

# The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

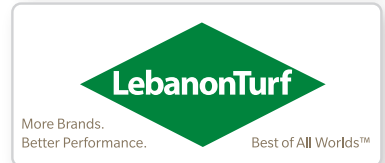
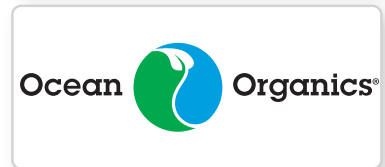
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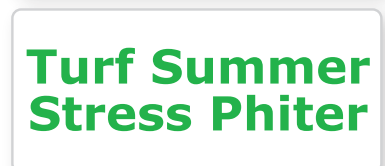


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## ABOUT THE COVER

The 11th Hole at Janesville Country Club host to our June Meeting. Janesville is the oldest county club in Wisconsin.

*If winter comes, can spring be far behind?*

**By English Poet Percy Bysshe Shelley, 1792-1822**

This quote by Shelley may have been made by a golfer but we can use it to remind us of the optimism of the coming spring.

Turf managers can use winter to relax and reflect on past successes but also to plan for 2017 as spring is not far behind.

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## THE GRASS ROOTS

is the bi-monthly publication of the Wisconsin Golf Course Superintendents Association. No part of the *THE GRASS ROOTS* may be used without the expressed written permission of the editor.

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## PRESIDENT'S MESSAGE

### It Has Been an Honor

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

It is hard to believe two years have passed already serving as the WGCSA President and I truly mean this, it has been an honor to do so. It is even harder to believe that I have sat on the WGCSA Board since 2004 and will remain on the Board in the capacity as Past President for another two years, man how time flies.

I remember back in 2003 Marc Davison called me one day and asked if I would like to sit on the Board. At that time I did participate in many WGCSA offerings but led somewhat of a low profile lifestyle in the profession and I declined. In 2004 he called me again and caught me off guard a little, however, I said I would not knowing what I was getting myself into. Honestly, looking back at the last twelve years I am glad I did, so thank you Marc, for seeing something in me I did not know I had.

Over the years and sitting on various committees as a Director and eventually serving on the Executive Board one quickly learns the nuances of the Association but you continue to learn as you go through the process. Again, it has been one of the most rewarding, although challenging, endeavors I have pursued. Early on I can vividly remember calling Randy Dupont and Mike Lyons numerous times as they were my “go to” guys and they always had the answers, treated me with respect, and did so in a comforting manner. I met many others in the profession not only on the board but also at our many monthly meetings, the Turf Symposium, Field Day, Spring Business Meeting and the Couple's Dinners. Many have always been acquaintances, but many others have become good friends doing things together professionally and also just for fun outside the profession which I cherish. There are so many great individuals in the turf industry I would like to mention that I have met along the way it would be a daunting task to put them all on to paper. What I can put on paper is the fact that we are truly blessed to be surrounded by so many of these individuals as our peers.

The definition of an association is a combination or partnership of a society or league and I cannot emphasize this enough with respect to the WGCSA. Every year we have gotten stronger with the past leadership further developing the WGCSA and it appears this will continue for many years as there are some very bright, eager and passionate individuals leading the Association into the future. The hiring of Brett Grams as our Chapter Executive spearheaded by Dustin Riley has proven to redefine who we are and streamline everything we do. We have worked diligently on our mission, vision, educational offerings, developing an SOP (Standard Operating Procedures) manual, listening to the needs of the members and working closely with the GCSAA and other organizations. In addition, there are many other areas of emphasis being discussed and formulated as we move forward.

I would like to take this opportunity to thank all of the past and present Board members for their services working together for the good of the Association, and also, you the members for your faith and trust in my ability to serve as well, again, it has been an honor to do so. If you have ever thought about serving on the Board of Directors of one of the greatest Chapters



**2015/2016 WGCSA President receives congratulations, thank you and the Past Presidents Plaque from incoming President Jon Canavan.**

in our industry, the WGCSA, get involved, support, and communicate your needs to the current Board, we are here for you the member. If you do not have the desire to serve on the Board that is understandable, but you too should get involved, support and take advantage of all the fantastic offerings so many work so hard to put forth, trust me it is very rewarding. I would also like to thank the support of the many vendors who graciously donate, in whatever capacity, for keeping our Chapter strong and continuing to aid us in all we do.

You are in great hands with your new President, Mr. Jon Canavan as well as the rest of the Board of Directors serving on the WGCSA Board – it remains an exciting time. 🌱







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## The Common Ground Initiative

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

Golf courses provide a wealth of environmental and economic benefits to our communities, from runoff mediation to carbon sequestration to contributing \$2.4 billion to the state economy (according to the 2010 Golf 20/20 report). Golf course superintendents are excellent stewards of the environment, and most meticulously monitor the inputs they apply to ensure only the minimum amount needed for acceptable turf quality is used. But increasing concern over pesticide usage is percolating into the region from all directions. From the north, Canada has large-scale pesticide restrictions on golf course turf with more on the way. From the east, Connecticut and New York have banned most pesticide applications on public school property and golf course superintendents in the region are concerned they may be targeted next. From the west, our neighbors in Minnesota commit significant resources to outreach with state decision makers to mitigate the impacts



of new regulations on the golf industry.

No significant restrictions are on the horizon here in Wisconsin, but that doesn't mean that superintendents here aren't interested in reducing the impact of their pest management programs. In fact, a full 86 of 119 respondents (72%) to a survey I sent to the WGCSA email list agreed with the following statement, 'It is important to reduce the overall environmental impact of

my pest management program' (Figure 1). I have heard the same thing in discussions with multiple superintendents in Wisconsin and elsewhere about their interest in reducing the impact of their pest management programs. Some are interested because they believe it's the right thing to do, others are interested because they want to reduce pesticide exposure for them and their employees, and still others are interested because their facility has identified reducing pesticide impact as a priority.

As a result of these individual discussions my team here at UW is working on an initiative that will scale up our efforts to work with a larger number of superintendents, something we're calling The Common Ground Initiative. I want to stress that this initiative is still in the development phase, but we're unveiling it to you now because we want your feedback and participation in making the initiative as impactful and beneficial for your operation as possible.



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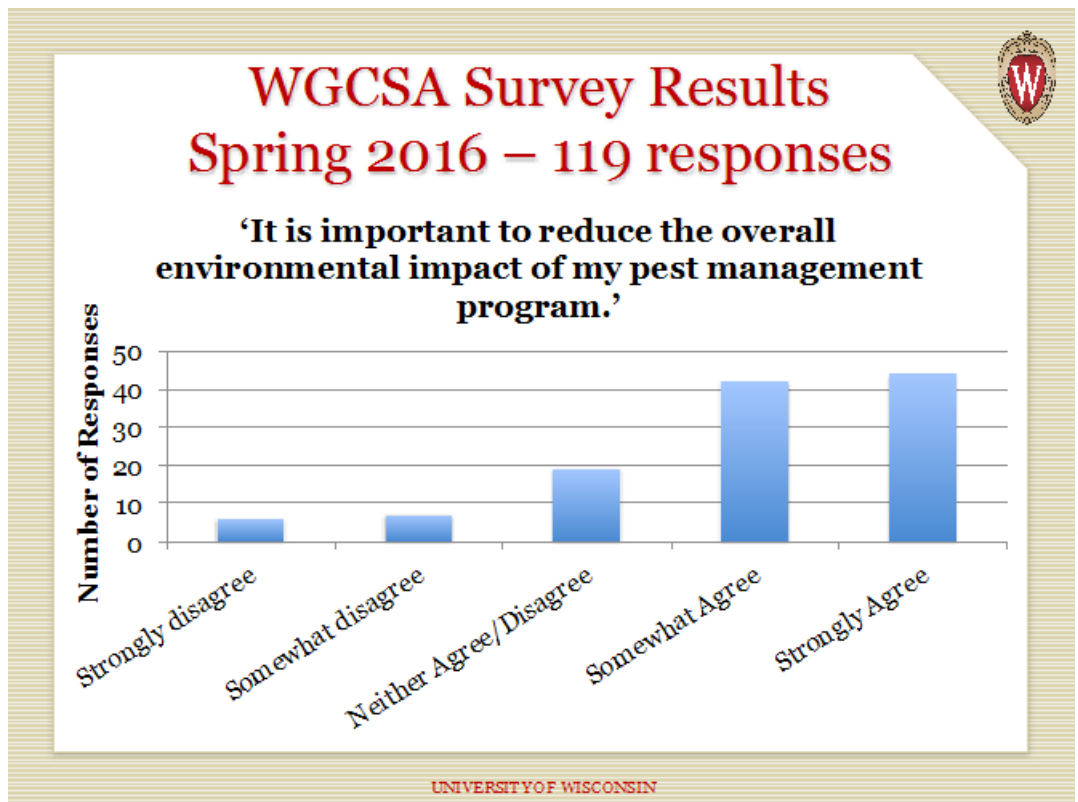
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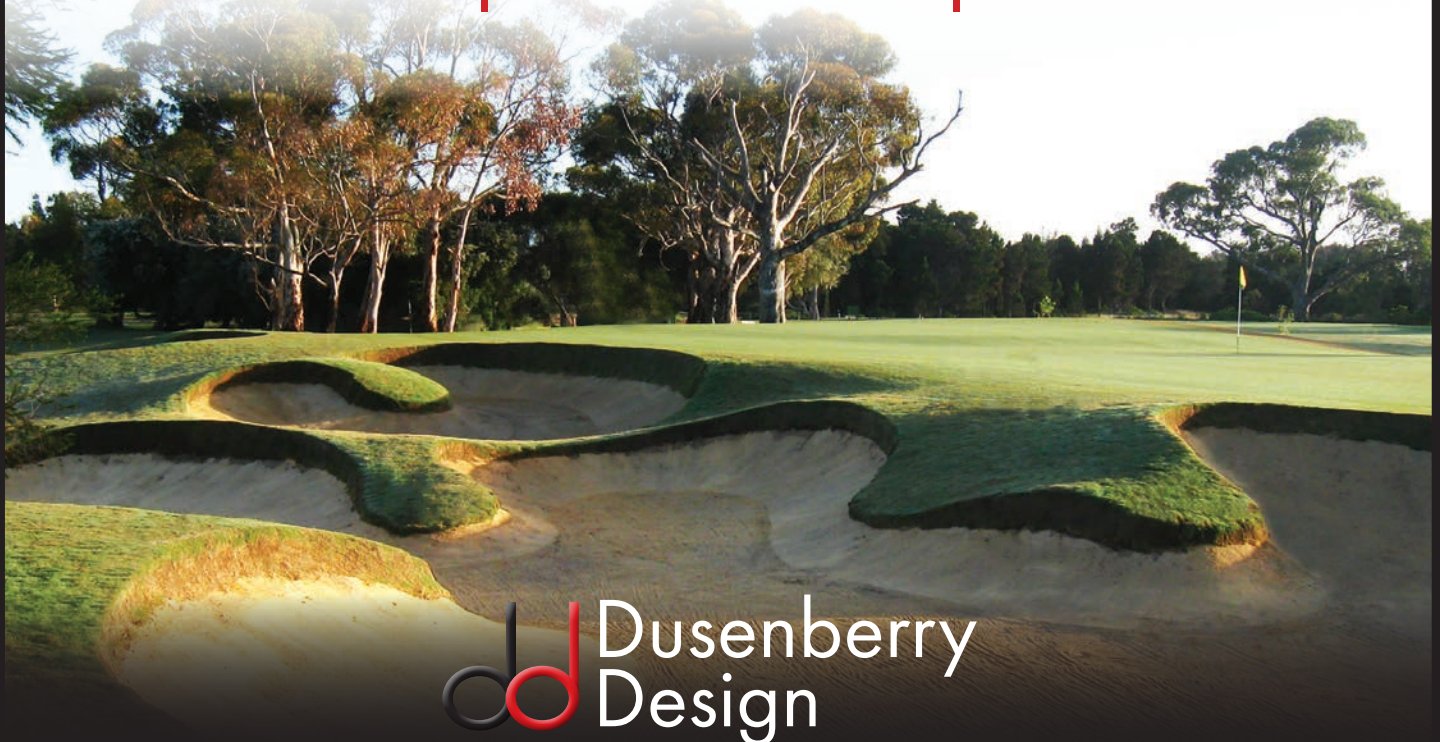




Figure 1: Responses to an online survey sent out to the Wisconsin Golf Course Superintendents Association email list.



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# WISCONSIN PATHOLOGY REPORT

Enclosed are some answers to questions that you may be having right now as you read this article:

## What is the Common Ground Initiative?

The initiative starts with the basic principle that the entire community benefits when healthy, functional turfgrass landscapes are present. The 'common ground' comes from the desire of all parties to maintain these important landscapes while using pesticides that have lower non-target effects. The primary purpose of the initiative then is to provide guidance and incentive for turfgrass managers in Wisconsin to transition towards lower impact pest management programs AND to document and promote the move towards lower impact pesticides for those that participate. The initiative will eventually encompass all segments of the turfgrass industry, though each industry segment will be handled independently because of their unique needs.

## What is the Common Ground Initiative NOT?

It is **NOT** a mandatory program. It will be completely voluntary and should only be implemented by those who think it will benefit their operations.

It is **NOT** a pesticide reduction or elimination program. Rather, it provides an incentive to pivot away from older pesticides that have a greater environmental impact to newer ones that have a lower environmental impact.

It is **NOT** a cost reduction program. While we feel that when properly implemented into an integrated pest management program the costs will not be prohibitive, we understand that newer chemistries are usually more expensive than older ones.

It is **NOT** a set pesticide program. The initiative is designed to have a target parameter that the participants will be required to meet, but also allow for ample flexibility to create the program that best fits the needs of each facility.

Pesticide records used in this initiative will **NOT** be made public. The only thing made public is whether a particular institution is participating or not.

## How will the initiative work?

The UW turf team is currently in the process of establishing the average level of pesticide usage from the golf industry in Wisconsin. Based on the results from our research over the past couple years, we will then establish a target reduction in environmental impact relative to the statewide average that we feel still provides plenty of options for maintaining healthy turf. Those interested in participating would contact us and work with us to develop a pest management program that meets the target parameter. If your program already meets the target parameter then you would not need to make any changes to be a participant. Following approval of the plan the course would then be a certified participant and could use the initiative to promote their sustainability efforts to their membership, their board, their municipality, or the general public. Participants would average their environmental impact over 2 years to account for fluctuations in pest pressure, and participants will have a multiple year 'grace' period to transition their current program into one that meets the initiative's target.

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# WISCONSIN PATHOLOGY REPORT

## How will we measure environmental impact?

This is one of the remaining sticking points, as there are several metrics for measuring impact...and all have significant flaws. The two that we are currently working with are the Environmental Impact Quotient (EIQ) and the Hazard Quotient (HQ). The EIQ attempts to be all encompassing and take into account numerous factors related to human and environmental health, but it is heavily correlated to amount of active ingredient applied and is a big, long, complicated equation. The HQ only takes into account acute or chronic toxicity to humans, but is a much simpler equation. For the time being we will work with both and make a decision later about which one is more effective for our needs.

## Can it work in the field?

For the last 3 years we have had a 'Reduced-Risk Disease Management' trial that we have exhibited at our Summer Field Day (<http://tdl.wisc.edu/2014-summer-fungicide-research-reports/>). Over those 3 years we have consistently demonstrated acceptable disease control while reducing the amount of active ingredient applied and the EIQ by approximately

90% over a standard program we borrowed from a Wisconsin superintendent (Figure 3). While this doesn't prove reduced-impact programs work in the field, it is an indication that this approach can be successful for many superintendents.

## What are the next steps?

The next step is to calculate the statewide average of environmental impact. To complete this we will need the pesticide records for 2015 and 2016 from approximately 75 Wisconsin golf courses. We have randomly chosen these 75 courses from a list of 420 Wisconsin golf courses and will contact those chosen before the end of 2016. If we contact you for your records please participate! Your records will be kept private and you will get a free analysis of how your pesticide program compares to the statewide average. Also, please contact us if you would like to volunteer your records for inclusion in the study...the more courses we have the more accurate our average will be!

After we calculate the statewide average, hopefully by spring of 2017, we will use our recent research to set the target parameter for participating in the initiative. I don't know what this parameter will be until we calculate the statewide average,

but I can assure you it will be one that can be met! It won't do you or us any good to develop a parameter that no one can possibly meet!

Once the parameter has been set we will solicit participants for the initiative. Participating will be as simple as calculating your current impact level and developing a plan for reaching the target within a set period (likely 2 to 3 years). Once the initiative goes live, we will discuss as an industry how best to promote and market the efforts of those participating in the initiative.

I fully understand that talking about pesticide usage and providing records makes many of us uncomfortable. However, I also strongly believe that not talking about pesticide usage or not debating methods that might improve efficiency or reduce environmental impact is a poor long-term strategy for our state's great industry. I look forward to hearing your feedback, both good and bad, and urge you to contact me with your comments, questions, and concerns as we strive to build an initiative that further showcases the environmental stewardship of the Wisconsin golf industry. Please feel free to email me at [plkoch@wisc.edu](mailto:plkoch@wisc.edu) or call me at 608-576-2673 to discuss this initiative. ✓

## 2015 Environmental Impact Quotient

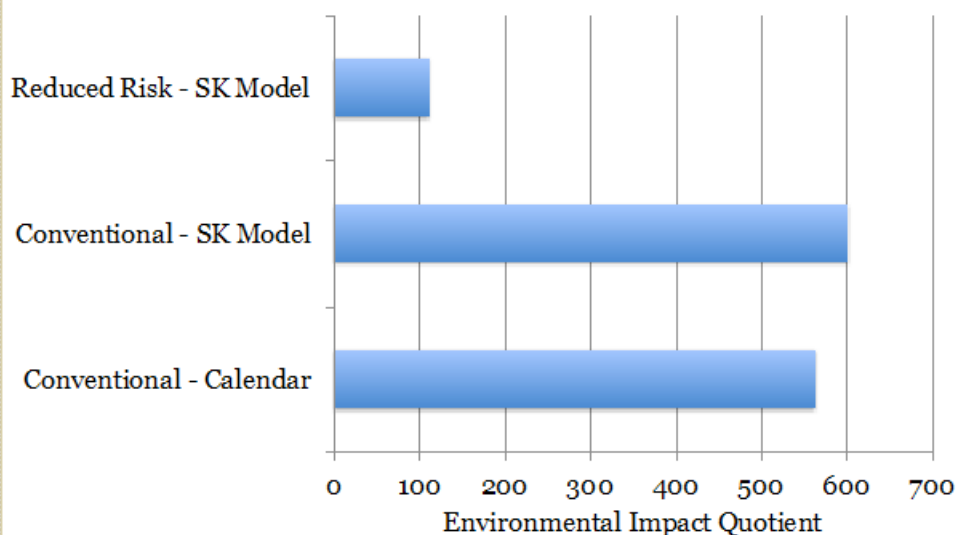


Figure 2: Study from 2015 at the OJ Noer Turfgrass Research Center in Madison, WI comparing the Environmental Impact Quotient (EIQ) on fungicide programs that used a strict calendar-based application method using conventional fungicides, application scheduling using the Smith-Kerns Dollar Spot Model using conventional fungicides, and application scheduling using the Smith-Kerns Dollar Spot Model but using lower-impact fungicides. An approximate 85% reduction in EIQ was realized when lower-impact products were used.

## Golf Turf Research Updates From Around The USA

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

Each fall, about 200 turfgrass researchers come together to give brief research updates as part of the Crop Science Society of America Annual Meeting, which was held jointly with the Soil Science Society of America and the Agronomy Society of America. This year the meetings were in Phoenix, AZ, November 6-9th. I really enjoy attending these meetings to catch up with my colleagues around the nation and see what they've all been up to. The new information often gives me new ideas to research and helps me develop more informational extension presentations heading into turf conference and education season. While the scientific conference covers all areas of turfgrass science, golf research is popular thanks to the ample support of the GCSAA chapters (like the WGCSA), state associations (like the WTA), and the USGA. Below I have highlighted some of the projects I felt Wisconsin golf turf managers could benefit from most.

### **Influence of Height of Cut and Mowing Frequency on Ball Roll Distance and Turfgrass Quality**

Dr. John Kaminski and graduate student Timothy Lulis studied how mowing height and frequency affected green speeds on bentgrass and Poa greens. They mowed at 0.115, 0.100, or 0.085 and



The turf plots at the O.J. Noer Research Center in Verona are valuable to researchers and turf managers.

either single cut, double cut, or quadruple cut (researchers love overkill!). Their findings were somewhat expected but a good reminder of the tradeoffs between plant health and green speed. In most cases mowing at 0.085 resulted in increases in green speed in the 15% range over mowing at 0.115. In fact, the difference in green speed on bentgrass between the highest and lowest mowing heights was only statistically relevant on less than half of the days the researchers measured it. However, the grass mowed lower resulted in up to a 25% reduction in turf quality. Turf quality decreased even more as frequency of cutting increased. My take away is that you are better off mowing at a higher height of cut for the sake of plant health, and trying to squeeze the extra 15% speed by doing things like increasing rolling frequency (more on that later). Worst case is that the golfers will have to swing their putter a little harder on your green grass, rather than a soft tap on soon to be brown grass.

### **Fall Applications of Nitrogen and Potassium and Their Effect on Winter Hardiness of Annual Bluegrass**

I've spent a lot of time and energy studying fall applied fertilizer at UW-Madison, so obviously this presentation caught my eye. My work has only been on bentgrass, which is a problem for the superintendents in the state who are growing mostly Poa. I've relied on the work at Rutgers University for recommendations on how to apply K to Poa systems. The Rutgers works suggests that keeping tissue potassium above 2% is best for optimum tolerance to anthracnose and ice damage to annual bluegrass. Katie Dodson and co-workers at Olds College in Alberta are also studying how N and K tissue levels affect the cold tolerance of annual bluegrass. Their findings suggest that tissue levels of 2.5 – 3% nitrogen and 2.25 – 2.75% potassium will result in optimum for cold tolerance of Poa. They found that going above or below these levels would decrease cold tolerance. I am happy to see more researchers working in this area and am hopeful that we are close to really fine-tuning a sound approach to K management on bent and Poa systems. Bentgrass appears to be quite different. I have not had success getting bentgrass potassium levels greater than 2% even when I apply over 1 pound of potassium fertilizer every month. We have yet to see any differences in cold tolerance of bentgrass, which is famously hardy.



DEPARTMENT OF  
SOIL SCIENCE  
University of Wisconsin-Madison



# WISCONSIN SOILS REPORT

## Changes in Turfgrass Crown Membrane Fatty Acid Ratios in Response to Chemical Applications and Ice Stress within Annual Bluegrass Putting Green Species

Speaking of cold tolerance, Dr. Emily Merowitz and co-workers at Michigan State are looking at the physiology of ice damage on annual bluegrass – an obviously important topic in Michigan and Wisconsin alike. They found that fall applications of Civitas One, Embark, and Trimmit resulted in more polyunsaturated fatty acids in the annual bluegrass compared to the non-treated control and Primo Maxx treated grass. The chemical treatments with higher polyunsaturated fatty acids exhibited greater regrowth from ice damage, with Civitas One treated grass having the greatest regrowth. While this is far from a clear solution on how to minimize or prevent ice damage, I am interested to see how this line of work progresses in coming years. Perhaps we will be managing our potassium content and polyunsaturated fatty acids more precisely in years to come.


## Iron-Cemented Layers Form at Soil Eh and pH Boundaries

Glen Obear and his advisor Dr. Bill Kreuser have advanced our understanding of the iron layer that Glen began studying here at UW-Madison. It appears that the layer is much more likely to occur when iron is applied to acidic sand root zones sitting on top of high pH gravel layers. In fact, he showed a time lapse video showing the formation of iron layer in a 48 hour period when an acid sand on top of a high pH gravel. When iron was applied to acid sand over acid gravel the applied iron drained through without forming a layer. I imagine Glen's work will eventually lead to changes in the

way root zones are specified in the future.

## Rolling and Dew Removal Effects on Dollar Spot Disease of Creeping Bentgrass

Graduate student Kyle Genova and his advisors at Rutgers Dr. Bruce Clarke and Dr. Jim Murphy are building on the findings from Michigan State regarding the impact of rolling on dollar spot. The Rutgers scientists rolled either in the AM or PM and either 3x or 6x per week. They found that the AM rolling could reduce dollar spot pressure by up to 50%. However, PM rolling had little impact. Rolling 3x per week was often as effective as 6x per week. They also included a treatment that removed dew (via a fabric) without rolling. That dew removal treatment was as effective as morning rolling for reducing dollar spot. While this was a putting green study, it is a good reminder of the potential value of dragging fairways for saving costs and reducing fungicide applications for dollar spot. Couple the dragging with an occasional iron sulfate application (2 to 3 oz/1000 sq. ft.) and I think you'll find you reduce fungicide applications for dollar spot.

These are just five of the more than 100 studies that were on parade in Phoenix. Ron Townsend represented UW well with his presentation on how nitrogen rate and source affects dollar spot and I had the opportunity to present our findings about how potassium fertilization affects pink snow mold pressure. Again, many of these studies and advances in turfgrass science would not be possible without the support of associations like the WGCSA. I hope you are able to find returns on the investments you've made over the years! 

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## STUDENT ARTICLE

# Creating Growing Degree Models For Commonly Used Plant Growth Regulators

By Benjamin Henke, Graduate Student, UW-Madison, Department of Soil Sciences

**EDITORS NOTE:** *This submitted article is eligible for the Monroe Miller Literary Scholarship, awarded each year to the author of a selected article.*

*Benjamin Henke is a first year graduate student under Dr. Doug Soldat in the Soil Science Department at the University of Wisconsin-Madison. Benjamin received his bachelor's degree from Iowa State University in Horticulture with an emphasis on Turfgrass Management. Being a sports fan his whole life, Henke wanted to learn more on how to maintain these fields/courses and how to properly manage them.*

I am a graduate student at the University of Wisconsin-Madison in the Department Soil Sciences working under Dr. Doug Soldat. This past summer, I initiated a research project to see if we could create growing degree models (GDD) for determining the best re-application

interval on common plant growth regulators (PGRs) applied to fairways. This research will be beneficial to professional turfgrass managers because it provides a more accurate way to apply these products effectively, allowing for potential cost savings along with information about which growth regulator is best for their particular needs. Dr. Bill Kreuser, a former graduate student at the University of Wisconsin-Madison, found that GDD models can be used to determine when to re-apply Primo Maxx (trinexapac-ethyl) on creeping bentgrass putting greens (Kreuser et al., 2011). He was able to create a GDD model that was effective in predicting a more precise interval application because metabolism of PGR active ingredients has been found to be directly related to air temperature (Beasley and Branham, 2005). Interest in this kind of model began because following

the metabolism of active ingredients of PGRs, turfgrasses have resulted in a post inhibition growth known as the "rebound phase" (Lickfeldt et al., 2001). GDD models can predict when this phase will occur as well as providing a more precise application interval to maintain suppression through the growing season (Kreuser et al., 2011).

The purpose of my study was to investigate if a GDD model could be developed on various PGRs on fairway turf, see how different application rates affected the performance of the different PGRs, and to determine if an ideal GDD interval can be identified for each PGR. These tests were conducted on research plots maintained similarly to a creeping bentgrass fairway and a Kentucky bluegrass fairway. These two types of turf were chosen because they are widely used within the turf industry in cool season environments.

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## Materials and Methods

The study was conducted on a Kentucky bluegrass fairway mowed at 1 inch on a silt loam soil and a creeping bentgrass fairway cut at 0.5 inch on a silt loam soil at the O.J. Noer Turfgrass Research Station in Verona, WI. Plots were watered twice a week to avoid drought stress. The study was a randomized block design with three replications of each product plus a non-treated control. Applications were made at the beginning of June, July, and August with no re-application interval. Application rates are shown on **Table 1**. Growing degree days were calculated using a 0° C model, which requires summing the daily average air temperature in Celsius starting with application day. Daily average air temperatures were collected from an on-site weather station.

Grass clippings were collected once a week by mowing down the center of each plot using a walking reel mower. The clippings were washed of any debris, dried and then weighed. We then calculated how the PGRs influenced growth by comparing the treated plots to the control. This was done by dividing the clipping mass of the treated plots by the clipping mass of the control plots. A value less than one indicted suppressive growth while values greater than one indicated rebound growth. Values close to one mean that growth is similar to the non-treated control.

## Results and Discussion

As we recently concluded our first year of field testing, there has been some interesting observations made. Our creeping bentgrass fairway responded much better to PGRs than did our Kentucky bluegrass fairway, which was surprising. We hypothesized that the Kentucky bluegrass would have had much more suppression than what was observed. When we applied PGRs at the high end of label rates, it resulted (generally) in greater percent suppression as well as delaying the rebound phase compared to the low end label rates. Let us now look more closely at each of our two types of turfgrasses and their respective trends.

Looking at our bentgrass fairway test results (**Table 2**), all but one product showed more than 50% maximum suppression, with Anuew and Primo Maxx showing up to 80% max suppression at the high application rate. **Figure 1** shows the growth pattern of Primo Maxx at high end rate. All products typically showed maximum suppression within 200 and 300 GDD, respectively. The rebound phase began between 500 and 700 GDD with all products, respectively. **Table 2** shows the suggested re-application interval for each product. Plots treated with the higher application rates resulted

**Table 1: Active ingredients and the application rate for each product tested.**

Plant Growth Regulator	Active Ingredients	Creeping bentgrass Fairway Rates oz/A	Kentucky Bluegrass Fairway Rates oz/A
Anuew	prohexadione-calcium	7	15
Anuew	prohexadione-calcium	15	24
Cutless MEC	flurprimidol	25	25
Cutless MEC	flurprimidol	49	49
Legacy	flurprimidol	10	10
Legacy	flurprimidol trinexapac-ethyl	20	30
Musketeer	flurprimidol paclobutrazol trinexapac-ethyl	18	18
Musketeer	flurprimidol paclobutrazol trinexapac-ethyl	30	30
Primo MAXX	trinexapac-ethyl	11	11
Primo MAXX	trinexapac-ethyl	33	33
Trimmit 2SC	paclobutrazol	16	16
Trimmit 2SC	paclobutrazol	32	32

**Table 2: Average of June, July, and August peak suppression and re-application interval in GDD**

Plant Growth Regulator	Active Ingredients	Creeping bentgrass fairway suggested re-application interval and maximum suppression	Kentucky bluegrass fairway suggested re-application interval and maximum suppression
Anuew Low Label Rate	prohexadione-calcium	300 GDD 70%	290 GDD 48%
Anuew High Label Rate	prohexadione-calcium	370 GDD 80%	200 GDD 48%
Cutless MEC Low Label Rate	flurprimidol	340 GDD 36%	60 GDD 18%
Cutless MEC High Label Rate	flurprimidol	350 GDD 53%	80 GDD 23 %
Legacy Low Label Rate	flurprimidol trinexapac-ethyl	260 GDD 65%	190 GDD 27%
Legacy High Label Rate	flurprimidol and trinexapac-ethyl	320 GDD 64%	300 GDD 62%
Musketeer Low Label Rate	flurprimidol paclobutrazol trinexapac-ethyl	340 GDD 50%	190 GDD 25%
Musketeer High Label Rate	flurprimidol paclobutrazol trinexapac-ethyl	330 GDD 65%	300 GDD 30%
Primo MAXX Low Label Rate	trinexapac-ethyl	250 GDD 66%	260 GDD 40%
Primo MAXX High Label Rate	trinexapac-ethyl	370 GDD 87%	410 GDD 63%
Trimmit 2SC Low Label Rate	paclobutrazol	380 GDD 66%	330 GDD 21%
Trimmit 2SC High Label Rate	paclobutrazol	410 GDD 77%	310 GDD 52%

in a longer time period until the rebound phase occurred compared to the lower rates.

Looking at our Kentucky bluegrass fairway test results (**Table 2**), only three products gave at least 50% maximum suppression. This was only achieved at the higher application rates, Anuew was unique as the lower rate showed similar results as the higher rate (each about 50% suppression). **Figure 2** shows the growth pattern of Anuew at the low end rate and **Figure 3** shows the growth pattern at the high end rate.



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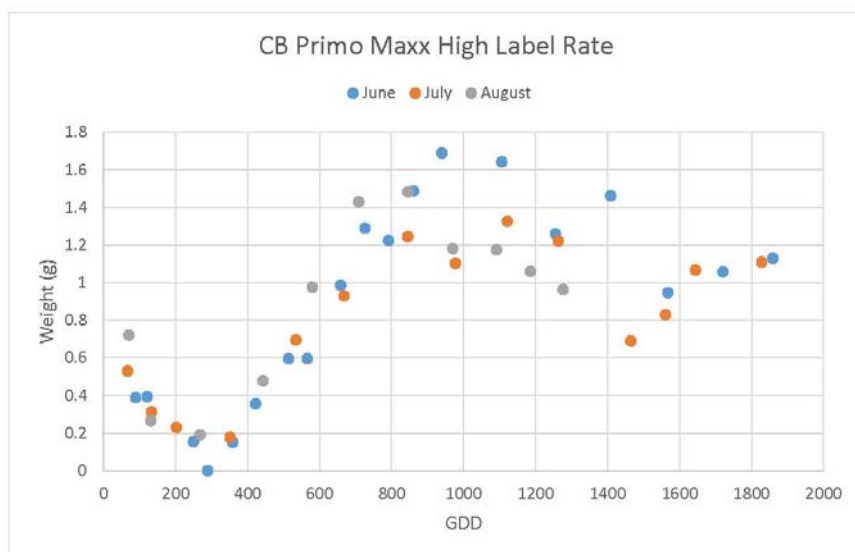


Figure 1: Growth pattern of creeping bentgrass fairway from Primo Maxx at the high end label rate

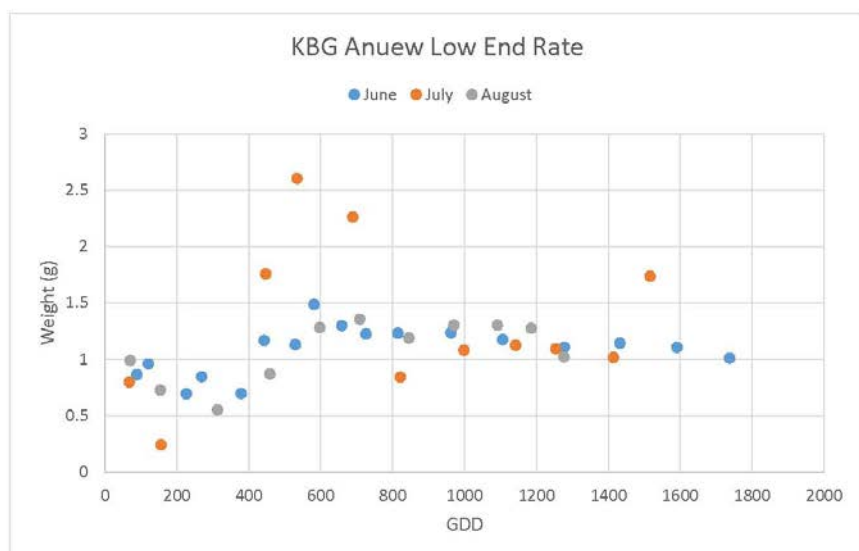


Figure 2: Growth pattern of Kentucky bluegrass fairway from Anuew at the low end label rate

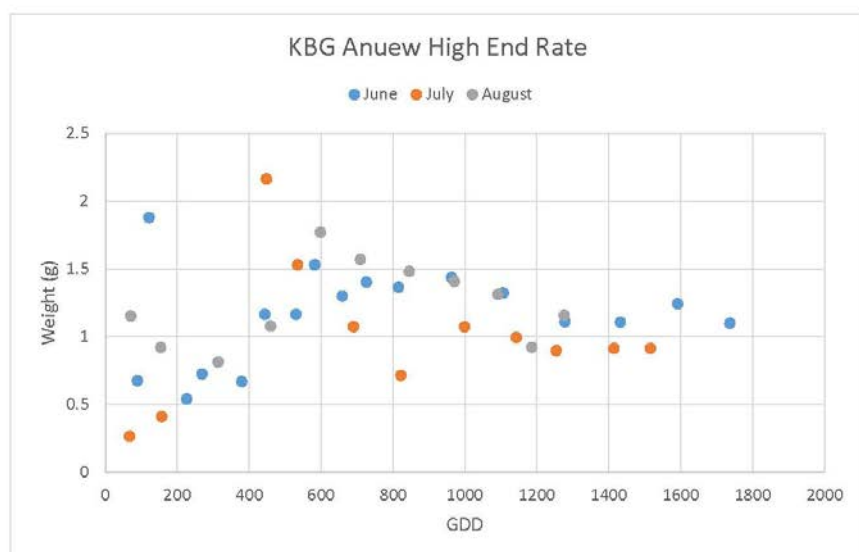



Figure 3: Growth pattern of Kentucky bluegrass fairway from Anuew at the high end label rate

Maximum growth suppression and the time at which the rebound phase began showed variability within all the treatments and a general range couldn't be identified (Table 2 shows the suggested re-application interval for each product). As stated earlier, this was surprising to find that low mow Kentucky bluegrass responded poorly to PGR applications because other studies have observed higher rates of suppression albeit at higher mowing heights. It appears that mowing height as a strong effect on PGR efficacy. Overall, products containing the active ingredient flurprimidol showed less suppression than did the other active ingredients with the exception of Legacy applied at the high application rate on our Kentucky bluegrass fairway.

### Conclusion and Summary

These results should be useful for selecting products, rates and re-application intervals for creeping bentgrass and Kentucky bluegrass fairways. In general, using the high end rates of the label result in greater suppression with a longer re-application interval. This is quite different than what the research on PGRs on bentgrass greens found, where application rates of Primo Maxx had a negligible effect on suppression and re-application interval. Superintendents managing Kentucky bluegrass should be more careful with product selection in order to obtain their desired goal. From this research, I hope to further explore why low mowing heights appear to cause turfgrasses to respond less to PGR applications. 

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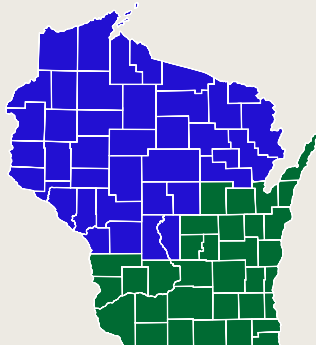
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# **RAIN** **BIRD**®



## MEMBER SPOTLIGHT

### Tony Hudzinski & Ben Larsen

By Josh Lepine, Certified Golf Course Superintendent, Maple Bluff Country Club

*NOTE: As a WGCSA Board member, I want to thank everyone who participated in the Membership survey this past fall. The information and feedback obtained was invaluable. The requests for more member spotlight stories inspired me to start this column. I hope to randomly highlight a few members each edition from all geographic areas, facility types and membership classifications. It may take me 20 years to get to everyone in the directory but please be ready for that phone to ring and be prepared to share stories, photos and information about YOU!*

Name: **Tony Hudzinski**

Company Position: **Director of Grounds at The Oaks GC, Cottage Grove, WI**

Years as WGCSA Member: **13**

Membership Classification: **B**

#### **18 holes with Tony Hudzinski:**

**1. How did you get started in the turfgrass industry?** As a kid I loved to golf but could not afford to play very often. As soon as I got my driver's license I called every course in a 20 mile radius looking for a grounds crew position. I was hired at Dell View GC in Lake Delton, WI (Wilderness/Wild Rock now) and never looked back. I played every day that summer and regularly shot par. I doubt if my game will ever reach that level again. A couple years into attending the UW-Baraboo campus with no real career direction I found out that I could get a degree in Turf Management at UW-Madison and it seemed like a no-brainer to pursue that.

**2. What is the most rewarding part of your career?** I'm an avid outdoorsman so being outside when the weather is just perfect reminds me every time that I'm in the right spot.

**3. What would you consider to be your greatest career challenge?** Sticking with this line of work in general has been tough. With the economy collapsing shortly after I finished college in December 2004 the Superintendent job openings disappeared. I spent 12 years as an assistant super at Stoughton Country Club instead of the 3-5 years I would have expected upon graduation.

**4. Which three adjectives describes you the best?** Funny, Handsome, Humble

**5. Tell us about your family.** I've been married to April for 7 years, we have a 3 year old daughter, Lucy, and a 1 year old son, Anthony III (whom we call Tiger - and not because of Mr Woods)

**6. Any pets?** We have a golden retriever named Riley, a yellow lab named Walter and a red-eared slider turtle named Tatt (because it looks like his under-side is tattooed). I highly recommend the turtle for a low-maintenance pet if your kids are bugging you to get something. We sometimes forget about him for weeks at a time yet he thrives.



**Tony Hudzinski, wife: April Hudzinski, 3 year old daughter Lucy and 1 year old son Anthony III (nicknamed Tiger- and not because of Mr. Woods.) Family photo at the bar they recently sold. "The barn wood behind us is from my dad's family farm."**

**7. What drives/motivates you every day?** At the golf course I want to create an environment I'd be proud to have my friends/family play on a daily basis.

**8. Who Would You Admire?** Anyone that finds a way to make a living doing what they love to do.

**9. Who is the person in history you'd most like to meet?** Chris Farley.

**10. What's a fun fact that people don't know about you?** My wife and I owned/operated a bar for the past 5 years which we just recently sold. We also Dj'd weddings before buying the bar.

**11. What do you do in your spare time, favorite hobbies?** Bow-hunting and ice fishing are always on my mind.

**12. If you could go anywhere in the world on vacation, where would you go?** I've always wanted to tour Europe.

**13. What is the one thing you would like to learn/accomplish someday?** I'd like to learn mixed martial arts though I'm probably better suited for sumo.

## MEMBER SPOTLIGHT

**14. What is your favorite turf management related tool or technique?** I'll never forget the day I figured out that a cordless reciprocating saw makes a fine substitute for a hand saw when cutting irrigation pipe.

**15. Favorites:**

**TV Show:** Eastbound and Down.

**Movie:** The Big Lebowski.

**Food:** Double Porterhouse.

**Sports Teams:** Packers, Badgers and even the Brewers.

**16. Do you golf? Handicap? Best shot or golf story?** I try to golf but it's tough to find time with two little kids at home. I'm an 18 handicap and my best shot was probably a near hole-in-one on the short par 4 7th at Stoughton Country Club. I hit a 3 wood with a perfect draw over the hill and could see by the dew on the un-mowed green that my ball rolled by the hole within an inch. I missed the 12 foot eagle putt.

**17. Top Bucket List Item?** I'd like to bowhunt elk in the Rocky Mountains.

**18. If you could provide one piece of professional advice, what would it be?** Keep it simple, It is easy to over-think this grass growing thing.



Tony and April at the Wilderness in the Dells while deejaying their brother in law's wedding.



Golden Retriever named Riley, Yellow Lab named Walter. Picture taken at Stoughton Country Club. Tony would take them to work for exercise during the shoulder seasons but in his words, "the lazy bums demanded to ride in the cart."



"My 'spider style' green reading pic was taken by a buddy at Stoughton Country Club years ago. I may have gotten stuck in that position for a few minutes."

### LAUGHTER ON THE LINKS!

*A friend of Henry's dies suddenly. A week later, he comes back to tell his friend how great Heaven is.*

*"Henry," he says, "you won't believe it, but there is golf in Heaven."*

*"That is wonderful!" Henry replies.*

*"Don't be so thrilled," his friend tells him. "You have a tee-off time scheduled for Saturday."*

\*\*\*\*\*

*A Baptist pastor decides to play hooky on a Sunday to play golf. He's playing the best golf of his life when an angel asks God, "Are you going to let this slide? Do something!"*

*So God says, "Watch this."*

*The pastor hits a 425-yard tee shot and the ball goes in the hole for a double eagle.*

*The angel asks, "Why did you reward him?"*

*God says, "Who is he gonna tell?"*



# MEMBER SPOTLIGHT

*NOTE: As a WGCSA Board member, I want to thank everyone who participated in the Membership survey this past fall. The information and feedback obtained was invaluable. The requests for more member spotlight stories inspired me to start this column. I hope to randomly highlight a few members each edition from all geographic areas, facility types and membership classifications. It may take me 20 years to get to everyone in the directory but please be ready for that phone to ring and be prepared to share stories, photos and information about YOU!*

Name: **Ben Larsen**

Company Position: **Golf Course Superintendent, Green Bay Country Club**

Years as WGCSA Member: **1.5**

Membership Classification: **B**

## 18 holes with Ben Larsen:

**1. How did you get started in the turfgrass industry?** A family friend, Rick Kroeger, owned a golf course and was also the Superintendent. Prior to opening the course, he had asked me to work on the crew and help build the golf course. After opening the course, and working there for a few years, he asked if I wanted to go into the industry professionally; the rest is history.

**2. What is the most rewarding part of your career?** Seeing positive changes, both long and short term, which the Grounds Crew and I have made to the course and club.

**3. What would you consider to be your greatest career challenge?** Various changes in weather from year to year

**4. Which three adjectives describes you the best?** Efficient, Patient & Focused.

**5. Tell us about your family.** I have been married to my wife, Jen, for 9.5 years. We have a daughter, Gwen, who is 4 and a son on the way, Owen.

**6. Any pets?** No Pets.

**7. What drives/motivates you every day?** The chase for perfection.

**8. Who Would You Admire?** Current and/or past Superintendents that have helped positively change the perception of our industry

**9. Who is the person in history you'd most like to meet?** Bruce Lee

**10. What's a fun fact that people don't know about you?** I'm a second degree black belt



**Ben with his wife Jen and daughter Gwen at Easter**

**11. What do you do in your spare time, favorite hobbies?** Workout, read, play golf and most of all spend time with my family.

**12. If you could go anywhere in the world on vacation, where would you go?** Stockholm, Sweden. The motherland

**13. What is the one thing you would like to learn/accomplish someday?** Become a Certified Golf Course Superintendent

**14. What is your favorite turf management related tool or technique?** Spectrum TDR

**15. Favorites:**

**TV Show:** Seinfeld.

**Movie:** Fight Club.

**Food:** Any kind of breakfast food.

**Sports Teams:** Green Bay Packers and Chicago Cubs.

**16. Do you golf? Handicap? Best shot or golf story?** Yes, 7.2. My Dad and I were playing golf at his club and we each eagled a hole during the same round.

**17. Top Bucket List Item?** Invent something and patent it.

**18. If you could provide one piece of professional advice, what would it be?** Best piece of advice given to me, "Being a Superintendent is 25% turf, 25% ornamentals and 50% communication."



## MEMBER SPOTLIGHT



Jen, Gwen and Ben visit Santa Claus



Ben with his wife Jen at a friends wedding



Jen and Gwen Larsen



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## Chinch Bugs: Biology and Management

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

Chinch bugs are native to North America, they have caused extensive damage to a number of economically important agricultural crops for well over a century. Chinch bugs primarily feed on plants in the Gramineae (grass) family, and are especially important insect pests of small grains including wheat and barley, corn and sorghum, forage grasses and turfgrass!

There are several chinch bug species that occur in the U.S., they include the common chinch bug, *Blissus leucopterus leucopterus*; the hairy chinch bug, *B. leucopterus hirtus*; the southern chinch bug, *B. insularis*; and the western chinch bug, *B. occidentalis*. Of these, the two important chinch bug species in the Great Lakes Region are the common chinch bug and the hairy chinch bug.

Chinch bugs overwinter as adults in protected areas such as thatch. In the spring, adult females feed for a short period, mate and begin laying very small eggs by inserting them into the folds of grass blades or into the thatch, typically from mid-April to June. An individual female can lay up to 200 eggs, the eggs take about 20-30 days to hatch when temperatures are below 70°F and hatch in a few as a week when temperatures are above 80°F. After egg hatch, young chinch bugs (first instars or nymphs) emerge and immediately begin feeding on grass plants by inserting their mouthparts into grass plants (leaf sheaths). Chinch bug nymphs and adults have piercing-sucking mouthparts, they feed on plants by withdrawing plant juices from the crowns, leaf sheaths and stems of host plants. During the feeding process, a salivary toxin is commonly injected into the plant that disrupts the translocation of water and nutrients, resulting in wilt and discoloration of plant tissues. Chinch bugs feed on most cool-season turfgrasses including creeping bentgrass, Kentucky bluegrass, perennial ryegrass and fine-leaf fescues. Chinch bugs have five immature life stages (nymph stage), all of which feed and cause damage. Young nymphs are initially bright red, approximately 1/16 inch long with a distinctive white band across the abdomen, as they grow, develop and mature, their color gradually changes to orange-brown and ultimately to dark brown. Adult chinch bugs are black with reddish-yellow legs, they are about 7/16 inch in length. Females chinch bugs are typically larger and more robust than the males. Chinch bugs (nymphs and adults) are gregarious animals that aggregate and feed on turfgrass plants. There are typically have two generations per year, overwintered adults lay eggs in the spring and the first generation typically matures in 4-6 weeks, usually by mid-July. Second-generation adults begin laying eggs from mid-July through late August completing development and maturing sometime in September or early-October. Late instar nymphs often die before winter, but adults seek out protected areas to overwinter.

Chinch bugs prefer open, sunny areas of turf and infestations usually occur in aggregations rather than being uniformly distributed throughout the turf stand. Feeding damage increases and damaged patches of turf begin to coalesce into large areas of dead or dying turf that does not recover regardless of irrigation or rainfall. Damage is typically most prevalent during hot, dry periods in mid to late summer when the turf is typically experiencing drought stress.

The most practical way to detect and sample chinch bugs is to remove both ends from a 2-pound metal coffee can, press it firmly into the ground in an area with a suspected chinch bug infestation and fill the can with water. Chinch bugs (nymphs and adults) will readily float to the surface after a few minutes. Another method for sampling chinch bug involves removing a small clump or section of grass and vigorously shaking it over a sheet of white paper or into a white porcelain pan. Dislodged chinch bugs can be quickly identified and counted.

Effective management of chinch bugs requires an integrated approach that includes the practice cultural practices to keep turfgrass stands in optimum condition, planting chinch bug resistant cultivars, and when necessary the judicious use of targeted insecticide applications.



**A chinch bug adult on a grass plant.**

Photo Courtesy of: Natalie Hummel, Louisiana State University AgCenter, Bugwood.org

# WISCONSIN ENTOMOLOGY REPORT

Some Kentucky bluegrass cultivars have been identified as having chinch bug resistance, however they are not among the most preferred cultivars as they lack certain aesthetic and management characteristics. Also, certain endophyte-enhanced turfgrasses exhibit high levels of resistance to chinch bugs, unfortunately they are limited to perennial ryegrass, tall fescue and fine fescue.

Insecticides are an effective management tactic to control chinch bugs, they are often the most practical method for mitigating chinch bug damage. Unfortunately, few definitive action (treatment) thresholds have been established for chinch bugs infesting turfgrasses. However, when chinch bugs are present and before extensive damage occurs, insecticides may be warranted. Best results can be attained when contact insecticides are directed against young (1st -3rd instar nymphs). Numerous contact insecticides are effective against chinch bugs, they include synthetic pyrethroids (bifenthrin, cyfluthrin, deltamethrin, lambda-cyha-

lothrins, etc.), chlorpyrifos (golf courses and sod farms only, not registered for lawn and landscape!), carbaryl (Sevin) and acephate (Orthene). Regular chinch bug sampling and monitoring can help pinpoint the optimal time for a treatment application. In areas with a history of chinch bug activity has been reported, the application of systemic insecticides may provide a more reliable and effective management approach. Systemic insecticides include clothianidin, dinotefuran, imidacloprid and thiamethoxam, these products are absorbed by the plant roots and translocated to the mesophyll tissue in the plant where the chinch bug nymphs and adults feed. ✓



Chinch Bug Damage



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## Oh, Henry

By Jake Schneider, LMD Production Manager, The Bruce Company

It must be sign of old age, but lately, I've been having sentimental flashbacks and realizations during the two-hour drive from Madison to my hometown of Hilbert. Most of those moments are related to my formative years in the countryside south of Green Bay.

As some of you know, I was a pseudo-farm kid until getting a grounds crew position at North Shore CC just prior to turning 16. My dad and his four brothers were partners in Schneider Farms, Inc., and at one point, I'm told that they had the largest dairy herd in the state (this was before mega farms existed). As the son of the calf-raiser, I would help my dad with chores such as changing water buckets, feedings, and the obligatory rock picking, but my time on the farm was a relatively cozy existence. My cousins, Luke and Joel, and I spent more time riding big wheels, keeping the cats tame and healthy, and shooting hoops in the haymow than we did performing farm work. Although I'm somewhat of a city slicker now, I wouldn't trade my childhood for anything. In recounting this with my parents a few months back, my mom expressed that she couldn't imagine raising kids without the farm and that my many older cousins had the same growing-up experience.

Due to the size and extra hired help, it was an atypical farm for the times, and we didn't work sunrise to sunset like the Wisconsin family farm that used to dominate our rural landscape. With this came a few more freedoms, and it allowed my dad to attend extracurricular events for my brother, sister, and me. I don't remember him missing a single one of my games, but I

recently found out that this wasn't always the case. My much, much (much) older brother was a darn good high school wrestler, and dad was at work when he had one of his best performances at a big invitational. My dad was torn up over not being there and vowed to not let it happen again. In his retirement, he's been spending quite a bit of time watching his grandkids participate in various activities. Again, it's safe to say that I struck gold with my old man and his beautiful bride (my mom reads these articles, you know).

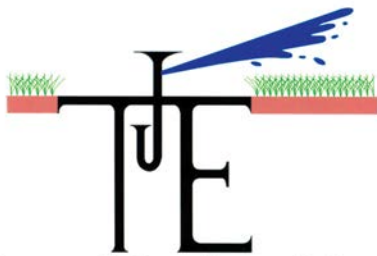
The foundation upon which the aforementioned farm and family was built was the life and love of Henry and Odelia Schneider. Grandma and Grandpa were married for almost 75 (!) years, had eight boys and two girls, 24 grandchildren, and 40 great grandchildren. And, despite occasionally needing nametags to keep track of everyone, we all get along; it's weird. Grandpa and his brother, Bill, built the farm from the ground up and purchased a dozen neighboring farms along the way. Turns out that grandpa was a damn good businessman, and it took me until our final visit to ask the questions that brought out these new-to-me stories. Henry Schneider passed away on November 13, 2016 which was one year and five days after Grandma Odie left us. He was 97 years old and still full of wit and stories.

I was lucky enough to have come along later into Grandpa's retirement that I was able to spend a lot of quality time with him on the waters of Lake Winnebago. After farming for over 40 years, Grandpa transitioned into a full-time fisherman, and from Monday-Saturday, it was not uncommon for him to go to Lake Michigan in the morning and Lake Winnebago in the afternoon. Sunday, of course, was his day of rest. By the time I was old enough to fish with him, Grandpa was mostly sticking to Lake Winnebago, and I happened to be patient and tolerable of eight hours in a boat. Going on a perch fishing trip with my dad, Grandpa, and Grandpa's buddies to Lake Winnibigoshish in Minnesota where yours truly had the hot hand was the highlight.

Henry was a highly social creature who didn't forget a face or a name even in his last years. I'm pretty sure that he knew 75% of the Calumet County's residents. When he wasn't fishing, he was playing Sheepshead, golfing, bowling, telling the same old jokes again and again, or spending time with his family. Grandpa worked hard, played harder, and loved unrelentingly. He set the example for his family to follow. I'm going to miss him like crazy.

During this holiday season, take stock of those closest to you—friends, family, co-workers—cherish time spent with them, get to know them better, and never take them for granted. ✓

**During this holiday season, take stock of those closest to you—friends, family, co-workers—cherish time spent with them, get to know them better, and never take them for granted.**



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## O.J. Noer Team Ready For Winter

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

Another year is in the books. The old saying goes “if you don’t like the weather in Wisconsin, just wait it will change.” In 2016 that was not the case, at least at the O.J. Noer Facility, it rained and then rained some more. At last count we were 14 inches over normal. The rain caused many issues all over the Midwest, courses closed for days, no cart revenue, thinning turf due to saturated soils and lack of oxygen, basal antracnose due to wet profiles and poor drainage, missed topdressing on greens, and a very grumpy staff just to name a few side effects to all the moisture.

Dr. Koch continues to remind us, Microdochium Patch thrives under periods of moist soils. With all the rain and lack of actual drying weather, several facilities may head into winter with soils at field capacity. Here at the Noer, we have a few places on property that are still almost too wet to mow. Additionally, as of this writing, there are some areas still growing and in need of one more mowing. As long as we do not get significant rain these areas should have received the last mowing.

In the real world, these weather related situations are all damaging events, but when you manage the TDL, they are regarded differently. As the year spun out of control the samples just kept pouring into the TDL. As this year winds down, the TDL had another very busy year and set another record for sample submissions. A few days this summer I began to contemplate how Paul Koch (Not a Dr. yet) managed the lab and fungicide trial plots while completing his PHD (kudos Dr. Koch). How did Steve Abler run the TDL and conduct research? When I have said they have been a hard act to follow, this year it became very evident how hard it is to follow in their footsteps.

By the time you read this article all the Plant Pathology Snow Mold projects will have been sprayed and put to bed. Dr. Koch remains the leader in Snow Mold Research with possibly the largest

snow mold research trials in the world. Here is a list of the snow mold projects Dr. Koch is conducting this year:

### Snow Mold Timing Study

- O.J. Noer Center, Verona, WI
- Greenwood Hills Country Club, Wausau, WI
- Timber Ridge Golf Course, Minocqua, WI

### Snow Mold Product Trials

- Marquette Golf Club, Marquette, MI
- Wausau Country Club, Wausau, WI
- Cherokee Country Club, Madison, WI

### Microdochium Trial,

- O.J. Noer Center, Verona, WI

### Microdochium Trial on Sports Turf and Residential Turf

- Wausau West High School, Wausau, WI

### Snow Mold Incidence of Fine Fescues

- Whispering Pines Golf Course, Cadott, WI

It looks like early spring will be very busy collecting data for all these trials. Let’s hope that the snow melts in April and not May.

This year the Koch team has conducted over 25 different research projects at the O.J. Noer and sites throughout the state. The newest addition to the Dr. Koch Team is Kurt Hockmeyer, he has brought many new ideas and processes. It is always good to see and find new and better ways to accomplish the same task. As the old guy change is tough but these new ideas made all our lives much easier and improved our efficiency greatly, THANKS KURT! Needless to say it has been a very busy year. The dollar spot data from the O.J. Noer is very solid this year with heavy dollar spot pressure and some plots that just got devastated (see photo).



**Heavy dollar spot pressure at the O.J. Noer Center provided for excellent research by the UW Team.**





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## TURFGRASS DIAGNOSTIC LAB

By now you have all heard Tom Schwab is retired. We are looking forward to the transition to a new facility manager at O.J. Noer. Tom did an excellent job for over 20 years of organizing the plot maintenance, anticipating all our needs and providing us all with excellent turf for our research. Tom was a behind the scenes unsung hero for most of his career. He took the spotlight twice a year, Summer Field Day at the O.J. Noer Facility and the WTA Fall Golf Outing. When Tom took the stage everything was carried out perfectly. There are countless things Tom did for the turfgrass industry that many of you never knew. That is the kind of distinguished person that Tom is, never worried about getting credit but always worried about others and making things go smoothly. Tom you will be missed but NEVER forgotten.

As December winds down the year we will be tying up loose ends, doing inventory, sending our 2017 TDL Contracts, cleaning the Noer and looking forward to spending some much needed time celebrating the holidays with family and friends. I hope you holidays are filled with joy and relaxation!

Happy Holidays to all!!!! 🌱



Tom Schwab waves goodbye after over 20 years of service as manager of the O.J. Noer Facility. For more on Tom see pages 36 and 37.



Turfgrass Diagnostic Lab  
O. J. Noer Turfgrass Research  
& Education Facility  
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# Turfgrass Research Day Conference & Webinar

**January 10<sup>th</sup>, 2017** at the Pyle Center, 702 Langdon St, Madison, WI

- |               |   |
|---------------|---|
| 8:00am        | Registration  |
| 8:30          | Welcome and Scholarships  |
| 8:45 – 9:30   | <b>Chris Williamson, Ph.D. – University of Wisconsin Madison - Entomology</b><br>Why Don't We Find Japanese Beetle Grubs on Putting Greens?               |
| 9:30 – 10:15  | <b>Dale Sanson, Ph.D. – PBI/Gordon</b><br>Why Do We Need So Many Different Formulation Types in Pest Management?  |
| 10:15 – 10:30 | Break   |
| 10:30 – 11:15 | <b>Doug Soldat, Ph.D. – University of Wisconsin Madison – Soils</b><br>Ultra Slow Growing Bluegrass, Potassium Requirements, and Organic Fertilizers      |
| 11:15 – 12:00 | <b>David Hogg, Ph.D. – University of Wisconsin Madison – Entomology</b><br>Care and Maintenance of Honey Bees   |
| 12:00 – 12:40 | Lunch   |
| 12:45 – 1:30  | <b>Chelsea Gallagher - Bruce Company – Human Resources</b><br>Recruitment, Retention and Human Resources Updates  |
| 1:30 – 2:15   | <b>Paul Koch, Ph.D. – University of Wisconsin Madison – Plant Pathology</b><br>Precision Disease Management; Current Strategies and Future Research Needs |
| 2:15 – 3:00   | <b>Nathan Wolfe – WDATCP - Environmental Enforcement Specialist</b><br>Your EES Agent, Your Best Resource   |



Chris Williamson is a professor of Entomology at the University of Wisconsin-Madison where he is an extension/research entomologist in urban landscape entomology including turfgrass. He received his B.S. and M.S. degrees from the Ohio State University. He received his Ph.D. from the University of Kentucky.



Doug Soldat is an associate professor and turfgrass extension specialist in the Department of Soil Science at the University of Wisconsin-Madison. He advises turfgrass management students at the UW and teaches courses in the fields of turfgrass management and general soil science.



David Hogg accepted a faculty position at the University of Wisconsin-Madison in 1979. During his tenure at Wisconsin, he has served two terms as department chair and has served as executive associate dean and as interim dean of the College of Agricultural and Life Sciences. He is a 40-year member of the Entomological Society of America.



Chelsea Gallagher started as the Human Resources Generalist at The Bruce Company in September 2016. She worked in recruitment for two years in Pennsylvania after graduating with her Bachelor of Arts degree in Communication Studies. She is passionate about creating relationships with potential employees and coming up with new and innovative ways to increase the success of recruitment strategies.



Dale Sanson has been with PBI/Gordon for over 20 years developing formulations for the turf market. This includes consumer and professional markets, which each have particular needs and varying price points. He holds four degrees in the hard sciences and developed analytical skills while doing post-Doctoral studies at the University of Arizona-Tempe.



Paul Koch is an assistant professor in the Department of Plant Pathology as well as the Molecular and Environmental Toxicology Center at the University of Wisconsin-Madison. He joined the faculty in January of 2014. His research has focused primarily on fungicide breakdown in the environment and snow mold diseases on golf course turfgrass.



Nathan Wolfe is originally from Janesville. He received his B.S. degree in Criminal Justice from Edgewood College. He received his M.S. degree in Criminal Justice from University of Wisconsin-Milwaukee. He is currently with WDATCP in Madison. His territory includes Rock, Green and Lafayette Counties.

Complete the registration form below and mail with payment to:  
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You may also register online by going to [www.wisconsinturfgrassassociation.org](http://www.wisconsinturfgrassassociation.org)  
 You may fax completed forms to 608-845-8162. Registrations must be received by December 30<sup>th</sup>, 2016. Registrations received after December 30<sup>th</sup>, will be an additional \$10 per person.

If you plan on participating in the webinar, make sure your email is included in your registration information. You will be emailed the webinar link by January 5<sup>th</sup>, 2017. We understand that Wisconsin weather can quickly change. If for some reason your plans change and you are unable to attend at the Pyle Center, contact Audra and she will make sure you get the webinar code.



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If you have any questions, contact Audra at [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu) or 608-845-6536. Registrations must be received by December 30<sup>th</sup>, 2016.



## 2016 Chapter Delegates Meeting

By Josh Lepine, Certified Golf Course Superintendent, Maple Bluff Country Club

The GCSAA Board, 2017 board candidates and 82 delegates representing 84 of the GCSAA's 98 affiliated chapters, met at the Hilton Kansas City Hotel and GCSAA headquarters on October 11-12, for the 24th annual Chapter Delegates Meeting. The Chapter Delegates Meeting is an event that brings together representatives from GCSAA-affiliated chapters. Delegates carry the opinions of their chapter's members regarding initiatives and issues affecting the profession, the association and its members. I want to thank the WGCSA board and members for the opportunity to attend. As a Delegate, I am responsible for communicating information I receive at the meeting to our chapter.

Finally, this meeting is also the beginning of a new election year, as delegates get the opportunity to meet GCSAA board candidates and discuss their campaign platforms. We should all be proud that one of our own members and past Presidents, Mr. Jeff Millies, CGCS is a 2017 GCSAA Board of Directors candidate. The WGCSA supports Jeff in this honorable endeavor.

The following is a compilation of the key meeting outcomes provided by GCSAA.

### PRESIDENTS BRIEFING

GCSAA President Peter Grass, CGCS focused his presentation on GCSAA's 90th anniversary. President Grass shared that the founding principles established by those charter members still holds true today. Education, fraternity and a willingness to help one another is why GCSAA was founded and are still core attributes.

President Grass shared GCSAA's strategic framework to ensure a successful association for another 90 years.

- The Mission – GCSAA is dedicated to serving its members, advancing their profession and enhancing the enjoyment, growth and vitality of the game of golf.
- The Vision- GCSAA is the global leader in golf course management.
- Strategic Priorities- Serving members, advancing the profession, increasing strategic partnerships/opportunities, advocacy and outreach and environmental stewardship.

### CEO BRIEFING:

#### GCSAA BUSINESS UPDATE

Mr. Rhett Evans, CEO gave the attendees a brief business update focused on GCSAA's financial priorities and membership numbers. Financially, GCSAA is on solid footing and uses the strategic framework of mission, vision and strategic priorities to align expenditures. Priority is given to areas such as field staff, advocacy and outreach, research and environmental programs. Mr. Evans advised that the Golf Industry Show, the association's largest revenue generator, is on track to have a successful year.

### CPI DUES PROCESS

GCSAA has a long-term membership dues pricing structure that ties increases to the Consumer Price Index (CPI). The process is not automatic and the membership must vote to approve the in-

crease. The GCSAA Board makes a recommendation to the membership on changes to A, B or C membership dues every two years based on the CPI. The CPI increased by 1.2% over the past two years and this translates to a proposed \$5 dues increase for A, B and C members.

This proposed increase will be voted on at the Annual Meeting on February 9th, 2017. If passed the new dues would be:

- Class A- \$380
- Class B- \$380
- Class C- \$195

The second item discussed with the delegates centered on a proposed bylaw change allowing the board to recommend discounted membership dues for potential growth initiatives in the A, B and C membership classifications. The Bylaws would change to stipulate that annual dues for Classes A, B and C shall "not exceed" the sum fixed at any annual meeting of the Association. This would allow flexibility to offer introductory, reduced membership dues for new members or other entities.

### POLITICAL ACTION COMMITTEE

GCSAA is investigating the possibility of resurrecting a GCSAA Political Action Committee (PAC) to further its advocacy efforts on behalf of the membership and remain the leader in advocacy for the golf industry. GCSAA stressed that if a PAC were started the money distributed would be to aid champions of policies that advance GCSAA's priorities from the GCSAA Priority Issue Agenda, not a particular person or party. Staff will provide additional educational materials to each chapter before year end to help gauge the level of interest. Please contact Chava McKeel if you have questions about a PAC at 800 472-7878 or cmckeel@gcsaa.org. Your comments will be vital to shape the direction of this initiative.

### MEMBER ENGAGEMENT THROUGH COMMITTEES AND TASK GROUPS

Delegates learned more about GCSAA's committee and task group process. GCSAA is asking you to spread the word that they are looking for volunteers. The Call for Volunteers for 2017 is open. More information is available on the GCSAA website or call GCSAA at 800-472-7878.

### MEMBERSHIP GROWTH

GCSAA has a renewed focus on membership growth and value and has set a goal to reach 20,000 members by 2020. The current membership total in 2016 is 17,194. Delegates were presented with several different membership growth initiatives, including ideas to partner with affiliated chapters. GCSAA is dedicated to growing membership and created a new position that will be focused on membership growth. Shelia Finney is the new Senior Director, Member Programs and is available to assist chapters with growth strategies.

## ROUNDS FOR RESEARCH

Since 2012, more than 50 GCSAA Chapters and turfgrass organizations have helped raise over \$435,000 for research, advocacy and education throughout the US and Canada. The program experienced a \$52,000 increase in proceeds over 2015 totals. 80% of the funds generated are directed to the chapter for research, education and advocacy.

### Top Fundraisers:

- Carolinas GCSA \$43,909
- Georgia GCSA \$12,921
- Tennessee GCSA \$12,695
- GCSA of New Jersey \$8,024

Individual Wisconsin courses participate in the Rounds for Research program but the WGCSA operates our own successful Par 4 Research program. WGCSA Par 4 Research program raised \$8,500 in 2016 with a grand total of \$65,000 raised for UW Turf Research. 100% of all funds generated are directed to UW Turfgrass Research.

## BEST MANAGEMENT PRACTICES (BMP)

### PLANNING AND TEMPLATE

The delegates were informed about GCSAA's BMP initiative. This initiative is aimed at having a golf-centric BMP program in all 50 states by 2020. GCSAA unveiled portions of its new BMP Planning Guide and online template which can be utilized by chapters creating the state level BMP programs. GCSAA will launch this initiative at the Golf Industry Show, February 4-9, 2017. The planning guide and template have been created to make the process of creating statewide BMP programs easier. Post GIS there will be opportunities for chapter education and training throughout 2017 and 2018. Webcasts will also be provided.

The Golf Centric BMPs are not new. Several states already have them in place and GCSAA has supported many of these efforts through the BMP Outreach Grants. A state BMP is an important tool to defend the industry and the profession using the very means/methodology that regulatory and legislative entities recognize as key to meeting their environmental objectives.



**The Statue of Old Tom Morris greets visitors to GCSAA Headquarters.**



**The Chapter Delegates are all ears for the sessions.**

## CANDIDATE PRESENTATIONS

The candidates for the 2017 GCSAA Board of Directors gave presentations and hosted breakout rooms for the delegates. The delegates were awarded ample time to interact and ask questions of the candidates. Those running for the 2017 GCSAA Board of Directors are:

- For President- Bill H. Maynard, CGCS
- For Vice President- Darren J. Davis, CGCS
- For Secretary/Treasurer-
  - Rafael Barajas, CGCS
  - John R. Fulling Jr., CGCS
- For Director (six members are on the slate for three director positions)
  - Mark F. Jordan, CGCS (Inc)
  - Jeffrey F. Millies, CGCS
  - Kevin P. Sunderman
  - Rory Van Poucke
  - John Walker (Inc)
  - Jeff L. White, CGCS

There are three open director positions, with John R. Fulling Jr, CGCS and Mark F. Jordan, CGCS at the end of their two-year director terms and John Walker completing a one-year appointment. The three director candidates receiving the most votes will be elected to two-year terms.

For the Secretary/Treasurer candidates, if Rafael Barajas, CGCS is elected secretary/treasurer, John R. Fulling Jr., CGCS will have to be nominated from the floor for the position of director, since he is at the end of his two-year term, and the remaining year of Rafael Barajas, CGCS director's term would be filled by an appointment. If John R. Fulling Jr., CGCS is elected Secretary/Treasurer, Rafael Barajas, CGCS will automatically remain on the board as a director for another year.

Kevin Breen, CGCS remains on the board with one year remaining in his two-year term. Peter J. Grass, CGCS will serve on the board for one year as immediate past president. John J. O'Keefe, CGCS retires from the board after serving the last year as immediate past president. ✓

Please contact Josh if you have any questions or concerns.

Josh LePine, CGCS

Maple Bluff Country Club

Treasurer and Chapter Delegate, WGCSA

608 249-3468 office



## This Year, Too, Shall End

By David Brandenburg, Editor, The Grass Roots

After terrific November weather the recent early December cold snap seems abrupt and unforgiving on fingers and ears.

Hopefully you have found some time to get out of the office and relax on vacation or at home. The off season seems to be getting shorter as golfers are eager to keep playing into fall and clubs are happy to redeem the extra revenue.

Although recounts continue it seems the election season is over with President Elect Trump well under way putting together his cabinet. Having a President involved in the golf business cannot be a bad thing and the industry has hopes for less regulation and a reeling in of national WOTUS regulations as control is given back to states.

Trump has shown to be as polarizing of a figure I have ever seen run for office making friends and enemies along the way. It will be a interesting 4 years and hopefully congress makes the most of an opportunity to do good. No matter how you voted we all share the same goal of a great America.

\*\*\*\*\*

2017 should be a exciting year for Wisconsin Golf with three professional golf events visiting us.



The first and largest will be June 15-18 when the United States Golf Association holds the US Open Championship at Erin Hills Golf Club in Erin just south of Hartford. This will be the first time Wisconsin has hosted the Open and the eyes of the golf world will be on the course taken care of by Zachary Reineking and his staff and volunteers.

This year the staff is putting the final touches on the property working on walk paths and raising irrigation heads to match the level of topdressed fairways, greens and tees. The team has also been perfecting mowing and baling of the 140 acres of unmowed fine fescue to avoid the areas being matted with dead material in spring. Using specialized mowers and hay rakes the staff creates over 3,500 bales each fall.

Rather than traditional aerification the course uses both planet air and dry-jet units to provide true putting surfaces throughout the season without sacrificing plant health.



The LPGA will come to Green Bay July 3rd to 9th when Thornberry Creek hosts the Thornberry Creek Classic. Steve Archibald and the staff at Thornberry have had a busy summer with drainage and bunker work along with a new driving range and practice greens.



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## EDITOR'S NOTEBOOK

As we move into winter the crew will continue with tree work and preparing to welcome the worlds best women golfers.

Steve is still looking for volunteers to help during tournament week and can be emailed at [sarchibald@golft Thornberry.com](mailto:sarchibald@golft Thornberry.com).



Phil Davidson and his team will host the 2nd American Family Championship at University Ridge Golf Course in Verona July 19 to 25. Last year the course was in incredible condition and was very well received by the players of this Senior PGA Tour event.

After big crowds turned out for the inaugural event the event will put in more bleachers and concession areas for the fans on the course.

2016 host Steve Stricker will become a player host after turning 50 for the 2017 event and will be joined by Jerry Kelly who turned 50 in November.

\*\*\*\*\*



Jerry Kershasky (left) served as the Golf Course Superintendent at Westmoor for 36 years and Bryan Bergner (Right) served as Jerry's assistant for 6 years and his replacement for 5 years. They took a moment at the recent symposium to take a picture.

Bryan is retiring from Westmoor CC to spend more time with his wife Danielle and son Miles.

Bergner has been a industry leader in the use of technology, social media, bee pods and pollination plants.

He has used the bee pods as a educational tool for tours by members, scout and school groups among others. He also has been a Apiculture resource for many other

golf courses around the country.

Bryan has led by example and mentored inner city kids through the Operation Dream program teaching them job and life skills with work on the golf course.

All this while maintaining one of the states top playing surfaces. Best of luck to you in your future endeavours!

\*\*\*\*\*

Congratulations to The Beloit Club (formerly Beloit Country Club) for being recognized by Golf Inc Magazine for taking 1st place in the Private Club category of most improved golf courses in 2016.

The course was recently purchased by Diane Hendricks owner of ABC Supply and Hendricks Commercial. Hendricks group invested more than \$15 million in the property.

A new clubhouse and pool along with new facilities for cart storage and maintenance were completed.

The golf course was lengthened by 200 yards with all new tee boxes, the bunkers were all replaced and 500 trees were removed.

Brian Digise is the golf course superintendent of the course that opened in 1909. It is great to see an investment in the historical club.

\*\*\*\*\*

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## EDITOR'S NOTEBOOK

GCSAA is taking applications for committee and task group service through January 30. Members can apply online and share their experience and interest in various committees with selections being made in March.

Some assignments require a in person meeting in Lawrence at GCSAA Headquarters but many just meet by webinar or phone. I have found committee service to be rewarding way to learn more about GCSAA and meet members from around the country.

\*\*\*\*\*

Tom Schwab recently retired as Superintendent at the O.J. Noer Turfgrass Research and Education Facility after 22 years of service.

According to an article in the January 1995 *The Grass Roots* by Dr. Frank Rossi Tom grew up on the west side of Madison and had an interesting journey to the turf industry that took him to Utah where he served as a ski bum followed by carpentry work and real estate before enrolling at UW-Madison to study Forestry.

By 1979 Tom was looking for a major that fit him better and Dr. Love guided him towards turf. Tom worked at Sun Prairie Country Club before joining Monroe Miller and the team at Blackhawk Country Club. From there he moved to Fond du Lac to work for Pat Norton at South Hills Country Club before becoming the Golf Course Superintendent at Monroe Country Club.

After 10 years at Monroe the opportunity at the Noer Center presented himself and Tom never looked back.

Although he was still growing grass, serving as superintendent at the Noer Center provided Tom a lot of variety and the opportunity to see research become accepted practice. Instead of hosting golfers Tom hosted educators, students, superintendents and organized educational events, golf fund-raisers and research.

In his retirement Tom has spent some time honing his baby sitting skills and still has his regular 9 hole golf game. Schwab is also looking forward to a scheduled downhill ski trip along with returning to cross country skiing on some of the trails the Madison area has to offer.

Above and right is a picture of Tom as he served on the WGCSA Board of Directors and on page 37 is pictures of Tom through the years as a host, speaker, auctioneer, musician and attendee at many events.

Thank you for your service and best of luck Tom Schwab!

\*\*\*\*\*

Jacobsen is on the move from Charlotte to Augusta GA to be near the EZ GO plant. Jacobsen has been in Charlotte since moving from Racine in 2001.

They are moving into a re-purposed Procter and Gamble facility located on 240 acres.



**The 1993 WGCSA Board Of Directors.**  
**Standing (L to R) Mike Handrich, Tom Schwab, Bruce Worzella, Bill Knight, Mark Kienert, Mike Semler, Joe Kuta.**  
**Seated: (L to R) Scott Schaller, Pat Norton**

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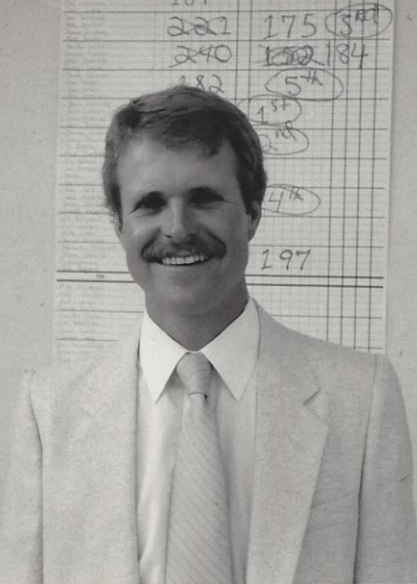
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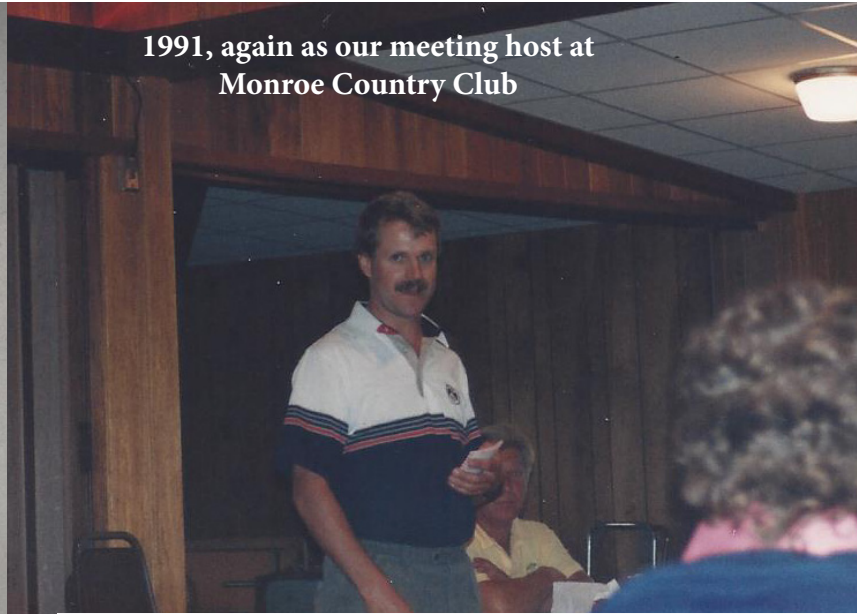


# EDITOR'S NOTEBOOK

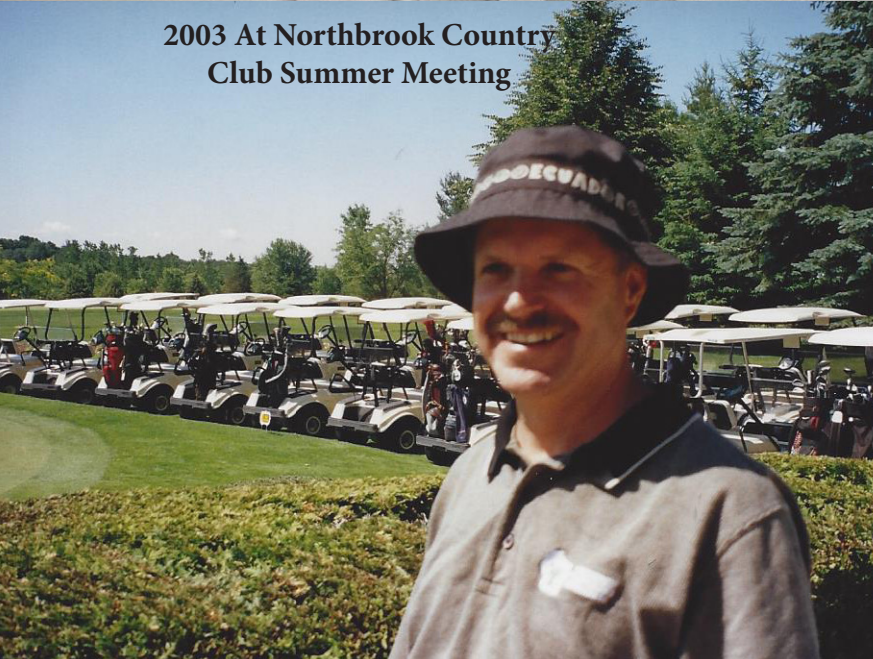
1985 as our meeting host at  
Monroe Country Club



1991, again as our meeting host at  
Monroe Country Club



2003 At Northbrook Country  
Club Summer Meeting



1995 as Auctioneer at the WTA Field Day



1999 Serving As Session Chair At  
The Golf Turf Symposium



2004 fiddling at the PGA  
Championship with his Irish Band





## EDITOR'S NOTEBOOK

The move to Augusta will be done in phases with fabrication making the move first followed by parts and service. During the move Jacobsen branches will be ready for any parts requests to ensure a smooth transition for customers.

\*\*\*\*\*

Congratulations to Horst Distributing of Chilton for reaching 70 years in business. Arthur Horst started the Horst / Miller Co. providing surveying and landscaping services. After a fire the company moved across the street and became Horst Engineering and Equipment Sales selling Ideal Mowers along with Nelson and Rainbird sprinkler equipment. In 1948 Horst became a Jacobsen Dealer and has never looked back.

In 1960 the company moved to its present location and in 1972 the name was changed to Horst Distributing to focus on their business of turf equipment and supplies. In 1974 Arthur Horst retired and John Mortimer who had been with the company since 1953 became President.

John still serves as Chairman of the Board and has been with the company for 63 years. Current President Grant Mortimer joined the company in 1993 and took over for his dad as President in 1995.

Horst is employee owned and features many long time employees including the sales team of Dennis Robinson, Greg Kallenberg, Joe Deschler and Randy Mallmann.

Here is hoping for another 70 years!

\*\*\*\*\*

Milorganite is celebrating 90 years of environmental stewardship as one of the nations oldest and largest recycling program. Nutrients from the areas wastewater are reclaimed using natural process and kiln dried into a environmentally safe fertilizer rather than being disposed in a landfill.

Not only is Milorganite saving landfill space while providing a valuable product they continue to lessen their impact on the environment by using landfill gas to generate the majority of energy needed to process the product.

In the early 1900's Milwaukee's newly developed bio-solids sewerage treatment process resulted in a problem of what to do with the tons of dead microbes. In 1923 the sewerage district established a University of Wisconsin College of Agriculture fellowship, directed by Oyvind Juul (O.J.) Noer, to investigate uses for Milwaukee's nutrient-rich bio-solids. His groundbreaking research determined the product was superior in quality and one-third the cost of manures and single-nutrient chemical fertilizers commonly used at the time. It was the first pelletized, dust-free fertilizer that provided multiple nutrients in a single product.

After experiments demonstrated the product's success as a fertilizer for field crops and vegetables, Noer turned to golf courses and found two distinct advantages of using the product on turf. First, there was no danger of it burning the turf even with over-application. Second, it produced a dark-green, dense turf without causing excessive top growth. As word spread among golf course superintendents across the country, Noer knew the product—soon to be called Milorganite—was commercially viable.

In the mid-1930s, MMSD hired Noer to establish the nation's first soils laboratory solely dedicated to turf grass research. There he pioneered much of the methodology still used in today's labs. His studies are the basis of Milorganite's fertilization recommendations, which have stood the test of time, and fit well with the low-nitrogen fertilization programs commonly used in modern turf management regimes. Milorganite's research remains the benchmark for all university turfgrass research.

Milorganite has been a key supporter of WGCSA and our Golf Turf Symposium. Congratulations to all those involved now and through the years to bring cleaner water to Milwaukee and a superior organic fertilizer product to turf managers.

\*\*\*\*\*

Well here we are at the end of 2016. For me 50 years of life, 21 golf seasons at my current position and 9 years (54 issues) as your editor. It doesn't seem possible for any of those three things.

2017 is just waiting for us to embrace and to enjoy each day the Lord gives us. Best of luck to you, your families and your staffs as we enter the new year with hopes of personal and professional joys and triumphs.

Merry Christmas and Happy New Year! 



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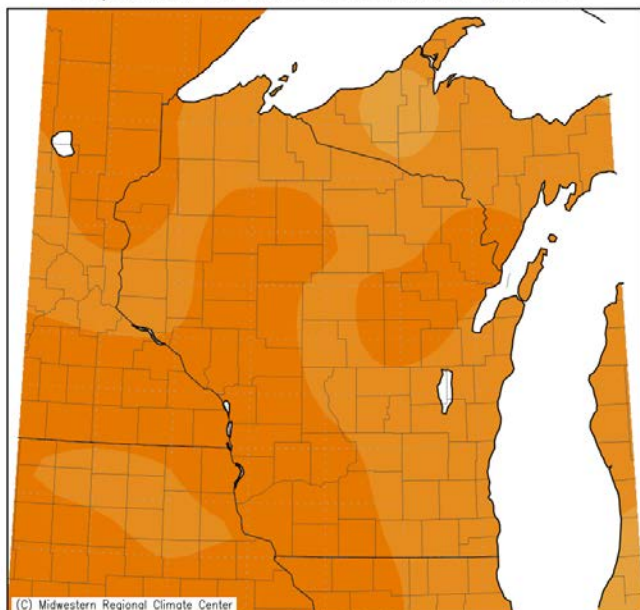
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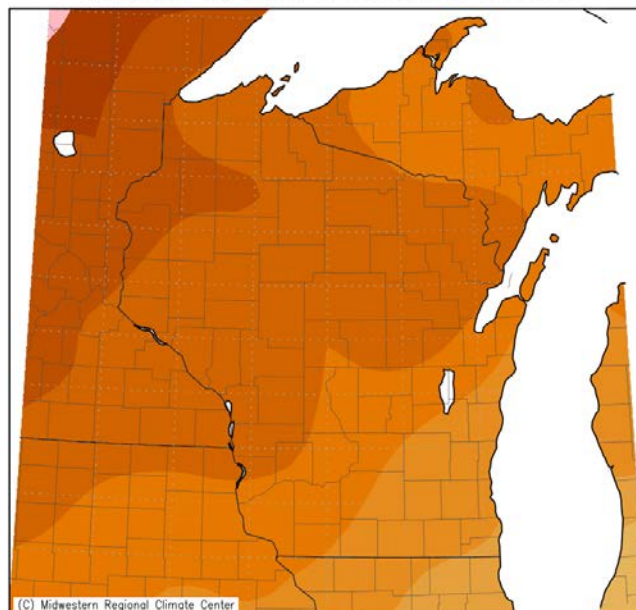
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Average Temperature (°F): Departure from Mean  
September 9, 2016 to December 7, 2016



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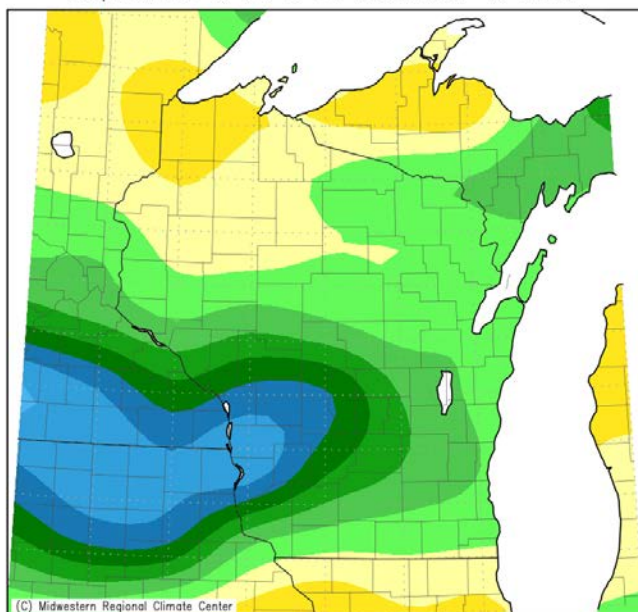
Average Temperature (°F): Departure from Mean  
November 8, 2016 to December 7, 2016



Wisconsin State Climatology Office [www.aos.wisc.edu/~sco](http://www.aos.wisc.edu/~sco)  
University of Wisconsin–Madison [stclim@aos.wisc.edu](mailto:stclim@aos.wisc.edu)

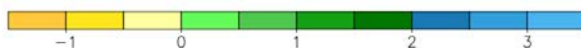
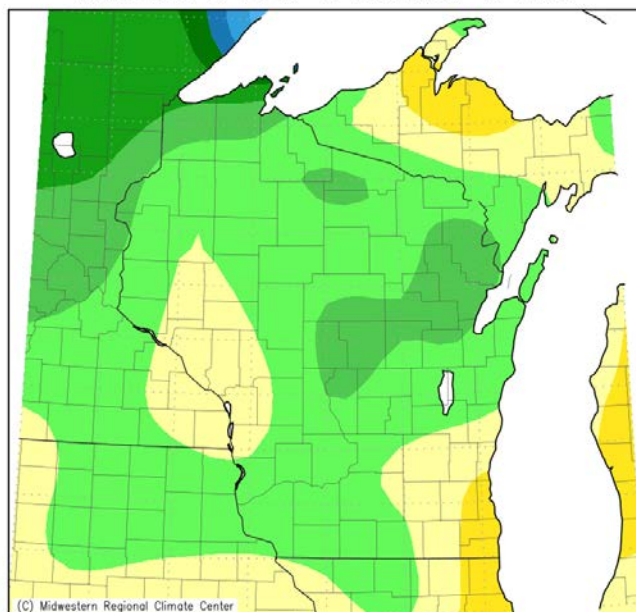
**Warm and wet is what can be summarized from the Wisconsin State Climatology Office 30 and 90 day temperature and precipitation maps. Early forecasts were calling for a cold snowy winter but after a mild November many of us were doubting those forecasts. As of today looking at the 10 and 20 day forecasts it looks as though the golf season is over and it is time to dig out the shovels and ice fishing equipment.**

Accumulated Precipitation (in): Departure from Mean  
September 9, 2016 to December 7, 2016



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Accumulated Precipitation (in): Departure from Mean  
November 8, 2016 to December 7, 2016



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University of Wisconsin–Madison [stclim@aos.wisc.edu](mailto:stclim@aos.wisc.edu)



## 2016 Election and Fall Business Meeting

By David Brandenburg, Editor, The Grass Roots

The first day of the Golf Turf Symposium starts with the WGCSA Fall Business Meeting and Election. I often wish more members would attend this important meeting but it is a clear sign members are pleased with the job the board has been doing.

The meeting was called to order by soon to be Past President Van Herwynen and his outgoing report included thank yous to the members, the board members he has served with and Chapter Manager Grams.

Grams was next to report and discussed his recent activities:

- 7th Annual Par4 Research Auction went well and is a key to the WGCSA research fund-raising. He explained we have a key group of golfers who bid on our golf packages and he hopes we can get a few more courses to participate.
- Brett along with the BOD has complete set of Standard Operating Procedures to ensure continuity from one board to the next.
- Grams attended a Great Lakes Chapter Executives Meeting in Chicago over the summer. It was a good experience to compare notes with similar chapters.
- Gathering information from GCSAA regarding efforts to get all states to adopt BMP's.
- Organized all our monthly meetings, speakers and sponsors through the year.
- Produced the Industry Partners Plan to allow vendors to contribute to the association and support our meetings, education and The Grass Roots.

As we move into winter Brett will be using the SOP's to assist the new board members in their positions.

Brett covered the membership update with reports that our membership levels have been staying consistent for several years and the 2016 records are fully cloud based to allow for easy access by members and himself.

The golf and education meetings are coming together but we do have a couple openings on the calendar below. Please contact Brett if your club can host a meeting or if you have a educational idea or need.

Next up the editor for The Grass Roots asked for 3 things from members:

- Any student article is eligible for the \$1,000 Monroe Miller Literary Scholarship. Encourage your students to write about projects or job experiences.
- We can use more articles by superintendents who do on site research, have a idea or method they want to share or a story on a recent project.

ect.

- Please send updates on new jobs, babies, weddings, construction, irrigation updates and that big fish, buck, bear or hog to the editor.

Mike Bremmer gave the Government Relations update and discussed his trip to Washington in May for the National Golf Day along with work being done by GCSAA on WOTUS, H-2B and overtime rule changes.

Bremmer also discussed the Ambassadors Program and the success we have had reaching out to our Senators and Representatives. We are in need of 4 more Ambassadors to complete our state. Use the map on page 41 to see if you can help.

Chapter Manager Grams then presented the proposed 2017 budget and review of the 2016 budget to date. With the numbers in order the focus changed to our Scholarship and Research history.

### Scholarship and Research

#### S and R History

2003 - \$23,000	2008 - \$38,000	2013 - \$30,875	In last 15 years we have provided over \$450,000 at an average of \$30,100 per year to our S and R efforts.
2004 - \$26,500	2009 - \$17,000	2014 - \$36,640	
2005 - \$31,000	2010 - \$32,180	2015 - \$25,933	
2006 - \$20,000	2011 - \$45,925	2016 - \$37,600	
2007 - \$24,730	2012 - \$34,260	2017 - \$28,100	

\$28,100 was approved in Scholarship and Research dollars for 2017 by the members present.

Josh Lepine provided a update from the Chapter Delegates meeting at GCSAA Headquarters. A complete recap can be found on page 32 of this issue.

The meeting finished with the unanimous election of officers and directors as follows.

- President - Jon Canavan - Milwaukee County Parks
  - Vice President - Josh Lepine, CGCS - Maple Bluff CC
  - Treasurer - Jeff Barlow, CGCS - Waupaca CC
  - Secretary - Scott Anthes - Brown County GC
  - Director - Garrett Luck CGCS - Hidden Glenn at Bentdale Farms
  - Director - Benjamine LeBarre - Ledgends at Bristlecone
  - Director - Andrew Noll - Westridge Golf Club
- Michael Bremmer remains a director serving his second year term, Kevin Knudtson, Scott Bushman and Past President Chad Harrington will leave the board and were thanked for their service. ✓

## Event Schedule!

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

February 8 (Wednesday) - GIS Wisconsin Room, 6:30 - 9:30 Brickhouse Tavern and Tap, Orlando, FL

February 28 (Tuesday) - NGLGCSA - Business Meeting and Election (Location TBD)

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

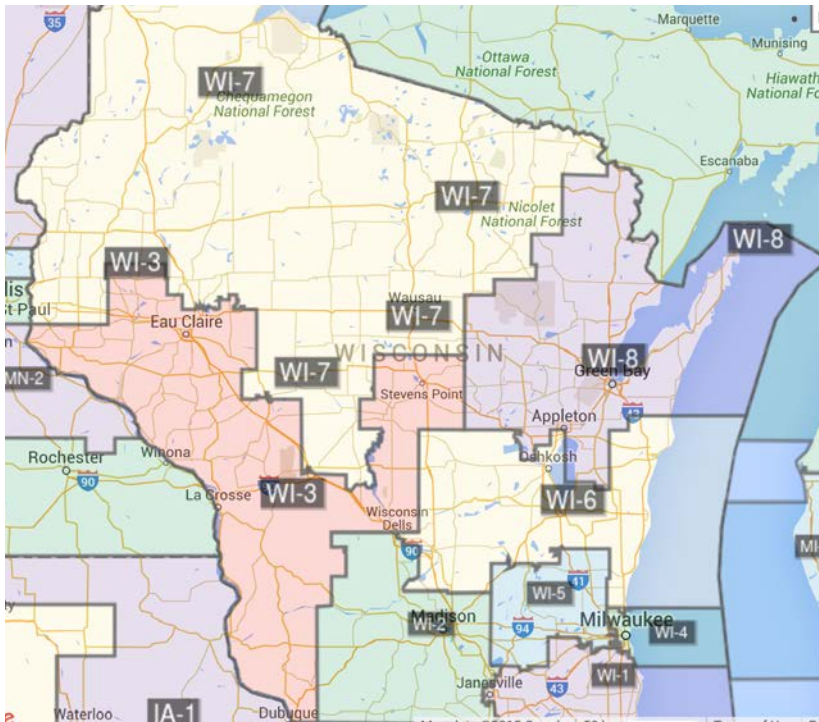
TBD - WGCSA Spring Business Meeting, South Hills Country Club, Fond du Lac

March 15 & 16 - Reinders Green Industry Conference, Waukesha

April 26 (Wednesday) - Super Pro Outing with PGA of Wisconsin

May 15 (Monday) - May Golf Meeting, West Bend Country Club, West Bend

(Check back next month for the complete schedule or visit our website at [www.WGCSA.com](http://www.WGCSA.com))



## GCSAA AMBASSADORS PROGRAM

### **Senators and Representatives Taken:**

**Sen. Ron Johnson – Harrison Beal**  
**Sen. Tammy Baldwin – Jon Canavan**  
**1st Dist - Rep. Paul Ryan - Jeff Milles**  
**4th Dist - Rep. Gwen Moore - Mike Bremmer**  
**5th Dist - Rep. James Sensenbrenner – Patrick Reuteman**  
**6th Dist Rep. Glenn Grothman – David Brandenburg**

### **Representatives Available:**

**Rep. Mark Pocan, 2nd Dist**  
**Rep. Ron Kind, 3rd Dist**  
**Rep. Sean Duffy, 7th Dist**  
**Rep. Reid Ribble, 8th Dist**

**Please contact GCSAA, Brett Grams or Mike Bremmer for more information on joining the Ambassadors Program.**



**The 2016 Couples Dinner included a exciting evening with a incredible dinner at the historic Wisconsin Club followed by socializing at the Milwaukee Ale House and those that chose to stayed at the InterContinental Hotel. Shuttle service kept couples warm, safe and sound. Some of the couples along with Tim and Jon are shown enjoying each others company.**





## 2016 Golf Turf Symposium - Protect Your Grass

By David Brandenburg, Editor, The Grass Roots

Late fall brings the excitement of hunting season, Packer and Badger football and golf courses closing allowing for turf managers to return to a normal schedule.

For 51 years late fall has also brought the Golf Turf Symposium sponsored by our silent sponsor Milorganite. I say silent because outside of a logo in the program and seeing Milorganite's Agronomist Jaime Staufenbeil doing a variety of tasks to keep the event running smooth the company does not get the recognition they deserve.

Through Milorganite's 51 years of sponsorship we are fortunate to have top speakers brought in from around the country for a event held at one of the best facilities in Wisconsin. Thank you Milorganite!

I have attended 28 of 29 Symposiums in my career however I had never stayed overnight at the American Club until this year. Our room block was full last year before I tried to make reservations so I did not hesitate to call for reservations this year.

All I can say is "Wow", the rooms and service were top notch and my only regret was not taking more showers with the amazing shower heads and not having a month to read the books in my in rooms bookcase.

The 51st Golf Turf Symposium started with newly elected WGCSA President Jon Canavan welcoming the crowd, congratulating the new board members and thanking the 2016 board members, outgoing President Jim Van Herwynen and Chapter Manager Brett Grams for their efforts. Jon then introduced Keynote Speaker Seth Jones.

Jones discussed his road from a aspiring sports writer and student at The University of Kansas to a intern at GCSAA and his move up to Senior Associate Editor for Golf Course Management a post he had for over 11 years before joining Golfdom Magazine as Editor-In-Chief in 2010.

A little known fact is Seth served as a writer for Comic Book Resources for nearly 10 years reporting on upcoming comic books as well as reports from comic book conventions.

Jones did not golf until he was 21 and



said "I am not a expert, you are. I just ask questions."

Jones discussed how stories they cover are developed and researched as he presented some of the important topics he



**Seth Jones, Editor, Golfdom Magazine provided tips for giving interviews when the press calls.**

has covered in his career.

He also told us about the great people he has met and interviewed along with the challenges he has had trying to interview celebrities.

Seth passed along these tips when we are on the recording end of a microphone.

- Answer a tough question by starting your answer with repeating the question.

- Don't sell yourself short. You are a expert at what you do.
- You are a expert, you do not need to try to be brilliant.
- In most cases the reporter is on your side but do not be afraid to pass on a interview if someone above you could better participate.

Overall Seth provided a entertaining look into his career, how stories are formed and the many people he has met with or without his tape recorder on.

Next on the docket was Mr. Kris Bachtell Vice President of Collections and Conservation for the Morton Arboretum discussing risk management when it comes to trees at home or on the golf course.

The Morton Arboretum is a 1,700 acre showcase of trees located just west of Chicago. The Arboretum hosts the largest collection of Elm trees in the world and has over 222,000 live plants representing 4,300 taxa from around the world.

Bachtell has made many trips to Asia and China looking for new plants to bring to the arboretum. One of the first steps is to ensure the new plant will not be a invasive species. Many disease resistant elm trees have been found in China.



**Kris Bachtell, Vice President of Collections and Conservation for the Morton Arboretum discussed tree assessment for health of the tree and safety of people and property.**

The popular dutch elm resistant Accolade Elm is from a parent tree planted at the Morton in 1924.

Kris has done tree assessment work at many golf courses using a 9 class rating system to determine priorities. Any assessment of trees has to start with an inventory and preferably a tagging system. One good tip from Bachtell was to use aluminum tags and nails to avoid any damage to saws from steel nails when it comes time to cut up a tree.

Although golf courses can have some magnificent trees it is important to avoid problems with root encroachment and shade, especially morning shade.

Golf courses or any planting should ensure diversity to avoid a wide spread loss of trees. Kris recommended no more than 10% of trees from any one species, 20% from any genus and 30% from any one botanical family.

Girdling roots are a big problem in golf and landscapes caused by trees planted too deep starting at the nursery. Kris recommended a publication by Gary Johnson, and Richard Hauer from the University of Minnesota titled *A Practitioners' Guide to Stem Girdling Roots of Trees*.

Girdling roots only occur on transplanted trees and requires a slow dirty process with a air compressor to blow away dirt and material to allow access to the problem roots. It is an important process for key trees in your landscape. This all goes back to the problem of trees being planted and transplanted too deep. To avoid this ensure trees planted so the flare is visible at the surface. Up to 1/3 of the ball may have to be removed at the surface to find the flare and first roots.

It is easy for golf courses to get behind on pruning when they only focus on low or dangerous branches rather than routine and structural pruning schedules.

Structural or developmental pruning is important for young trees and requires a "look ahead" to the future of a tree. What we see at age 5 to 10 is not the tree we will see at age 20 or after. The branches we can easily see and prune from the ground are not considered permanent. Permanent branches are at least 14 feet up and may not even appear for years into a trees life.

One of the main goals of structural pruning is to define a single leader to avoid future cabling caused by dangerous crotches. The second is to remove or "subordinate" any branches that are greater than 50% of the size of the stem.

3 under-used trees are the swamp white oak, Kentucky coffee tree and the new introduction of hackberry.

After a break and much hallway discussions on how to find time for proper pruning and removal of girdling roots we went back to work with Dr. Paul Koch speaking on the new "Common Ground Initiative". A complete review of the program can be found on page 6 of this issue but I will say this writer commends Dr. Koch and his team for taking the initiative to show not only the importance of turfgrass in the landscape but how we may be able to maintain quality turfgrass with less environmental impact.

If you have not please go to page 6 and read about this important "draft" program.

Dr. Bill Kreuser was next with a discussion on Keeping Cool During Summer. The talk was for turf not people but in many cases keeping the turf cool provides less stress on turf managers. Heat stress can come as a acute stress when leaf temperatures are 100 to 130 degrees but more often we worry about chronic heat stress with or without drought and dessication.

Chronic stress is caused by slow, long term, inefficiencies in how the plant can deal with heat and humidity.

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**Dr. Bill Kreuser, University of Nebraska discussed heat stress and using new technology to guide our agronomic decisions.**

At 80 degrees and less plants produce and store more sugars (energy) than they use but at over 80 degrees more energy is used than made. Heat tolerant plants make heat shock proteins to help during stress periods.

High soil temperatures are worse than high air temperatures so hot spring days when the soil is cool have little effect on healthy turfgrass.

Tips to manage heat stress include adequate nitrogen levels while avoiding too much or it will promote growth and sugar use. A increase in mowing height will allow for more leaf surface and reduce stress.

The use of biostimulants such as seaweed extracts and humic acids before stress starts can help produce a healthier plant.

The proper use of growth regulators can reduce respiration rate and primo has shown to promote cytokinins.

Proper moisture levels are important because a water shortage will shut down

the plant transpiration but to much will reduce the plants ability to breath. A deficit irrigation program is best for long term plant health as it provides enough but not too much water. Dry turf plots are warmest during the day but the wettest ones are warmest at night as water holds heat.

Where needed, fans will help to promote cooling showing the importance of air movement

Syringing to cool the turfgrass used to be considered a essential practice but has been shown by recent studies to be a waste of time. In soils with adequate moisture the cooling effect from syringing lasts less than 5 minutes while increasing humidity and causing more problems.

However if root length is so short the plant needs a shot of water to make it through the day syringing is imperative to job security. In that case you are watering the plant, not syringing.

Dr. Krueser's work with pigments has shown they do not cool the plant and can increase temperatures slightly. However they do increase plant color and reduce light stress when coupled with proper soil moisture.

Day 2 started with Jack MacKenzie, Executive Director for the Minnesota GCSA discussing Community Relations and Environmental Stewardship and Regulatory Actions.

Jack started with saying "if you are not seated at the table, you are on the menu." Or in other words, in the world of government regulations and environmental groups if we are not at the table discussing options and talking about the good things golf does we will be talked about in a negative light.

The Minnesota Golf Course Superintendents became interested in government and advocacy when they were listed at category 6 in new water regulations. Category 6 users are considered non-essential

and subject to complete permit loss at any time. Oddly golf was the only industry listed by name.

It was time to rally the troops so committees were formed and BMP's were drafted. At that time as a superintendent Jack served on the committee but as usual members were busy with jobs and families



**Jack MacKenzie, Executive Director for the Minnesota Golf Course Superintendents Association discussed how MN has and how WI should focus on advocacy and environmental issues while spreading the good news of golf.**

so committee work was a extra when time allowed.

In the summer of 2012 a drought hit MN and 12 courses lost their permits to irrigate. It became clear a volunteer committee was not going to get the job done and Jack was hired on as the Executive Director to allow year round work on all association business.

Jack learned how to work with the "enemy" or the environmental and government groups to tell them the good story of golf.

They need to be told how golf courses provide wildlife habitat, carbon sequestration, erosion control, pollinator habitat and are the communities largest rain gardens controlling storm water and often flooding.

Legislatures need to be reminded that golf is a industry, and golf is a solution not a problem. Golf creates jobs, provides for millions in charitable fund-raising and giving while providing acres of green space.

MacKenzie was happy to hear about Dr. Koch's work with the Common Ground Initiative and the future benefits it will give us. He also encouraged our chapter to consider hiring help as BMP's are produced and we start working closer with legislatures.

Individual superintendents have good intentions but rarely can head to Madison with a hours notice to keep our causes out of a bill or in a bill.



**Bayer Environmental Science**

**John M. Turner**  
Sr. Sales Specialist - Golf  
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Jack had some advice for any superintendent who works with politicians or environmental groups..... "Don't lie or you will shut the door of opportunity permanently". And if you do not know a fact or figure say you will get back to them, just be sure to do so in a timely manner.

It was great to hear the battle scars and success stories from someone who has been there and MacKenzie had great advice for us as individuals and our chapter leaders.

Dr. Krueser was back to discuss technology in agronomics and how precision is important in turfgrass maintenance when our goal is put what is needed when and where it is needed.

Turf systems are extremely complex and are often oversimplified. Data management will allow us to become more precise, but do we have the time to gather and analyze all this data? If we do not have time to analyze data then gathering data is just a waste of time and effort.

Test plots are one of the easiest and quickest analytical tools we have today. Bill asked if we live too much in the moment and suggested we need to look at a broader range of time as we analyze results of turf applications.

He recommended we keep a excel spreadsheet to track nitrogen rates and color / quality to find the minimal amount of N needed to maintain the turf quality our site needs.

Soon GPS guided sprayers will be common and provide for easy test plots and differing rates of nitrogen.

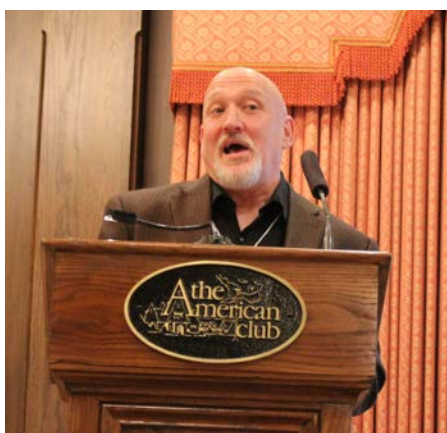
Drones are a valuable tool to track color as well as projects. The new regulations actually make it easier for commercial drones as you no longer need a pilots license.

TDR probes measure volumetric soil water and reminded users each soil type and location has its own calibration curve. What is the wilt point at one property or hole could be fine at another it doesn't pay to compare numbers to another course.

FLIR infrared cameras or attachments for smart phones are a new way to find hot spots caused by drought, disease, insects or stress.

Pesticides models such as PGR growing degree day calculators and the Smith Kerns Dollar Spot Model allow turf managers to anticipate problems and plan solutions.

Bill has developed Greenkeeperapp.com as a great tool to track product applications, Growing degree days, weather reports and pest reports from your desktop, tablet or smart phone. Krueser and some of his current users suggested using the desktop version to setup your program and information



**Jim Chiolino, Director, Labor Standards Bureau, State of Wisconsin, Department of Workplace Development spoke on workplace rules and wage laws.**

first and then using the smart phone to track daily activities .

Jim Chiolino started his talk by announcing "I am from the government, and am here to help!" Actually he was there to help as he discussed how his department can help employees and employers. Most of their work is not policing but is complaint driven by employees.

Jim discussed the minimum wage rules, overtime rules and the overtime exemption that some courses fall under due to the 33.3% of revenue rule.

The new administrative rule changing the minimums required for an employee to be exempt from overtime has been held up in the courts and is likely tabled for the near future due to the change in presidents.

Jim discussed how children 15 and under can only work after 7am and cannot operate any equipment with a engine, including a golf cart or weedeater.

Dr. Koch returned to discuss the uses of and impact of green covers on snow mold. He discussed the types of winter kill and the benefits of different types of covers for putting greens.

All covers can help with spring green-up and reduce dessication in open winters however only impermeable covers can help with crown hydration and suffocation from a layer of ice on top of the turf for long periods of time.



**Dr. Paul Koch, UW Madison, Department of Plant Pathology discussed "The Common Ground Initiative" the effect of greens covers on snow mold.**

The impermeable covers were concerned to increase the incidence of snow mold. However Dr. Koch's work has shown with a proper fungicide treatment snow mold is easily controlled with or without a cover. The impermeable covers do require occasional venting of fresh air through the winter. This is often done with a leafblower and a system of vent pipes.

The panel was very informative and gave insight into the tips and tricks of cover installation, use and removal at three different properties.

The day ended with Bob Vavrek, Central Region Director for the USGA Green Section gave his roundup and take home messages from each speaker.

A big thank you goes out to the speakers and Milorganite for sponsoring the Golf Turf Symposium for 51 years. See you next year for number 52! 🌱



**The panel of Jim VanHerwynen, Josh Lepine and Bill Stein discussed their successes, failures and recommendations for using differnt types of greens covers.**



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