

Trying to Beat the Heat? Think Snow Mold

By PAUL KOCH

Turfgrass Diagnostic Lab
University of Wisconsin - Madison

What a year so far it has been in the upper Midwest. Cool spring temperatures led to poor growing conditions and slowed winter injury recovery efforts. Tornado outbreaks caused widespread damage, and constant downpours led to record rainfall that ravaged many communities. Add in the rising price of inputs due to skyrocketing fuel costs and many superintendents are wondering what could possibly be next.

Fortunately disease activity on golf courses has been pretty quiet across most of the area as of early July. The majority of samples submitted to the Turfgrass Diagnostic Lab so far this year have been due to leaf spot (*Drechslera* spp, *Bipolaris* spp), take-all patch (*Gaeumannomyces graminis* var *avenae*), or some combination of abiotic stresses related to the swings in both temperature and soil moisture. This is still summer though, and the heat and humidity will inevitably arrive and lead to outbreaks of dollar spot, brown patch and anthracnose.

With the dog days of summer upon us, what better way to beat the heat than to start planning for snow mold? Believe it or not, every day is a little bit shorter than the previous one and football practices are underway for the upcoming season. It won't be long until the leaves begin to change and the extremes of summer begin to fade. But in what should be a time of catching your breath after a long summer, many superintendents begin to worry about protecting their turf from destructive winter snow molds.

The University of Wisconsin's Turfgrass Diagnostic Lab, in cooperation with the University of Minnesota, has conducted snow mold fungicide trials for over a decade to provide you with the latest research to aid in product selection. Last winter trials were conducted at six sites across the Upper Midwest: three in Minnesota, two in Wisconsin, and one in Upper Michigan. In Minnesota, two trials were held at Giants Ridge GC in Biwabik and a new trial was conducted at Edina CC in Edina. In Wisconsin trials were held at the OJ Noer Turfgrass Research and Education Facility in Verona and Sentryworld GC in Stevens Point. In Michigan a trial was conducted at Timberstone GC in Iron Mountain.

While the duration of snow cover was long enough to cause significant damage at Edina CC, little snowfall for much of the winter kept snow depth low and reduced overall disease pressure. Due to the low pressures, little in the way of treatment differentiation was detected in the Edina fungicide trial.

Up north in Biwabik it was a similar story for much of the winter. An early-season snowfall followed by cold temperatures kept a shallow blanket of snow on the ground for most of the winter. But near the end of spring snow storms dropped multiple feet of snow on the area, and disease pressure jumped exponentially. The trial held on the Legend course at Giants Ridge showed the highest disease pressure of any Minnesota trial, averaging 76.3%

disease on the untreated controls. Many treatments were quite effective at controlling snow mold even under these difficult conditions, and the results can be viewed in Table 1.

(Continued on Page 15)

Table 1.

Snow Mold Ratings Recorded on April 30th, 2008 at The Legend at Giants Ridge

Treatment	Rate	Timing ^a	% Snow mold	Color ^c
1 Untreated Control			76.3 a	7 a
2 Spectro	4 OZ/M	Early	0 f	7 a
26/36	4 FL OZ/M	Late		
CLEX-9	1.2 OZ/M	Late		
3 Spectro	4 OZ/M	Early	5 ef	7 a
26/36	8 FL OZ/M	Late		
Endorse	4 OZ/M	Late		
4 Spectro	5.75 OZ/M	Late	0 f	7 a
CLEX-9	1.2 OZ/M	Late		
5 Spectro	4 OZ/M	Early	9.8 ef	7 a
26/36	4 FL OZ/M	Late		
Endorse	4 OZ/M	Late		
Alude	5.5 FL OZ/M	Late		
6 Insignia	0.7 OZ/M	Late	0.8 f	7 a
Trinity	1 FL OZ/M	Late		
Daconil WeatherStik	3.7 FL OZ/M	Late		
7 Insignia	0.7 OZ/M	Late	0 f	7 a
Trinity	1 FL OZ/M	Late		
Turfside 400	6 FL OZ/M	Late		
8 Insignia	0.7 OZ/M	Late	14.3 def	7 a
Chipco 26GT	4 FL OZ/M	Late		
Daconil WeatherStik	3.7 FL OZ/M	Late		
9 Insignia	0.7 OZ/M	Late	9 ef	7 a
Chipco 26GT	4 FL OZ/M	Late		
Turfside 400	6 FL OZ/M	Late		
10 Instrata	9.3 FL OZ/M	Late	4.3 ef	7 a
11 Instrata	11 FL OZ/M	Late	1.8 f	7 a
12 Instrata	7 FL OZ/M	Late	4.5 ef	7 a
13 Instrata	5.4 FL OZ/M	Late	23.8 cd	7 a
14 QP Iprodione	4 FL OZ/M	Late	32.5 bc	7 a
TM/C	6 OZ/M	Late		
15 QP Iprodione	4 FL OZ/M	Late	12.5 def	7 a
QP Propiconazole	2 FL OZ/M	Late		
TM/C	6 OZ/M	Late		
16 Banner MAXX	3.2 FL OZ/M	Late	7.8 ef	7 a
Daconil WeatherStik	4.5 FL OZ/M	Late		
Medallion	0.27 OZ/M	Late		
17 Banner MAXX	3.2 FL OZ/M	Late	1 f	7 a
Daconil WeatherStik	4.5 FL OZ/M	Late		
18 Banner MAXX	3.2 FL OZ/M	Late	6.8 ef	7 a
Medallion	0.27 OZ/M	Late		
19 Daconil WeatherStik	4.5 FL OZ/M	Late	18.8 def	7 a
Medallion	0.27 OZ/M	Late		
20 Chipco 26GT	4 FL OZ/M	Late	37.5 b	7 a
Daconil WeatherStik	3.7 FL OZ/M	Late		
21 Tartan	2 FL OZ/M	Late	1.8 f	7 a
Daconil WeatherStik	5.5 FL OZ/M	Late		
22 Tartan	2 FL OZ/M	Late	0 f	7 a
Turfside 400	6 FL OZ/M	Late		
23 Reserve	3.8 FL OZ/M	Late	0 f	7 a
Compass	0.25 OZ/M	Late		
24 Tourney	0.44 OZ/M	Late	2.5 f	7 a
Daconil Ultrex	3.2 OZ/M	Late		
25 Turfside 400	10 FL OZ/M	Late	32.5 bc	6.3 b
26 Turfside 400	6 FL OZ/M	Late	2.8 f	7 a
Banner MAXX	2 FL OZ/M	Late		

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

^aEarly and late fungicide treatments were applied on Oct. 22, 2007 and Nov. 16, 2007, respectively

^bMean percent diseased area

^cColor was rated on a scale of 1-9 where 1 = straw colored, 7 = acceptable, 9 = dark green

Think Snow Mold—

(Continued from Page 14)

A warning to those superintendents who have traditionally used PCNB as the backbone of their snow mold fungicide program. PCNB in the turf market is now controlled solely by one company, and word is that the price will jump significantly prior to the winter of 2008-2009. PCNB is an effective product when used in concert with other fungicides, but make no mistake that the major benefit of using this product is its affordability. There are other products that are more effective at controlling snow mold, have less risk of phytotoxicity, and leave less of an environmental impact. When the cost of PCNB is raised to nearly equal these other products they become more attractive than PCNB. For those concerned about the increasing costs of PCNB, I urge you to use information provided in this article and elsewhere to find an effective yet affordable snow mold program that fits your golf course.

I would like to thank the golf course superintendents at all of our sites for hosting the fungicide trials and enduring swaths of dead turf in their otherwise pristine fairways. Mike Powers and Brandon Schindele at Edina CC and Jared Finch at Giants Ridge GC were extremely generous in their hospitality. We plan to be back conducting snow mold research in Minnesota in the winter of 2008-2009, and hope to see many of you at the Snow Mold Field Days next spring.

Please feel free to contact me with any questions regarding research reports on any of our winter or summer disease trials at 608-845-2535 or plk@plantpath.wisc.edu. Information on submitting samples to the Turfgrass Diagnostic Lab can be accessed via our website at www.plantpath.wisc.edu/tdl.



The next time a board member questions the amount of money you spend on snow mold fungicides, bring them to Snow Mold Field Days in the spring to convince them. This picture from Giants Ridge shows the edge of the treated area, and the effects of snow mold on untreated bentgrass are clear.



HARTMAN

Quality since 1971

Specializing in classic restoration and renovation

- Drainage problems
- Slit Drainage
- Greens
- Bunkers
- Laser Leveling
- Grading
- Irrigation

8011 BAVARIA RD
VICTORIA, MN 55386
952-443-2958

WWW.HARTMANCOMPANIES.COM
INFO@HARTMANCOMPANIES.COM