# Snow Mold Across America

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Though it might not have the sheer number of followers of some past cultural icons, The Grateful Dead and the McRib® come to mind, there is an annual tour throughout the upper Midwest that attracts followers of a different kind. Rather than music, drugs, and cholesterol, these followers come to see snow mold. Or, more specifically, what controls snow mold. The most committed followers travel from as far as the east or west coast and travel with the tour from northern Minnesota, through central Wisconsin, on up to the upper peninsula of Michigan. The travel can make one weary, the days can be long, and after seeing so much snow mold one might even forget that grass isn't supposed to be tan or bleached. But to those on the Snow Mold Tour, only the thrill of the effective treatment matters. Since every good following has a nickname, we'll call those dedicated followers Mold Heads (Figure 1 and 2).

The University of Wisconsin Snow Mold Field Days have been held every year since 2005, when I started with the Turfgrass Diagnostic Lab, and for many years prior to that under Drs Jung and Worf. The Field Days have been held everywhere from southern Wisconsin to northern Michigan, from the Twin Cities to north of Duluth, and many points in between. They have been held in 70 degree sunshine, sideways sleet, and even 6 inches of snow (Figure 3). To the dismay of the Mold Heads, the events have even been pushed inside or cancelled altogether on rare occasions when weather won't allow for travel. No matter what the weather or how far the travel, one thing unites them all; the confused look of outsiders viewing the spectacle of 30 odd men crouched on the ground looking for sclerotia.

The planning for Snow Mold Field Days begins when snow mold is the furthest thing from a superintendent's (and diagnostician's) mind, usually somewhere in June to July. It is during this time when sites to host the upcoming snow mold trials are selected. Five to six sites are selected and several factors go into selecting each site, with the number one factor being the level of snow mold pressure usually observed at that golf course. Other factors include, in no particular order, the superintendent's willingness to host, proximity to major population centers or interstate highways, and ease of access to the trial site on the golf course. Successful sites are used again; unsuccessful sites are usually removed after 1-3 years of either low snow mold pressure or difficulty in another aspect of administering the trial. Sentryworld GC in Stevens Point, WI for example has hosted snow mold research for a decade or longer. Excellent disease pressure, easy access from Interstate-39, and the tremendous assistance offered by Superintendent Gary Tanko and his staff make Sentryworld a site we will test at as long as we are allowed.

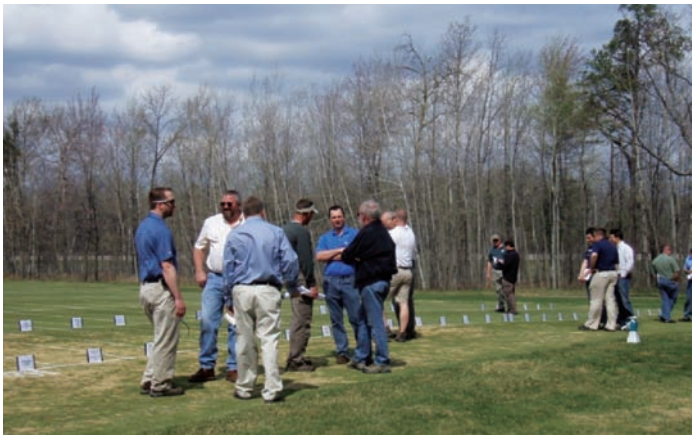

**Figure 1: The attendees at Sentryworld GC in Stevens Point enjoyed warm, breezy conditions. Warm enough for one attendee to break out the shorts, much to the dismay of the rest of the crowd.**

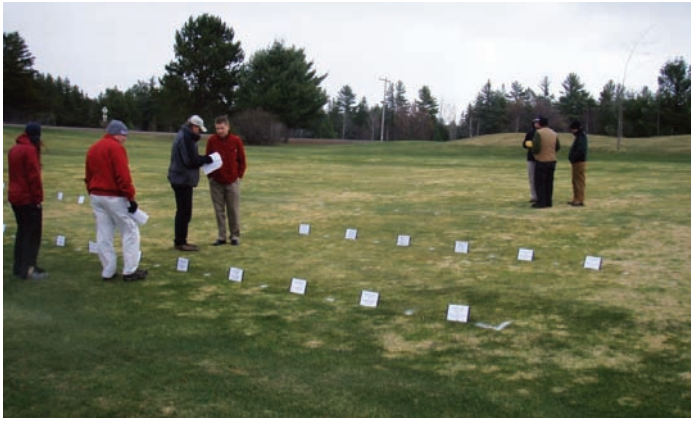

**Figure 2: The small crowd that attended the event at Wawonowin CC got to see some intense snow mold pressure, as well as the variable springtime conditions of the upper Midwest. This field day was less than 24 hours after the field day at Sentryworld, where short sleeves were the preferred attire.**

After the research sites have been selected, cooperators from fungicide-producing companies submit treatments to test the efficacy of standard and experimental fungicides. Sometimes a completely new compound is being tested to determine if it controls snow

**Figure 3: Field Day must go on, even when 6 inches of snow falls on the morning of the event. Here Gary Tanko and his crew provide an assist in readying the plots.**

mold as well in the field as it did in the lab. Sometimes a fungicide registered for use on turf 30 years ago is tested at a new rate in combination with a more recent compound. The number of treatments in each trial can vary between 50 and 75 in an average year, though more or less have been tested on occasion.

Once the treatments have been received the fall travel can begin. Two trips are made to each site, and more than one site is usually grouped into each trip. The plots are laid out and the early fungicide applications are made (if necessary) during the first trip to a given site. Three to four weeks later, a second trip to each site is made to apply the late timing of treatments. While all treatments have an application during the late timing, on average usually only 10-15% of treatments have an early application. Trips are scheduled so that the late timing applications are made 2-3 weeks prior to the first average snowfall, though weather conditions are closely observed and have been moved up to beat impending snowfall.

Following snowmelt the following spring, a trip is made to each site to rate the amount of snow mold present in each site and photograph each treatment. Snow mold is rated as a visual percent disease, turfgrass quality is measured visually using a 1-9 scale, and turfgrass color is rated using a TCM 500 NDVI Turf Color Meter® from Spectrum Technologies. Upon returning to Madison, the Field Day dates for each site are scheduled and emailed to the turf industry and the reports are written and compiled.

The 2010 Snow Mold Field Days were held on April 14th, 15th, and 16th in Brainerd, MN, Stevens Point, WI, and Champion, MI, respectively. Dr. Jim Kerns and myself traveled from Madison to Brainerd the night of

the 13th in preparation for the event the following day. Mild temperatures greeted us in Brainerd on the 14th with some passing showers. A small but dedicated following observed the results and asked questions, mingled with other company representatives and took pictures, drank coffee and ate doughnuts.

Following the hour and a half long field day at Craguns Golf Resort in Brainerd, it was on the road again for the drive to Stevens Point, WI. Dr. Kerns and I met some of the other weary travelers at Hilltop Pub for dinner to shake off the rust of the long drive, and despite our sharp dress and agreeable demeanor were promptly led to a nearly empty back room. I can only assume the two older women in the room wished it was empty. The field day at Sentryworld in Stevens Point is always our best attended, and 2010 was no different. Sunny skies, unseasonably warm temperatures, and howling winds greeted the 28 attendees who made the trek from as far as away as Kansas City or as short as the maintenance facility (Figure 1). The presentations from Brainerd were repeated, and discussions on fungicide longevity and what is truly considered snow mold "breakthrough" followed.

After two hours and a hearty lunch in the Sentryworld clubhouse, it was back on the road for a scenic but long drive up to Marquette, MI. Most of the Mold Heads that made the trip up to Marquette somehow ended up in the same restaurant again for dinner on the night of the 15th, suggesting an almost spiritual connection that brings men together when traveling the upper Midwest looking for snow mold control. That or all the hotels in Marquette recommend the same restaurant. We went to bed that night after the sun had set with warm temperatures and a tinge of summer in the air. We woke up the next morning to 40 MPH winds and snow flurries, quickly reminding us it was still mid-April, and mid-April in the U.P. at that. There is an inverse proportionality between the quality of the weather at a Field Day and the dogged determination of the attendees, and the field day at Wawonowin CC 20 minutes west of Marquette proved that. The small, frozen group that attended the final field day saw what no other attendees could say they saw, acceptable snow mold control in winter conditions so severe that on average snow is on the ground more than half the year. The discussion at Wawonowin revolved around two things, (1) how making both an early and late application can be very beneficial under intense disease pressure, and (2) the complete shock by several of the travelers how it can go from 70 degrees one day to snowing the next.

The trip back to Madison on Friday completed the journey that was the 2010 Snow Mold Field Days. In total, the 1300 mile round trip required 23 hours on the road to complete. The Mold Heads traveled to the lake country of Minnesota, the central sands of Wisconsin, and the shores of Lake Superior. They experienced gentle rain showers, brutal winds, summer evenings, and winter mornings. They saw treatments provide excellent protection at one site, and the same treatment provide no protection at another. In their travels across the upper Midwest they saw what we all know, if you want consistency...move to San Diego.

Thanks to those who traveled to and attended the 2010 Snow Mold Field Days. The final research reports with pictures of each treatment can be found at the Turfgrass Diagnostic Lab's website (www.plantpath.wisc.edu/tdl) on the 'Research' page. Discussion and further interpretation of the results will be included in the July/August issue of *The Grass Roots*.