

FEATURE I

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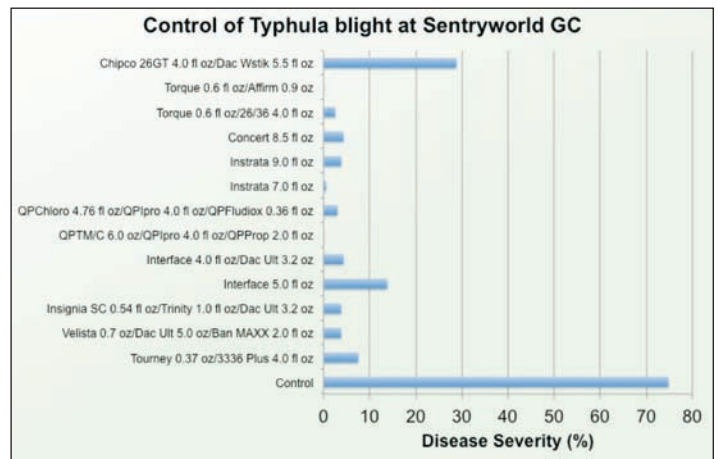
# Preparing for Snow Mold Applications

*After a spring and summer full of surprises including a frigid May, a bone-dry June, and a blistering July with significant rainfall, planning for snow mold applications in September is a welcome sight! With the chaos of the PCNB stop-sale order issued by the Environmental Protection Agency in August of 2010, and the widespread feeling that PCNB wouldn't be available for a significant period (if ever again), it seemed that planning for the 2011-2012 winter would be straightforward. Scrutinize the 2011 UW Snow Mold Research Reports, discuss with colleagues and sales representatives, make a selection, and wait for the right time to spray. Then on August 19, 2011 came the latest twist. The PCNB stop-sale order, issued in 2010, had been vacated by a district judge, allowing the sale of PCNB once more. Predictability had been thrown out the window, replaced by questions with no certain answers. Do I revamp my plan to once again include PCNB? Can the product get to my facility in time? What will PCNB be priced at, and how will that affect my decision? For the latest on the PCNB situation as well as a full listing of all the orders and press releases visit the Turfgrass Diagnostic Lab's PCNB page at [www.tdl.wisc.edu/PCNB.php](http://www.tdl.wisc.edu/PCNB.php).*

By the time you read this, most of the above questions are likely to have been answered. That does not mean that the uncertainty surrounding PCNB is over. The legal wrangling will likely continue until PCNB is (eventually) fully removed from the turfgrass market. For that reason, in the long term it is best to find a snow mold program that works for your facility and your budget and does not include PCNB. An excellent place to start is with the 2011 University of Wisconsin Snow Mold Research Reports.

The 2010-2011 UW Snow Mold Trials were held at 5 locations in Wisconsin, the Upper Peninsula of Michigan, and Minnesota. The trials were held at Grant Park, GC in South Milwaukee, Wisconsin; Sentryworld GC in Stevens Point, Wisconsin; Wawonowin CC in Champion, Michigan; Les Bolstad GC in St Paul, Minnesota; and The Legacy at Craguns GC in Brainerd, Minnesota. A sincere thank you to the host superintendents at each course for their gracious hospitality: Jason Rosbach at Grant Park, Gary Tanko at Sentryworld, AndyHakkarinen at Wawonowin, Brent Belanger at Les Bolstad, and Matt McKinnon at Craguns. The full reports for each site can be found at the Turfgrass Diagnostic Lab's Research page at [www.tdl.wisc.edu/research.php](http://www.tdl.wisc.edu/research.php).

The 2010-2011 trial that showed the greatest difference among treatments was held at Sentryworld GC (See Figure 1). Ninety different treatments were tested, and not a single one

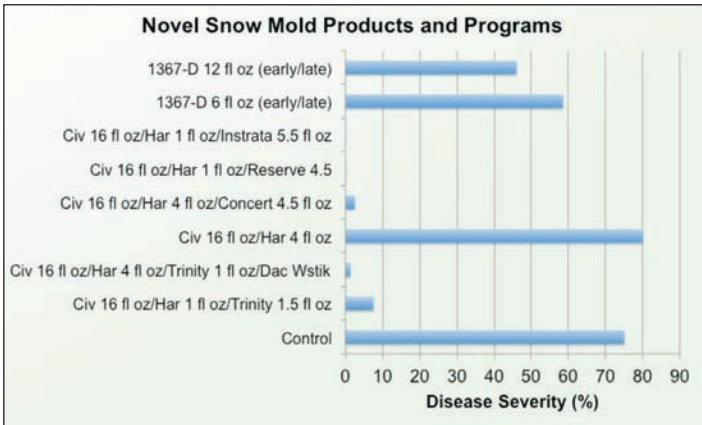


**Figure 1.** Fungicides that provided good suppression of *Typhula blight* at Sentryworld Golf Course in Stevens Point, WI. Applications were applied in early November and plots were rated in early April.

contained PCNB. Disease pressure was high, as non-treated controls averaged 74.8% disease. Despite this high pressure, nine treatments gave complete control of snow mold and thirteen more allowed less than 5% disease. Including some other experimental products and experimental Civitas mixes,

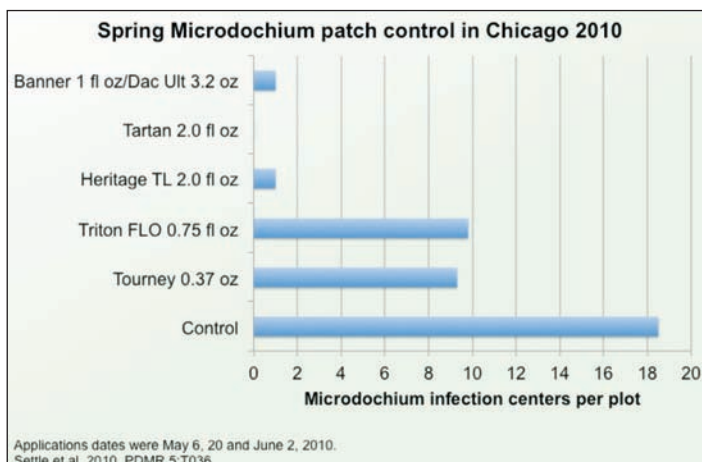
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a full 36 treatments out of a possible 90 allowed less than 5% disease. Two common aspects of the treatments that performed well include applications of two or three active ingredients in the tank mix and inclusion of multiple fungicide chemistries (contact, DMI, Qol). Products that performed well when mixed with other products include Insignia, Trinity, Instrata, Interface, Reserve, Velista, Torque, and 26/36 (Figures 1 and 2). With 36 treatments performing exceptionally well though, there is a wide range of options for obtaining excellent control of snow mold.

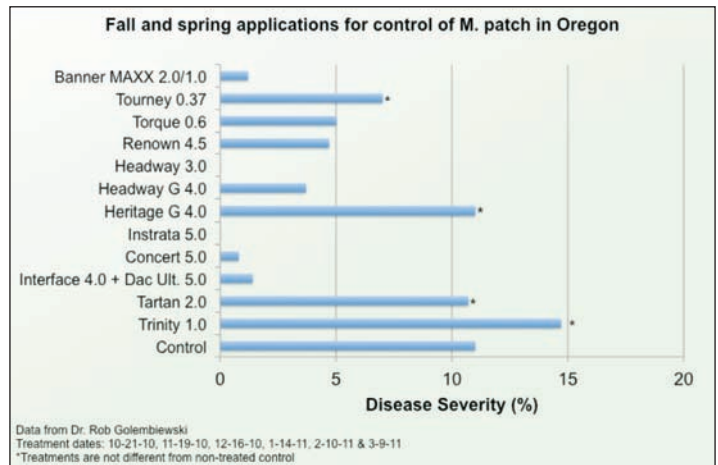


**Figure 2.** Novel snow mold programs and products for the control of *Typhula blight* at Sentryworld Golf Course in Stevens Point, WI.

In the Chicagoland area, the primary snow mold pathogen of concern is *Microdochium patch* or pink snow mold. Products that are typically very effective against *Microdochium patch* are iprodione, Qol fungicides (Heritage, Insignia, Compass, Disarm), Trinity, Torque and various pre-mix products. Research from Dr. Derek Settle reveals that tank mixtures of Banner MAXX and DaconilUltrex work well against *Microdochium patch*, as do applications of Tartan or Heritage TL (Figure 3). Data from the west coast demonstrates that applications of Interface, Headway, and Torque are effective in suppressing *Microdochium patch* development (Figure 4). Fairway applications in the Chicagoland area may not be warranted, but be prepared to deal with *Microdochium patch* during the spring. If the disease does develop it is normally easy to clean up with any of the fungicides listed above.



**Figure 3.** *Microdochium patch*, pink snow mold, control with three spring applications of fungicides in Chicago, 2010.



**Figure 4.** *Microdochium patch*, pink snow mold, control with three fungicide applications in late fall and three applications throughout the spring in Oregon. Bars with an asterisk were not significantly different from the control.

The treatments listed above will provide excellent snow mold protection, but may not be practical for most facilities on larger areas such as fairways. PCNB is a popular product not because it completely controls snow mold; it doesn't. It's popular because it provides a reasonable level of control at an affordable price. Are there options currently available that also provide a reasonable level of control at an affordable price? The answer is yes, as both Trinity and Torque will provide a reasonable level of snow mold control (0-20% disease allowed) at costs that most facilities can afford. Applied at the full label rate over 30 acres of fairways, both products cost approximately \$3,000. If greater levels of control are desired and can be afforded, mixing in products such as Daconil, 26/36, and Insignia will improve disease controls. A final consideration about snow mold fungicides is that soil temperatures affect their residual efficacy. Once soil temperatures consistently eclipse 32°F, fungicides applied prior to snow cover quickly degrade. Take home message: once the snow melts and the ground thaws, fungicides applied in the fall are no longer effective and re-applications may be warranted to protect against new pink snow mold infections. If any questions arise after examining the figures included with this article or the ones posted on the website please do not hesitate to contact Paul Koch (plkoch@wisc.edu) or Dr. Jim Kerns (jkerns@wisc.edu). -OC