

# The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

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# TABLE OF CONTENTS

THE PRESIDENT'S MESSAGE Think Outside The Box .....	4
WISCONSIN SOILS REPORT Performance of Coated Nitrogen Fertilizers .....	6
TURFGRASS DIAGNOSTIC LAB More Thoughts from a Superintendent .....	12
WISCONSIN ENTOMOLOGY REPORT European Chafer: Another White Grub Species in Wisconsin! .....	14
MADTOWN MUSINGS A Cultural Experience .....	16
WISCONSIN PATHOLOGY REPORT 2015-2016 Wisconsin Snow Mold Review .....	18
NOTES FROM THE NOER My Final Field Day Presented Some Challenges .....	26
TOURNAMENT GOLF American Family Championship At University Ridge....	30
GCSAA National Golf Day 2016 .....	34
COVER STORY State Amateur Visits North Shore Golf Club.....	36
WTA Schmidt Finishes Spectacular Career By Hosting WTA Golf Fundraiser .....	44
WGCSA June Meeting at Janesville Country Club .....	46
EDITOR'S NOTEBOOK Be Who You Are .....	50
EVENT SCHEDULE .....	50

## ABOUT THE COVER

The 7th hole at North Shore Golf Club, Menasha. Host of the 115th Wisconsin State Amateur.

*"Summer afternoon—summer afternoon; to me those have always been the two most beautiful words in the English language"*

**By American Writer Henry James, 1843-1916**

This quote by James can serve to remind us to enjoy the many summer afternoons we are part of before they disappear for another year. Don't just work in the summer, enjoy the beauty of the season while you work.

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## THE GRASS ROOTS

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### Think Outside The Box

By Jim Van Herynen, Certified Golf Course Superintendent, South Hills Golf and Country Club

One year ago I wrote an article entitled, "There Is a First Time For Everything". I hope you read it, if you did not I hope you may reconsider. I spoke about taking a family vacation in the middle of the golf season, and for me personally it was the first one since 1982 – again long overdue. To recap, I did in fact go and it was one of the best weeks of my life, and I plan on going again this year in August. One thing I found to be truly enlightening upon my return is how productive the crew was. It appeared that they had something to prove and everything and more that was on the list did get accomplished! I was really proud of everyone's efforts. If you have thought about it for years and haven't pulled the trigger yet, like I did for so many years, take the time with your family or your spouse and get away.

I am amazed how fast time is going as yet another golf season is over half complete already. I would like to thank everyone who has participated in our monthly meetings. So far so great, May was a sell out at Blackwolf Run, our June meeting at Janesville had some of the best participation in recent years and it appears the Summer Field Day at the O.J. Noer Research Facility in July and the August Meeting in Oneida are having a lot of interest. The WGCSA Board of Directors has tried extremely hard to listen to the needs of the membership and has thought


"Outside the Box" if you will, by trying new things the last couple of years and we have heard many positive comments so far. Looking ahead is the Wee One Fundraiser at Pine Hills in September, the WTA Fundraiser at Butte Des Mortes in

**Before the end of the season take a step back and ask yourself, "Have I taken enough time off, did I spend enough time with my family, did I participate in one of the many offering from the WGCSA that so many work so hard to produce and did I thank the vendors who graciously support this profession and help make it what it is today?"**

October, followed by an exciting Couple's Weekend in Milwaukee in November. Of course the finale being our Turf Symposium in December, which is always top notch, is taking shape with great topics and speakers. If you have missed some of the offerings from the WGCSA please consider joining us during the remainder of the season for one of these fine offerings just mentioned.

The WGCSA continues being at the forefront in the Turf Industry in the State of Wisconsin. For the first time we have sent one of our very own Mr. Mike Bremmer to Washington D.C. recently to show sup-

port of our industry and have a voice at the table as we all know is needed more than ever. We continue to work closely with our friends and allies at the UW to help guide the industry in the right direction. You will hear more about this in the coming months so please stay tuned. We have made changes in the operations with printing and our directory which I hope you would agree is the best one you have ever seen. Brett Grams has done a tremendous job coordinating all of our efforts.

I understand during the middle of the golf season one can quickly get bogged down in the day to day operations of maintaining a golf course, athletic field, sod farm or other green industry professions. Before the end of the season take a step back and ask yourself, "Have I taken enough time off, did I spend enough time with my family, did I participate in one of the many offering from the WGCSA that so many work so hard to produce and did I thank the vendors who graciously support this profession and help make it what it is today?" If not you should. I can guarantee, you will not be disappointed. If there is anything I or any of the other Board Members can ever do for you please never hesitate to ask and I am sure one of us can help you with whatever you may need. I hope your season has been successful and hope to see you soon at one of our events. 

#### WGCSA MISSION STATEMENT

The Wisconsin Golf Course Superintendents Association is committed to serve each member by promoting the profession and enhancing the growth of the game of golf through education, communication and research.

#### WGCSA VISION STATEMENT

The Wisconsin Golf Course Superintendents Association is dedicated to increase the value provided to its members and to the profession by:

- Enhancing the professionalism of its members by strengthening our role as a leading golf organization in the state.
- Growing and recognizing the benefits of a diverse membership throughout Wisconsin.
- Educating and promoting our members as leaders in environmental stewardship.
- Offering affordable, high value educational programs at the forefront of technology and service.
- Being key to enjoyment and the economic success of the game of golf.

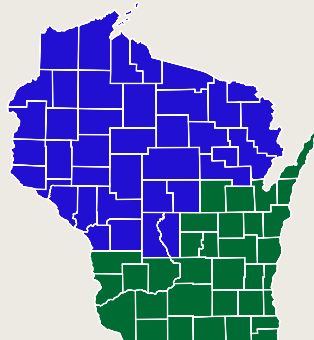


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## Performance of Coated Nitrogen Fertilizers

By Dr. Doug Soldat, Department of Soil Science, University of Wisconsin – Madison

Coated nitrogen fertilizers may allow for lower application rates to achieve a similar response as multiple split applications of non-coated urea, saving labor and potentially overall costs. However, urea coating technologies vary greatly and data on turf response is lacking. During the 2015 growing season, we conducted a trial with Spring Valley to investigate turf response to various coated materials at different application rates and frequencies compared to split applications of urea.

This study was designed and executed as a randomized complete block with four replications at the O.J. Noer Turfgrass Research and Education Facility in Madison, WI. The study site was primarily Kentucky bluegrass mown weekly at 2.5 inches and irrigated to prevent dormancy. The soil texture was silt loam. Individual plots measured 6 by 4 ft. The study was initiated on June 2, 2015 and

consisted of nine fertilizers and one non-fertilized control. Treatments details are listed in **Table 1**.

Observations of visual quality and clipping mass were made every other week during the growing season from June 16th through November 5th, 2015. Visual quality was assessed using the standard NTEP scale of 1 to 9, where 9 represents the highest possible turf quality, and 6 represents the minimally acceptable turf quality. Clippings were collected using a rotary mower from a single pass with the mower down the center of each plot resulting in a clipping collection area of 10 ft<sup>2</sup>. The clippings were dried in an oven, cleaned of any debris, and weighed. Treatment means were separated using Fisher's Least Significant Difference at  $\alpha = 0.05$  (meaning we are 95% sure that statistically significant differences are due to the treatment and not some other random factor).

**Table 1.** Description of treatments evaluated in the study. Single application fertilizers.

ID	Treatment Name	Nitrogen Applied per Application	Annual Nitrogen Application Rate	Number of Applications
-----lbs N/M-----				
1	Urea (46-0-0)	1	4	4
2	Regain (46-0-0)	1	4	4
3	XCU (43-0-0)	1	4	4
4	EXP 90 (43-0-0)	1.5	3	2
5	Polyon 43 (43-0-0)	1.5	3	2
6	Duration 90 (44-0-0)	1.5	3	2
7	EXP 180 (42-0-0)	2.5	2.5	1
8	Polyon Blend (42-0-0)	2.5	2.5	1
9	Duration 180 (43-0-0)	2.5	2.5	1
10	Untreated Control	0	0	0

### RESULTS

In 2015, air temperatures were fairly normal for Madison, WI and ranged between 60 and 80 °F for most of the season before dropping off in the fall. Rainfall was also fairly normal and the study area was irrigated to replace ET as calculated from an onsite weather station.

All fertilized treatments had significantly greater quality, and clipping production than the non-treated control (**Table 2**). However, there were very few statistically significant differences in those three parameters among the various fertilizers tested. The fertilized treatments having the numerically greatest turf quality included Regain, XCU, and Duration 90. The fertilized treat-

ments with the lowest turf quality included Duration 180 and Polyon Blend. These results make sense because the Duration 180 and Polyon Blend received only 63% of the total N that the urea, XCU, and regain treatments received. Therefore, it is quite impressive that the EXP 180 treatment was able to maintain statistically similar quality, color, and clipping yield compared to the urea treatment. Similarly, all of the two-application products had statistically similar quality, color, and clipping yields as the urea, Regain, and XCU treatments but did so with only 75% of the total N applied to those treatments. Clipping yields were statistically similar among fertilized treatments with the exception of Duration 90 producing more clippings than EXP 90.





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# WISCONSIN SOILS REPORT

Turfgrass quality measurements for individual dates during the season are reported in **Table 3** (showing statistics) and **Figure 1** (showing trends). Clipping mass from individual dates can be found in **Table 4** and **Figure 2**. It is clear that by the end of the season, the four application treatments (4 lbs N/M total) had the greatest color and quality, followed next by the two application treatments (3 lbs N/M total), with the single application treatments (2.5 lbs N/M total) having the poorest color and quality at the season's end. The mid-season peaks in color and quality were the greatest for the single application and four application treatments, with the two application treat-

ments having a lower mid-season peak.


Trends in clippings (**Figure 2**) show that the four application treatments had generally greater peaks of clipping production in the mid-season (unsurprisingly) and there was a noticeable decline in clippings from the single application treatments near the end of the study period.

These data suggest that coated products applied less frequently at lower total seasonal rates can maintain similar quality as non-coated products applied frequently at higher seasonal rates. Turfgrass quality dropped off significantly in the coated products at the end of the growing season compared to the non-coated products,

but maintained similar or greater quality at mid-season. These results suggest that perhaps the best combination would be a single application of a coated product in spring at 2-2.5 lbs N/M with a follow up application of a soluble (non-coated) N source in the fall. This is also logistically interesting because fall is an important time to apply herbicides (which could be tank mixed with the soluble fertilizer). Such a plan is expected to provide excellent turf quality throughout the growing season but with less total N applied for the season. It also is expected to reduce labor costs by eliminating the need for a mid-season fertilizer application. ✓

**Table 2.** Average turfgrass quality and clipping response as affected by the fertilizer treatments. Different letters indicate statistical significance at the  $\alpha=0.05$  level.

Treatment Name	Annual N Rate	Average Turf Quality	Average Clipping Mass
	lbs N/M	1-9, 9=best	----- g -----
Urea (46-0-0)	4	7.59 ab	24.2 ab
Regain (46-0-0)	4	7.68 a	24.5 ab
XCU (43-0-0)	4	7.66 a	22.6 ab
EXP 90 (43-0-0)	3	7.34 abc	19.9 b
Polygon 43 (43-0-0)	3	7.34 abc	21.9 ab
Duration 90 (44-0-0)	3	7.66 a	26.3 a
EXP 180 (42-0-0)	2.5	7.48 abc	24.7 ab
Polygon Blend (42-0-0)	2.5	7.23 bc	21.5 ab
Duration 180 (43-0-0)	2.5	7.18 c	21.7 ab
Untreated Control	0	5.09 d	5.8 c



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# WISCONSIN SOILS REPORT

**Table 3.** Turfgrass visual quality as affected by fertilizer treatments during the growing season. Visual quality is measured on a scale of 1-9 where 9=highest possible quality, 6 represents the minimally acceptable visual quality, and 1=no turf present. Different letters indicate statistical significance at the  $\alpha=0.05$  level. \* indicates dates of fertilizer application (first app 2 June).

ID	6/16	7/1	7/15	7/22	8/14	8/26
----- 1-9 9=Best -----						
1	7.5 ab	6.8 bc	7.3 cd	8.3 ab	8.0 ab	8.3 abc
2	7.8 a	7.0 ab	7.0 d	8.3 ab	8.0 ab	8.0 abc
3	6.5 cd	7.3 ab	7.8 bc	7.5 c	8.3 a	8.3 abc
4	6.3 d	7.3 ab	7.5 cd	7.5 c	7.0 c	7.5 c
5	6.0 de	6.8 bc	7.8 bc	7.8 bc	7.8 abc	7.8 bc
6	6.8 bcd	7.5 ab	8.3 ab	8.0 bc	7.3 bc	7.5 c
7	7.3 abc	7.8 a	8.3 ab	8.3 ab	8.0 ab	8.8 a
8	6.0 de	6.0 c	7.3 cd	7.8 bc	8.0 ab	8.8 a
9	5.3 ef	7.3 ab	8.5 a	8.8 a	8.5 a	8.5 ab
10	5.0 f	4.8 d	5.3 e	5.3 d	5.3 d	5.0 d

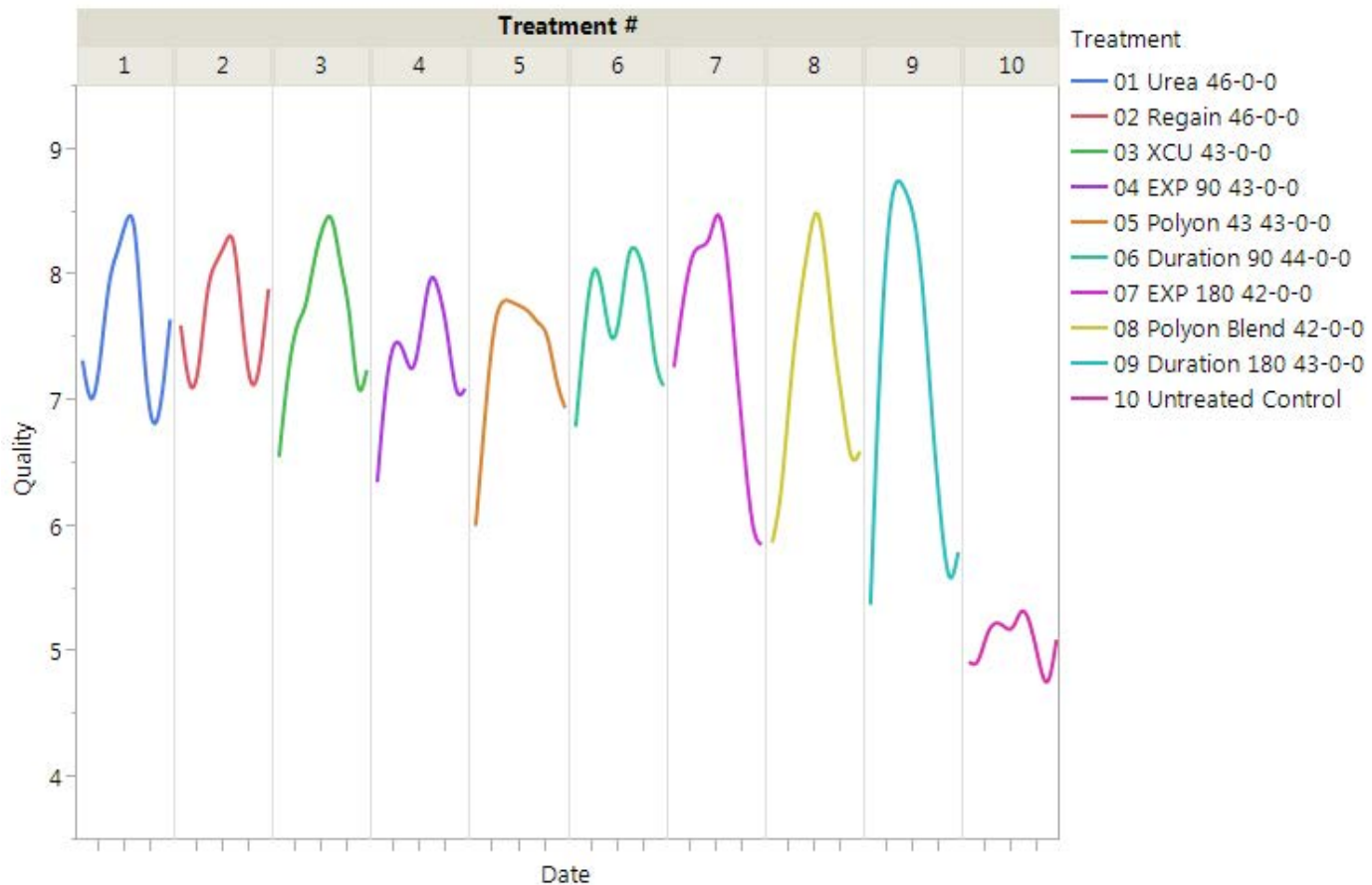
**Table 3 cont.** Turfgrass visual quality as affected by fertilizer treatments during the growing season. Visual quality is measured on a scale of 1-9 where 9=highest possible quality, 6 represents the minimally acceptable visual quality, and 1=no turf present. Different letters indicate statistical significance at the  $\alpha = 0.05$  level. \* indicates dates of fertilizer application (first app 2 June).

ID	9/11	9/25	10/8	10/23	11/5
----- 1-9 9=Best -----					
1	9.0 a	7.0 cd	6.8 cd	7.0 ab	7.8 ab
2	8.8 ab	7.5 abc	7.0 bcd	7.3 a	8.0 a
3	8.8 ab	7.8 ab	8.3 a	6.5 bc	7.5 abc
4	8.3 ab	7.8 ab	7.8 ab	6.8 abc	7.3 bcd
5	7.8 b	7.5 abc	7.8 ab	7.0 ab	7.0 cd
6	8.5 ab	8.0 a	8.3 a	7.0 ab	7.3 bcd
7	8.3 ab	7.3 bcd	6.8 cd	5.8 de	6.0 e
8	8.3 ab	7.3 bcd	7.3 bc	6.3 cd	6.8 d
9	8.0 ab	6.8 d	6.3 d	5.3 e	6.0 e
10	5.5 c	5.3 e	5.0 e	4.5 f	5.3 f



DEPARTMENT OF  
SOIL SCIENCE  
University of Wisconsin-Madison

# WISCONSIN SOILS REPORT



**Figure 1.** Trends in turfgrass quality (1-9, 9=best) among the treatments over the season. Actual data and statistics for the individual rating dates are shown in Table 3.

**Table 4.** Clipping mass of grass cut at 2.5 inches from one strip of plot measuring 6 x 1.66 ft, or 10 ft<sup>2</sup>. Clippings were dried at 60°C for 72 hours. Different letters indicate statistically significant differences (p = 0.05).

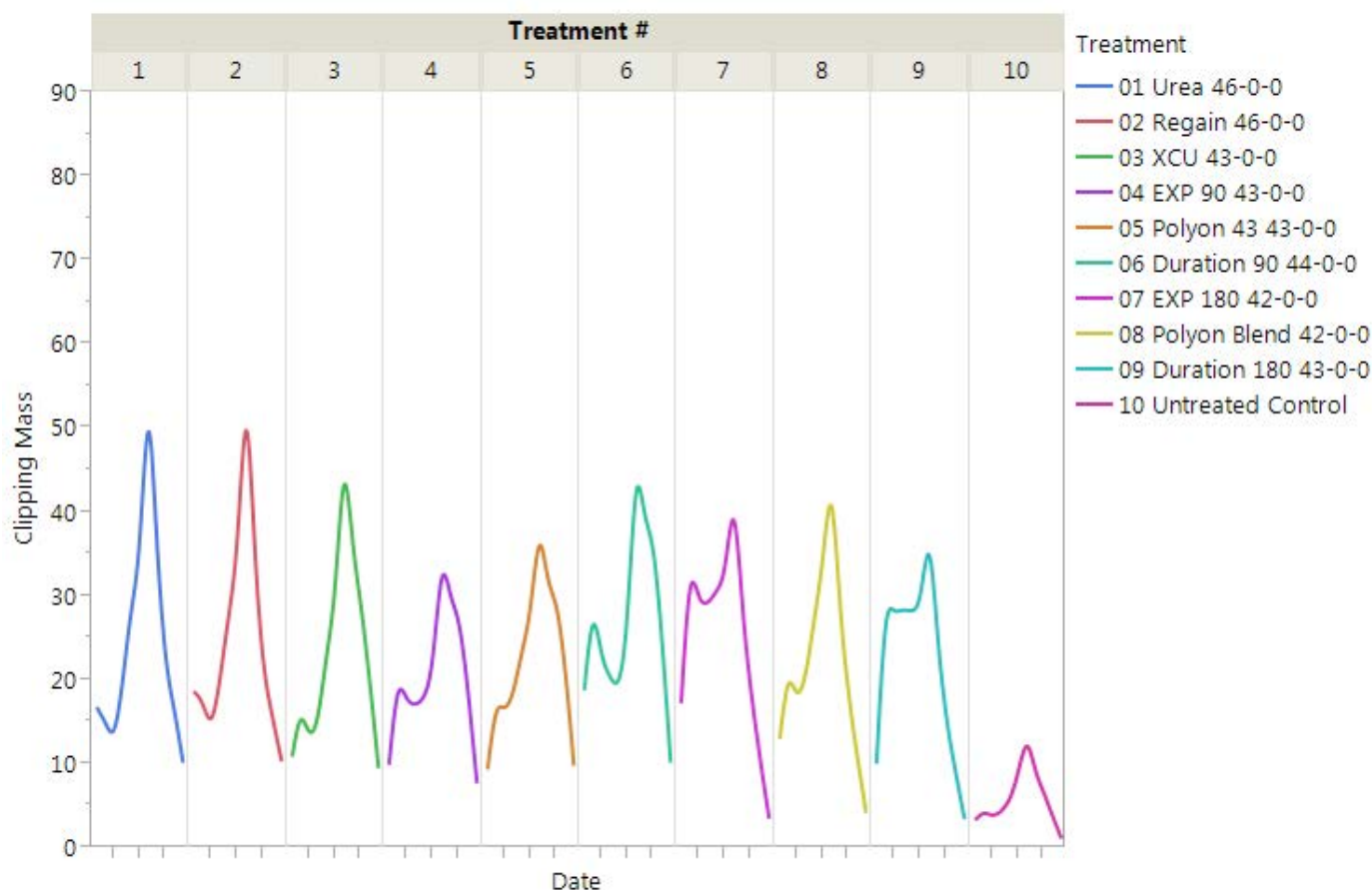
ID	6/16	7/1	7/15	7/22	8/14	8/26
	----- g/m <sup>2</sup> -----					
1	16.7 ab	17.1 d	10.6 d	20.2 b	34.1 a	19.5 bcd
2	18.1 a	20.4 d	11.2 d	21.3 b	32.1 ab	20.6 abcd
3	8.8 de	20.7 d	10.6 d	14.0 c	28.0 ab	19.3 bcd
4	7.1 ef	24.7 cd	14.1 cd	17.9 bc	19.4 c	15.2 d
5	7.4 ef	21.0 d	13.8 cd	18.2 bc	26.0 bc	21.7 abc
6	15.2 abc	34.9 abc	17.6 bc	23.0 b	19.7 c	17.8 cd
7	12.7 bcd	41.0 a	23.8 a	29.5 a	33.2 a	24.0 ab
8	10.4 cde	26.2 bcd	14.0 cd	20.3 b	29.6 ab	26.2 a
9	5.7 ef	35.6 ab	22.6 ab	29.5 a	29.7 ab	21.2 abc
10	3.0 f	5.2 e	3.1 e	4.9 d	5.5 d	6.8 e



# WISCONSIN SOILS REPORT

**Table 4 (cont).** Clipping mass of grass cut at 2.5 inches from one strip of plot measuring 6 x 1.66 ft, or 10 ft<sup>2</sup>. Clippings were dried at 60°C for 72 hours. Different letters indicate statistically significant differences (p = 0.05).

ID	9/11	9/25	10/8	10/23	11/5
	----- g/m <sup>2</sup> -----				
1	74.1 a	24.4 abc	21.2 c	18.5 ab	9.9 a
2	75.2 a	21.8 abcd	20.9 c	17.1 b	10.3 a
3	60.1 b	27.3 ab	30.4 b	19.9 ab	9.2 ab
4	43.4 e	22.9 abcd	29.7 b	17.7 b	7.3 b
5	47.2 de	23.7 abcd	32.1 b	21.1 ab	9.1 ab
6	59.1 bc	28.7 a	40.1 a	23.8 a	9.6 a
7	53.9 bcd	20.2 bcd	19.1 c	10.5 c	3.7 c
8	55.7 bcd	20.0 cd	19.0 c	11.2 c	4.3 c
9	49.0 cde	17.0 d	15.4 c	9.4 c	3.5 c
10	17.1 f	6.0 e	7.3 d	3.5 d	1.2 d



**Figure 2.** Trends in clipping mass among the treatments over the season. Actual data and statistics for the individual rating dates are shown in Table 4.

## More Thoughts from a Superintendent

By Bruce Schweiger, Turfgrass Diagnostic Lab Manager, O.J. Noer Turfgrass Research and Education Facility

Wow this summer is going by fast, mid-July already. The weather pattern has no pattern this year but it has been very survivable. Even so I sure feel tired all the time, for an easier year why should I be so tired.? What has actually been happening to make me this worn out?

It all started around Memorial Day. Many of my summer staff were new this year and a couple of them have had a few issues. The one guy was really having an issue with raking bunkers. I had many employees that could not grasp the fact that when the bunker has been raked, it needs to be smooth and not have ridges, or small sand dams from turning the bunker rake too sharp. Some of the bunkers are not too wide so get-

ting him to get off the bunker rake and touch up mistakes was like pulling teeth. Or hand rake the edges. Then there was the mess he makes leaving the bunker, sand everywhere.

**I never stopped and realized how much great research data I get from the UW. I guess my WGCSA and WTA dues are being put to good use. Thank you UW Madison Turfgrass Professors.**

The young woman I hired to set cups and mow greens has been a pleasant surprise. The fact that she played golf in high school gives her an edge on setting cups. She understands where you can and cannot cup greens and her attention to detail is another

great asset. Mowing greens though has been an issue. It did not take long for her to learn the art of mowing a straight line but her ability to mow the outside pass has been a struggle. I did want to move a few of these greens out a bit and if I let her keep mowing,, by fall they might be.

Employee issues are typical and I expect them every year so that can't be the issue. What else is going on?

There must be something else. Let see from seminars by Dr. Soldat, I have been very mindful of what nutrients I really need to apply. I have cut back on some micronutrients this year. I wonder how my greens will survive the real "dog days of summer" without them.

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Then there was that whole discussion about potassium on greens and how it related to snow mold. I work on my applications with the targets of when and how much potassium to have in the plant when winter comes. This will be a real change from high potassium application for winter hardiness. I thought what I was doing was correct but maybe this can be even better. Doubt still hangs in my mind, MAYBE I can do the front nine the way I always have and the back nine using Dr. Soldat's new theory?

Oh yeah, then there is all that stuff from Dr. Koch on summer diseases. His dates, temperatures and timing for root pathogens drove me nuts this spring. Then just when I think I am back on an even keel I need to think about Basal Anthracnose on bentgrass or is it Leaf Anthracnose on Poa annua. Leaf Anthracnose is on Poa annua, but when I sent a sample into the TDL last year Schweiger said he found Summer Patch but I told him I saw Anthracnose acervuli on the leaves with my hand lens. He said there was Anthracnose on the older non-senescent leaves, was a secondary infection and in this case the Anthracnose was only doing its job of breaking down dead organic matter. So how many An-

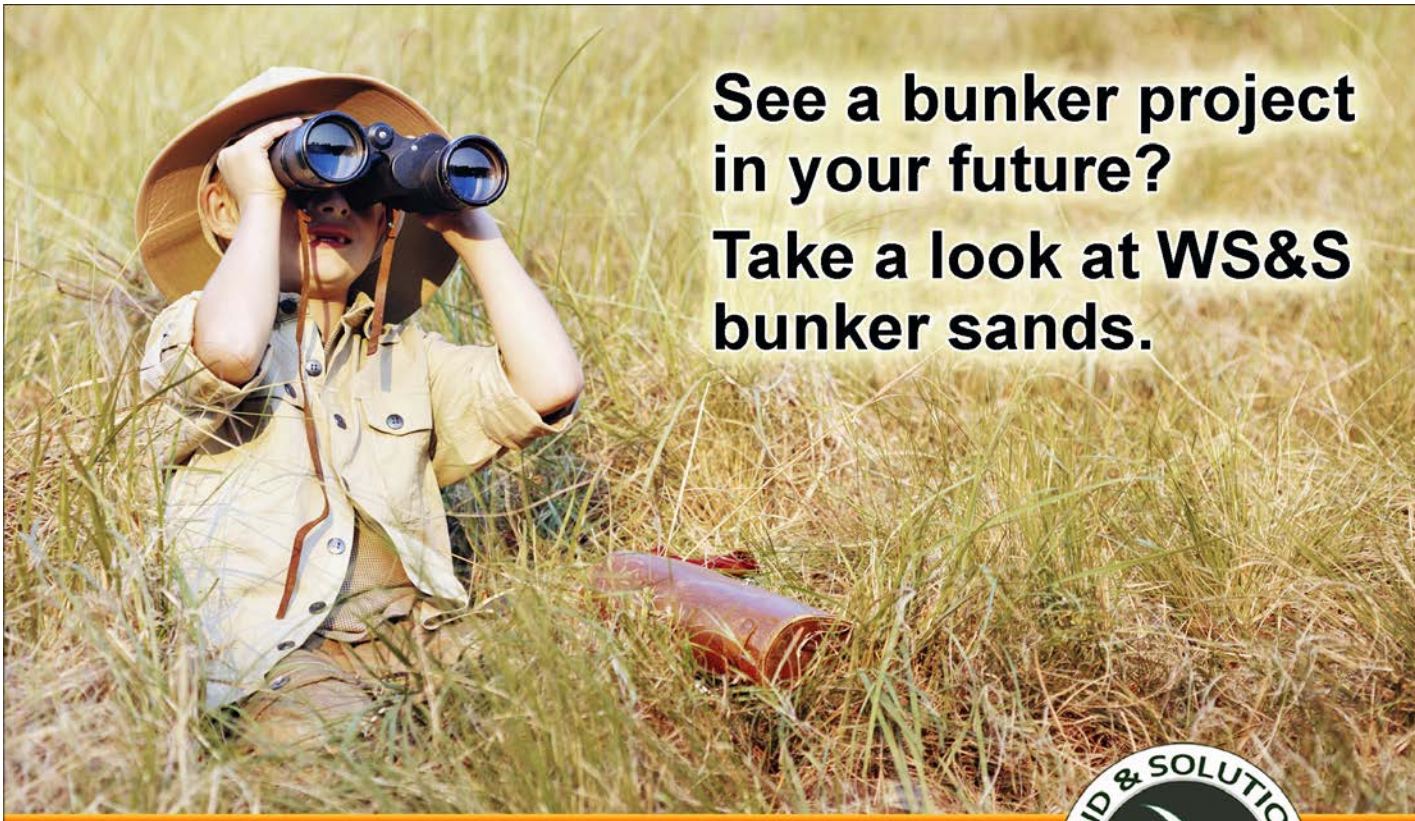
thrachnose issues are there? I thought Anthracnose infects Poa annua during the heat of the summer, but now it infects bentgrass crowns in May or June then the symptoms appear well after the infection? Or is Anthracnose my friend and it breaks down dead organic matter? This gets confusing. Thank goodness I am attending WTA Summer Field Day to have Dr. Koch or Schweiger explain this to me again.

Before you know it will be time to buy snow mold products. I need to make time to look over the last few years Snow Mold Reports by Dr. Koch to see if there is any new plant protectant combination that I should consider this winter. That can take time looking back over the last three or four years to see what provided adequate to excellent control. That reminds me of the time Alfred went to Snow Mold Field Days in April and saw

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a product that was excellent. He did the math and saved big money the next year. His only mistake was he did not look at past years data. If he had done that research he would have discovered that his new spray only provided acceptable control that one year. The snow mold pressure was low the year he attended snow mold field day, even the control looked good. Boy did he have a tough spring with all that Snow Mold. Someone should have called Dr. Koch, I bet he would have loved to have seen all that break through.


OK, now I know why I am so tired. I never stopped and realized how much great research data I get from the UW. I guess my WGCSA and WTA dues are being put to good use. Thank you UW Madison Turfgrass Professors, but slow down I can't keep up, your making my head spin! 🍀

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## European Chafer: Another White Grub Species in Wisconsin!

By Dr. R. Chris Williamson, Department of Entomology, University of Wisconsin-Madison

The European chafer is a native of Europe where it is a serious insect pest in turfgrass, it was discovered in New York in 1940. Since then, it had been primarily located in the northeastern United States. However, it has been reported in western states including Ohio, Michigan and most recently Wisconsin. European chafer is often considered the most damaging grub species compared to the numerous other white grub species such as the Japanese beetle. European chafer grubs are larger than Japanese beetle grubs, thus they can be more destructive than equal numbers of Japanese beetle grubs. In addition, they continue to feed later into the fall and resume feeding earlier in the spring than most other white grub species.

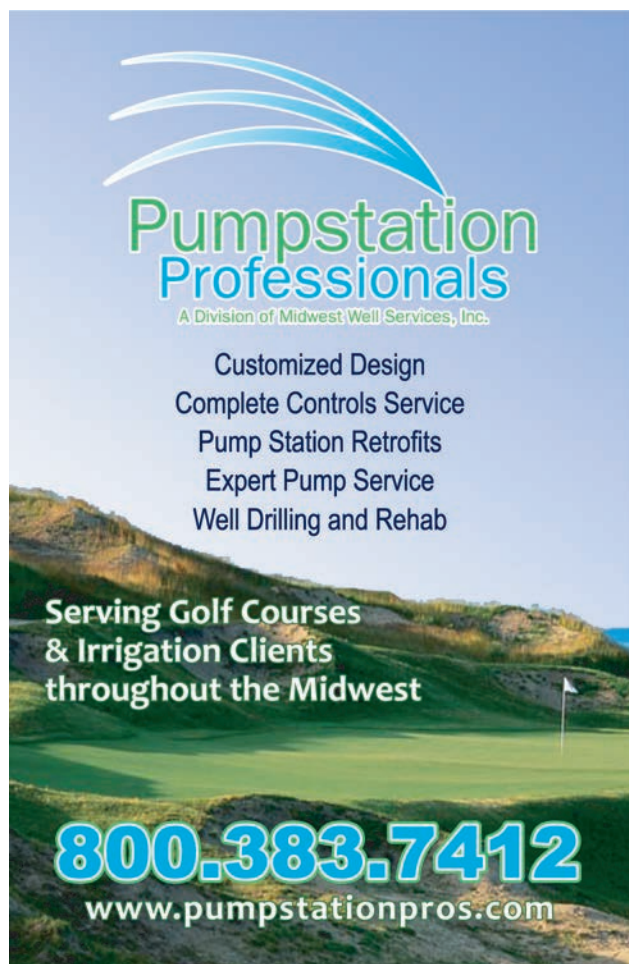
### Damage

European chafer larvae feed on the roots of most cool-season turfgrasses as well as numerous grassy and broadleaf weed species in pastures and landscape nurseries. Grub feeding damage cause thinning, wilting, and subsequent irregular patches of turf that can be readily pulled back or rolled-up from the soil like a loose roll of carpet. Damage to turf by European chafer grubs typically appears in early to mid September, especially when the turf is already stressed by both heat and drought. Damage can also be observed in the spring when the grubs resume feeding on the

previously weakened turf. Although European chafer adults will occasionally feed on the margins of tree leaves, they rarely cause any measurable damage.

### Biology

The life cycle of the European chafer closely resembles those of other white grub species such as Japanese beetle, in northern portions of Michigan and New York, adult European chafers begin emerging in mid-June and are most abundant from late-June until mid-July, and end by late-July. In areas further south such as New Jersey, Ohio and Pennsylvania, adult activity typically occurs about two week earlier. Adults are most active on warm, clear nights when the temperature is above 66°F. On favorable nights large numbers of adults begin emerging from the turf canopy near sunset. The adults instinctively fly to nearby trees, swarming about by the thousands. After a courtship/mating period of about an hour, mating pairs begin to make their way to the turf canopy throughout the night, ultimately returning into the soil before sunrise. Adult females return to trees several times to re-mate during their 1 – 2 week lifetime, each female lays between 20 – 40 eggs in her life. Eggs are typically laid singly at 2-4 inches deep in the soil and hatch in approximately 2 weeks, most by late-July. Similar to most other white grub species, there are three instars of European chafer. First instars are most common until mid-August, second instars are present in early-September, and third instars continue to feed and develop into late October when the first measurable frost occurs. Much like other white grub species, European chafers move down into the soil profile just below the frost line to overwinter. In the spring, when soil temperatures become conducive, the overwintered grubs return to the upper 1-2 inches near the soil-thatch interface to feed until late-May. In early-June the European chafer grubs begin moving down into the soil profile, 2-5 inches deep in the soil where they form earthen cells to pupate. After about 2-3 weeks, adult beetles begin emerging in mid-June.



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European chafer adults are a light-reddish color and are approximately a 1/2" long.



# WISCONSIN ENTOMOLOGY REPORT

European chafer adults are light-reddish beetles approximately ½ inch long. European chafer adults closely resemble May/June beetle adults. European chafer adult females eggs are oval, shiny, milky white initially, but become dull gray after a few days. As they absorb water from the soil, the eggs become spherical, swelling to about an 1/10 inch diameter prior to hatching. European chafer larvae are typical C-shaped white grubs with a yellowish-brown head and six distinct, joined legs. The larvae can be easily differentiated from other white grub species by the raster pattern, which has two distinct, nearly parallel rows of small spines that diverge outward at the tip of the abdomen, similarly to a slightly open zipper. The raster pattern in combination with a Y-shaped anal slit, readily distinguishes European chafer larvae from other turfgrass infesting white grub species in the temperate United States. First-instar European chafers are initially white and translucent but the terminal portion of the abdomen becomes dark after feeding. Fully mature larvae are approximately one inch long. The pupal stage of the European chafer resembles most other white grub species; they are about 5/8 inch long, smaller than May beetle pupae and yet larger than Japanese beetle pupae.

## Management

The management strategies and tactics for European chafer are much like those for the Japanese beetle and other white grub species. There are two approaches: 1) preventative treatments and 2) curative treatments. The performance (efficacy) of preventative treatments are often more effective than curative or rescue treatments; preventative treatments often provide > 85% control while curative treatments deliver < 70% control. Preventative insecticide treatments (Table 1) should be applied prior to or at egg hatch to ensure maximum performance. An exception to this is that Acelepryn (chlorantraniliprole) and Ferrence (cyantraniliprole), both preventative insecticides, should be ap-



**European chafer larvae feed on the roots of most grasses and weeds.**

plied at least 30 days prior to egg lay. Consequently, these insecticides should be applied sometime in early to mid-June. Curative insecticide treatments (Table 1) are best applied to newly hatched or young (1st or early 2nd instar) grubs to maximize performance (efficacy) as older/larger grubs are quite difficult to control. Regardless of the management tactic or approach, all insecticide treatments must be watered-in with post-treatment irrigation or rainfall to ensure the delivery of the product to the target site (soil profile) where the grubs are located to maximize performance (efficacy). In order to protect pollinators, be sure to remove (mow-off) any potential flowering plants such clover prior to making an insecticide application! Also, always read and follow label directions prior to using pesticides. ✓

**Table 1. Preventative and Curative White Grub Control Products and Application Timings.**

Active Ingredient	Brand Name	Preventative	Curative
carbaryl	Sevin		X
Chlorantraniliprole*	Acelepryn	X	
clothianidin	Arena	X	X
Cyantraniliprole*	Ferrence	X	
dinotefuran	Zylam	X	
imidacloprid	Merit, Mallet, Zenith, others	X	
thiamethoxam	Meridian	X	
trichlorfon	Dylox		X

\* Apply approximately 30 days prior to egg hatch to maximize performance  
All products must be watered-in post-treatment with irrigation or rainfall to maximize performance



## A Cultural Experience

By Jake Schneider, LMD Production Manager, The Bruce Company

Whenever people ask, I generally tell them that I'm from the Appleton area because 9.9/10 Wisconsinites would have a tough time finding Hilbert (population 1,116 in 2013) on the map. But, it's a typical small town with a Sargento cheese plant, enough bars to keep the locals well hydrated, and a really good restaurant on Main Street. From the late '80s through mid '10s, we had one of the most consistently successful high school football teams in the state that has made seven championship game appearances and come home with three gold balls.

As a sports nut, growing up during the prime of the program's success was pretty fantastic, and because I was a team manager from roughly 3rd-7th grades, I was fortunate enough to have been fairly involved with the its goings on. (Side note: due to my time manag-



ing, I'm the scrawniest person to have two state football championship medals) Back then, just about every boy in school went out for football, and regular lifting and participation in the offseason conditioning program was not optional if you expected to play. The village took on a football-centric culture, and the ad-

age of "success breeds success" certainly became true; no class wanted to be the one to drop the proverbial and literal ball.

Behind it all, Coach Moreau was a leader in every sense of the word who demanded excellence, prepared diligently, and established the tone of the program. Having a bunch of big farm kids at his disposal didn't hurt, either. The culture of the program sustained itself for a few years after Coach Moreau initially retired, but the dedication level gradually declined until he returned for his second stint at the helm. Success returned almost immediately.

In my professional career, I observed similar leadership and results at Blackhawk CC, and while comparing a high school football team to a golf course grounds crew might seem like a bit of a stretch, the results are similar.

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## MADTOWN MUSINGS

In my opinion, maintaining the culture that Monroe Miller established at Blackhawk is the best thing that Chad Grimm has done as his successor. During a Sunday afternoon mowing session, it struck me just how spoiled Chad is in regards to his workforce. The average tenure of the 10 employees working that night is 16.5 years, and this includes one first-year employee. Further, three have masters degrees and one just got his PhD. For most of that Sunday afternoon crew, working at Blackhawk is a side job with some nice extra cash, but mainly, we do it because we want to.

Much of the reason why people tend to stick around at Blackhawk is due to the work atmosphere where everyone generally gets along but knows how to bust their butts when the time comes. Aside from hiring the right people, here are some things that help sustain this culture:

- **Food.** Who doesn't like food, especially when it's free and delicious?


Many times throughout the summer, the crew gets to eat lunch in the clubhouse after noon outing shotguns finish and take the course. Chad often arranges for burgers with the fixings for those weekend afternoon mowings, too. Otherwise, the kitchen occasionally sends down extra desserts, members regularly drop off treats or Gatorades when it gets hot, and sales people know that bagels for the crew are an excellent form of bribery.

**As we all know, the golf course duties are often difficult and demanding, but maintaining a positive outlook with your co-workers makes the days much more bearable.**

- **Golf.** This seems like a natural perk given the line of work, but I'm not sure how many actually take advantage of it. More often than not, there are two four-somes from the grounds crew that play golf on Monday afternoons. If there isn't an outing at Blackhawk, they'll play

there, and if there is an outing, local superintendents are great about providing a few complimentary tee times.

- **Humor.** One thing that surprised me when I first started working for Monroe was his great sense of humor that has a tendency to stray from being politically correct, and the jovial attitude that remains today is one of the primary reasons why it's a great place to work. As we all know, the golf course duties are often difficult and demanding, but maintaining a positive outlook with your co-workers makes the days much more bearable.

In essence, I believe that creating situations outside of the normal workday routine where employees can connect is hugely beneficial to employee morale and longevity and to the tangible results on your golf course. Sure, it sometimes takes a bit of extra effort and money, but from what I can tell, the net benefit is positive; just like the watermelon races at the end of two-a-days that were the highlight of football practice. 

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## 2015-2016 Wisconsin Snow Mold Review

By Dr. Paul Koch, Department of Plant Pathology, University of Wisconsin – Madison

The great turf debate from the fall of 2015 was whether or not to reapply snow mold fungicides. Obscenely warm and rainy December weather made many superintendents jittery over the level of their snow mold protection that remained. This concern was understandable given our research that showed warm temperatures and winter rains led to rapid depletion of iprodione and chlorothalonil during the winter months. Most superintendents didn't reapply, but many did. Snow mold was largely absent for both groups, but much of that was due to low overall disease pressure. How would things have been different if snow mold pressure during January, February, and March was higher? As luck would have it, our research trial at Marquette CC from last winter provides us with some insight.

The trial at Marquette Country Club in Marquette, MI included 100 different fungicide treatments. Each treat-

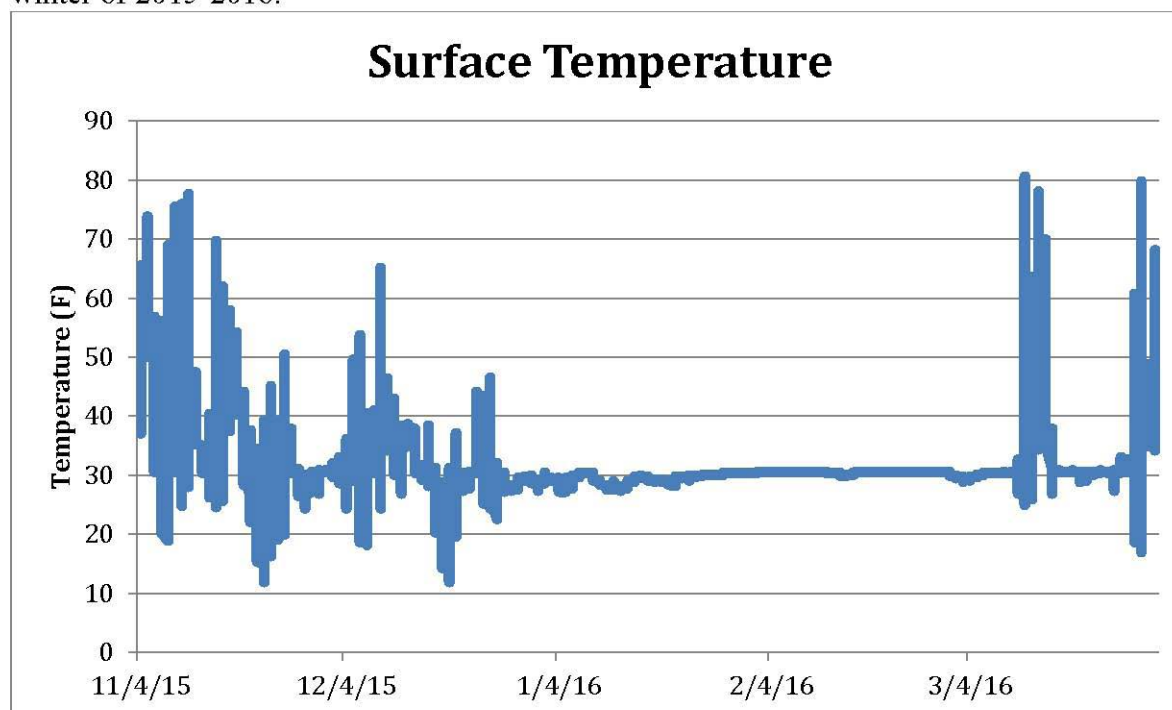
ment was applied in 1.5 gallons of water per 1000 ft<sup>2</sup> on November 3rd, 2015. From local weather records and our Spectrum Watchdog® data logger placed on the plot we know that temperatures in Marquette were well above average in November and December and that numerous rainfall events occurred between the application and the beginning of 2016 (Figure 1). We also know based on the horizontal temperature line from Figure 1 that a deep and insulating snow cover was present on site from January 1st of 2016 until mid-March, a duration of just over 60 days. Disease severity, turf quality, and turf color were assessed following snowmelt on March 31st, 2016.

The two months of snow cover on unfrozen ground at Marquette provided optimal pink snow mold conditions, and the full research results can be found in Table 1. Microdochium patch was the primary disease observed in the experimental area (75%), though

gray and speckled snow mold were also observed. The non-treated control plots averaged 84% disease (Figure 2), however there were also numerous treatments that performed exceptionally well under trying circumstances. Every treatment except for one lowered disease relative to the non-treated control, and 12 treatments provided greater than 95% control. Several additional treatments provided excellent control of 90% or more. Of those that provided excellent control, most included a mixture of 2, 3, or 4 active ingredients. In many cases, one of those active ingredients was chlorothalonil in the form of Daconil WeatherStik.

What these results demonstrate is that even once the fungicide has been depleted, it still has a lasting effect on the snow mold fungus. Initial absorption by the fungus following application kills back the fungus, and the longer the fungicide is present on the plants the longer the inhibition.

Figure 1: Surface temperature at Marquette Country Club in Marquette, MI during the winter of 2015-2016.






# WISCONSIN PATHOLOGY REPORT

However, snow mold fungi are naturally slow growing and once severely stunted can have a difficult time recovering to the point of entering the plant and causing symptoms. Where snow mold applications were effective in 2015-2016 was likely the result of significant dieback of the fungus in late fall, and the failure of the fungus to grow fast enough to cause disease during the winter months.

Does this mean that there is never a case where re-application is warranted? I don't consider that to be the case, and those who made reapplications in December lowered their risk of snow mold occurring. If snow cover approached 90 days at Marquette CC as opposed to the 60 that was observed, I have a feeling the results may have been quite different and more breakdowns in protection would have been observed. In any event, I think the next time we have a case like this, the results from this trial can provide some comfort in knowing that more often than not our fungicide application will keep us safe through the winter months.

These and other snow mold research trials would not be possible without the tremendous support of our host superintendents. Thanks to Craig Moore from Marquette CC, Jay Pritzl from Timber Ridge GC, Scott Sann from Greenwood Hills GC, Randy Slavik from Wausau CC, Eric Leonard from Cherokee CC, and Kevin Knudtson from Geneva National GC for hosting snow mold research sites in 2015-2016. 



**Figure 2: The pressure at Marquette CC was very high in 2015-2016, but plenty of products still provided effective control.**

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# WISCONSIN PATHOLOGY REPORT

**Table 1: Mean snow mold severity, turf quality, and turf color assessed on March 31<sup>st</sup>, 2016 at Marquette Country Club in Marquette, MI.**

	Treatment	Rate	Application Timing <sup>a</sup>	Disease Severity <sup>b</sup>	Turf Quality <sup>c</sup>	Turf Color <sup>d</sup>
1	Non-treated control			83.8a	1.8m	0.4603p
2	Fame T	0.44 fl oz/1000 ft <sup>2</sup>	Late	8.8u-y	5.3b-g	0.6638a-d
3	Fame T	0.67 fl oz/1000 ft <sup>2</sup>	Late	2.8y	6.8a	0.6745abc
4	Fame T	0.89 fl oz/1000 ft <sup>2</sup>	Late	3.5y	6.5ab	0.6704abc
5	Fame SC	0.36 fl oz/1000 ft <sup>2</sup>	Late	41.3e-n	3.8h-l	0.509k-p
6	Fame SC Tourney	0.36 fl oz/1000 ft <sup>2</sup> 0.44 oz/1000 ft <sup>2</sup>	Late	5.5wxy	6.3abc	0.6594a-d
7	Fame SC Tourney	0.18 fl oz/1000 ft <sup>2</sup> 0.44 oz/1000 ft <sup>2</sup>	Late	2.3y	6.8a	0.662a-d
8	Fame SC Tourney	0.36 fl oz/1000 ft <sup>2</sup> 0.37 oz/1000 ft <sup>2</sup>	Late	2.3y	6.8a	0.6907a
9	Tourney	0.44 oz/1000 ft <sup>2</sup>	Late	62.5bcd	3j-m	0.5863b-l
10	Fame C	6.0 fl oz/1000 ft <sup>2</sup>	Late	18.8o-y	4.8d-h	0.6824ab
11	Fame C Chipco 26GT	6.0 fl oz/1000 ft <sup>2</sup> 4.0 fl oz/1000 ft <sup>2</sup>	Late	18.8o-y	5c-h	0.615a-j
12	Adjuvant UW2015-114	8.0 fl oz/1000 ft <sup>2</sup> 1.93 fl oz/1000 ft <sup>2</sup>	Late	81.3ab	1.8m	0.4625op
13	Banner MAXX II UW2015-114	2.0 fl oz/1000 ft <sup>2</sup> 1.93 fl oz/1000 ft <sup>2</sup>	Late	46.3d-l	3.8h-l	0.5538f-n
14	Insignia SC Trinity Daconil Ultrex Turfcide	0.7 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 5.0 oz/1000 ft <sup>2</sup> 8.0 fl oz/1000 ft <sup>2</sup>	Late	1.8y	6.8a	0.6583a-d
15	Insignia SC Trinity Chipco 26GT Turfcide	0.7 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 4.0 fl oz/1000 ft <sup>2</sup> 8.0 fl oz/1000 ft <sup>2</sup>	Late	4.3xy	6.3abc	0.677abc
16	Insignia SC Trinity Turfcide	0.7 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 8.0 fl oz/1000 ft <sup>2</sup>	Late	6.8v-y	5.8a-e	0.6715abc
17	Insignia SC Trinity Chipco 26GT Daconil Ultrex	0.7 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 4.0 fl oz/1000 ft <sup>2</sup> 5.0 oz/1000 ft <sup>2</sup>	Late	1.8y	6.8a	0.6675abc
18	Concert II A19188A Par WIN15008	6.375 fl oz/1000 ft <sup>2</sup> 0.75 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup> 10.0 fl oz/A	Late	18.8o-y	5c-h	0.665abc
19	Chipco 26GT Daconil Weatherstik	4.0 fl oz/1000 ft <sup>2</sup> 5.5 fl oz/1000 ft <sup>2</sup>	Late	26.3l-w	4.5e-i	0.5627d-n
20	Chipco 26GT Secure	4.0 fl oz/1000 ft <sup>2</sup> 0.5 fl oz/1000 ft <sup>2</sup>	Late	51.3d-i	3j-m	0.51k-p

<sup>a</sup>All fungicide treatments applied Nov. 3<sup>rd</sup>, 2015.

<sup>b</sup>Mean percent diseased area assessed on March 31<sup>st</sup>, 2016.

<sup>c</sup>Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

<sup>d</sup>Color was assessed using a FieldScout TCM 500 NDVI Turf Color Meter from Spectrum Technologies, Inc.



# WISCONSIN PATHOLOGY REPORT

**Table 1 (cont): Mean snow mold severity, turf quality, and turf color assessed on March 31<sup>st</sup>, 2016 at Marquette Country Club in Marquette, MI.**

	Treatment	Rate	Application Timing <sup>a</sup>	Disease Severity <sup>b</sup>	Turf Quality <sup>c</sup>	Turf Color <sup>d</sup>
21	Turfcide	8.0 fl oz/1000 ft <sup>2</sup>	Late	47.5d-k	3.8h-l	0.5757c-m
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
22	Turfcide	12.0 fl oz/1000 ft <sup>2</sup>	Late	20o-y	4.8d-h	0.6293a-h
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
23	Turfcide	16.0 fl oz/1000 ft <sup>2</sup>	Late	35h-q	4.3f-j	0.5405h-p
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
24	AMV4820-G	8.0 fl oz/1000 ft <sup>2</sup>	Late	33.8h-r	4.3f-j	0.612a-j
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
25	AMV4820-G	8.0 fl oz/1000 ft <sup>2</sup>	Late	16.3p-y	5.3b-g	0.651a-f
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
	Daconil Weatherstik	4.0 fl oz/1000 ft <sup>2</sup>				
26	AMV4820-G	8.0 fl oz/1000 ft <sup>2</sup>	Late	10u-y	5.3b-g	0.6675abc
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
	Daconil Weatherstik	5.5 fl oz/1000 ft <sup>2</sup>				
27	AMV4820-G	8.0 fl oz/1000 ft <sup>2</sup>	Late	22.5n-y	4.8d-h	0.6503a-f
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
	Secure	0.5 fl oz/1000 ft <sup>2</sup>				
28	AMV4820-G	10.0 fl oz/1000 ft <sup>2</sup>	Late	18o-y	5.5a-f	0.6225a-i
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
29	AMV4820-G	10.0 fl oz/1000 ft <sup>2</sup>	Late	8.8u-y	5.5a-f	0.6493a-f
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
	Daconil Weatherstik	4.0 fl oz/1000 ft <sup>2</sup>				
30	AMV4820-G	12.0 fl oz/1000 ft <sup>2</sup>	Late	18.8o-y	5c-h	0.6405a-g
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
31	AMV4820-G	12.0 fl oz/1000 ft <sup>2</sup>	Late	5.5wxy	6a-d	0.6894a
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
	Daconil Weatherstik	4.0 fl oz/1000 ft <sup>2</sup>				
32	Interface	5.0 fl oz/1000 ft <sup>2</sup>	Late	5.5wxy	6a-d	0.6317a-h
	Mirage	2.0 fl oz/1000 ft <sup>2</sup>				
33	Interface	5.0 fl oz/1000 ft <sup>2</sup>	Late	22.5n-y	5c-h	0.644a-g
	Turfcide	8.0 fl oz/1000 ft <sup>2</sup>				
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
34	Concert II	8.5 fl oz/1000 ft <sup>2</sup>	Late	19.3o-y	5.5a-f	0.658a-e
	Banner MAXX II	1.0 fl oz/1000 ft <sup>2</sup>				
35	Concert II	5.5 fl oz/1000 ft <sup>2</sup>	Late	4xy	6.5ab	0.6578a-e
	Turfcide	8.0 fl oz/1000 ft <sup>2</sup>				
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
36	Concert II	8.5 fl oz/1000 ft <sup>2</sup>	Late	4.8xy	6.3abc	0.659a-d
	Turfcide	8.0 fl oz/1000 ft <sup>2</sup>				
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
37	Insignia SC	0.7 fl oz/1000 ft <sup>2</sup>	Late	21.3n-y	5c-h	0.6405a-g
	Trinity	1.0 fl oz/1000 ft <sup>2</sup>				
38	Insignia SC	0.7 fl oz/1000 ft <sup>2</sup>	Late	10u-y	5.3b-g	0.6373a-g
	Turfcide	8.0 fl oz/1000 ft <sup>2</sup>				
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				

<sup>a</sup>All fungicide treatments applied Nov. 3<sup>rd</sup>, 2015.

<sup>b</sup>Mean percent diseased area assessed on March 31<sup>st</sup>, 2016.

<sup>c</sup>Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

<sup>d</sup>Color was assessed using a FieldScout TCM 500 NDVI Turf Color Meter from Spectrum Technologies, Inc.

# WISCONSIN PATHOLOGY REPORT

**Table 1 (cont): Mean snow mold severity, turf quality, and turf color assessed on March 31<sup>st</sup>, 2016 at Marquette Country Club in Marquette, MI.**

	Treatment	Rate	Application Timing <sup>a</sup>	Disease Severity <sup>b</sup>	Turf Quality <sup>c</sup>	Turf Color <sup>d</sup>
39	Torque	0.6 fl oz/1000 ft <sup>2</sup>				
	Turficide	8.0 fl oz/1000 ft <sup>2</sup>	Late	12.5s-y	5.3b-g	0.6528a-e
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
40	Torque	0.9 fl oz/1000 ft <sup>2</sup>				
	Turficide	8.0 fl oz/1000 ft <sup>2</sup>	Late	27.5k-v	4.5e-i	0.6544a-e
	Foursome	0.5 fl oz/1000 ft <sup>2</sup>				
41	Concert II	8.5 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	6.8v-y	5.8a-e	0.6777abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
42	Concert II	5.0 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	8.8u-y	5.5a-f	0.6663abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
43	Concert II	8.5 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	3.5y	6.5ab	0.6615a-d
	Medallion SC	2.0 fl oz/1000 ft <sup>2</sup>				
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
44	Concert II	8.5 fl oz/1000 ft <sup>2</sup>				
	Secure	0.5 fl oz/1000 ft <sup>2</sup>	Late	9.3u-y	5.5a-f	0.6753abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
45	Concert II	5.0 fl oz/1000 ft <sup>2</sup>				
	Secure	0.5 fl oz/1000 ft <sup>2</sup>	Late	16.8p-y	5.5a-f	0.6754abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
46	Concert II	8.5 fl oz/1000 ft <sup>2</sup>				
	A19188A	1.0 fl oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.5a-f	0.659a-d
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
47	Concert II	5.0 fl oz/1000 ft <sup>2</sup>				
	A19188A	1.0 fl oz/1000 ft <sup>2</sup>	Late	9.3u-y	5.8a-e	0.645a-f
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
48	Daconil Weatherstik	5.5 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	20.5n-y	5.3b-g	0.6733abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
49	Daconil Weatherstik	5.5 fl oz/1000 ft <sup>2</sup>				
	A19188A	1.0 fl oz/1000 ft <sup>2</sup>	Late	27.5k-v	5c-h	0.6135a-j
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
50	Headway	3.0 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.5a-f	0.6548a-e
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
51	Headway	3.0 fl oz/1000 ft <sup>2</sup>				
	Secure	0.5 fl oz/1000 ft <sup>2</sup>	Late	13.8r-y	5.3b-g	0.6707abc
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
52	Concert II	8.5 fl oz/1000 ft <sup>2</sup>				
	Banner MAXX II	1.0 fl oz/1000 ft <sup>2</sup>	Late	10u-y	5.5a-f	0.6044a-k
	Par	0.37 fl oz/1000 ft <sup>2</sup>				
53	Renown	2.5 fl oz/1000 ft <sup>2</sup>				
	A18126B	0.16 oz/1000 ft <sup>2</sup>	Late	25m-x	4.5e-i	0.5795c-l
	Par	0.37 fl oz/1000 ft <sup>2</sup>				

<sup>a</sup>All fungicide treatments applied Nov. 3<sup>rd</sup>, 2015.

<sup>b</sup>Mean percent diseased area assessed on March 31<sup>st</sup>, 2016.

<sup>c</sup>Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

<sup>d</sup>Color was assessed using a FieldScout TCM 500 NDVI Turf Color Meter from Spectrum Technologies, Inc.



# WISCONSIN PATHOLOGY REPORT

**Table 1 (cont): Mean snow mold severity, turf quality, and turf color assessed on March 31<sup>st</sup>, 2016 at Marquette Country Club in Marquette, MI.**

	Treatment	Rate	Application Timing <sup>a</sup>	Disease Severity <sup>b</sup>	Turf Quality <sup>c</sup>	Turf Color <sup>d</sup>
54	Renown A19188A Par	2.5 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	13.8r-y	5.3b-g	0.6608a-d
55	Renown Secure Par	2.5 fl oz/1000 ft <sup>2</sup> 0.5 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	57.5c-f	3.3i-l	0.5213j-p
56	A21664 Par	0.8 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	28.8j-u	4.5e-i	0.584c-l
57	A21664 A17856 Par	0.8 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.3b-g	0.6417a-g
58	A21664 A17856 Par	0.8 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	4.3xy	6.3abc	0.6598a-d
59	A21664 A13705 Par	0.8 fl oz/1000 ft <sup>2</sup> 2.6 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	10.5t-y	5.5a-f	0.6737abc
60	A18126B A13705 Par	0.164 oz/1000 ft <sup>2</sup> 2.6 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	6.8v-y	6a-d	0.6905a
61	A17856 A19188A Banner MAXX II Par	1.0 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	27.5k-v	4.8d-h	0.5934a-k
62	A19188A A13705 Par	1.0 fl oz/1000 ft <sup>2</sup> 2.6 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	8.8u-y	5.5a-f	0.643a-g
63	A19188A A17856 Par	1.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	16.3p-y	5c-h	0.677abc
64	A18126B A17856 Par	0.164 oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	12.5s-y	5c-h	0.654a-e
65	Instrata Par	9.0 oz/1000 ft <sup>2</sup> 0.37 fl oz/1000 ft <sup>2</sup>	Late	15q-y	5c-h	0.6508a-f
66	Interface Mirage	6.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.3b-g	0.6687abc
67	Interface Mirage	4.0 fl oz/1000 ft <sup>2</sup> 1.4 fl oz/1000 ft <sup>2</sup>	Late	21.5n-y	4.8d-h	0.5997a-k
77	26GT Xtra Daconil Weatherstik Mirage	5.0 fl oz/1000 ft <sup>2</sup> 5.5 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	3.5y	6.5ab	0.683a
78	26GT Xtra Daconil Weatherstik Mirage	6.0 fl oz/1000 ft <sup>2</sup> 5.5 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	8u-y	6a-d	0.6594a-d

<sup>a</sup>All fungicide treatments applied Nov. 3<sup>rd</sup>, 2015.

<sup>b</sup>Mean percent diseased area assessed on March 31<sup>st</sup>, 2016.

<sup>c</sup>Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

<sup>d</sup>Color was assessed using a FieldScout TCM 500 NDVI Turf Color Meter from Spectrum Technologies, Inc.

# WISCONSIN PATHOLOGY REPORT

**Table 1 (cont): Mean snow mold severity, turf quality, and turf color assessed on March 31<sup>st</sup>, 2016 at Marquette Country Club in Marquette, MI.**

	Treatment	Rate	Application Timing <sup>a</sup>	Disease Severity <sup>b</sup>	Turf Quality <sup>c</sup>	Turf Color <sup>d</sup>
79	26GT Xtra Daconil Weatherstik Mirage	8.0 fl oz/1000 ft <sup>2</sup> 5.5 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	4.8xy	6.3abc	0.6614a-d
83	Compass	0.2 oz/1000 ft <sup>2</sup>	Late	43.8d-m	3.8h-l	0.5955a-k
84	Daconil Weatherstik Exteris Mirage	5.5 fl oz/1000 ft <sup>2</sup> 4.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	16.3p-y	5c-h	0.6515a-e
85	Daconil Weatherstik Exteris Mirage	5.5 fl oz/1000 ft <sup>2</sup> 5.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	12.5s-y	5.3b-g	0.6715abc
86	Daconil Weatherstik Exteris Mirage	5.5 fl oz/1000 ft <sup>2</sup> 6.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.5a-f	0.6904a
87	Daconil Weatherstik Interface Mirage	5.5 fl oz/1000 ft <sup>2</sup> 6.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	4.8xy	6.3abc	0.6515a-e
88	Daconil Weatherstik Interface Mirage Proxy Tartan	5.5 fl oz/1000 ft <sup>2</sup> 3.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 5.0 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup>	Late	6.3wxy	5.8a-e	0.6555a-e
89	Daconil Weatherstik Interface Mirage Tartan	5.5 fl oz/1000 ft <sup>2</sup> 3.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup> 1.0 fl oz/1000 ft <sup>2</sup>	Late	5.5wxy	6a-d	0.669abc
90	Daconil Weatherstik Interface Mirage	5.5 fl oz/1000 ft <sup>2</sup> 6.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	7.3v-y	6a-d	0.6644a-d
92	Exteris	6.0 fl oz/1000 ft <sup>2</sup>	Late	61.3b-e	2.8klm	0.6055a-k
93	Instrata	11.0 fl oz/1000 ft <sup>2</sup>	Late	11.3t-y	5.3b-g	0.6378a-g
94	Interface	1.57 fl oz/1000 ft <sup>2</sup>	Late	48.8d-j	3.3i-l	0.5848b-l
95	Daconil Weatherstik Mirage	5.5 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	18.8o-y	4.8d-h	0.582c-l
96	Interface Mirage	4.0 fl oz/1000 ft <sup>2</sup> 1.5 fl oz/1000 ft <sup>2</sup>	Late	12.5s-y	5c-h	0.6528a-e
97	Interface Mirage	4.0 fl oz/1000 ft <sup>2</sup> 2.0 fl oz/1000 ft <sup>2</sup>	Late	15q-y	5.3b-g	0.65a-f
98	Interface Mirage Proxy	4.0 fl oz/1000 ft <sup>2</sup> 1.5 fl oz/1000 ft <sup>2</sup> 5.0 fl oz/1000 ft <sup>2</sup>	Late	17.5p-y	5c-h	0.5795c-l
100	Mirage	1.0 fl oz/1000 ft <sup>2</sup>	Late	61.3b-e	3j-m	0.5605e-n

<sup>a</sup>All fungicide treatments applied Nov. 3<sup>rd</sup>, 2015.

<sup>b</sup>Mean percent diseased area assessed on March 31<sup>st</sup>, 2016.

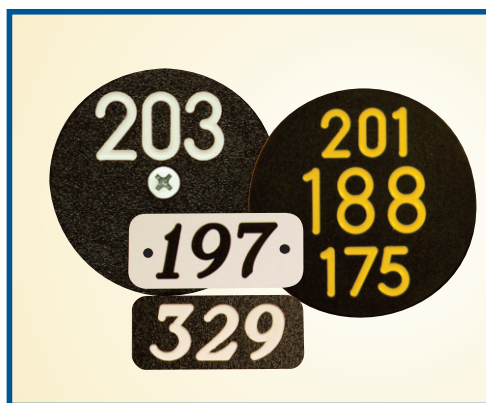
<sup>c</sup>Quality was visually assessed where 1 = dead, 6 = acceptable, 9 = dark green.

<sup>d</sup>Color was assessed using a FieldScout TCM 500 NDVI Turf Color Meter from Spectrum Technologies, Inc.





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## My Final Field Day Presented Some Challenges

By **Tom Schwab**, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

As manager of the O.J. Noer Facility, preparing for every Field Day has always been a huge undertaking. However, our recent WTA Field Day presented some memorable challenges for the last Field Day that I will be hosting. I am retiring in November after 22 wonderful years as manager of the O.J. Noer Facility. This year's challenges came in the form of excessive rain and wind, with 5.1 inches and another 2.1 inches of rain, five and three days before the event. After the deluge, how was I going to get the grounds presentable before the event and where could I place all the heavy equipment coming in for the trade show and field day setup? Luckily we received two days of dry weather after the rains and generous help from the Turf Diagnostic Lab's crew to make the grounds look like nothing really happened at Noer. Please see the picture of Lake Noer from five days before event.

Next, all the professors' students and staff worked diligently to mark off and display all the research. Field Day 2016 had so many research projects with signs on them that you could hardly digest it all in one day. Speakers were stationed at the most important projects to tell attendees all about their latest research findings and to answer questions during the education tours.

This year attendees learned about:

- Low Toxicity Herbicides
- Mitigating Risk to Pollinators
- Evaluation of Grasses under Different Mowing Frequencies
- Mosquito and Tick Control
- Reduced Risk Pesticide Management
- Optimal Timing for Plant Growth Regulators
- Impact of Nitrogen on Dollar Spot
- Different Nitrogen Sources Get Different Results
- Using GPS Technology on Boom Sprayers
- Potassium Soil and Tissue Testing
- Bentgrass Fairway/Tee NTEP
- Questions and Answers with Entomologist Dr. Chris Williamson
- Reduced Risk Dollar Spot Management
- Precision Tools for Disease Management
- pH Impacts on Fungicide Efficacy

A detailed description of these presentations may be found in the Field Day tour book. Contact Audra Anderson at [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu) or 608-845-6536 if you missed Field Day and would like a tour book mailed to you. Or go to [www.wisconsinturfgrassassociation.org](http://www.wisconsinturfgrassassociation.org) and find the tour book under the Field Day link. But you shouldn't have missed Field Day. There is nothing like being there in person and soaking up the trade show and current education. The event is also such a good way to gather with peers to see how their season is going.

Field Day has always been my favorite WTA event of the year. It's a little sad to think this will be my last one to host. But I look forward to returning for many years to see what the next manager does with the facility and event. I'm sure there will be bigger and better Field Days to come. I just hope the weather is kinder for following Field Days.

In closing, I'd like to thank the 2016 Field Day exhibitors, listed here. These exhibitors help bring this wonderful event to you every year, so please show them your appreciation. ✓

### 2016 WTA SUMMER FIELD DAY EXHIBITORS

**BASF**  
**Burris Equipment**  
**ClesenProTurf Solutions**  
**Contree**  
**Deer Creek Seed**  
**DHD Turf & Tree Products**  
**Dow AgroSciences**  
**E Z Locator**  
**GreenJacket**  
**Helena Chemical**  
**Heritage Seed Company**  
**Horst Distributing**  
**Insight FS**  
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**L T Rich Products**  
**Pendelton Turf Supply**  
**ProGro Solutions**  
**Rain Bird**  
**Reinders**  
**Rock River Laboratory**  
**SiteOne**  
**Syngenta**  
**TerraMax Inc**  
**The Andersons**  
**Tyler/Masterblend International**  
**Waupaca Sand & Solutions**





# NOTES FROM THE NOER



**Top Left:** The Noer Facility after receiving 5.1 inches of rain in less than 2 hours just a few days before Field Day.

**Middle Left:** WTA Board member Paul Zwaska painting Bucky in preparation for Field Day.

**Middle Right:** Paul's Finished Product.

**Bottom Left:** My last Field Day pictured with my friends Charlie Frazier and Randy Smith.

**Bottom Right:** Soil Science graduate student Ben Henke talks about plant growth regulators.





# NOTES FROM THE NOER



**Top Left:** Dr. Soldat giving one of his several presentations.

**Top Right:** WTA Board member Jake Schneider gives opening remarks to commence Field Day 2016.

**Middle Left:** Plant Pathology research specialist Kurt Hockemeyer talks about reduced risk weed management.

**Middle Right:** Many distinguished guests attended Field Day including former Dean of the UW CALS Leo Walsh, Chancellor of the UW Extension Cathy Sandeen, and former head UW tennis and basketball coach John Powless.

**Bottom Left:** Another distinguished guest included Wisconsin Department of Agriculture Secretary Ben Brancel.

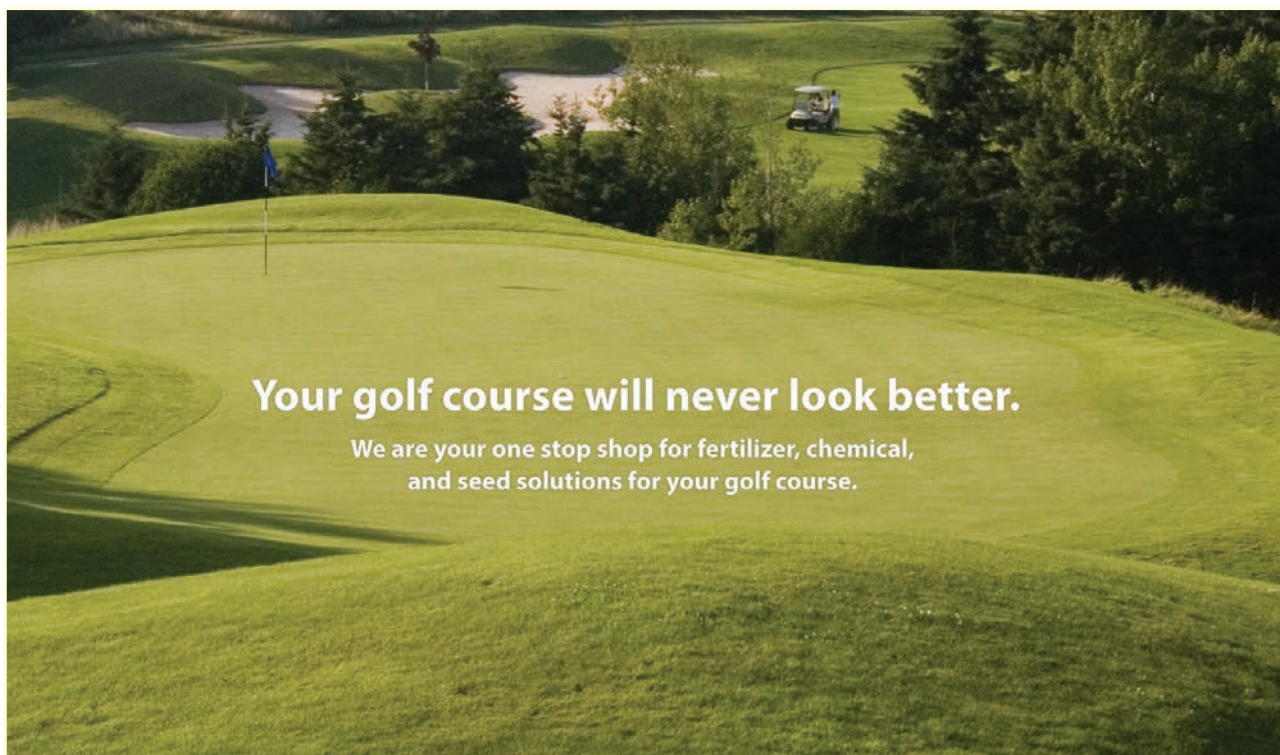


## NOTES FROM THE NOER



Left: UW Extension entomologist P.J. Liesch talks about mosquito and tick control.

Below: Joe Deschler from Horst Distributing talks about the virtues of the Jacobsen fairway mower.



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## American Family Championship At University Ridge

By David Brandenburg, Editor, The Grass Roots

The inaugural American Family Insurance Championship turned out to be a resounding success for the Senior PGA Tour, American Family, University Ridge and Golf Course Superintendent Phil Davidson and the staff.

Over 56,000 spectators attended the 3 day event held June 24 to 26th. According to American Family Jack Salzwedel CEO the PGA had told them to hope to break even financially for the inaugural event. However the group had faith in Badger State golf fans and set a goal of raising \$500,000 for the charities. Due to the great turnout when all the invoices are paid the event will raise nearly double that number.

The charities involved included the Steve Stricker American Family Insurance Foundation, The American Family Children's Hospital and other local organizations.

With this years success the event can grow next year with more or bigger bleachers, more concessions and with that more parking.

The total purse was \$2,000,000 with winner Kirk Triplett taking home \$300,000 and the Dream Achieved trophy. Triplett had to rally with 4 straight birdies on holes 13 to 16 to win his 5th Senior PGA event narrowly beating out Mike Goodes.

Interviews with the players showed they loved the event, the course and had great respect for host Steve Stricker. Stricker had appreciative things to say about the course conditions and the work Phil and his staff did to recover from Saturday night storms when over 2" of rain fell.

Sticker will turn 50 soon and will be eligible to host and play next years event. He jokingly said it will be easier to play in the event than to be the full time host.

University Ridge opened in 1991 and was designed by Robert Trent Jones, JR. The layout features two different 9 hole layouts with the front 9 more open and the back 9 more tree lined. The course plays host to the UW-Madison men's and women's golf teams and the WIAA State Golf Tournaments.

The players had many good things to say about the work Phil Davidson and the staff did to get and keep the golf course ready for tournament play. Mother Nature threw a little curve ball with light rain Wednesday evening and heavy rain on Saturday night.

Some parking needed to be moved off property and bunkers had some marginal washouts but overall the course stayed firm and ready for Sundays final round.

Congratulations to Phil and the entire staff and volunteers for a job well done. Next years event will be here before you know it.



**Above: Joey Sindelar plays on hole 17 during the pro am. The par 3 17th is called Reflection.**

**Below: The 17th offers multiple tees to offer yardages from 130 to 250 yards. The left portion of the stands featured the Leinie Lodge fan pavilion.**





# TOURNAMENT GOLF



A panoramic view of hole 16 from the TV tower. The par 5 16th provides a split fairway and decisions for golfers. The hole titled Bunkered plays from 434 to 554 yards depending on the tee selected. (Photo by Phil Davidson)



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# TOURNAMENT GOLF



**Top:** Assistant Superintendent Nick Adell shows John Daly how to operate the LF557. Daly owns a couple golf courses and wanted to test the newest mower. (Photo by Phil Davidson)

**Middle Right:** Big in popularity, personality and dress John Daly remains a fan favorite.

**Middle Left:** Mowing the first cut on the par 4 14th Hole.

**Bottom:** Mowing and taking stimpmeter readings on the 398 yard 14th called Hickory Hill.





# TOURNAMENT GOLF



**Top Left:** Evening work begins on the par 4 1st hole after the Pro Am. The hole titled Verona plays 396 yards.

**Top Right:** Morning mowing from the TV Tower on Hole 10. Called Elm Valley the par 4 10th plays 483 yards. (Photo by Phil Davidson)

**Middle Top:** The divot crew is working hard in the rain but still smiling.

**Center Bottom:** The approach on the Par 4 18th. The uphill dogleg plays 413 yards and is titled Capital Climb.

**Bottom Left:** Rolling on the par 4 15th. Titled Lone Elm the hole plays 352 yards. (Photo by Phil Davidson)

**Bottom Right:** Bunker edging on the par 3 12th Hole. Playing from elevated tees the hole plays 200 yards from the black tees and is suitably called Dropshot.



## National Golf Day 2016

By **Mike Bremmer**, Golf Course Superintendent, Wisconsin Club.

Golf industry professionals from around the country gathered in Washington DC to participate in National Golf Day on May 18th. It was an incredibly well organized and productive event which educated our elected officials on the benefits golf contributes to our environment, economy and lives. Attendees were also given the chance to speak with State Representatives, Senators and staff members about pending legislation that could impact our day to day operation.

During the individual meetings set up for GCSAA members with their elected officials, topics discussed were WOTUS (Waters of The United States) and NPDES (National Pollutant Discharge Elimination System) fix legislation, newly released information from the Golf Course Environmental Profile Water Use and Conservation Survey, the new overtime pay rule and the H-2B visa situation. Golf's annual \$70 billion economic impact as well as the \$4 billion in charitable giving were also heavily promoted throughout the event.

Almost all of the professional associations had representation for the event, but the 65 members and staff representing the GCSAA had the overwhelming majority of participants. This was the highest attended event in the nine years it has taken place.

It was a privilege to represent the WGCSA and meet with our lawmakers to inform them of the aforementioned topics. My take home message from the event is one we already know. We can never do enough education of the public on how we benefit the environment and economy. It is our voice which has the greatest impact on informing others of what we do on a day to day basis and how new laws effect our business.



Above: GCSAA Executive Director with Ryder Cup Vice Captain and Wisconsin's own Steve Sticker at the Capital.

Below: The contingent from GCSAA included Mike Bremmer on the far left.







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## State Amateur Visits North Shore Golf Club

By David Brandenburg, Editor, The Grass Roots

The 115th Wisconsin State Amateur Championship was held at North Shore Golf Club in Menasha July 18 to 21.

Located along the northern part of Lake Winnebago the course opened in 1930 and was designed by Leonard Macomber.

Originally the club was supposed to be the "new" Riverview Country Club as that course was only 9 holes and looking for a property to build a new facility.

The club bought the land and hired Macomber in 1928 but the club soon found itself in financial despair. With Riverview in need of cash a small number of members agreed to pay \$56,000 for the new property and start their own club and Riverview would continue as a 9 hole club.

The new club was organized as North Shore Golf Club and they oversaw completion of the grounds and clubhouse. The entire project was completed for around \$200,000, a figure that would not even purchase the lake property today.

The course has had a strong and active membership in both golf and social activities.

In fall of 2001 architect Bruce Hepner, Renaissance Golf Designs was hired to restore the course back to the original 1930 Macomber design. One of the most notable changes is the run off areas around many of the greens rather than deep rough. With small greens the chipping areas around them will see a lot of use and

give players a lot of options. Decisions will have to be made to chip, pitch or putt the ball while trying to get close to the pin.

156 of the states best players were in the field to start the 72 hole stroke play event. After two days of 18 holes the low 70 and ties will play 36 holes to determine the champion.

The first three days featured firm conditions and hot sunshine for the players. The golf course was in excellent condition as expressed by players and the staff and volunteers of the Wisconsin State Golf Association.

Things were not so smooth for Thursdays final round as storms moved in and caused a 4 hour rain delay in the morning. The last group did not tee off until 3:20 and then another storm in the evening caused a hour delay.

It was getting near dark when the final putt fell and in the end Nick Nelson won with a 4 under par 276. Nelson plays out of Brown Deer Park Golf Course and recently graduated Marquette University.

Nick is no stranger to tournament golf as he had won the WSGA match Play championship in 2015.

Thomas Longbella of Eau Claire Golf & Country Club took a one stroke lead into the final round but fell short in his quest at the championship by 3 strokes. Defending champion Eddie Wajda of Oconomowoc Golf Club tied for 4th place after a open-

ing round 65 but a second round 77.

The Yule Cup is played along with the amateur and rewards the club with the lowest three player score over the first 36 holes of play. Led by Champion Nick Nelson Brown Deer Park won with a 8 over par 428. Coming in second was The Legend Clubs with 443 followed by the home team with 448.

The crew at North Shore has been led by Certified Golf Course Superintendent Scott Schaller since 1996. His knowledge of the property was key to the restoration work done with Bruce Hepner but also preparing the layout for the states best amateur golfers.

Scott and the staff handled the gullywashwer of a storm on Thursday and quickly had the playing surfaces and bunkers back in play.

Schaller is a 3rd generation golf course superintendent and has been around golf courses his entire life. He started working for his dad at age 13 while he was building the 3rd 9 holes at Alpine Golf Course in Door County. The story of the 3 generations of Schaller Superintendents can be found in the May / June, 2001 issue of *The Grass Roots*.

Scott was quick to express his appreciation for the opportunity to work for Rod Johnson at Pine Hills Country Club as an assistant superintendent. Pine Hills is a great golf course and Rod was a great leader to learn from.

The 115th State Amateur was a great success and North Shore showed the state what a excellent course it had to offer. North Shore will play host to the Wisconsin State Open in 2017. ✓

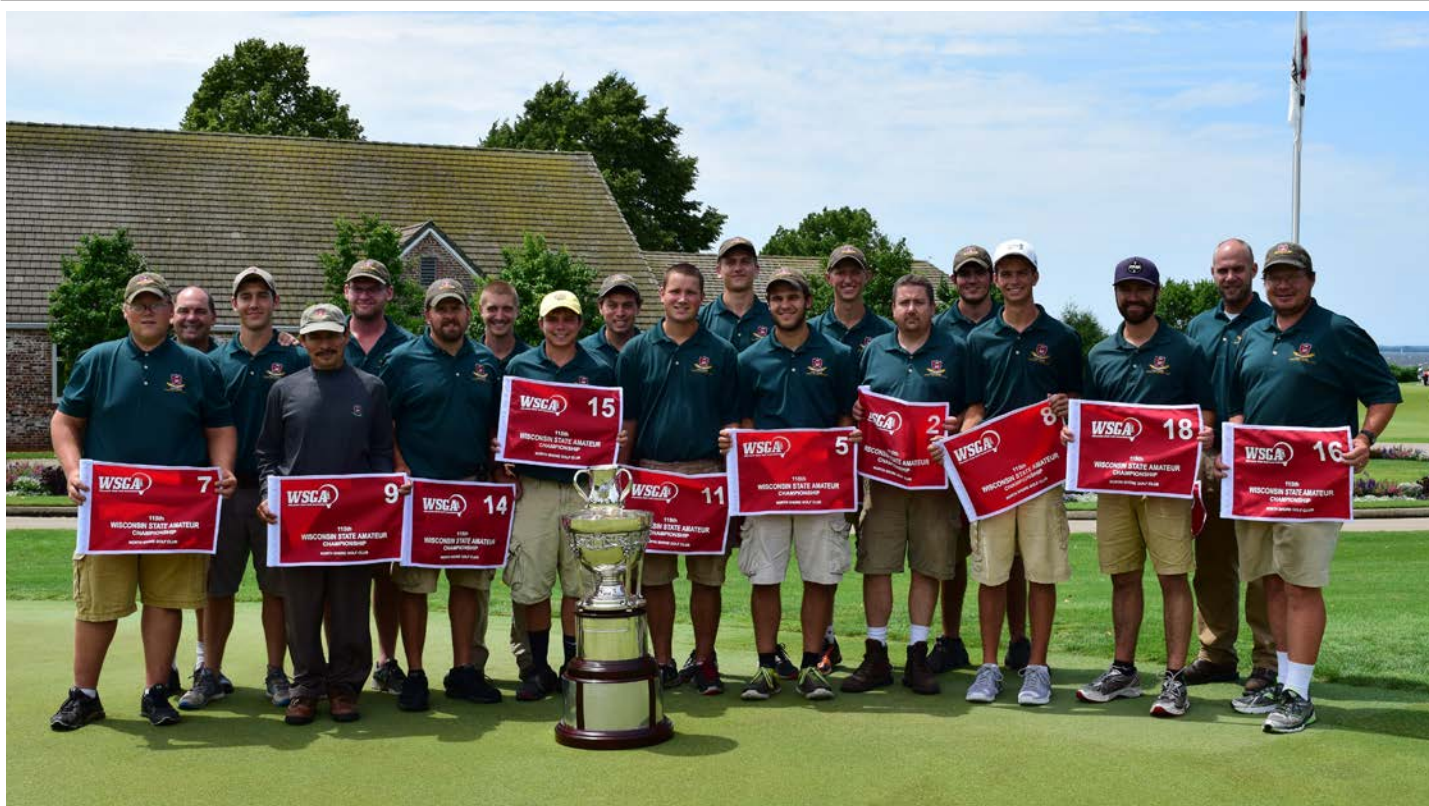
### 2016 WSGA Amateur Championship Qualifing Sites

Meadowbrook CC, Neenah  
Ridgeway CC, Neenah  
Naga-Waukee GC, Pewaukee  
Eau Claire G&CC, Altoona  
Wausau CC, Schofield  
La Crosse CC, Onalaska  
Reedsburg CC, Reedsburg  
River Club of Mequon, Mequon  
Muskego Lakes CC, Muskego





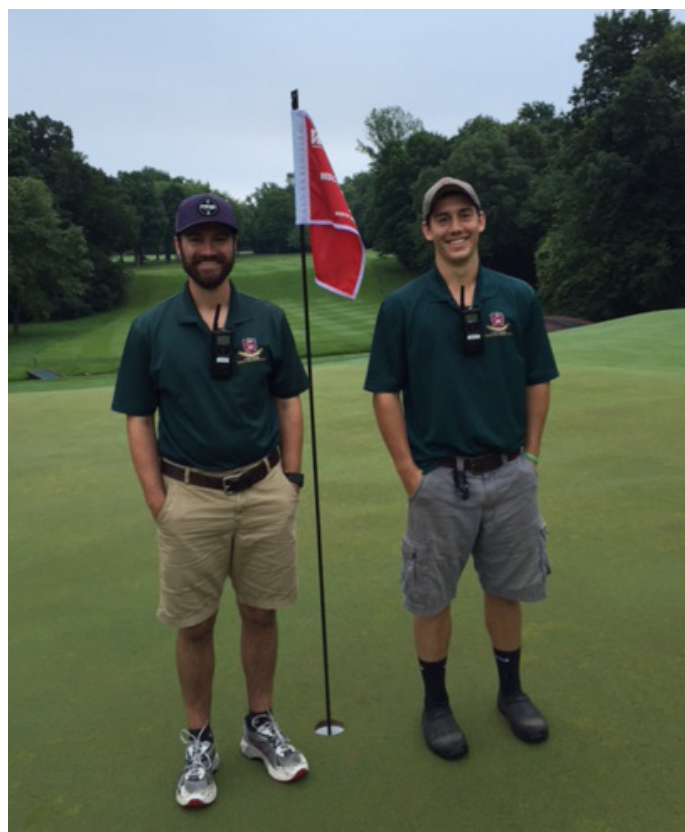
## COVER STORY



Above: 2016 North Shore Golf Club Grounds Crew. Scott expresses they are a great bunch who do a wonderful job for the North Shore members on a daily basis.

Below Left: Matt Juno, Scott Schaller and Joe Sell. Matt and Joe serve as the crew veterans and leaders.

Below Right: Former 1st Assistant Jacob Rath and son and 6 year former crew member Jacob Schaller returned to volunteer for the Amateur.





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—Darren Dase  
Superintendent, Delbrook Golf Course

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Above: Rolling on the par 4 1st hole.

Middle: Bunker raking on the par 3 7th hole. Notice the double leaf rake to speed the process.

Bottom: Mowing and cup changing on the par 3 7th.





# COVER STORY



**Top left: Rolling on 2 green.**

**Top Right: Mowing on 6 green.**

**Left: Green and approach mowing on 3 green**

**Bottom Left: Approach mowing on hole 9.**

**Bottom Right: Hole 16 with the moon setting and sun rising taken from 17 fairway.**





## COVER STORY



**Top:** A group of workers prepare the par 3 7th hole for play.

**Left:** These steep bunkers protect the 4th green from errant shots.

**Bottom:** The par 3 6th hole and the North Shore clubhouse.





## COVER STORY



**Top:** Fairway mowers working as a team on hole 15.

**Second:** Fairway mowing on the par 4 10th hole.

**Third:** Fairway mowing on the par 4 8th hole.

**Bottom:** The first tee is set right along Lake Winnebago.



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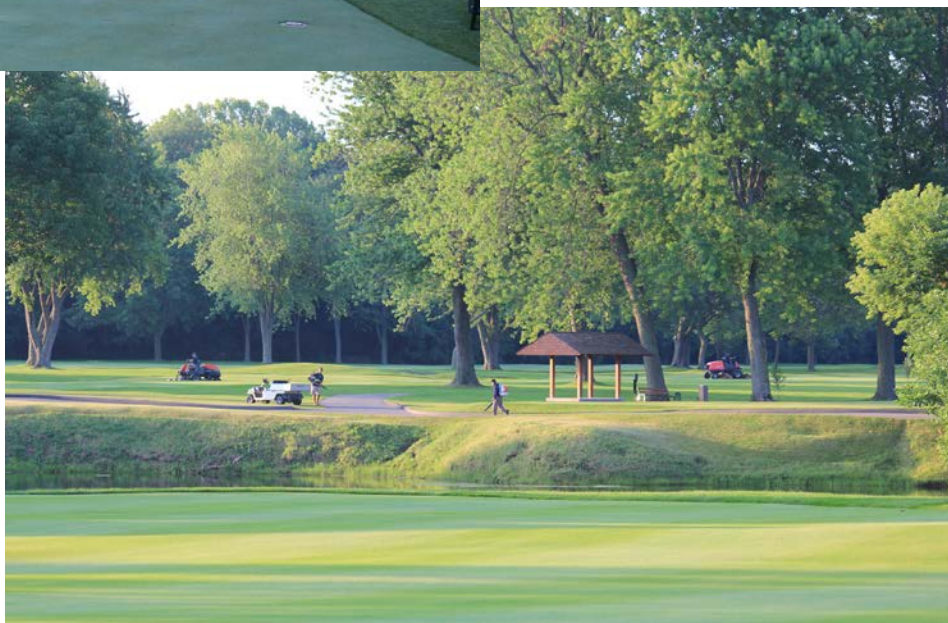
### Member 9 With Scott Schaller

1. **First Vehicle?** 1971 Pontiac Grand Prix - Black.
2. **Favorite Piece of Golf Course Equipment?** *There are a lot of them that I like, but if I had to pick one I would say the Toro 648 Aerifier. Great tool for aerification and venting.*
3. **18 Hole Handicap?** *I think it is a 13. Don't play much anymore and I hope to work on that in the future.*
4. **Current Vehicle?** 2013 Silverado Crew Cab Pickup Truck
5. **Favorite TV Show?** *Don't really have any TV Shows, but I enjoy watching NFL Football.*
6. **Favorite Pro Sports Team?** Green Bay Packers
7. **Favorite Main Course Meal?** *Rib Eye Steak cooked to medium well over an open fire.*
8. **Pets?** *No pets. As I get a little older I would like to get a German Sheppard. Still working on the sales pitch with my wife!*
9. **Favorite Thing About Working In Golf Industry?** *There are so many. I truly enjoy the early mornings on the course while making my rounds before the crew gets in.*



**Left:** Hole 3 plays 166 yards down hill to a well bunkered green.

**Below:** A team of workers on 11 fairway and 12 tee.





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# Schmidt Finishes Spectacular Career by Hosting WTA Golf Fundraiser

By Tom Schwab, Manager, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

He loves the game of golf. That's what brought Steve Schmidt to Butte des Morts Country Club in Appleton, where he's been superintendent for 34 years. Steve really started at age 16 as a night waterman at Grand View Golf Club in Hortonville. After high school, he knew he wanted to work in the golf industry but wasn't sure whether as a golf professional, since he loved the game of golf and was really good at it, or as a golf course superintendent. He sought advice from two superintendents, Irv Johnson at Butte des Morts and Bill Sell from Chaska Golf Course, and decided to pursue course management because he also loved working outdoors. He attended the University of Massachusetts in their turf program. After graduating, he went to work at Butte des Morts under Mr. Johnson, worked his way up, and took over as superintendent in 1982.

This December Steve is retiring from his position, and for a final hoorah, he and his son Tim, who is taking over as superintendent, are hosting the WTA Golf Fundraiser. The event is on Monday, October 3rd and the registration form is included in the newsletter. You may also sign up and pay online at [www.wisconsinturfgrassassociation.org](http://www.wisconsinturfgrassassociation.org).

It's been 28 years since the WTA golf fundraiser has been played at the outstanding Buttes des Morts. The host superintendent at that time was, of course, Steve. Also helping him that year was his wife, Cheryl, who has worked on the course every year since. Their daughter has also worked at the course on occasion. It's been a real family affair.

Come join Steve and the family for this last big event he is hosting. Tell your friends, relatives, and coworkers to come and enjoy an amazing round of golf as this 2016 season nears the end.

The registration fee is \$150. For this you will be treated to a delicious lunch, practice range, golf with a cart, and valuable golf prizes. After golf you'll enjoy hors d'oeuvres and hopefully go home with one of the abundant door prizes. Many door prizes are worth more than the cost of registration. You may register as a foursome or by yourself.

Butte des Morts has generously given us the course for a special price. Therefore, most of your registration fee goes to promote golf turf research at UW-Madison. Proceeds from the golf outing are used to develop new techniques in managing turfgrass for the most environmental, aesthetic, and economic results.



**Above: Steve and Tim Schmidt will serve as hosts for this year's WTA Golf Fundraiser at Butte Des Morts.**

Your participation allows the WTA to add to the new Turfgrass Research Sustainability Fund at the UW Foundation. The need for quality turfgrass research is as important today as it has ever been. Your participation at Butte des Morts helps meet that need.

The golf outing isn't all about funding research, though. This year it will also be to send off a good friend into retirement. Although we're not sending him too far. I heard he may still work on the course. But like a good father, he will be giving all the politics and headaches to his son Tim. So the event will also welcome Tim into the turf industry. The golf outing promises to be a real family affair and great golf experience that you won't want to miss. The course is one of the truly greats in Wisconsin. I hope that you are able to attend the Fundraiser and play this outstanding course. Contact Audra Anderson at 608-845-6536 or [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu) if you have any questions. Whether it is your first WTA Golf Fundraiser or you have attended them all, we hope you won't miss this one. ✓



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## **Wisconsin Turfgrass Association** **2016 Golf Outing Fundraiser**

Benefitting the  
**Wisconsin Turfgrass Research  
Sustainability Fund**



### **Butte des Morts Country Club – Monday, October 3**

**Where: Butte des Morts CC**  
3600 W. Prospect Ave  
Appleton, WI 54914  
(920) 738-5555

**When: Monday, October 3, 2016**

10:30 - 12:15 Registration  
11:00 - 12:15 Range  
11:00 - 12:15 Lunch  
12:30 4-Person Best Ball Shotgun Start  
After Golf Hors d' Oeuvres, Door Prizes, Golf Awards, Cash Bar

**Cost: \$150 per person**

**What:** Golf, Cart, Practice Range,  
Lunch, Door Prizes, Golf  
Awards, Hors d' Oeuvres

**Questions:** (608) 845-6536 or [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu)

**Directions:** Go to [www.buttedesmortscc.org](http://www.buttedesmortscc.org)

**Decades of tradition and outstanding care... (reprinted from [www.buttedesmortscc.org](http://www.buttedesmortscc.org))**

**Buttes des Morts Country Club** was established 90+ years ago and has since evolved into one of the finest private golf clubs in Wisconsin. The course is set against sloping hills, wooded terrain, and a picturesque landscape. It was meticulously designed by famed golf course architect W.C. Jackson of Chicago, and in late spring of 1924, the first grass seed was spread by longtime greenkeeper, Jack Taylor. Just as it was when it first opened, the course is carefully groomed and impeccably maintained.

Golf course superintendent Steve Schmidt, and the members of Butte des Morts Country Club welcome you to this WTA event. Proceeds from the golf outing will be used by the UW-Madison turf faculty to develop new techniques for managing turfgrass for today and the future.

---

### **ENTRY FORM – WTA Golf Outing Fundraiser**

Name: \_\_\_\_\_ Phone: (       ) \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

# of People Attending \_\_\_\_ x \$150 per person = \_\_\_\_\_

#### **You May Also Sponsor A Golf Hole**

Optional Tee Sign Golf Hole Sponsorship x \$125 = \_\_\_\_\_

Name To Be Printed on Tee Sign --- \_\_\_\_\_

- Please make check payable to WTA and return to 2502 Highway M / Verona, WI / 53593
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- Refer questions about the outing to Audra at 608-845-6536, or [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu)
- Registration deadline is Monday, September 26, 2016
- You may register by yourself or as a foursome

## June Meeting at Janesville Country Club

By David Brandenburg, Editor, The Grass Roots

Golf Course Superintendent Jeff Rottier was our host for the June WGCSA meeting at the historic Janesville Country Club.

It started back in 1893 when businessman Alexander Galbraith returned home from a trip to Scotland with 15 golf clubs, several dozen balls and a layman's knowledge of their use from a couple rounds of golf at St. Andrews.

Galbraith and 5 friends formed the club and became charter members of the Sinnissippi Club. Sinnissippi is the Indian name for the Rock River. By 1895 land was secured and a 18 hole course was laid out but the second 9 did not open until 1924.

Janesville Country Club was the sixth country club established in the United States and the first in Wisconsin. The club is also one of the 9 founding clubs of the Wisconsin State Golf Association.

In 1901 the first State Amateur Championship was held at the Sinnissippi Golf Club and to this day the Amateur trophy is called the Sinnissippi Cup.

It had been some time since I had visited Janesville Country Club and this time I had a greater appreciation for the layout and its place in history.

**"Bunkers are not a place for pleasure. They're for punishment and repentance."**

**Old Tom Morris**

Our day started with education provided by Bob Lohmann from Lohmann Companies discussing the topic of "Design and Construction Options for Bunkers". Bunkers can be a challenge for golf course managers as they are supposed to be hazards and provide challenge to the layout of a golf course. But at the same time many golfers want bunkers to be consistent and easy to hit out of. Bob expressed bunkers cover about 3% of the average golf course but are responsible for 80% of the complaints.

The main benefit of bunkers is strategy.

They impact the direction of play while limiting the players options at what kind of shot to hit. Bunkers protect greens from poorly hit shots while limiting the corridor of a hole. In golf architecture strategic bunkering provides a risk, a reward and a recovery. Ponds or dense woods do not provide the recovery aspect a bunker allows.

Visually, bunkering provides texture, scale and memorable views of golf holes. The can also target the landing area and provide direction for golfers to aim.

There are many types of bunkers but most are either flat sand or flashed sand. The benefit of flat sand is they are cheapest to build and rarely wash out limiting contamination from the soil underneath. They do however limit visibility and the grass banks can cause a lot of handwork depending on the style of bank.

Flashed bunkers are visually striking but are subject to erosion during rain events and require more hand work in the bunker.



The winners of the Net and Gross two person best ball.



Bunkers are a large expense for most courses both during construction and daily maintenance. Flat sand bunkers average \$5.50 to \$6.50 a square foot to build while flashed bunkers average \$9 to \$10 per square foot to build.

Washouts from rains cause contamination of the sand from the subsoil which reduces drainage. Bob expressed most bunker drainage problems are not due to the tile failing but the sand being contaminated with fines so the water cannot reach the tile.

Lohmann discussed the different methods of lining flashed bunkers to avoid contamination and keep the sand in place. Fabric liners are the least expensive but have limitations while requiring a proper sand depth to keep it from getting caught by rakes or golf clubs. Another problem has been staples coming up over time get-

ting caught by clubs or mechanical rakes. Once a liner has been snagged by something and has come up there is no putting it back again.

Aggregate liners such as the Better Billy Bunker or Capillary Concrete have been used with great success by not only keeping the sand and subsoil separate but increase water inflow the sand cannot erode as soil based bunkers do. Aggregate liners are cost and labor intensive to install but do reduce future bunker maintenance.


Traditional liners can add \$.65 to \$1 per square foot for installation costs while the Better Billy Bunker system can add \$2 per square foot.

The new bunkers are worth their cost but Bob cautioned the attendees to make sure your bunker is in the right spot before investing in capillary concrete or a polymer liner system.

After the education a great cookout lunch was served on the patio before the two man scramble competition started.

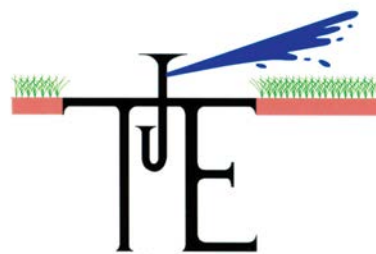
I was paired with Jeff Millies, or I could say Jeff was stuck with me as my game was a bit off. It could be I was too busy admiring the classic course to think about hitting my ball. It could be my game was not ready for the fast small greens and tree lined fairways. Either way we had fun and the course provided a memorable experience.

After golf the group was treated to an excellent spread of Hors D' Oeuvres, beverages and most importantly networking with colleagues and friends.

Thank you to Jeff Rottier and his staff and the entire group at Janesville Country Club for allowing us to enjoy the oldest course in Wisconsin. 



**Top Left: Our host Superintendent Jeff Rottier**  
**Top Right: our speaker, Bob Lohmann.**  
**Bottom: Hole 6 plays 389 yards with a slight dogleg right and is well protected by bunkers.**



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**Top Left:** The 11th hole is a downhill dogleg right well protected by trees.

**Top Right:** Hole 12 plays straight uphill and requires a well placed tee shot.

**Left:** Hole 14 is only 305 yards but the small green is well protected by bunkers and requires a light touch.

**Bottom Left:** From the tee the 495 yard par 5 15th looks huge.

**Bottom Right:** Looking back on the 15th you can see it features one of the smallest greens on the course.







**Top Left:** The challenging 16th hole is only 161 yards but crosses a deep swale.

**Top Right:** Kerry Anderson hits out of the bunker on 16 while playing partner Tom Emmerich hopes he holes out.

**Left:** Hole 9 is a mild dogleg right playing 428 yards as a par 4.

**Bottom Left:** The home hole is only 331 yards but is uphill with little room for error. It is important to land on the right level of the putting surface for a chance to birdie.



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### Be Who You Are

By David Brandenburg, Editor, The Grass Roots

As managers at our facility's we want the best for the course, for the customers and for the management. Superintendents are hard working, do more with less type of people.

I am sure that is what keeps us in the golf business with the long hours, interruptions all summer and constant worry about not enough rain, too much rain, heat, ice, and our employees showing up and doing what is expected of them. It is a frustrating business where we often notice the 1% of the course that needs improvement rather than the 99% that is near perfect.

I often think we as superintendents are our own worst enemy when it comes to doing more with less and providing more at the expense of our fee time. In reality most golfers are just out to enjoy the game and their friends.

This came to my mind a couple weeks ago when I was reading a story about a superintendent at a top private club who walks the course most days rather than take a cart. My first thought was a negative one about what a stupid waste of time that was.

I quickly came to my senses and realized if that is works for him, that is great. He works at a different type of club with different expectations than I do and that is how he can best do his job. I need my cart because at any time I have to try to fix a mower, tow a golf cart, turn off a sprinkler that is stuck on or go into the clubhouse to try to get the point of sale going when the computer locks up.

We have different duties and responsibilities. A second example was a few months

ago on one of the industry forums when the discussion centered on how close can employees drive to greens and tees when servicing cups or tee markers. Some in the group were adamant no carts off the path just like the golfers. They actually got downright rude to the superintendents who drive on the green and tee banks.

In the end there is no right answer. If you have the staff and budget to park 30 or more feet from the green and walk up to change cups or fix ball marks then by all means do that. If you have paths and curbs and absolutely do not allow golf carts on green and tee banks well then employees should not leave the path either.

If your club is like ours and golfers drive on the green banks all day and the cup changing employee is doing three other jobs on his way around the course then driving on the green bank makes sense to save time.

These are simple examples of being who you are and do what works for your club and budget.

If you consider Augusta National is the mecca of all that is green and perfect in golf as many golfers do; then you need to realize what they produce is backed up by a budget that can produce that product.

Our course is a daily fee and the bills are paid by leagues and outings. We have a few customers who want greens to stimp 11 but most of our customers score better at a speed of 9.

We have a handful of customers who want fairways mowed at 3/8". In reality most of our customers sweep the ball and only take

a divot when they mis-hit the ball.

And we also have few customers who want fast and firm fairways that look like Pinehurst during the US Open. In reality we have poa annua fairways growing on clay that do not go dormant they die. If left to dry out cracks big enough to eat a golf ball will open up in the clay.

With a center row irrigation system the centers of the fairways can be a bit soft during August mornings. But at league time the fairways are mainly green and produce bounce and that is all our average golfer wants. A little bounce in the fairway, mowed rough so they can find their ball, greens that are smooth and most of all... a well timed beverage cart.

I am as guilty as anyone as trying to do more with less at the cost of my time and maybe my sanity.

We can all take a step back and decide what type of club we are at and do the best we can with what we have. Perhaps some amenities no one cares about have to fall by the wayside to concentrate on greens, tees, fairways and beverage carts routing.

Be who you are can be a lesson for golf course operations and people. Many young people are brought up to expect instant gratification. Although getting what you want when you want it sounds good it is not realistic for most of us.

All we can do is live within our means, save for what is important and enjoy life without worrying about what others have.

What is good for Augusta looks nice on TV but in reality it is not good for the average golfer.

## Event Schedule!

September 19th, Monday - Wee One Fundraiser - Pine Hills CC, Sheboygan

October 3rd, Monday - WTA Golf Fundraiser - Butte des Morts CC, Appleton

November 5th, Saturday - Couples Dinner - Wisconsin Club - City Club, Milwaukee

November 30 - December 1 - Wisconsin Golf Turf Symposium - American Club, Kohler

February 4-9, 2017 - Golf Industry Show, Orlando, FL

March 1, 2017, Wednesday - NGLGCSA Spring Education Conference, (Location TBD)

March 15 & 16 - Reinders Green Industry Conference, Waukesha



## EDITOR'S NOTEBOOK

The Wee One Foundation recently announced it has donated its MILLIONTH DOLLAR to a family in need. The foundation in existence since 2004 when namesake Wayne Otto was diagnosed with cancer.

The foundation has helped over 80 families in 23 states and is supported by 12 events through the states that support the foundation. For more information visit [weeone.org](http://weeone.org).

\*\*\*\*\*

Tyler Tanko recently was awarded a GC-SAA Legacy Scholarship. Tyler is majoring in paper science engineering and chemical engineering at UW Stevens Point. Tylers father Gary is the golf course superintendent at Sentryworld Golf Course in Stevens Point.

\*\*\*\*\*

Congratulations to David Smith for a successful 34 year run at Abbey Springs Golf Course in Lake Geneva.

David earned his degree from Cal-Poly in Pomona CA and started his career working on the Monterey Peninsula in

CA. He joined Abbey Springs in 1981 and has been the Director of Grounds since 1990 overseeing the maintenance of the expansive grounds, not just the golf course.

I remember in the early 90's Dave served on our board of directors and as Publicity Chairman. It was his idea to have a booth at the Milwaukee Golf Show and showcase this brand new thing called "soft spikes".

We had one of the more popular booths at the show that year as golfers stopped to check out these new plastic spikes.

Dave was a regular attendee at education locally and at the Golf Industry Show.

Enjoy your retirement years David!

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By the time you read this school will be starting, staffs will be smaller and the nights cooler making our jobs a lot easier. Best of luck to you and your courses as you finish up the summer and move to early fall. ✓



**Top: David recognized for achieving 25 years as a Certified Golf Course Superintendent at the Golf Industry Show.**

**Middle: As host of the 1994 April Meeting.**

**Bottom: Introducing Brian Silva at the 1992 Symposium.**



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