

The GRASS ROOTS

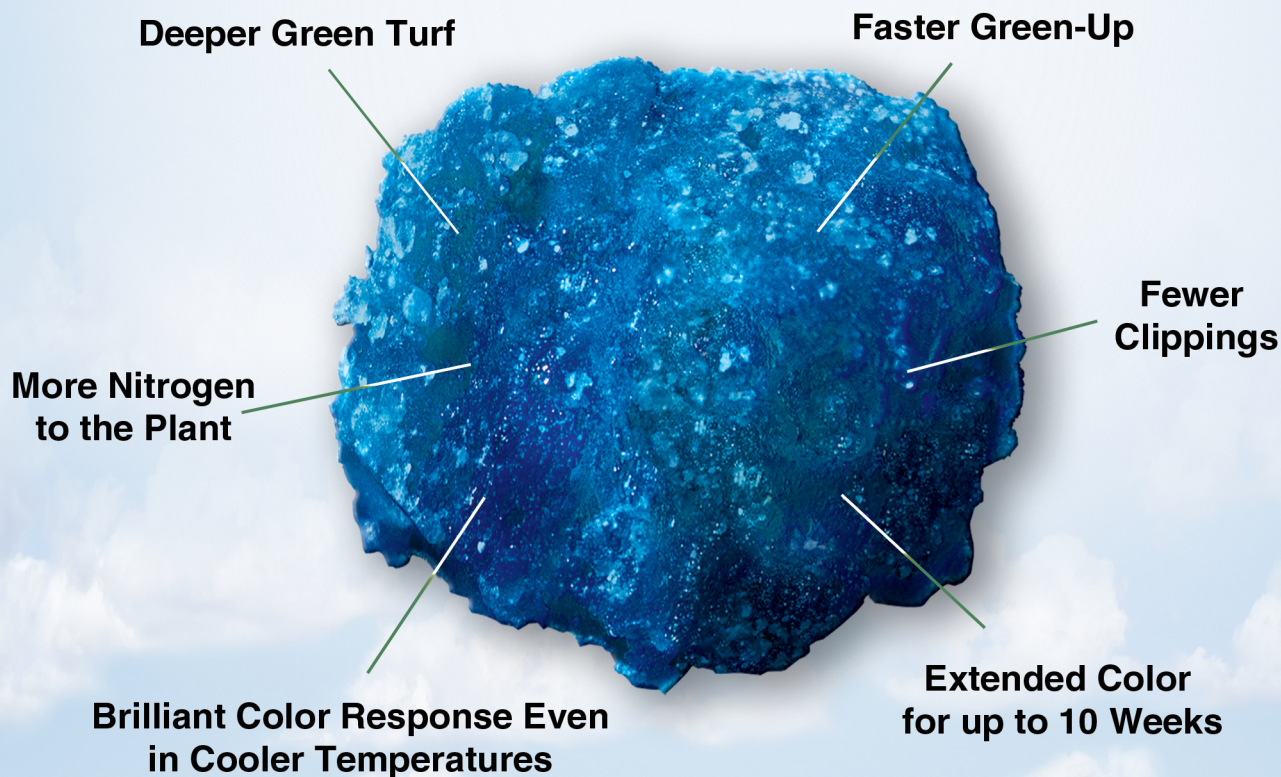
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James Van Herwynen 43rd President of The Wisconsin Golf Course Superintendents Association at South Hills Country Clubs th Tee.

*It's a beautiful day for baseball,
let's play two!*

By American Baseball Player Ernest "Ernie" Banks, 1931-2015

This quote given on a sweltering summer day in 1969 by Banks who played for the Kansas City Monarchs and the Chicago Cubs reminds us of the optimism and joy we can find in our lives despite the challenges we may face.

Visit our Website at

www.wgcsa.com

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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Front Row: Jim Van Herwynen, Jon Canavan, Josh Lepine, Kevin Knudtson. Back Row: Joe Sell, Scott Anthes, Mike Bremmer, Jeff Barlow, Chad Harrington, Brett Grams. (Not pictured Phil Spitz and Scott Bushman.)

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My Introduction

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

I would like to thank everyone who attended and took advantage of our premier educational offering - the annual Golf Turf Symposium which was held at the American Club in Kohler the first week in December entitled "How are You Doing as a Professional". The feedback was an overwhelming positive response from the surveys collected.

Much time and effort goes into an event such as this and I would like to give special thanks to Jamie Staufenbeil and the Milwaukee Metropolitan Sewerage District (MMSD) for their continued generosity sponsoring this event for an incredible 49 years!

Jamie Staufenbeil, an Agronomist with MMSD Milorganite is to be commended on a job well done as this was her first Golf Turf Symposium as the sole liaison collaborating with us, and what a great job she performed. Countless hours, phone calls, travel arrangements and meetings along with her great attitude made this a success.

I would also like to thank the Symposium Committee which included Chad Harrington (Chairman), Brett Grams, David Brandenburg, Bob Vavrek, Doug Soldat,

Dustin Riley, Jon Canavan and myself, for the many hours spent putting it all together.

Next Year is taking shape already as we will be celebrating the 50th annual Golf Turf Symposium. If you have never attended or have not for a few years we hope you will join us next year for this wonderful educational opportunity and generous donation it creates for the O.J. Noer Research Foundation.

Taking on the role as the President of the WGCSA I have many new duties and challenges during my term and I thank you for allowing me this opportunity. One of the duties is presenting the President's Message for this great publication, *The Grass Roots*, which is the official publication of the Wisconsin Golf Course Superintendents Association. Of course many ideas run through your head preparing for an article however for my first attempt I would like to ask you a question. Have you ever had a moment in your life when you stop and really think about the circumstances at hand i.e., marriage, the loss of a loved one, your first child, your first job etc., and think, how did this happen, why did

this happen and how am I going to adapt to these changes? Similarly, becoming the President of this fine association has made me stop and think of these questions.

You live your life, make choices and then it hits you - this is really happening and now I have to move forward! It is kind of like the commercial recently for an insurance company that pokes fun of the man who states he is never going to get married, have kids, move to the suburbs and drive a mini-van and surprise, surprise he does all of the above and loves every minute of it. I think you know where I am going with this so I would like to take this opportunity to thank some of those who have influenced my life as a Golf Course Superintendent.

In 1983 I was sixteen years old and started my first job on a golf course at North Shore Golf Club in Menasha, WI. If it wasn't for the fact that I was an amateur motocross rider starting at age 13 with a Yamaha YZ80, then at 15 with a YZ125, 16 with an enduro 250 I would never have known what a clutch, 2-cycle engine or a choke was. I had much to learn!

WGCSA MISSION STATEMENT

The Wisconsin GCSA is dedicated to ensuring members have the resources to provide quality playing conditions, advocating on behalf of the golf course management profession and supporting the future of golf..

WGCSA VISION STATEMENT

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

- Be recognized as the leading golf organization in the state
- Growing and serving a diverse membership
- Advocating environmental stewardship
- Offering valuable educational programs at the forefront of technology and communication
- Being critical to the enjoyment and economic success of the facility

PRESIDENT'S MESSAGE

Mr. Roger Bell was the Superintendent I worked for during my high school years and a couple years in college. I consider this man my mentor. Working with Roger I quickly realized that it was possible to work a ten hour day in eight hours. Having made many mistakes at the beginning and having been reprimanded for them he always took the time to teach you what to do so you would not make the same mistake twice.

He ran a tight ship and produced a product I am still trying to achieve. When I realized turfgrass management might be for me I recall asking him, "Do you need a degree to do your job?" I truly believe he refrained himself from smacking me in the head and on the contrary realized I was serious, naïve, and he took me under his wing and the flood gates opened. Roger proceeded to give me more responsibility and taught me skills I use to this day.

I truly thank him for molding me. Many do not know this but his wife Suzy was a College Professor at UW-Fox Valley and my chemistry teacher. Unfortunately, not due to her teaching skills, I ended up taking chemistry over in Madison.

Roger had many connections all over the state but two individuals in Madison helped me through my next phase in my career, Dr. Wayne Kussow at the University of Wisconsin-Madison and Monroe Miller at Blackhawk Country Club.

I can only imagine what Dr. Kussow was thinking when I went into his office on Observatory Drive for my initial consultation. Who is this small town transfer student with Robert Plant like hair (see insert page 6)? I quickly realized that Dr. Kussow did not judge anyone but rather was there to aid in every imaginable way he could. As my advisor, as well as many others, through graduation he not only advised but took special time for every students needs as we were all from different backgrounds and definitely different personalities.

Not only was Dr. Kussow a brilliant man he was admirably patient and went way above and beyond to make sure every student had every opportunity to

succeed. Trust me, he taught me many words I had no idea existed and could somehow make you understand what he was saying. To this day I cannot thank him enough for all he did for me at the UW. Thanks again Dr. Kussow!

We all know the attributes Monroe brought to the turf industry but to scale it down a bit working for Monroe was truly a treat. This is a man who obviously knew turf but also saw the value in treating the crew like family. It was not uncommon to have former employees and friends stop by the shop and tell tales of by gone days. Monroe always had time to listen, direct and appreciate the little things in life not related to turf that makes life so grand.

One example I vividly remember is

the day he announced the Circus Train was going to be traveling through on its journey from Baraboo to Milwaukee for the Great Circus Parade. Monroe told us we could come back to the shop early to witness this awesome spectacle and of course everyone did.

Sure enough the train did go through and we all witnessed it and carried on with our day. To me, that was pretty special, the fact that he allowed us to take the time and enjoy this rare occurrence, which equated to there's more to life than just working all the time.

After graduation I worked as an Assistant for almost six years at Kenosha Country Club under the direction of Mr. Michael Seaton and Mr. Scott Bar-tosh.



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PRESIDENTS MESSAGE

Michael taught me about body language and how to sell a project to the membership through educating them on why we need to do a project and the outcome to expect and for the most part the risk was worth the reward. He also was one who knew how to work hard and balance it with activities away from work. Scott was always one with a very calm demeanor and thought things out thoroughly.

He never got too excited and was always willing to tackle the largest of jobs and not be afraid to try anything. I was always amazed at his seemingly endless knowledge of construction, laws of physics and just plain old common sense. Both of these gentlemen helped me compile all that I had learned over the years and become prepared for my first Superintendent's job and I thank them both.

Lastly, for those of you that are married you will understand, I thank my wife

Kimm who I have been married to for 22 years and been with for 29 years. She has been with me through college and job transfers, many, many weekends staying close to home and taking winter vacations. I will never be able to thank her enough for understanding my position and being willing to accept this lifestyle.

There are many other individuals who have made an impact on my life and I will elaborate more in coming articles. I look forward to my term as President and am very grateful for the very talented and savvy group on the WGCSA Board of Directors.

If there is anything I, or we can do to help you out with in the future never hesitate to ask. After reading this take the time to thank those who have made a difference in your life, give your spouse and kids a hug and take time for the little things in life. ✓



Above: Jim Van Herwynen at the Symposium

Below: A young Jim with his Robert Plant hair and Rush T-shirt making some nice stripes with the Ransomes 180.



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Van Herwynen Takes Helm As 43rd President

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

James Van Herwynen was elected the association's 43rd president at our fall election and business meeting in December.

Growing up in Kimberly his first experience with a golf course was at age 13 as a caddie at the nearby North Shore Country Club. He found that to be a bit of a low paying job for the work and moved on to Crystal Print in Little Chute doing janitorial work.

He was encouraged to work by his mom who told him if he wanted to wear Levi Jeans that every kid had to have he needed to get a job to pay for them.

After he turned 16 a friend of his brothers suggested he work on the grounds crew at North Shore Country Club. (More can be found on Jim's time at North Shore in his Presidents Message on page 4.)

After high school graduation in 1985 Jim started at Hayes Manufacturing and then attended UW- Fox Valley the next year to start his general studies.

With his associates degree in hand from Fox Valley and a interest in the turf industry Jim enrolled at UW-Madison to finish his degree.

While in Madison Jim worked at Blackhawk Country Club under Monroe Miller and delivered pizzas to pay the bills.

Jim met his wife Kimberly in 7th grade but their relationship didn't blossom until after high school. He was quick to give recognition to Kim for all the support she gave him during college both financially and academically along with the patience that comes with dealing with the busy golf season.

Jim is currently the superintendent at South Hills Golf and Country Club in Fond du Lac. The club opened for play in 1927 after being built by A.D. Filatrault and his farmhands. The course was public at the time and called "Takodah" which means Welcome.

In 1951 the course was sold to Fred Thiel

and Nate Manis who eventually sold it back to the members.


The 152 acre layout provides a good test for golfers and mature trees, rolling terrain and the Denevue Creek add to the challenge.

The course provides some challenges for the grounds staff due to the heavy clay soils, mature turf and occasional flooding.

Some years the course does not flood at all but in 2014 the creek flooded its banks 5 times.

Van Herwynen chooses to maintain the stand of poa and bent for the enjoyment of the players.

In his term as president Jim plans to work with the board to create some new events to draw more participation and improve the boards written SOP's so they can be easily handed off to the next person.

It is clear the association is in good hands as Jim leads our board for the next two years. 



Jim, Madelyn, Kimm and Mitchell Van Herwynen

2015 Committee Assignments

COMMITTEE	CHAIRMAN	ADDITIONAL MEMBERS
Affiliate Member Liaison	Phil Spitz	Brett Grams
Audit	Jon Canavan	TBA (Brett to assist)
Benevolence	Jon Canavan	Brett Grams
Bylaws	Jim Van Herwynen	Jon Canavan
Certification Liaison	Jeff Barlow	Jim Van Herwynen to assist
Membership Directory/Outreach	Kevin Knudtson	Brett Grams, Jeff Barlow
Education	Scott Anthes	Kevin Knudtson, Mike Bremmer, Jeff Barlow, Scott Bushman
WGCSA and First Tee Liaison	Jim Van Herwynen	Jon Canavan
Grass Roots Business Manager	Brett Grams	
Grass Roots Editor	David Brandenburg	
GCSAA Delegate	Josh Lepine	Jon Canavan to vote at 2015 Elections
GCSAA Liaison	Jim Van Herwynen	Jon Canavan to assist
Golf – Arrangements	Scott Bushman	Mike Bremmer, Jeff Barlow, Scott Anthes
Fed. Govt. Regs./Ambassador	Mike Bremmer	Jon Canavan
State Govt. Regs.	Jon Canavan	Mike Bremmer, Dr. Doug Soldat
Historian	Monroe Miller	
Limited Budget Outreach Liaison	Chad Harrington	
Nominations	Chad Harrington	Jeff Millies, Brian Zimmerman
Parliamentarian	Chad Harrington	
Publicity	Jim Van Herwynen	Jon Canavan, Brett Grams
Scholarship – Research	Jon Canavan	Josh Lepine, Brett Grams
Social	Phil Spitz	Brett Grams, Jim Van Herwynen, Chad Harrington
Symposium Committee	Jim Van Herwynen,	Jaime Staufenbeil, Jon Canavan, Josh Lepine, Brett Grams, Bob Vavrek, Dr. Doug Soldat, David Brandenburg, Chad Harrington
Par4Research	Dustin Riley	Josh Lepine, Joe Sell, Jon Canavan, Brett Grams
Wisconsin Turfgrass Assn. Class C Committee	Dustin Riley Jon Canavan	Joe Sell



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Scholarships & Research Updates

By Brett Grams, Chapter Manager, Wisconsin Golf Course Superintendents Association

Happy New Year to all WGCSA Members! 2015 is off to a great start. I am happy to report that many membership renewals are arriving daily at this time. Having your annual renewal returned by the February 1st deadline is very helpful as revenue flows are never an issue and it allows me to confirm that we have the correct contact information for you. Proper information insures you have access to all communications and benefits that the WGCSA offers.

Thanks to all who have renewed on time, in appreciation for your cooperation and to acknowledge our 85th anniversary you will be mailed a WGCSA lapel pin that we hope you will wear proudly at this year's Golf Industry Show and other meetings.

I also wanted to share with you some details of your association's efforts towards scholarship and research that was approved at the Fall Business Meeting in December prior to the 2014 Golf Turf Symposium. Per our WGCSA By-Laws, the specific Scholarship and Research Budget is approved at our annual meeting. I wanted to provide you with some updates as to what our specific 2014 ef-

forts were along with what was approved for 2015.

Annually the WGCSA funds multiple scholarships. We offer three \$500.00 Legacy Scholarships. In 2014 **Emily Barlow** (daughter of Jeff Barlow), **Alexa Ferrie** (daughter of Brian Ferrie), and **Jacob Schaller** (son of Scott Schaller) were each awarded scholarships towards secondary education.

We also awarded UW Student **Luke McGhee** the \$1500.00 JR Love Scholarship and the \$1000.00 Monroe S. Miller Literary Scholarship to **Brad Debels**.

The Turf Diagnostics Lab received \$3100.00 in 2014 with the majority of this amount supplied by the per person registration donations from our meetings throughout the year. We also funded \$27,540.00 for four specific efforts by the research staff at UW-Madison. The \$10,380.00 we raised by conducting our 2014 PAR4Research auction was applied to these efforts and the remaining \$17,160.00 was funded by our operational budget. In addition to these efforts we also fund \$500.00 each year to the GC-SAA's EIFG and thanks to the generosity

of our Title Partner Milorganite we took the net revenue generated from the Golf Turf Symposium to the OJ Noer Research Foundation. In 2014 this was \$1500.00. These all add up to \$36,640.36 for 2014. For 2015 the S and R budget allows for all scholarships, EIFG, and OJ Noer Foundation funding at the same level. The research budget for four projects that total \$29,204.00. It is important to note one of these projects was approved by the GC-SAA as an EIFG Matching Grant Project that we will co-fund for two years at \$8000 per year by both associations.

In the last 13 years we have provided over \$400,000 at an average of \$30,800 per year to our S and R efforts. The WGCSA is continuing our long standing dedication to turf research and scholarship funding in 2015. Being able to fund these efforts is only possible due to our excellent Industry Partner Companies and the members that donate to the PAR4Research Auction. The WGCSA is financially healthy in our 85th year and we have been able to fund all our efforts without raising dues or ad rates for quite a few years. Something all members should be proud of. ✓

Scholarship and Research

S and R History

2003 - \$23,000	2008 - \$38,000	2013 - \$30,875	In last 13 years we have provided over \$400,000 at an average of \$30,800 per year to our S and R efforts.
2004 - \$26,500	2009 - \$17,000	2014 - \$36,640	
2005 - \$31,000	2010 - \$32,180	2015 - \$38,304	
2006 - \$20,000	2011 - \$45,925		
2007 - \$24,730	2012 - \$34,260		

	2014 Bud.	2014Act.	2015 Prop.
J.R. Love Scholarship	1,500.00	1,500.00	\$ 1,500.00
Legacy Scholarship	1,500.00	1,500.00	\$ 1,500.00
M. S. Miller Literary	1,000.00	1,000.00	\$ 1,000.00
TDL Donations	3100.00	3,100.00	\$ 3,100.00
UW Mad./Wis Turf. Assoc.	10,000.00	17,160.00	\$ 19,204.00
PAR4 Research Donation	10,000.00	10,380.00	\$ 10,000.00
EIFG	500.00	500.00	\$ 500.00
Other/OJ Noer Foundation	2,375.00	1,500.00	\$ 1,500.00
Other	0.00	0.00	
	29,975.00	36,640.00	\$ 38,304.00

Your dues and support have allowed the WGCSA to support Scholarships and Research in the amount of 400,000 over the past 13 years.

Research donations are given to the WTA as they can provide funds to support research without any processing fees.

CHAPTER CONVERSATION

UW Funding Proposed as of 12.2.14

Name of Project	Requested by:	2014 Funding	2015 Funding	2016 Funding	Project Total
Sponsorship of Pathology Mtg. June 2014	Dr. Paul Koch	\$500.00			\$500.00
Snowcover and Temp. Effects of Chlorthalonil and Azoxystrobin	Dr. Paul Koch	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00
Cultural and Chemical Weed Management in Fine Fescue	Dr. Paul Koch Dr. Doug Soldat Bruce Schweiger	\$6,000.00	\$6,000.00		\$12,000.00
Evaluation of Soil Potassium on Putting Green Quality	Dr. Doug Soldat	\$11,040.00			\$11,040.00
EIFG Matching Chapter Grant Studying Propiconazole Uptake and Timing When Used for Snowmold.	Dr. Paul Koch	(50/50 Match)	\$8000.00	\$8,000.00	\$16,000.00
Carbon and Nitrogen Cycling in Golf Course Soils	Dr. Doug Soldat		\$5204.00		\$5,204.00
	Annual Totals	\$27,540.00	\$29,204.00	\$18,000.00	\$74,744.00

Left is the funding that was supported at the fall business meeting in Kohler.



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Evaluation Of Prohexadione-Calcium, A New Plant Growth Regulator For Creeping Bentgrass

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

Prohexadione-calcium is a plant growth regulator that has been evaluated for use on turfgrass for the past fifteen years. In 2014, NuFarm released it as “Anuew” and it is labeled for use on creeping bentgrass, Kentucky bluegrass, and perennial ryegrass as well as on a few warm season grasses. It is a gibberellin inhibitor, like flurprimidol (Cutless), paclobutrazol (Trimmit), and trinexapac-ethyl (Primo Maxx). Prohexadione-calcium is foliarly absorbed and inhibits gibberellic acid in the late stages, similar to trinexapac-ethyl (Ervin and Zhang, 2008). This past summer we evaluated Anuew on a creeping bentgrass putting green against Primo Maxx.

The study was conducted at the O.J. Noer Turfgrass Facility in Verona, WI on a ‘Memorial’ creeping bentgrass put-

ting green constructed to USGA specification in 2005. The putting green was mowed five days per week with a Toro 1000 walking reel mower at a height of 0.125 inches. The putting green was fertilized with 0.2 lbs N/1000 ft² as urea every 14 days, irrigated to replace ET as estimated from an on-site weather station, and disease was controlled with only non-DMI fungicides as needed.

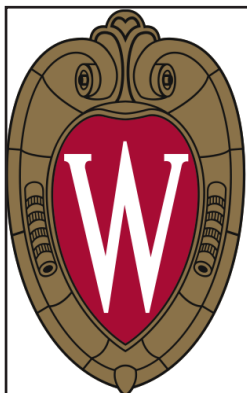
Treatments consisted of plant growth regulators applied at two rates and are described in **Table 1**. Treatments were applied at the appropriate rate at a pressure of 40 PSI using a CO₂ pressurized backpack sprayer equipped with two XR TeeJet 8004 VS nozzles. The growth regulator/water solutions were well mixed by hand and delivered at a rate of 2 gallon per 1000 ft². Treatments were initiated on June 3rd, 2014 and re-applied

on a 14 day interval (+/- 2 days). The final application was made on August 27th.

Turfgrass visual quality was assessed approximately every 14 days during the study period on the standard NTEP 1-9 scale where 1 represents completely dead or brown turf, 6 represents the minimally acceptable quality, and 9 represents the highest possible visual quality. Clipping yield was measured approximately every 14 days by collecting the clippings from one pass down the center of the plot (8ft), and swept from the mower clipping basket into a paper bag. The clippings were dried for at least 48 hours at 60°C, cleaned of sand and other debris, and then weighed. Means were separated using Fishers Least Significant Difference at alpha = 0.05.

Table 1. Description of treatments.

Treatment Name	Application Rate ounces/acre	Application Rate ounces per 1000 ft ²	Application Interval days
Non-treated Control	0.00	0.00	N/A
Anuew	4	0.09	14
Anuew	8	0.18	14
Primo Maxx	6	0.138	14
Primo Maxx	12	0.275	14



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WISCONSIN SOILS REPORT

Averaged over the duration of the study, all growth regulator treatments had significantly lower clipping yield compared to the non-treated control (**Table 2**). Primo Maxx at the high rate (12 oz/A) had significantly lower clipping yield than the 6 oz/A rate of Primo, but the 12 oz/A rate did not have significantly fewer clippings than either rate of Anuew. These trends in clipping yield held across many of the individual clipping collection dates (**Table 3**). Under the conditions of this study, we can conclude that the 4 oz/A rate of Anuew will provide approximately 25% reduction in growth, and no extra yield reduction is achieved with a doubling of the rate.

Table 2. Season-long averages of clipping yield and visual turfgrass quality.

Treatment	Clipping Yield	Visual Turfgrass Quality
	g/plot	1-9, 9=best
Anuew, 4oz/A	3.86 A	6.57 B
Anuew, 8oz/A	2.84 BC	6.68 AB
Primo Maxx, 6oz/A	2.66 BC	6.81 AB
Primo Maxx, 12oz/A	2.93 B	6.82 AB
Control	2.58 C	6.89 A

Table 3. Visual turfgrass quality as affected by treatment during the season.

Treatment	June 11	June 23	July 16	July 22	August 4	August 20	Sept. 3
	-----Visual Turfgrass Quality (1-9, 9= best) -----						
Anuew, 4oz/A	4.75 A	5.25 A	6.75 A	7.25 A	7.75 A	7.00 C	8.0 A
Anuew, 8oz/A	4.75 A	4.75 A	6.5 AB	7.50 A	8.50 A	8.00 A	7.75 AB
Primo Maxx, 6oz/A	5.25 A	5.25 A	6.75 A	7.50 A	7.75 A	7.25 BC	8.0 A
Primo Maxx, 12oz/A	4.75 A	5.25 A	7.00 A	7.50 A	8.00 A	7.75 AB	8.0 A
Control	5.75 A	6.00 A	6.00 B	6.75 A	8.00 A	6.00 D	7.5 B

Significant differences in visual turfgrass quality were not observed early in the study, but became evident late in the season (**Table 4**). The difference in quality was associated with the darkening of the growth regulator treatments compared to the non-treated control (**Figure**

1). This color difference is likely related to the fact that approximately 25% less nitrogen was being removed (from clippings) from the regulated treatments, while the same amount of nitrogen was being applied to all plots. This phenomenon has been observed before (Kreuser

and Soldat, 2012). From these data, we conclude that Anuew (4 oz/A) performs similarly to Primo Maxx (6 oz/A) in terms of clipping yield reduction and visual turfgrass quality. No phototoxicity was observed on any of the plots over the duration of the study.

Table 4. Turfgrass clipping yield (g/plot) as affected by treatment during the season.

Treatment	June 11	June 23	July 7	July 22	August 4	August 20	Sept. 3
	-----Dry weight clipping yield, g/plot -----						
Anuew, 4oz/A	1.10 B	3.15 B	1.45 BC	1.73 A	3.40 B	1.88 B	7.20 B
Anuew, 8oz/A	1.40 B	2.55 C	1.20 C	1.90 A	3.20 B	1.65 BC	6.75 B
Primo Maxx, 6oz/A	1.37 B	3.15 B	1.53 AB	1.83 A	3.95 AB	1.80 BC	6.88 B
Primo Maxx, 12oz/A	1.08 B	2.75 BC	1.45 BC	1.75 A	3.28 B	1.53 C	6.23 B
Control	1.95 A	4.13 A	1.83 A	2.03 A	5.23 A	2.28 A	9.60 A



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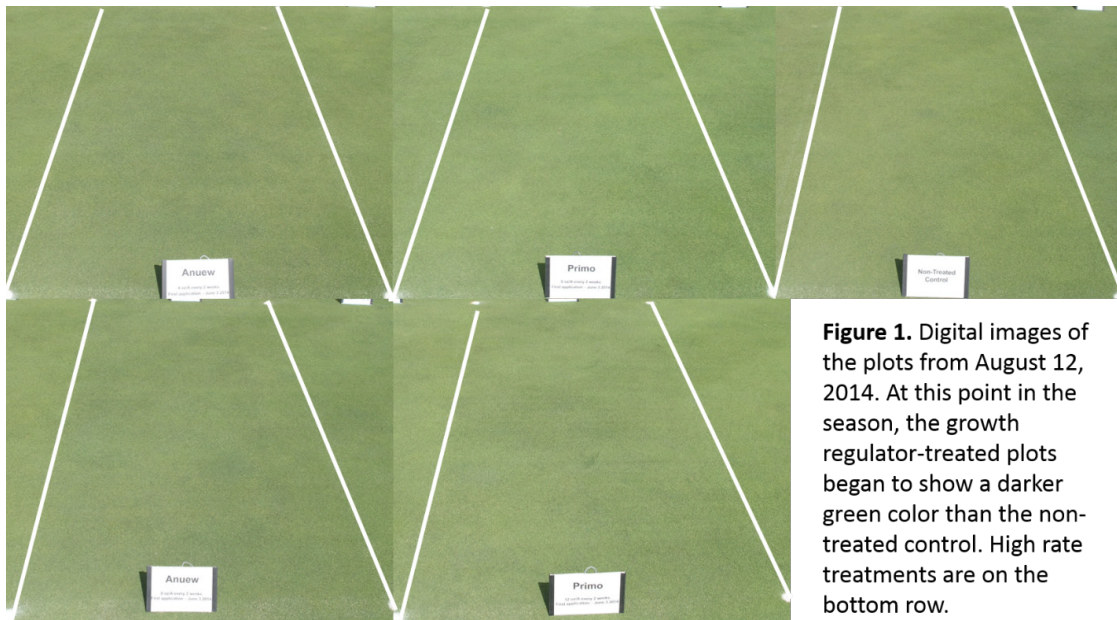


Figure 1. Digital images of the plots from August 12, 2014. At this point in the season, the growth regulator-treated plots began to show a darker green color than the non-treated control. High rate treatments are on the bottom row.

While we did not evaluate prohexadione-calcium on annual bluegrass, others have. Beam et al. (2007) reported that annual bluegrass absorbs more prohexadione-calcium and translocates more to the roots than creeping bentgrass. Their earlier work (Beam et al., 2003, Beam and Askew, 2005) found that annual bluegrass was suppressed more than perennial ryegrass and they suspect the increased absorption and translocation is the cause. Pat McCullough at University of Georgia reported in 2009 that spring applications of prohexadione-calcium suppressed annual bluegrass seedheads similar to or

better than Embark and Proxy + Primo Maxx, but prohexadione-calcium exhibited more injury than the other PGR treatments. And finally, researchers in Japan found that similar to trinexapac-ethyl, prohexadione-calcium enhances drought resistance of creeping bentgrass and Kentucky bluegrass (Otsuka et al., 2006). Obviously, much more work is needed on prohexadione-calcium, but it appears it can work very similarly to trinexapac-ethyl on bentgrass, and may be useful as a tool to discourage annual bluegrass invasion. Early spring use to control seed heads is not advised until the safety aspect

can be further evaluated.

Finally, growing degree day systems for re-applying Primo Maxx and Trimmit was developed at the University of Wisconsin. Bill Kreuser, at the University of Nebraska, recently reported that the optimal re-application timing for Anuew is somewhere between 250 and 300 GDD Primo Maxx (200 GDD, base 0 C) and Trimmit (350 GDD, base 0 C). It appears that Anuew is slightly longer lasting than Primo Maxx, but shorter-lived than Trimmit. I look forward to continuing to evaluate Anuew in coming seasons. ✓

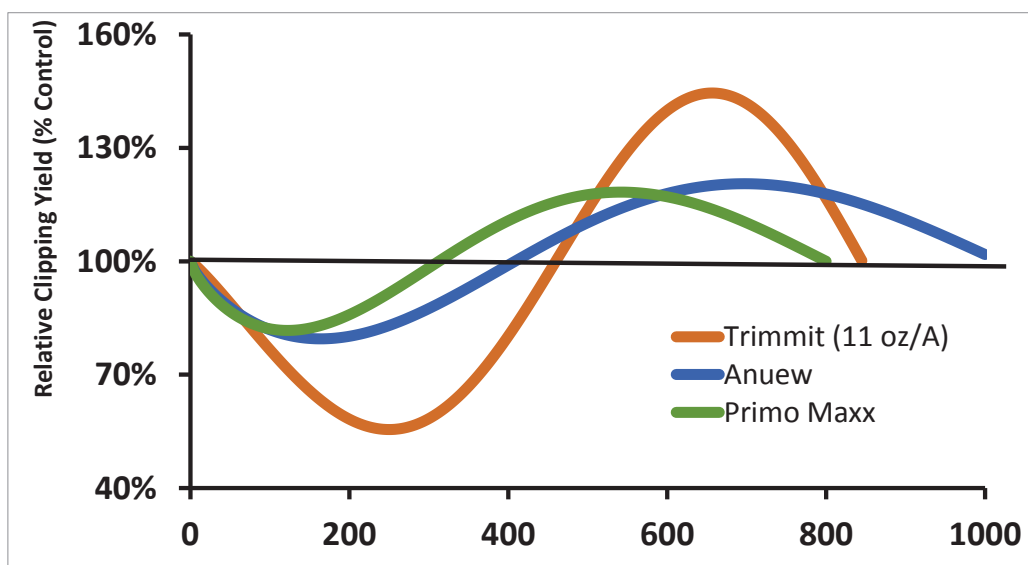


Figure 2. Clipping suppression and rebound phases based on a growing degree day system, base 0 C. Anuew was applied at 7.4 oz/A, and Primo Maxx at 5.5 oz/A.

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TDL 2014 Year In Review

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

In the Golf Industry every year passes and leaves its mark for us to remember. As winter rolls in we all find time to reflect on the year past. For many of us that means evaluating what went well and what parts of our programs could use some modification. Reviewing the past years at the TDL for me is the same practice I have used in my years as a Superintendent and as a Sales Representative.

2014 will be long remembered as the year we had very active and re-occurring dollar spot pressure. History has shown at the Noer that we usually do not see heavy dollar spot pressure until late July and sometime not until after the WTA Summer Field Days (this year July 28th). June of 2014 ended with some very heavy dollar spot pressure. On June 20th we did dollar spot counts on the Reduced Risk Study and all the plots were clean. The next Tuesday was topdressing day and as I dragged in the topdressing things were still clean. On my early morning walk of the plots on Wednesday morning June 25th there was dollar spot everywhere. I walked back to the Reduced Risk Plots and you could pick out the controls with ease. The stage was set for a cyclical pattern of dollar spot and we experienced dollar spot outbreaks all summer long. According to Dr. Koch this may have been the best dollar spot pressure we have had at the Noer in years, maybe ever. Visiting with many of you it appears many of you had the same issue this past year.

As for the lab we had another very steady year, the weather was fairly mild and the disease was subdued again this past year. We did have more samples than 2013 but not that many more. In a difficult year like 2012, there were well over 200 samples submitted to the lab. Many of those 2012 samples were abiotic due to the very difficult weather. In **Figure 1** you can see a comparison of the samples from 2013 to 2014.

As you look at **Figure 1** you will notice the number of ant samples. These seem a bit odd for the disease lab but in fact they are not. All of these samples came to the lab from golf courses that were having an issue controlling dollar spot. All of them had made multiple applications of standard dollar spot control products and the problem either persisted or seemed to clear up then re-appear a week or two later.

Figure 1. Shows a comparison of submitted sample numbers between 2013 and 2014.



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Disease	2013	2014
abiotic	36	28
algae	1	2
Ants	1	4
Anthracnose	6	8
Asochyta	4	3
Basal Anthracnose	9	16
Bentgrass	1	2
Bipolaris	2	11
Brown Patch	1	1
Damping Off	1	2
Dreschlera	5	5
Dollar Spot	2	2
Fusarium	1	0
Fairy Ring	2	1
Mushroom ID	1	0
NRS	9	12
PGR	1	3
Pythium	9	6
Quackgrass	2	2
Rapid Blight	3	1
Summer Patch	18	14
Take All Patch	11	14
Yellow Patch	1	0
Totals	127	137

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TURFGRASS DIAGNOSTIC LAB

As you look at **Figure 2** you can see the blighted leaves they appear almost white, much like a dollar spot infected leaf. Under careful examination there was no evidence of any dollar spot organism and no other pathogens either. Thanks to an Article written by Dr. Williamson and published in GCM ("Dollar spot, Maybe Not?" May 2001), and some discussion with Dr. Williamson we determined this was ant damage to the leaves from formic acid secreted by the ants in a territorial battle. For information more please read the article or engage Dr. Williamson in a lively ant discussion.

Due to the cooperation between departments here at the UW, these superintendents save thousands of dollars in unnecessary chemical applications.

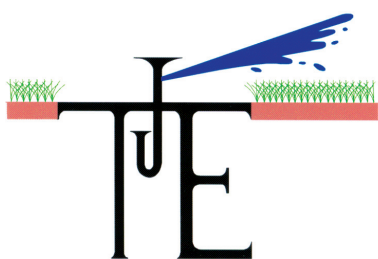
The TDL does receive samples from many places outside Wisconsin (**Figure 3**); we are truly a nationwide lab. The samples we receive all tend to come from other areas of the country where they are also growing cool season grasses. When I talk too many of these superintendents they are usually either repeat submitters or they know someone that has used the TDL. Their desire for a timely and accurate diagnosis has led them to the Lab. Many times I hear there is a lab closer they can send the sample to but they depend on the timeliness of the TDL and use the other lab as an after that fact second opinion.

One of the things I learned quickly since coming to the lab is that we rarely get the easy diagnosis. As it has been explained to me by a wise veteran, "turf diseases are illiterate and they never read the textbook so they do not always know what they should look like". My job is to diagnose the ones in disguise. Frequently I can quickly find a pathogen, but the symptoms do not appear consistent with that pathogen so like an NFL Referee I go back under the hood and under further examination I find the real cause of the problem. After this past weekend it is apparent that further review can reverse a bad call. The key is that the presents of a pathogen does not always equate with that pathogen being the causal agent.



Figure 2: The blighted leaves appear almost white like a dollar spot infected leaf but under examination this was determined to be ant damage.

STATES	2013	2014
California	4	3
Colorado	1	1
Illinois	10	8
Indiana	2	3
Iowa	4	6
Michigan	2	6
Minnesota	20	16
Nebraska	1	0
New Jersey	1	1
New York	3	0
North Dakota	0	4
South Dakota	0	3
Ohio	15	8
Wisconsin	64	78
Totals	127	137



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TURFGRASS DIAGNOSTIC LAB



Figure 4: A cross section of a root infected with a Vascular Bundle pathogen. Notice the black dots in the middle of the root; these are the vascular bundles that are filled with the pathogen.

The TDL does have its share of usual suspects and they tend to visit us every year. The diseases I see most frequently at the TDL are what I call the vascular bundle group. This includes Necrotic Ring Patch (*Ophiosphaerella korrae*), Summer Patch (*Magnaporthe poae*) and Take-all-patch (*Gaeumannomyces graminis* var. *aneae*). In **Figure 4** you can see a cross section of a root infected with a Vascular Bundle pathogen. Notice the black dots in the middle of the root; these are the vascular bundles that are filled with the pathogen. From the picture you can easily understand why turfgrass plant infected with these pathogens struggle in the summer heat. With the blocked vascular bundle the plant cannot properly translocate enough water and nutrients when dealing with summer. The biggest problem here is once we see the symptoms the disease has done its damage and curative fungicide applications are not very effective.

As I look forward to 2015 I am reminded of Dr. Koch's Rust project that will be entering its third year. This fall I was told by many Turfgrass Professionals that they had planned to assist us in collecting samples but when Rust is at its peak the Turfgrass Managers are at their busiest time of the year and many reported they forgot. This year I am starting a new notification program (Rust Scout Program). This program will ask anyone interested in collecting samples in the summer of 2015 to send me a text, call the lab and leave message or send me an email indicating their willingness to collect samples. A data base has been created and I will enter their information and then next summer when the Rust begins to appear I will send out a reminder email with the submission form attached. I cannot tell a lie, I may send it out a few times over the summer as a gentle reminder. **Please take a minute and sign up for our Rust Scout Program.** As always your assistance is very much appreciated and needed! 

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Comrades

By Jake Schneider, LMD Production Manager, The Bruce Company

And, I'm back. I'm sure that many of you were worried that the landscaping world had swallowed me up and refused to spit me out as I've been slacking off on my Grass Roots obligations. This past year was busier than normal in my end of the industry due to the vast amount of plant material that didn't survive the never-ending polar vortex that was the winter of 2013-14 and because of timely rains that kept lawns very happy throughout the summer. (Side note: since making the job change, I've come to appreciate summer dormancy and its positive effects on our bottom line.) Aside from the job keeping me busy, I somehow managed to sell two homes, move three times, and live in four different locations from April through November. I imagine that the USPS is not very happy with the amount of forwarding addresses that it has to contend with. On a positive note, my packing skills have improved greatly. No, 2014 wasn't a great year on a personal level, and I've found that this little game of life doesn't always go as planned. Despite the tribulations, it has made me even that much more grateful for the friends and family that I hold close, and many in the former category can be traced to the world of golf course maintenance.

Aside from generally enjoying the outdoor work (as I sit behind the computer that is now my Siamese twin), instant results, and beautiful end product, the collegiality of the golf course maintenance world was a big factor behind my decision to pursue a career in the green industry, and I suspect that I'm not alone. Memories of Scott Schaller bringing a teenage me to the Reinders Winter Conference are still fresh in my mind, and aside from all of the equipment and education, the relaxed atmosphere of friendliness and sharing of ideas was the most surprising and impressive as-

pect of this experience. As my career in golf advanced, picking the brains of anyone that would listen, attending research days and industry conferences, and even reading online forums became tremendous sources of new information and ideas that helped drive continuous improvement on the golf course.

While I generally despise the Ohio State athletic program and Urban Meyer in particular (sorry, Dr. Williamson), there is no doubt that he is one of the best college football coaches in modern times, and his record of success reflects just that. After their impressive victory over Oregon, I read an article in which one of his assistant coaches called Meyer the best listener that he has ever been around.

Throughout the course of his coaching career, he has picked the brains of coaches who run a spread offense and synthesized this information to develop incredibly productive offenses at Utah, Florida, and OSU. While he has an innate competitiveness and drive to succeed, the knowledge that Meyer has acquired from others has played a sig-

nificant factor in his success. Such information-acquiring tactics are certainly not exclusive to coaches, and many of the most successful superintendents have this same sense of inquisitiveness and desire to learn from others.

From what I can tell, information sharing and comradery aren't nearly as prevalent in the cut-throat world of for-profit landscaping and that's the aspect of the golf maintenance community that I miss the most.

From what I can tell, information sharing and comradery aren't nearly as prevalent in the cut-throat world of for-profit landscaping and that's the aspect of the golf maintenance community that I miss the most. Not surprisingly, hand watering fairways during 90 degree summer afternoons did not make the list. Accordingly, it wasn't a shock that networking opportunities ranked so highly in the WGCSA survey that was discussed in the last issue. Maybe I'm easily pleased, but I've never not enjoyed any WGCSA, WTA, or GCSAA event that I've attended. But, in order to keep these great events relevant, we have to support them through our attendance (present company included). Heck, I missed not attending the Golf Industry Show so much last year that a trip to the Golf Industry Show in San Antonio is going to be my warm-weather trip for the year. Well, I hope that it's warm.

Don't take the people and events of your industry for granted because I believe that it truly is a unique atmosphere that might just makeup for the long summer hours and those golfers who are never satisfied with the course conditions. 🌱





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Turfgrass Pathology Research Roundup

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

The past year was a productive one for the UW Turf Pathology team. New staff were added; Sam Soper as Research Specialist and manager of the fungicide trials, Brijesh Karakkat as a post-doctoral research working on turfgrass rust, and Lisa Reedich as a toxicology graduate student working on pesticide degradation.

New grants were received; 2 years of support from the Golf

Course Superintendents Association of America and the Wisconsin Golf Course Superintendents Association investigating snow mold fungicide timing and plant fungicide uptake, and 3 years of support from the OJ Noer Foundation to develop a new, rapid detection tool for root-infecting diseases such as take-all patch and summer patch. And last but certainly not least, new research projects were initiated...lots of new research projects.

Overall there are 26 research reports from 2014 posted on the Turfgrass Diagnostic Lab's website (www.tdl.wisc.edu/results). Most of these are fungicide-testing reports, but a few are reports from projects developed internally. Let's look at the results from each one of these in a little more detail (a full report of each is posted at the TDL website address listed above).

Reduced-risk fungicide program

This project compared 3 fungicide programs; 1) a conventional calendar-based fungicide program provided by a local superintendent, 2) a program using conventional fungicides but only making applications when the Smith-Kerns Dollar Spot Prediction Model identified conditions as being favorable for dollar spot development, and 3) a program using the Smith-Kerns model but ONLY using fungicides labeled as reduced-risk by the EPA. What we found in 2014 was that we eliminated 2 (Program 2) or 3 (Program 3) fungicide applications compared to the calendar-based program without any decrease in dollar spot control when using the model (Table 1).

In addition, program 3 used 85% less active ingredient and lowered the overall environment impact quotient (EIQ) by 85% relative to program 1. However, the heavy reliance on chlorothalonil in program 2 led to a 6% increase in active ingredient applied and a 30% increase in EIQ compared to program 1.

These increases occurred despite the fact that program 2 made 2 fewer applications over the course of the season than program 1. The two take-aways from year 1 of this project were that the Smith-Kerns model can be a beneficial tool for managing dollar spot on golf course fairways and chlorothalonil usage needs to be severely curtailed in order to lower the EIQ of a fungicide program.

This project will be repeated in 2015, and in addition 5 Wisconsin superintendents have signed on to test use of the dollar spot model on their fairways in 2015.



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Treatment	Spray Date	Pesticide Applied	Field Use EIQ
Conventional	May 20 th	Emerald	9.1
	Jun 17 th	Torque	25.5
	Jul 8 th	Daconil WStik	176
		Banner MAXX II	12.3
		Subdue MAXX	11.4
	Jul 22 nd	Chipco 26GT	46.1
		Subdue MAXX	11.4
	Aug 7 th	Daconil WStik	176
	Aug 27 th	Torque	25.5
Smith-Kerns Model: Conventional Fungicides	Sep 2 nd	Curalan	23.7
	Sep 23 rd	Chipco 26GT	46.1
	Total EIQ		563.1
	June 5 th	Emerald	9.1
	Jul 2 nd	Banner MAXX II	12.3
		Daconil WStik	176
	Jul 18 th	Chipco 26GT	30.8
		Daconil WStik	176
	Aug 7 th	Banner MAXX II	12.3
Smith-Kerns Model: Reduced-Risk Fungicides		Daconil WStik	176
	Aug 27 th	Emerald	9.1
	Sep 23 rd	Banner MAXX II	24.6
	Total EIQ		802.2
	Jun 5 th	Emerald	9.1
	July 2 nd	Velista	18.2
	Jul 25 th	Emerald	9.1
		Heritage TL	12.9
	Aug 27 th	Compass	10.1
		Velista	18.2
	Sep 23 rd	Emerald	9.1
	Total EIQ		86.7

Table 1. Environmental Impact Quotient (EIQ) of conventional versus reduced risk fungicide programs at the O.J. Noer Turfgrass Research and Educational Facility and University Ridge Golf Course in Madison, WI during 2014.

Nitrogen source impacts on dollar spot development

Previous reports have suggested that the source of nitrogen fertilization can impact the development of dollar spot. We tested applications of ammonium sulfate (21-0-0), potassium nitrate (13-0-46), and urea (46-0-0) applied at a rate of 0.2 lbs of nitrogen per 1000 ft² every 14 days throughout the growing season.

Average dollar spot on August 27th showed no significant differences between the treatments (**Figure 1**). The two take-aways from this project are that nitrogen source did not appear to have a significant impact on dollar spot development, and somewhat surprisingly neither did nitrogen itself (no difference between non-treated receiving no nitrogen and the nitrogen treatments).

Dollar spot has traditionally been thought of as a 'low nitrogen' disease, but that was not observed here. This project will be repeated in 2015 with more of an emphasis on the impact of nitrogen itself on dollar spot development.

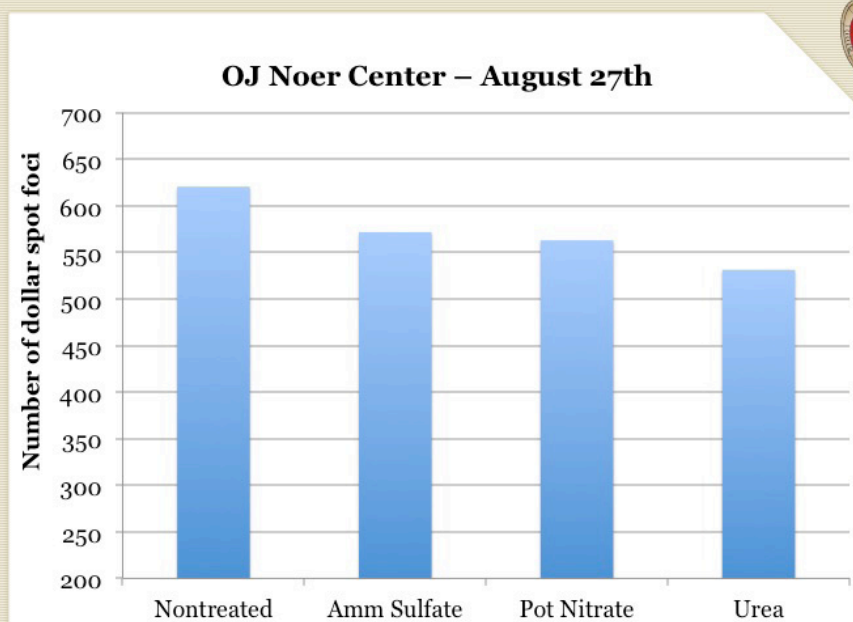


Figure 1. Number of dollar spot foci under four different fertilizer regimes on August 27th, 2014 at the O.J. Noer Turfgrass Research and Educational Facility in Madison, WI.

Dollar spot suppression using strobilurin fungicides

This study was initiated in response to claims about the ability of some strobilurin fungicides to suppress dollar spot (namely Insignia), while others were reported to have no impact (Compass) or even worsen dollar spot symptoms (Heritage). We tested Heritage TL, Compass, and Insignia Intrinsic for their ability to suppress dollar spot along with Xzemplar and Lexicon (combination of Insignia and Xzemplar). Xzemplar is a highly effective dollar spot product and was included as a positive control treatment.

As expected, Lexicon and Xzemplar provided the most effective dollar spot control under the heaviest dollar spot pressure on August 27th (Figure 2). However, Heritage TL and Compass did provide some dollar spot suppression relative to the non-treated control. In addition, Insignia provided increased dollar spot suppression relative to Heritage TL and Compass, though the suppression did not provide acceptable levels of control and was not as effective at controlling dollar spot as Xzemplar and Lexicon.

The primary take-aways from this project were the increased dollar spot suppression of Insignia relative to the other strobilurin fungicides, and the fact that the other strobilurin fungicides not only didn't increase the amount of dollar spot but instead provided a slight level of control. This project will likely be repeated in 2015 to see if the same patterns hold true over a period of multiple years.

Water volume and nozzle impact on dollar spot development

This study was initiated in response to reports of effective disease control being achieved with very low spray volumes and new 'dual fan nozzles.' The study tested dual fan and air induction nozzles at water volumes of 0.5, 1.0, and 1.5 gallons of water per 1000 ft². In each case, Banner MAXX was applied at 2.0 fl oz per 1000 ft² on a 21-day interval.

Average dollar spot on August 27th showed that all treatments reduced dollar spot relative to the non-treated control, but that there were no significant differences between any of the nozzle and water volume treatments (Figure 3). This suggests that both types of nozzles and all 3 water volumes provide a similar level of dollar spot control. This project will likely be modified and repeated in 2015 to further investigate the relationship of water volume and nozzle type to disease control. ✓

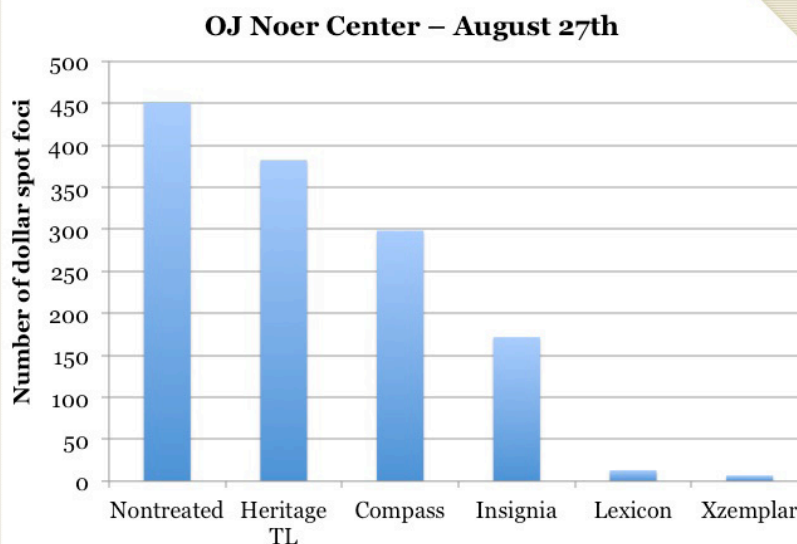


Figure 2. Number of dollar spot foci following repeated applications of various strobilurin and succinate dehydrogenase inhibitor fungicides on August 27th, 2014 at the O.J. Noer Turfgrass Research and Educational Facility in Madison, WI.

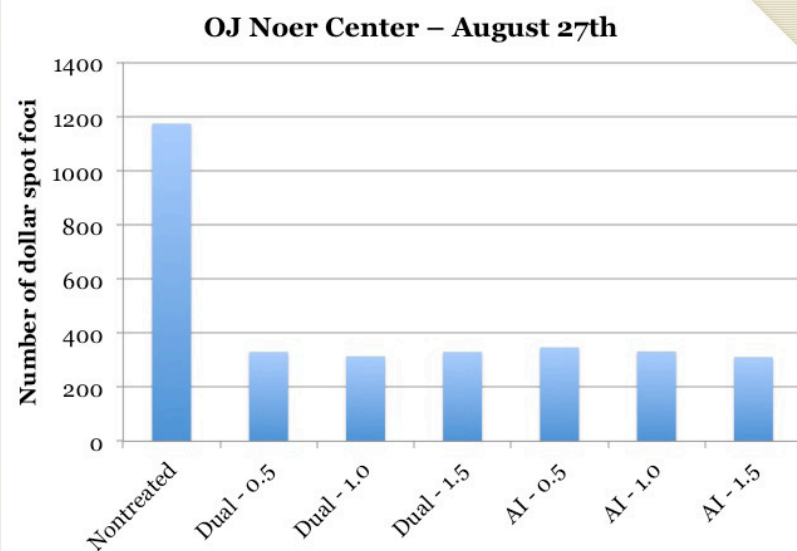


Figure 3. Number of dollar spot foci following application of Banner MAXX using a dual fan or air induction nozzle and a water volume of 0.5, 1.0, or 1.5 gallons per 1000 ft² on August 27th, 2014 at the O.J. Noer Turfgrass Research and Educational Facility in Madison, WI.



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MEMBER SPOTLIGHT

Charlie Edwards, Paul Hugget, Grayson Harms

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

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!

Individual commitment to a group effort- that is what makes a team work, a company work, a society work, a civilization work. -Vince Lombardi

Name: **Charlie Edwards**

Company Position: **Assistant Superintendent at The Legend at Brandybrook Wales, Wisconsin**

Years as WGCSA member: **12**

Membership Classification: **C**

18 holes with Charlie Edwards:

- 1. How did you get started in the turfgrass industry?** I got started in the industry working in the Pro Shop at Oconomowoc Golf Club at age 16 where I would watch the grounds crew and think to myself that is where I need to be working. The following summer I joined the grounds crew and from there my turf career was born. Thanks Dustin!
- 2. What is the most rewarding part of your career?** The most rewarding part of my career is the fact that at the end of the day you get to see constant progress of the work you and your crew perform on a daily basis
- 3. What would you consider to be your greatest career challenge?** Finding good seasonal help. It seems harder every year to find good dependable hardworking individuals. Luckily our core staff has been here 10 plus years.
- 4. Which three adjectives describes you the best?** Alive, Well-balanced, Outgoing.
- 5. Tell us about your family** I am engaged to my wonderful Fiancée Shannon and have 2 amazing step-sons.
- 6. Any pets?** Our family pet is Daisy, a Black Lab. At the course we also have the owner's dog Brandy, a Chocolate Lab who is waiting for her biscuits every morning.
- 7. What drives/motivates you every day?** I am motivated by my managers and members. When I see them happy with the course playing conditions I get a feeling of fulfillment and that keeps me striving to produce even more.
- 8. Who do you admire?** I admire all the past and present troops in this country who fight and protect our freedom.
- 9. Who is the person in history you'd most like to meet?** Vince Lombardi



Top: Charlie Edwards with Fiancee Shannon

Bottom: At Lambeau Field



MEMBER SPOTLIGHT

10. What's a fun fact that people don't know about you? Well, if you have not seen me in 2 years you may not recognize me as I lost 200 lbs the old fashioned way through diet and exercise.

11. What do you do in your spare time, favorite hobbies? In my spare time I like to get up north for snowmobile trips, hunting and also enjoy playing softball.

12. If you could go anywhere in the world on vacation, where would you go? One place I would love to vacation someday is Revelstoke British Columbia for some back country snowmobiling in the Mountains.

13. What is the one thing you would like to learn/accomplish someday? I would like to overcome my fear of heights someday.

14. What is your favorite turf management related tool or technique? My favorite turf management tool is the moisture meter.

15. Favorites: TV Show: Breaking Bad

Movie: Top Gun

Food: Bacon wrapped Fillet Mignon

Sports Teams: Green Bay Packers

16. Do you golf? Handicap? Best shot or golf story? I carry around a 14 handicap and was lucky enough to have a hole in one on a 193 par 3 when I was 17.

17. Top Bucket List items? I'm not a bucket list guy.

18. If you could provide one piece of professional advice, what would it be? A wise man once told me, "Building a golf course is 90% drainage and 10% common sense and if you find yourself running short on common sense add more drainage."



Charlie Edwards snowmobiling in Wyoming with the Teton Mountains in the background.

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MEMBER SPOTLIGHT

Name: Paul A. Huggett

Company Position: Paul's Turf and Tree Nursery Inc. President Owner Operator

Years as WGCSA member: Not as many as most

Membership Classification: Supplier Business

BIO : Sod roll stomping at knee high to dad, mowing grass at head high to his shoulder and loading trucks when I could almost look him in the eye. Welding, bulldozing and mom's bookkeeping learned at the finest Hard Knocks School in the country earned me the title "Jack of all trades master of none" As a stone throwing, puddle jumping farm boy, I went to the big city (UW Madison) to learn about grass. Got book smart but couldn't wait to get back to farm practicality.

18 Holes With Paul Huggett

1. How did you get started in the turfgrass industry? Mom and Dad said we have to start doing something different because the mint we grew at the time was not keeping the table full. So... the year I was born was our first year growing sod. Starting with walk behind Ryan cutters and advancing to the Auto Stack behemoths costing more than a house harvesters of today, have afforded me the awesome opportunity to see and do it all as its related to being a sod (turfgrass for those in the UK) farmer.

2. What is the most rewarding part of your career? I love doing everything (easy to say at the current -8 temp) One of my memorable "days" was at 3 am fixing an 8" irrigation pipe that had blown apart, while tugging on the pipe I slipped and landed flat on my back in 4" of refreshing water that hot and sweaty night. I laughed at my clumsiness only

for the frogs to hear but looking up at that point I saw the most beautiful star lite sky and smiled thinking not many people get to have this much fun.

3. What would you consider to be your greatest career challenge? Understanding why things aren't always perfect and then realizing and accepting that's the way things are supposed to be. Reacting to a challenge with an action and not ponder and delay responding to the issue.

4. Which three adjectives describes you the best? Let's sea, English is my weak suit but I will do my best to "Unpack My Adjectives" learned from "School House Rock." The closest would be patient, tolerant and forgiving. The last is also close to forgetful which also works when wronged.

5. Tell us about your family. Go figure, of all the women in the world the best one picked me to hang around with and we are having a blast. Teenage driving daughter Alanna and Middle schooler Claire never stop amazing me. Least I forget our cats that I never wanted but now have 4. Our democracy household at its best.

6. Any pets? See above. Once is enough.

7. What drives/motivates you every day? Living today

8. Who do you admire? In this industry Monroe Miller, my fellow WTA board members, state wide Barry Alverez for his quick actions, worldly would be Mother Theresa.

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

10. What's a fun fact that people don't know about you? I like to sing

11. What do you do in your spare time, favorite hobbies? Reassembling a barn we took down, woodworking, starting and finishing a project without getting interrupted.



Left: Paul, Alanna, Claire and Shelly Huggett



Right: The Huggets hobby is rebuilding the barn

MEMBER SPOTLIGHT

12. If you could go anywhere in the world on vacation, where would you go? I enjoy staycations. Wisconsin is a great state, I'd like to go back to the Olympic Peninsula

13. What is the one thing you would like to learn/accomplish someday? Operate a coal mining truck. I enjoy running equipment and have operated most of the common things already.

14. What is your favorite turf management related tool or technique? Laying down on the grass for a nap, everything looks better after that.

15. Favorites: TV Show: College Basketball

Movie: Tootsie (family joke)

Food: Cookies

Sports Teams: Badgers Basketball


16. Do you golf? A long time ago

17. Top Bucket List items? Finish the Barn. Travel south in the spring and follow the blooms back north. Take a trip with no specific destination or time frame.

18. If you could provide one piece of professional advice, what would it be? *"Chance (Luck) favors the prepared mind"*
Louis Pasteur Put luck on your side and plan ahead for success. Paul

Right: The Huggetts at Love Park in Philadelphia

Below: Paul enjoying the winter season

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MEMBER SPOTLIGHT

Name: Grayson Harms

Company Position: Superintendent at Bishops Bay Country Club, Middleton

Years as WGCSA member: 13

Membership Classification: Class A Superintendent

18 Holes With Grayson Harms

1. How did you get started in the turfgrass industry? Working at Maple Bluff CC as a summer job after I graduated high school.

2. What is the most rewarding part of your career? All of the different people I get to work with and interact with on a daily basis.

3. What would you consider to be your greatest career challenge? Balancing my time between home and the course.

4. Which three adjectives describes you the best? Motivated, Sincere, Modest

5. Tell us about your family. I've been married 11 years to Lisa, the only woman I have ever dated. My daughter, Addy, is 6, and my son, Eli, is 2.

6. Any pets? Nope.

7. What drives/motivates you every day? There's always a new problem or challenge to tackle. I enjoy the problem solving aspect of being a superintendent.

8. Who do you admire? I've always admired my father. He has inspired me over the years to continue learning new things and instilled a can do attitude that has been a foundation for my work ethic.

9. Who is the person in history you'd most like to meet? Mother Teresa. I don't think that there has been a more genuinely good and holy person in the last century.



The Harms Family, Grayson, Mom Lisa, Daughter Addy and Son Eli.



MEMBER SPOTLIGHT

10. What's a fun fact that people don't know about you? I'm a huge Lego fan. I still have all the Legos from when I was growing up and have been passing on that fun to my daughter and son.

11. What do you do in your spare time, favorite hobbies? I enjoy photography, which started when I worked on a magazine at UW. I also enjoy woodworking.

12. If you could go anywhere in the world on vacation, where would you go? The Virgin Islands – There's nothing better than laying on a beach in the sun with a beer in your hand!

13. What is the one thing you would like to learn/accomplish someday? I would like to become fluent in Spanish. I think being bilingual is impressive.

14. What is your favorite turf management related tool or technique? TDR Probe. This tool has changed how confidently and consistently I can manage turf on the dry side.

15. Favorites:
TV Show: Shark Tank
Movie: What about Bob?
Food: Steak
Sports Teams: Badgers/Packers

16. Do you golf? Handicap? Best shot or golf story? I do golf, but not enough. I plan on golfing more next season – but I say every year! I did have a hole in one at the Vitense Par 3 course when I was going to school at UW which I have yet to repeat.

17. Top Bucket List items? I'd like to travel around the world. There are so many places that I've seen in pictures and studied in history, but I believe the feeling of standing in St. Peter's Cathedral or seeing the wildlife on the Galapagos islands would be indescribable.

18. If you could provide one piece of professional advice, what would it be? As I was told the first day I worked on a golf course – "Don't worry - It's only grass!"



Grayson Harms

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Conference Lives Up To Expectations

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

The annual WTA Winter Conference offered great turf education to start out the New Year. The conference was held on the UW-Madison campus on January 6th to an appreciative crowd of onsite attendees and webinar participants. There were 52 registrants and 18 students/staff/researchers that ventured to the UW-Madison campus to attend the live conference. An online webinar was added as an option two years ago for those who preferred to listen in from the comfort of their work computers. The webinar added another 33 participants. Participation would have been even better if the weather didn't throw another curve at us in the form of two inches of fresh snow and sub-zero temperatures that forced several attendees to stay home. Those attendees will be able to view the presentations at a later date via the archived conference tapes. For information on how to access the archive, contact

Audra Anderson at ajander2@wisc.edu or 608-845-6536.

Dr. Doug Soldat started the conference with a moment of silence for the late Dr. James R. Love who passed away on February 25, 2014. Dr. Love started the UW-Madison turf program in 1961 and meant so much to many of us. Next came the presentation of student scholarships. Dr. Love would have been proud of the following recipients that represent the future of the turf industry. **Tyler Gerritts** was the recipient of the first scholarship, which was named after Dr. Love. **Kristin Witkowski** was the recipient of the next, which was named in honor of another turf legend and former president of the WTA, James Huggett. Two other WTA scholarships went to **Sabrina Ruis** and **Lisa Reedich**. Lastly the Charles O. Newlin scholarship went to **Luke McGhee**.

The first speaker of the conference was

Dr. Cale Bigelow from Purdue University. He talked about management programs to suppress annual bluegrass in existing bentgrass turf. He stated there are some very nice annual bluegrass turfs on golf courses, but most always creeping bentgrass provides a more reliable, persistent, seasonally consistent, and lower expense turf to manage. His suggestions for trying to increase the percentage of bentgrass on a playing surface includes changing cultural practices and environments, like watering and fertilizing somewhat less, decreasing compaction, and increasing sunlight by decreasing shade. He also prefers slowly rather than rapidly lowering annual bluegrass percentages, which can be accomplished through proper use of plant growth regulators. When starting a reduction program, you must decide what percentage of annual bluegrass you can live with and commit to a dedicated several year plan.



2015 Scholarship Recipients – Dr. Doug Soldat with Luke McGhee, Tyler Gerritts, Sabrina Ruis, Lisa Reedich, (not pictured, Kristin Witkowski)

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NOTES FROM THE NOER

The newly hired UW-Madison Insect Diagnostic Lab manager, P.J. Liesch, was next to present. He talked about the insect trends that occurred in 2014 and what to expect for 2015. 2014 really witnessed no major insect outbreaks with its cold winter, cool wet spring, and moderate summer temperature. P.J. talked about the origins and potential damage that many insect pests can cause to our landscapes. Those pests include chinch bugs, sod webworms, cutworms, emerald ash borer, gypsy moth, tent caterpillar, fall webworm, and gypsy moth, which may be the worst for Wisconsin's landscapes because it does damage both as larvae and adult. You may contact P.J. for any questions by email at pliesch@wisc.edu, Twitter @WiBugGuy, or through the diagnostic lab website at www.labs.russell.wisc.edu/insectlab/.



ABOVE: Dr. Cale Bigelow, Purdue University

LEFT: P.J. Liesch, UW-Madison Insect Diagnostic Lab



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NOTES FROM THE NOER

Dr. Paul Koch was next to present. His topic was, “Reduced Risk Disease Control: How To Do It and Why It’s Important”. Dr. Koch first described that pesticide risk includes two parameters: how toxic a compound is, and how much are you exposed to the compound. He evaluated four different fungicide programs to see if reduced risk plans work at curing disease and are cost effective. Reduced risk products are determined by an EPA environmental impact quotient. That quotient rates products according to human health concerns, non-target organism’s impact, potential for groundwater contamination, rates of product needed, and compatibility with integrated pest management practices. Dr. Koch’s conclusion was that those concerns are all important for both us and the future of the industry.

The rest of the morning session included three other presentations. Dr. Bigelow presented on “What’s New in Bentgrass Cultivars”, Superintendent of Des Moines Golf & Country Club, Rick Tegtmeier, presented on Using Technology in Maintenance Operations, and Bruce Schweiger presented a 2014 review of the UW-Madison Turfgrass Diagnostic Lab.

Next came a wonderful lunch and time to catch up with fellow participants. Starting right after lunch, Dr. Chris Williamson presented a very current topic of “The Association of Insecticides to Bee Decline”. More specifically, he talked about a relatively newer class of insecticide, neonicotinoids (neonics), and how they affect pollinator insects. There is no question that they can be lethal to pollinators when applied improperly. The label states to not apply to plants when they are in bloom and attracting pollinators. He stated the three ways to use neonics so they don’t effect pollinators are to read and follow label instructions, mow weed blooms before applying the insecticide, and to consider granular formulations. He stated that at this time the USDA’s position is that neonics are NOT considered to be a primary cause of colony collapse disorder, although neonics may suppress bees’ immune systems which could make them more susceptible to some bee diseases. The bottom line to Dr. Williamson’s talk was that the role of mnemonics in causing bee decline is being intensely debated and researched without a clear answer at this point.



TOP: Dr. Paul Koch, UW-Madison Department of Plant Pathology

MIDDLE: Dr. Chris Williamson, UW-Madison Department of Entomology

LEFT: Retiring WTA Ambassador Monroe Miller is thanked for his years of service by WTA Research Day coordinator Aaron Goninen

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NOTES FROM THE NOER

Next came a presentation by Dr. Doug Soldat, who gave results from several of his 2013 and 2014 research projects at O.J. Noer. He discussed the testing of Aneuw, a new plant growth regulator from NuFarm, on bentgrass putting greens and testing of a new herbicide called Defender from Dow. Other projects he talked about were testing of different polymer coated ureas as compared to more frequent application of non-coated urea, testing of other nitrogen additives as a group, and lastly how to use soil tests for potassium in developing stronger turf.

The last talk of the day was from Jerry Kershasky, former superintendent of both University Ridge Golf Course and Westmoor Country Club and current sales representative for Reinders. Jerry talked about 'Do's and Don'ts of A SHORT TURN-AROUND Putting Green Restoration'. He added SHORT TURN-AROUND to his title because the amount of time that most superintendents are given to renovate old greens is short. It's typically from late August to the following June before the greens have to be ready for golfers again. Identifying the reasons for the old greens failure is paramount to ever starting a greens renovation program. At University Ridge, Jerry found shade and air movement issues, internal and surface drainage issues, rootzone material and layering issues, golf course politics and financial issues, and more. Jerry credits the dedicated staff at University Ridge with the successful renovation of all the putting greens. They did as much as they could given the time period, course politics, and original design of the course.

WTA Turfgrass Research Day met all expectations despite the weather. The planning committee of Drs. Soldat and Koch, Aaron Goninen, Audra Anderson, and Bruce Schweiger should be commended. The generous sponsors that helped bring you Turfgrass Research Day 2015 should also be thanked. Please show these sponsors, listed here, your gratitude for supporting quality education. And thank you speakers, both near and far, for all your efforts. ✓



TOP: Jerry Kershasky, Reinders

MIDDLE: Bruce Schweiger, UW-Madison Turfgrass Diagnostic Lab

LEFT: Dr. Doug Soldat, UW-Madison Department of Soil Science





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Robert Vavrek Receives Distinguished Service Award

By Monroe Miller, WGCSA Chapter Historian

Editors Note: This article by Monroe Miller is a speech he gave at the 2014 Golf Turf Symposium and is used here with permission.

Is it possible? Has it really been 25 years since Bob Vavrek accepted employment with the United States Golf Association Green Section? It certainly doesn't seem that long ago – A quarter of a century!

In what has to be one of the most difficult jobs in golf, he has prospered, he has excelled and he has been an outstanding success. That has been great for Bob, but it has been even more significant for Wisconsin's golf course superintendents.

The same things that make our jobs difficult and challenging make his job the same. Whether dealing with tough, unreasonable green committee chairs, miserable weather, shallow roots on poa annua turf, budget issues and hundreds of other things, Bob brought to our golf courses his considerable experience, his expertise and intellect, and always the right tone.

Lots of times, his greatest skill was the last item. It is difficult to tell a veteran superintendent that he would be better if he changed a program, but from personal experiences, Bob was

able to do that. He has had the ability to capture the confidence of green committee members, owners and other officials. And from that vantage point he's been able to offer the advice they needed to hear, as opposed to what they wanted to hear. In the end, each visit he makes is to make golf better and more enjoyable, and when golf is better the superintendent wins.

Bob Vavrek's participation in our careers goes beyond the course visits to USGA Turf Advisory Service subscribers. He is here today, *(at the golf turf symposium)* just like he has been for 25 years. His help in developing programs, rounding up speakers for the symposium and even speaking himself has been invaluable and irreplaceable. Facing winter injury? There's Bob, in front of hundreds of course officials, golf players and superintendents, offering up the need for patience and the value of planning for the worst. Or if driving through town, you might just get a courtesy stop from him, just to say hi and see how things are going. We see him at WTA events also and we are only one of the states he is responsible for managing. Neighbors will tell you the same thing – He is a contributor for them as well.



Chapter Historian Monroe Miller Presents Robert Vavrek The WGCSA Distinguished Service Award



Has It Really Been 25 Years?

Top: 1990 Symposium at the Pfister

Middle: 1994 WGCSA Meeting at Lawsonia and Nortons Resturaunt

Bottom Right: 1998 WTA Expo

Bottom Left: 2001 With Frank Rossi



I went back to look at the 19 annual reports from Bob's TAS visits during those years our careers coincided. Wow! I agree with Director of the Green Section Dr. Kim Erusha – He has superb writing skills. Think about how many reports he has written in his 25 years; yet, as I read each of those he sent to our course I was stuck by how each was fresh, to the point, original, instructive and valuable. We always made copies and distributed them to club officials. Many, many of them spoke the same about his advice and the reports themselves.

Bob received his undergrad degree from Marietta College as a biology major, a


M.S. Degree from The Ohio State University where he studied turf entomology (and fishing from his major professor Harry Niemczyk) and then onto a PhD program at Cornell. He was a grad student at the same time as Dr. Frank Rossi.

Fortunately for us, he took Green Section training from Jim Latham, his predecessor here in the north central region. Jim had 25 years of work with Milorganite and about a decade with the Green Section. The rest is, as they say, history.

In my career, I have benefitted from the advice of USGA Green Section Agronomists Lee Record, Dr. Carl Schwarzkoph, Stanley Zontek, Jim Latham and Bob

Vavrek. It would be foolish to wish for another 25 years from him, but let's hope for another decade.

I fear that all too often we have taken this man for granted, but not after today. The golf world will now know how much he has been appreciated. It is a pleasure and an honor to present Bob with our highest expression of respect and gratitude, the WGCSA Distinguished Service Award.

He joins fellow agronomists Charlie Wilson, Stan Zontek and Jim Latham as recipients of this award. It is a coincidence that it happens on this end of his 25th year with the USGA, but what a great coincidence it is for us. 



Bob Vavrek, Duwayne Laak, Bob Emmerich and Lee Merkel Enjoy Oshkosh Country Club in 2001. After golf Bob put on his blazer and gave his Year In Review.

2015 Event Schedule!

Wednesday February 4th - Northern Great Lakes Winter Turf Conference, Comfort Suites, Green Bay

NEW DATE - Monday February 9 - Assistants Seminar, Whispering Springs Golf Club

February 21-26 - Golf Industry Show, San Antonio, TX

Wednesday February 25th - Wisconsin Room, Hard Rock Cafe, San Antonio, TX

Monday March 4th - Spring Business Meeting, South Hills Country Club, Fond du Lac

Wed & Thur March 11-12 - Reinders Green Industry Conference, Waukesha Expo Center, Waukesha

NEW DATE - Wednesday April 29th - Super Pro Outing with Wisconsin PGA, Abbey Springs Golf Club, Fontana

Tuesday May 19th - May Golf Meeting, Lawsonia Golf Club, Green Lake

Monday June 22nd - June Tournament Meeting at Autumn Ridge GC, Valders

Wednesday July 22nd - 9-Hole Golf or Foot Golf and Picnic, Rolling Meadows Golf Course, Fond du Lac

Tuesday August 18th - Joint Meeting with NGLGCSA, Sentry World Golf Club, Stevens Point,

Monday September 21 - Wee One Fundraiser, Pine Hills Country Club, Sheboygan

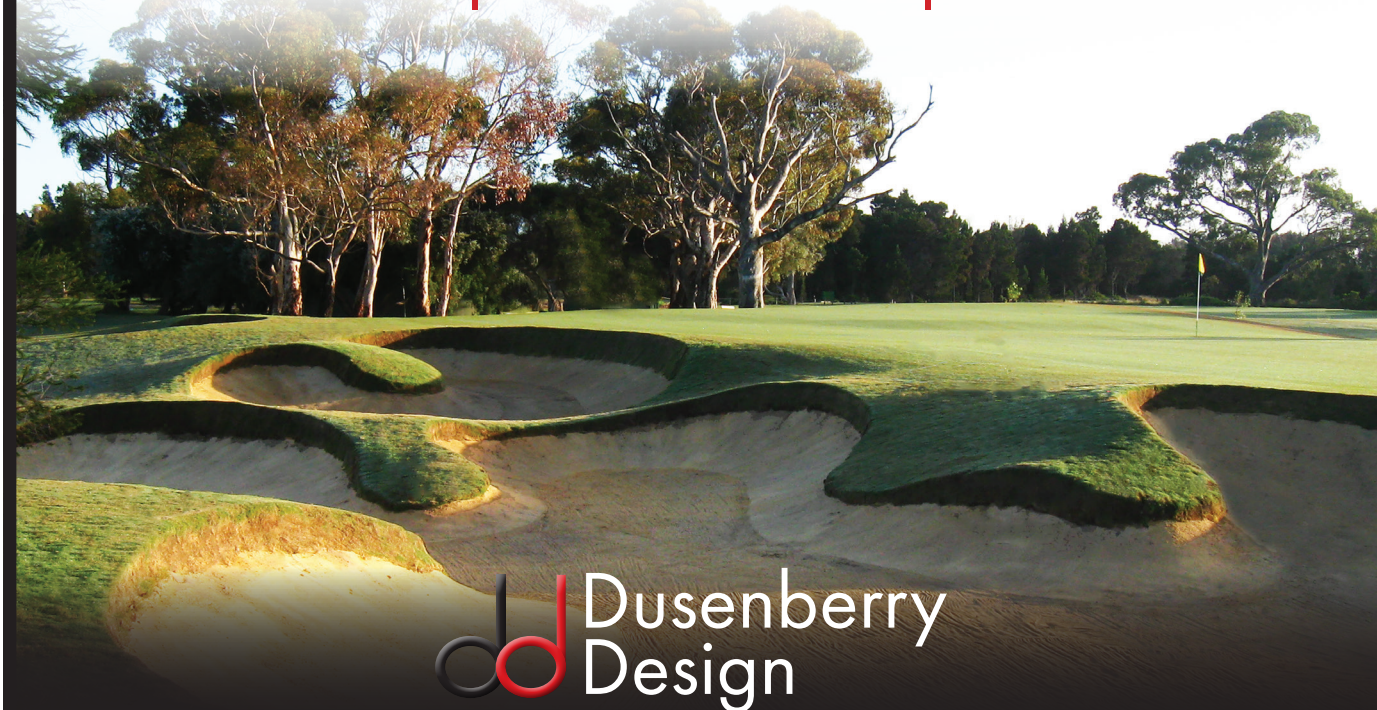
Monday October 5 - WTA Fundraiser - Blue Mound Golf and Country Club, Wauwatosa

November 7th OR 14th - Couples Dinner, Lombardi's Steakhouse, Appleton

Wed & Thur December 2-3 - Golf Turf Symposium

February 6-11, 2016 - Golf Industry Show, San Diego, CA

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49th Golf Turf Symposium

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

The 49th Golf Turf Symposium was held December 3rd and 4th at the amazing American Club in Kohler. The topic “How Are You Doing As A Professional?” covered a unique combination of turf topics with similar individual improvement topics that we all need but often put on the back burner when selecting our continuing education.

WGCSA President Elect Jim VanHerwynen provided opening comments discussing this years schedule and offering next years 50th symposium will be How Are We Doing As A Industry. Next up, GCSAA Associate Director of Chapter Outreach Steve Randall provided the keynote address, “Defining Success, Attitude and Results.”

Randall started by provided the following future industry trends:

- Expect a continued decline in the number of golf courses.
- Turf managers can expect an increased role at their clubs.
- Golf courses will struggle to find help due to a shrinking labor pool.
- Government regulations will continue to increase.
- Customer expectations will continue to increase.

None of them should be a surprise if you have been paying attention although the shrinking labor pool will affect the year round golf courses more than our seasonal golf operations. Steve then turned to what GCSAA can and is doing to help us succeed in our positions.

At the conference and show GCSAA offers communication classes but they are often the last to fill up after the agriculture related classes are full. However as individuals we need professional development to be leaders at our clubs and courses.

Steve suggested we each have personal vision and mission statements to guide us. A vision statement describes what we are trying to become while mission statements are why we exist in our lives.

He suggested to be better communicators we need to become better listeners. In meetings the person who speaks first often sets the tone and the person who asks the questions controls the direction and content of the conversation. But the person who listens controls the outcome. As participants we do not need to talk all the time but we need to pick our spots to ask good questions or provide valuable comments.

Steve discussed the importance of relationships starting with how to provide quality customer service which he defined as following up to set you apart. Every business is going to get complaints but it is how you follow up is what the customer will remember.

As managers our attitude is important in our relationships and we have a choice each day in how our attitude will be. He suggested we place a high value on people and try to find something positive in everything we do and include something positive in every conversation.

We cannot remain complacent in our personal growth. Our growth as individuals impacts organizational growth. We should set goals to improve ourselves through reading, continuing education, chapter service and spending time with those we admire. Randall also suggested we track what we are learning by writing a report or blog and then applying what we have learned.

Stevens keynote was a great lead into the 49th symposium.

Bob Porter from Hiawatha and Fort Snelling Golf Clubs spoke on “Social Media in the Turf Industry”. He started with how we need to build and protect our personal and professional brands.



Top: Keynote Speaker Steve Randall

Bottom: Bob Porter discussed Technology and Social Media.

Personally social media sources such as Google Plus, Instagram and Facebook are good ways to have an internet presence and follow family and friends.

Professionally Linked-In is imperative for job seekers but also for those happy in their current positions. Word Press and Blogger are two ways to reach out to the industry and customers while letting them know what is happening at your operation and why you do the agronomic work you do. Twitter is a great way to keep up with industry news and information or provide a communication tool with customers. U-Tube and Vine are ways to provide fun or educational videos to share with customers, staff and the industry as a whole.

A couple keys to developing a brand either personal or professionally is to be consistent and develop a philosophy on what you are going to promote. With any social media platform it is key to keep posts positive and not share personal information on professional sites and not share on personal sites anything you do not want the world to know about you. Other misuses to avoid are being self serving, overposting, talking club politics, ranting about anything or forwarding or posting graphic pictures.

Often club management or our customers assume we just mow grass all day but a video on U-Tube or Vine can show them what we do while we explain why we do it.

To start out professionally Bob suggested Twitter as the right step to network and communicate. As a new user do a lot of listening and reading but when it is time to post be yourself and be compelling.

Porter then switched away from social media and discussed some new applications or apps that will help turf managers. Measure Map allows users to measure distance and area and comes in three versions. Measure Map Lite is free while measure map is \$1.99. The best version Measure Map Pro is \$33.95 and has the most features.

Sunseeker shows sun and shade by time of year and season to show how trees or buildings effect sunlight.

Evernote is a great digital file cabinet and is free depending on how many files you plan to move around. Skitch can be used with or without Evernote and allows users to add arrows, annotations and otherwise mark up documents and pictures to get

your point across and highlight key features.

Following Bob's talk on communication with applications and social media Jan Fox was next to give tips on public and interpersonal speaking. Golf course managers are often asked to speak to members or customers along with industry functions and educational seminars.

She discussed how speakers move through a emotional roller coaster from panicked to exhilarated but in order to increase our value, status and leadership we need to overcome any fears and improve our public speaking abilities.

Jan said good speaking starts with our visual rhythm and that 55% of speaking is body language and we should not get caught by "death by podium". Speakers need to be seen and by being on the floor makes us feel like one of the attendees.

Before she went over how to use our hands she went through the ways not to including the fig leaf with the hands mounted in front of us, or the speaker prison with our hands behind our back as though we have handcuffs on. It was entertaining to see her samples of the belly button warmer, opera hands, penguin, dinosaur and chicken wing. Fox said we need to let our hands follow our words and be a normal human being.

In her career Jan has won 4 emmys and consults with a number of professionals and beginners to improve their speaking ability. Eye contact is important and she said to look at the "black eyeball dots" of the audience members and not just hover from face to face. Make actual eye contact.

Speakers need a good voice tone and pace while avoiding patterns but change volumes when appropriate. The ums take practice to fix but is worth the time and effort it takes.

To be remembered by the audience Fox recommended we tell stories as though we are going through it. Our goal is to make it personal to change the audiences feelings and minds. Most people make decision with their hearts not their minds so we need to make them feel our emotions. Jan finished up with:

- You can't sell what you can't speak.
- Can't persuade if you can't present.
- Can't motivate if you can't communicate.



Jan Fox demonstrates the right and wrong ways of using hands to communicate.

Next up Troy Carson presented "Communicating With Our Turf." In the past turfgrass maintenance has been a art as managers felt what the turf needed and how to keep it healthy. With new tools like moisture, light and salinity meters along with tools to test bulk density, and compaction it is easy for us to know what inputs the turf needs. Spectrometers can be used to measure turf vigor and health to allow us to see stresses before they can be seen by the naked eye.

These tools allow courses to apply water, fertilizer or even aerify only where needed. This precision turf management will result in savings in products and labor as well as providing consistent conditions from hole to hole or even area to area.

We can do simple things such as irrigation audits to measure our coverage and make decisions on changing nozzles or heads to newer technology. 1mm graph paper can be used to check mower sharpness by examining tearing patterns rather than a clean cut. Work has been done to show mowers could be setup or sharpened more often than now to increase plant health.

New precision applications of turf protectant products can produce savings of 14% in products through precise applications.

GPS guided sprayers than can go much faster and provide individual nozzle control to reduce overlap and waste.

Although golf course management is still an art these tools can help us apply science to justify our decisions and quantify our results.

Wednesday ended with the hallway networking with refreshments and hors d'oeuvres and then Thursday started with a great breakfast buffet and right back to the education. Dr. Doug Soldat started the day with a talk on Turf Nutrition. Doug told the audience the symposium was the first event he spoke at when he was hired 8 years ago and he was glad to be back.

Dr. Soldat explained that plants can control nutrient uptake and just because they have more nutrients in the ground it does not mean they will use them. Through tissue testing on the leaves of grass plants soils high in phosphorus and potassium do not lead to increased uptake in the plant. Growth rate drives the demand for nutrients and although weather and plant growth regulators affect growth rate nitrogen has the biggest single impact on growth rate.

Higher rates of Nitrogen will drive the uptake of other nutrients. Turf managers who reduce nitrogen rates below recommended levels will cause their plants to take up less of other important nutrients.

Doug explained the checkbook method of nitrogen uptake. A annual N surplus will cause excessive growth and thatch along with nitrogen leaching. A annual deficit in nitrogen will cause a depletion of soil N levels and a decline in turf quality. The Bank of N in the soil plays a huge role in N availability.

Soldat also explained the use of plant growth regulators will reduce N requirements as the growth rate slows. He explained it may explain why PGRs seem to make the turf greener. It may not be the PGR itself but by slowing the plant down the available N does more. Work with Primo shows it could reduce N needs 30-40%.

Recent research has shown potassium levels can impact snow mold incidence with higher levels of K in the tissue leading to increased and faster infection grey snow mold. Tissue levels of 1.45 and lower were clean while 1.8 showed some snow mold infections and tissue levels of 2-2.2 showed

the highest snow mold incidence.

At the same time work in 2012 at Rutgers showed anthracnose infections were higher when potassium tissue tests were under 2 and lower over 2. When considering both the snow mold and anthracnose work turf managers should have a goal of a tissue K level of 2%+ in the summer and allow the levels to reduce below 1.5% for winter. When asked Doug offered a good start would be three tissue tests per year to track progress. One during the spring growth period the second in summer with a third in September. Tissue tests should not be taken after topdressing or applications of granular fertilizers.

Dr. Soldat finished with a quick discussion on Iron rates. At 8oz rates Fe showed fungal inhibition but that rate is high and he cautioned us to watch for iron layering especially at the gravel layer of new greens. He went so far as to consider not adding iron unless a deficiency is seen.

We then switched from nutrition for our plants to nutrition for our bodies with Dr. Michael Zastrow from Green Bay giving a talk titled "What Are The Divots In Your Life?"

In a nutshell Dr. Zastrow offered we would do better if we exercised three times a week, stretched daily, avoided destructive beverages and increased our nutrition.

He led the group in some simple stretches we could perform daily in increase our flexibility and overall healthy feeling. He also suggested we exercise three times a week.

We had a quick break right before Mike started which gave many in the audience a chance to grab a soda which became the topic of the next section as Mike explained how soda and energy drinks are expensive and destructive to our bodies. High sugar beverages will deplete nutrients in our body and actually cause energy crashes. The blood sugar spikes caused by them will add stress to the pancreas and the phosphoric acid can eat our out stomachs.

The corn syrups and white sugars can also cause liver stress and he noted we can lose more than 75% of our liver function before we notice we are getting sick. The caffeine in the drinks actually acts like a diuretic. So although we are drinking fluids they do not act as fluids and reduce the water in the body.



Top: Tory Carson of Toro

Middle: Dr. Doug Soldat

Bottom: Dr. Michael Zastrow led the crowd in stretching exercises



Dr. Zastrow suggested most people do not drink enough water and a lot of headaches are caused by slight dehydration. The body is 73% water by weight. To find the proper amount of water to drink a day divide your body weight in half and drink that many ounces. For example if you weigh 226 pounds you would drink 113 ounces of water per day.

Although that may seem like a lot your body will adjust to the amount in a short period of time.

Other important tips were to start each day with fiber and protein to reduce cravings mid-morning.

Continuing on the health for us theme next up for us was Rikki Hammel from Dermatology Associates of Wisconsin discussing skin cancer

1 in 5 people will have skin cancer in their lifetime and most commonly on their face, nose or ears. Skin cancer normally does not hurt so it can go undetected.

Our chances for having skin cancer can increase due to heredity, blistering sunburns, repeated sunburns or exposure to UV light.

The 3 types of skin cancer include basal cell carcinoma at 80%, squamous cell carcinoma 15% and melanomas at 5%. Melanoma is by far the most dangerous.

Basal cell carcinoma typically occur on sun exposed skin and grows slowly and rarely spreads to other parts of the body. However if left untreated it can become locally invasive and destroy surrounding muscle, bone and nerves causing disfigurement.

Basal cell most often looks like a pink waxy bump that may bleed if disturbed.

Squamous cell carcinomas also occur most frequently on sun exposed areas such as the head, neck ears, lips and back of the hands. Although it rarely spreads it can. It starts as enlarging red bumps with a rough, scaly or crusted surface. The usually progress slowly but can spread rapidly in some people. People with organ transplants are very susceptible to this cancer.

Melanoma causes 77% of skin cancer deaths even though it only makes up 5% of the skin cancer cases. About 100,000 cases are diagnosed each year.

Melanoma typically looks like a brown or black spot with irregularities in border and color. It may develop on a mole

or on previously normal looking skin. When caught early chances for treatment are much higher due to the rapid rate this cancer can spread. (Metastasis)

Warning signs include a sore that does not heal, a new growth, a change in a mole or a spot that is red, itchy or painful.

Rikki also discussed actinic keratosis which serves as a early warning sign for squamous cell cancers. These pre-cancerous skin lesions result from chronic sun exposure and are often pink or red in color and rough or scaly to the touch. Often it is easier to feel the patches than see them.

Early treatment of actinic keratosis may prevent their change to squamous cell cancer in later years.

Hammel discusses the treatment options for the different cancers and the importance of early detection though self exam and skin cancer screenings.

Most of all she stressed avoiding the direct sun from 11-2 and using a sunscreen with a spf of 30 or more along with covering skin with a long sleeve light shirt and pants. Wide brim hats also help keep the sun off of ears and most of the face.

Dr. Bill Krueser was next as he switched our thoughts from protecting our skin to protecting our turf. "Does Turf Need Sunscreen?" He answered that right away by saying turf has evolved to in the full sun, it can respond and has the mechanisms to deal with sun light.

However the height of cut on golf turf makes it susceptible to stresses and heat and light stress are one of them.

Bill has been doing trials with turf pigments, Civitas and TurfScreen to see if these products help, hurt or do nothing for plant health as it relates to light.

Bill explained that healthy turf is efficient at energy capture, conversion and utilization while being able to perceive and adapt to abiotic and biotic stresses. Healthy plants have a controlled release of energy.

The problems of too much light is direct UV rays can damage or degrade tissue and alter plant DNA.

However plant leaves can move in response to light to change the absorption rate. Plants will change and adapt to survive.

As turf manager we can help plants avoid light stress with sufficient nitrogen, water, and airflow. So if plants can adapt do they

need sunscreen?

Krueser first found signs of pigments helping plants at Cornell when plots under UV stress were accidentally put under drought stress and the pigment treated plots did better.

Pigments with Green 7 being the main compound can alter light quality.

There is more work to do but so far Bill has seen that photosynthetic efficiency is not effected by colorants at label rate and adequate water. The plants looked better but were not better.

Surface temperatures increased 1-6 degrees while research at Clemson showed transpiration was lower.



Top: Rikki Hammel discusses protecting our skin from the sun.

Bottom: Dr. William Krueser discusses protecting our turf from the sun.

In spring a warm up of soil temperatures is desired to promote growth and pigments can increase spring soil temperatures. Not as much as covers or plastic but more than the untreated control.

Caution must be taken on using pigments on shaded turf as some studies have shown reduced root depths in the first year of the study.

Krueser summed up by saying turf managers should strive to provide good agronomics first. Although pigments can speed up spring green up and possibly reduce uv damage they do not cool the canopy temperatures or reduce pathogens or N requirements.

Next up was our panel of experts to discuss communication. It is hard to do justice to a panel discussion with a written review so I will give a few highlights and add, you should have been there as this panel gave in-depth information.

Moderator Bob Vavrek started with things he has seen on his many visits to clubs and one thing that stands out is clubs who discuss as a management team “did anything unusual happen today?” Was there any complaints or comments that need to be taken care of.

For example if Mr. Brown had a bad experience with his meal it is probable the

next time he is on the property the manager or even the superintendent may mention it to him and make sure the problem was taken care of. This attention to detail a private club makes the member feel special and sets the club apart.

Mike Bremmer explained the importance of open lines of communication between departments and with the general manager to the overall success of the facility.

John Constantine added “we are going to get complaints, it is how we address them that matters.” At the Wisconsin Club he has his managers leave a voice mail for him at the end of each day so he knows what is going on in their departments and what he needs to take care of the next day.

Jack Gaudion expanded on that by saying managers often overreact to complaints. There is no reason to be defensive, people just want to be heard and to know you are listening.

For golfer communication John expressed their club lets golfers know what is going through conversations and newsletters and social media. Jack added we must educate golfers and why we are doing what we are doing because they do not know.

Curt Larson said today's member is different than the member of ten years ago.

Many of the new members just had their kids move out and are looking for the country club lifestyle.

Jack added things are changing at private clubs forever. He also expressed customers need to know what is going on with the club especially at a private facility. This also goes for employees. The employee needs to have trust in the manager or owner and that trust starts with communication.

The group also detailed how to provide successful capital campaigns, promote play from women, what amenities are important to today's player and how to survive in today's competitive market. We not only compete with other golf courses but also for the golfers time that they could spend doing something else.

The day finished with Bob Vavrek's Roundup of the speakers and each one's take home message. There were plenty of take home messages attendees could use right away.

Overall the 49th Golf Turf Symposium was one of the most informative I have every attended. The committee did a great job combining personal health and life skills with the skills we need to maintain healthy turf. We hope to see you next year at the 50th Golf Turf Symposium.



The Panel Discussion Focused On Communicating Within Management. From Left to Right Jack Gaudion, Owner, The Legend Clubs and from the Wisconsin Club John Constantine, Manager, Curt Larson, Golf Professional and Mike Bremmer Golf Course Superintendent,

Wisconsin Golf Turf Symposia

First*	1966	Winter Injury (Bulletin No. 5)
Second	1967	The Physical Nature of Soils
Third	1968	POA ANNUA
Fourth	1969	Satisfying the Golfer
Fifth	1970	The Chemical Nature of Soil
Sixth	1971	Where are We Going in Golf Course Management?
Seventh	1972	Recycling Golf Course Wastes
Eighth*	1973	Thatch
Ninth	1974	Water Movement in Soils
Tenth	1975	A New Deal for an Old Course
Eleventh	1976	Living with POA ANNUA Species
Twelfth	1977	Keeping Your Head on Straight
Thirteenth	1978	Fast Grass
Fourteenth	1979	Research
Fifteenth*	1980	Sand - On and In Golf Greens
Sixteenth*	1981	Management Requirements for Sand Greens and Sand Top-Dressed Greens
Seventeenth	1982	Getting to the Roots of the Matter
Eighteenth*	1983	The Facts and Fallacies of POA ANNUA Management
Nineteenth	1984	Directions in Golf Course Management
Twentieth	1985	Grooming - The State of The Art - New Problems for New Times
Twenty-first	1986	The Micronutrients - Who Needs Them?
Twenty-second	1987	Impressions - A Memorable Golf Course (First to Lasting)
Twenty-third	1988	Water Management - A Cultural Practice for all Conditions
Twenty-fourth	1989	Optimizing Pest Management - Strategies to Maximize Results
Twenty-fifth	1990	Bentgrasses - New Old Right or Wrong
Twenty-sixth	1991	Traffic - How much can you bare?
Twenty-seventh	1992	The Green and Tee Complex - Renovating the Surrounds
Twenty-eighth	1993	Winterkill - The Causes And Solutions?
Twenty-ninth	1994	Golf In The Year 2010 The Game, The Job, The Challenge
Thirtieth	1995	Earth, Soil, H ₂ O
Thirty-first	1996	You Can't See The Trees For The Turf
Thirty-second	1997	"If You Build It They Will Come" Putting Green Construction
Thirty-third	1998	"What You Seed Is What You Get" Putting Green Establishment
Thirty-fourth	1999	Showtime! Developing the Playing Surface
Thirty-fifth	2000	The Ins and Outs of Bunkers
Thirty-sixth	2001	Emerging Problems and Pests
Thirty-seventh	2002	Doing More With Less - Resource, Time and Money Management
Thirty-eighth	2003	POA - Twenty Years Later
Thirty-ninth	2004	Soils - Managing the Pressures
Fortieth	2005	Grasses - So Many Choices, It's a Pain in the Grass
Forty-first	2006	Getting Down to the Roots
Forty-second	2007	Why Close At All?
Forty-third	2008	All Water is NOT Created Equal
Forty-fourth	2009	Fewer Dollars Requires More Sense
Forty-fifth	2010	Golf In The Year 2010 - Did We Predict The Future?
Forty-sixth	2011	New Tools For Old Challenges
Forty-seventh	2012	What's In Your Tank?
Forty-eighth	2013	Extreme Turf Management

*Proceedings

News and Notes From WGCSA Members

By David Brandenburg, Editor, The Grass Roots

With 35 years at West Bend Country Club Bruce Worzella is somewhat of a legend in the industry where the average job spans 7 years. This is especially true at a private club where your bosses change every couple years.

Worzella has shown himself to be a leader both at his club and the WGCSA serving as our 31st President in 1992 and 1993. It was Bruce who took my call many years ago and allowed me to start my volunteer service to the association as a committee member.

Bruce started in the business in his hometown of Wisconsin Rapids working with industry icons Jeff Bottensek

and Dave Murgatroyd at The Ridges Golf Course during high school.

After high school Bruce worked for Jack Keidel at Bull's Eye Country Club and by 1971 worked up to assistant under Bill Brazeau. In the fall of 1972 Bruce became co-superintendent of the 27 hole facility with Cliff Brandl. Looking to broaden his education and experience Worzella attended Penn States turfgrass management program in 1976 and 1977.

His legacy at West Bend County Club started in April of 1979 replacing Dennis Willms at the course that was carved out by the glaciers centuries ago.

One of the benefits of West Bend Coun-

try Club is the superintendent has a house right on the property. This allowed Bruce and his wife Mary to raise their children Beth, Marci and Michaeln close to Bruce's work.

On course housing has one negative, when you retire, you have to move. Bruce and Mary have had a place near Waupaca for some time and have retired there to enjoy some downtime and family time. Congratulations Bruce and Mary.

Brian Bonlander has moved up from assistant superintendent to superintendent to take over for Bruce. Good luck Brian taking care of this historic property and moving your family to West Bend.



Top Left: Leading the meeting at Watertown Country Club in 1992

Top Right: Hosting the 1989 WTA Golf Outing and Fundraiser with Jeff Bottensek.

Bottom: In 1987 not only did the Worzellas win the Mr. & Mrs. Mow Trophy at the annual couples weekend, Mary also presented the association a check for \$375 for turfgrass research. The funds were from a cookbook Mary and other wives put together and sold.

BADGER STATE TURF CLIPPINGS



Left: With longtime friend and Greens Chairman Dick Gagen in 2001

Right: Bruce and Mary in 2012 at the couples weekend in Elkart Lake with Rick and Pat Weiterman.



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BADGER STATE TURF CLIPPINGS

Former WGCSA President Kristopher Pinkerton is a little younger than Bruce but has also chosen to leave his post at Oshkosh Country Club after 21 1/2 years at the facility. Pinkerton grew up in Waupun where his family operated a dairy farm. As high school ended Kris decided the 7 day a week all day stresses of the farm were not for him. Not knowing what he wanted to do he started working for Larry Karel at Rock River Country Club. In 86 Kris took over as superintendent when Karel moved on. Having more experience than formal education led Kris to take horticulture classes at Blackhawk Tech in Janesville and small engine classes at the local Moraine Park Technical College. In 1988 Kris

attended the short course in Turfgrass Management at the University of Massachusetts to enhance his education.

In 1990 Kris moved up to Waupaca Country Club to gain greater experience and in 1993 he moved to Oshkosh Country Club to have an opportunity to do renovation and construction projects at the property built in 1917. OCC is one of the founding members of the Wisconsin State Golf Association and has a long history in the industry.


Pinkerton joined the WGCSA Board of Directors in 1994 and served as president in 1999 and 2000. It may seem amazing to younger members but as association treasurer in 1996 Kris moved our finances

from a paper ledger to a checkbook program on the computer to allow for easier tracking and reporting.

Kris and his wife Michelle will move from their home in Oshkosh to their weekend home near Waupaca now that Natasha and Hunter are out of high school.

Kris is a avid hunter and is looking forward to a more relaxing career as he becomes manager of the Reinders Branch in Stevens Point.

Good luck to Kris and Michelle as you start this new part of your life.

Congratulations and welcome to Jonathan Dipple who took over as Golf Course Superintendent at Oshkosh in January. 



Kris Pinkerton

Top Left: As Session Chairman at the 1991 Golf Turf Symposium

Top Right: As host at the WGCSA Hospitality Room in 1998

Bottom: Kris, Ed Witkowski, Tom Welton and Pat Shaw at a WTA Fundraiser at The Bog in 2000.

Welcome To Education Season

By David Brandenburg, Editor, The Grass Roots

Here we are at the shortest month of the year with spring hopefully around the corner. So far winter has been fairly kind which is nice after the cold abrupt end to the golf season.

We are entering our education season with the Northern Great Lakes Symposium coming up followed by the Assistants Seminar which isn't just for assistants. After that the GIS returns to San Antonio and our spring meeting is right after that.

Check out the event schedule on page 45 and note the assistants seminar is a day earlier than anticipated while the Super Pro is a day later and now on Wednesday April 29th.

The always popular Reinders Turf Conference is March 11 and 12 and provides a great educational opportunity. The 22nd edition of this every other year show will feature Dr. Jim Kerns, Dr. Joe Vargas and Bob Vavrek along with a chance to win a drone and camera package. More information can be found at Reinders website.

Attendees will be given .4 CEU daily from GCSAA for attending,

John Miller who has served as the GCSAA Great Lakes Region Field Agent is returning to join the LPGA Tour as their agronomist. We will miss John and thank him for the help he has given our chapter and individual members over the past few years.

If you are interested in joining the GCSAA to replace Johns post the employment notice can be found on the GCSAA website.

The candidate will travel between Illinois, Indiana, Kentucky, Michigan, Ohio and Wisconsin to visit with and assist the areas 20 different chapters. The deadline to apply is February 18.

GCSAA is also saying goodbye to Penny Mitchell who will retire February 6 after 28 years serving us. Penny's name has been synonymous with the certification program where she has been working since 1993.

Penny will be replaced by Jenny Pagel - Guile who was most recently the division director for the March of Dimes Foundation in Topeka, KS

Congratulations and good luck to Penny Mitchell and welcome to Jenny Pagel - Guile.

Speaking of certification congratulations to Rod Johnson, Pine Hills Country Club and Robert Stephens, Marathon County Parks Department for renewing their certification with GCSAA.

It is Roberts 1st 5 year renewal while it is Rod's 6th for 30 years as a certified golf course superintendent.



The show floor of the Reinders Turfgrass Conference in Waukesha is a busy place. This years conference is March 11 and 12 and offers education for the entire staff.

WELCOME NEW MEMBERS July-December 2014

Adam Ayers (C)	Erin Hills
Steven Ainsworth (D)	South Beloit
Jim Cavezza (SM)	Trappers Turn GC
Phillip Davidson (SM)	University Ridge GC
Bob Gibson (D)	Waukesha
Aaron Hansen (SM)	UW-Madison
Jeff Heaton (SM)	Lake Genava CC
Jeff Plasschaert (SM)	Reid Golf Course
David Rutz (E)	Easy Locator
Gary Sullivan (E)	Green Jacket
Lance Wagner (C)	Legend at Bergamont
David Wetenkamp (D)	Fitchburg

EDITOR'S NOTEBOOK

How was 2014 at your club? With final numbers still being tabulated by the competing industry experts it looks as though weather was a downer for much of the country but that is no surprise for those of us who work in the weather.

For us spring was down, while the rest of the year was okay and we showed a 2% increase in golf playable days compared to 2013 which was horrible.

Also 2014 was the second cool and wet spring which many operators believe impacts revenues more than summer or fall rains. This is mainly due to the spring fever golfers feel.

Retired Superintendent and Manager from Brown County Golf Course, Paul Delfosse told me that in spring, golfers want to play. But if we take that spring urgency to play away from them due to weather or winter kill they find other activities to fill their time and they may not play all year.

I think we had a lot of badger state golfers who have not played much at all in 2013 and 2014. Hopefully a warm spring will entice them to hit the links in 2015. If we can show them a good time, they will be back a few more times during the season.

It looks as though rounds were down 2% for 2014 nationwide compared to a poor 2013. With approximately 451 million rounds played in 2014 it is way down from the games peak of 518 million played in 2000.

From the graphic on page 57 you can see we had a net loss of 143 18 hole equivalent courses with 185 closing and 42 opening. It is a troubling thing if you worked at one of the 185 courses but in reality we either need more players or less courses.

I sat in on the State of The Industry presentation from Pellucid and Edgehill Consulting last week where the graphic was shown. As Mr. Jack Gaudion said on the Golf Turf Symposium Panel "Our industry is not bad. A lot of clubs are thriving while some are failing."

The Pellucid presentation said the same thing. There are a lot of thriving operations out there and many courses can thrive with the right operations and location.

At the same time some facilities are just in the wrong place. They may offer a great golf course but are offering it to the wrong people. In good years they could make ends meet but in poor years they cannot discount themselves into profitability.

In preparation for this summers PGA Championship at Whistling Straits Golf Course Discovery World on the lake in Milwaukee is hosting "Innovations In Golf, The PGA Championship Exhibit".

The exhibit located in the Johnson Controls Innovation Gallery will be in town though April and is one of just many currently at Discovery World.

Attendees can see some of the rare artifacts and memorabilia in the tournaments 95 years. Jim Barnes hickory driver from the inaugural 1916 event, John Daly's "Grip It and Rip It" driver from 1991 and Tigers Scotty Cameron putter from 1999.

There is a special exhibit to Gene Sarazen who won the 1933 tournament at Blue Mound Country Club.



The Passing of The Gavel as newly elected President James Van Herwynen presents The Presidents Plaque to Chad Harrington. Harrington will spend two years on the board as past president.

Congratulations Jim and huge thank you to Chad for a job well done leading the WGCSA.



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2014 Supply Change: Net Reduction of ~145 EHEs or 0.5% of Total Supply

- Net supply reduction rate continues in tight range (0.5-1.0% annual)
- Took 8.5 years to work out 5 year buildup, back to 2000 level of supply
- By our calculation, healthy supply level would be ~13.7K EHEs
 - That means we're still ~0.7K EHEs oversupplied at an annual workout rate of ~140/yr (or ~5 yrs away from a return to equilibrium)

Year	Net EHE Gain/Loss	# of EHE Closings	# of EHE Openings
'14	(143)	(185)	42
'13	(144)	(158)	14
'12	(141)	(155)	14
'11	(120)	(150)	30
'10	(61)	(107)	46
'09	(90)	(140)	50
'08	(34)	(106)	72
'07	(9)	(122)	113
'06	(26)	(146)	120
'05	31	(94)	125
'04	88	(63)	151
'03	103	(68)	171
'02	182	(38)	220
'01	252	(32)	284
14-Yr Sum	(111)	(1,562)	1,451
10-yr Avg. CAGR	-0.4%		

Source: NGF Facility Database

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Photo courtesy of Golfblogger.com

It is hard for me to believe that Bruce Worzella and Kris Pinkerton have both retired from their posts at West Bend and Oshkosh. Kris and I along with Scott Schaller came up through the ranks of the WGCSA at the same time and pushed each other to attend meetings and do volunteer work. When I wrote on page 54 that Kris had been at OCC for 21.5 years I was amazed by how fast time flies and I felt older.

Bruce along with Rod Johnson who served as president before him were inviting to us youngsters eager to learn and volunteer to help the WGCSA. I thank both Bruce and Kris for the help they have given me in my volunteerism and in managing the properties I have been responsible for.

I also congratulate both of them on successful careers as golf course superintendents and wish them luck in their new endeavors.

I also feel older as I near the magic 50 with the changes I see and the passings of family members or personalities I have followed. I was lucky to have grandparents into adulthood but I went from losing grandparents to losing parents and in-laws in just a few short years. Don't wait to have conversations with those you love or before you know it your opportunity will be gone.

It is no secret that I am a fan of baseball and especially the Chicago Cubs. When others were listening to rock and roll on their walkmans in the 80's I was listening to WGN talk radio and many afternoons Cubs baseball.

I was reminded how fast things were passing me by with the passing of the iconic Ernie Banks this week along with the realization the Cubs are leaving WGN radio after 89 years. These items allowed me to realize no one I listened to as a young adult is around anymore. They have either passed on like Bob Collins, Roy Leonard, Harry Carey and Ron Santo or retired like Spike O'Dell and the rest of the staff.

For you "youngsters" and "oldsters" out there believe me when I say your life will go by in a flash. Don't get me wrong, I have no regrets, I love what I do and am not entering a mid life crisis and picking out a sports car. I am merely in the position to remind you to enjoy every day while it is here because before you know it they will be a distance memory and you will wonder what happened.

Best of wishes to you and yours in this winter season. I will leave you with a quote from the late Ernest Banks "You must try to generate happiness within yourself. If you aren't happy in one place, chances are you won't be happy anywhere."

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