and being such a gracious host, we really do appreciate it.) The site was on a 'Penncross' creeping bentgrass putting green maintained at a height of 0.125 inches. The plots were 3 ft by 10 ft and the treatments were arranged in a strip, split plot design.

Basically the putting green was divided into three sections, covered with an evergreen cover, a green jacket cover with insulation and no cover. Then the three winter cover treatment sections were split into three different fungicide application timings: an early application (10/06/2011), a split application (10/06/11 and 11/1/11) and a late application (11/01/11). Interface at 4.0 fl oz and Triton FLO at 0.85 was applied once for the early and late application timings. The split application received

Impact of covers on snow mold severity

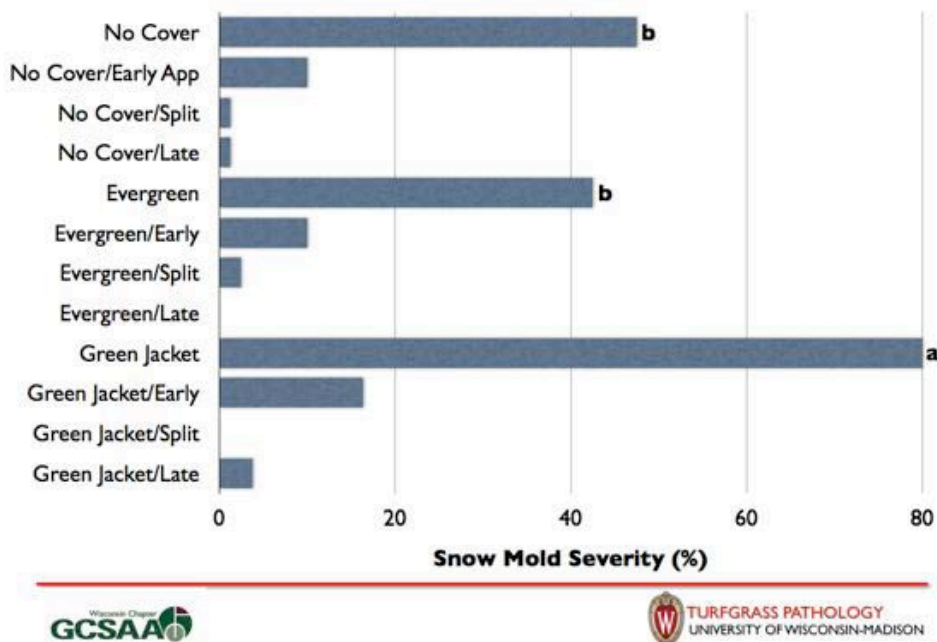


Figure 1. Impact of winter covers on snow mold severity at Bass Lake Country Club in Antigo, WI.



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two applications of the mixture listed above, but the rates were cut in half to achieve the same amount of product in each application timing.

Immediately following the final fungicide application on Nov. 1, Dave Van Auken and crew installed the winter covers. Disease severity and turfgrass quality were visually estimated on March 19, 2012. The experimental area was under snow cover for approximately 100 days. This experiment will be repeated this year. Although most of our snow mold trials in 2011-2012 were a wash, this particular trial yielded excellent and interesting results. The purpose of this experiment was to investigate claims of severe snow mold development despite using excellent fungicide mixtures for snow mold management.

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After the first year, we immediately discovered that snow mold was most severe in the absence of fungicides under the Green Jacket covers with insulation (Figure 1 and 2). We did not observe significant differences between fungicide timings under any winter cover treatment. However, it was apparent that snow mold development was more severe when applications were only performed in early October. This is important because I heard many claims that systemic products need to get into the plant early in order to be effective. This is not true and I may have caused some of the confusion. We observe excellent suppression of snow mold when fungicides are applied well before snow cover, but after the last mowing of the year. We also did not observe a difference between split applications and a single late application, but keep in mind that we only treated a 120 ft² with our tanks! It remains to be seen if coverage is better when ap-

plications are split when treating large acreage.

It is interesting to note, that we did not see differences among application timings within the Green Jacket treatment despite increased development in the non-treated control. We used an exceptional fungicide mixture that has performed well at our site in the Upper Peninsula of Michigan, which may have confounded our results. However, if you notice the early applications averaged about 18% disease and the late application had some disease development as well. It will be interesting to see how this changes when we repeat the study this year because the plot locations will remain the same. Thus, inoculum density in plots with some breakthrough maybe higher and may allow for more differences this year.

Throughout the study we monitored environmental conditions. Although nothing immediately stood out, we did notice

the insulating green jacket covers tempered the extremities of winter better than snow and snow plus the permeable Evergreen cover. Essentially, we may see more striking differences in regions with less persistent snow cover. Snow cover itself is an excellent insulator for environmental extremes and covers are only needed to protect against desiccation and ice damage. We hope this study and potentially another study with the NGLGCA will help us determine if covers are truly needed in environments with persistent snow cover during the winter months.

This study was very exciting and our co-operator, Dave Van Auken, was an absolute pleasure to work with. We look forward to collecting another year's worth of data and reporting the findings. If you have any questions or comments please feel free to contact Paul or I about the study. Looking forward to this year!! 🌱



Figure 2. Images of the impact of winter covers on snow mold severity in the absence of fungicides. The far left image was not under any winter cover, the middle was under a permeable Evergreen cover and the right was under a Green Jacket cover with insulation.