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VOL. XLV ISSUE 2 MARCH/APRIL 2016





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The 10th Hole at Autumn Ridge p_{4} Golf Course our host for the June a 2015 Meeting. The hole plays 565 B	t is only the farmer who faithfully lants seeds in the Spring, who reaps harvest in the Autumn. By American Journalist Berte Charles Forbes, 1880-1954						

This quote by Forbes can remind us our spring work and planning is needed for success throughout the season. Are you and your staff ready to succeed?

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. **EDITOR**

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Become One

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

s you all know Family is something Ato cherish. A family has many attributes as we are all different in our wants, needs, goals and dreams. A family is held together not only by love, understanding, acceptance and patience, it is successful by ones willingness to aid, listen, offer advice and not be judgmental. We all have different forms of family and it can be difficult and trying at times but ultimately it is one of the most comforting qualities of humanity.

As we come off of a somewhat short winter season and enter another golf season did you ever think to yourself while at work, "Wow, I spend a tremendous amount of time here and I see the staff more than I see my family at home" Do you embrace that notion and treat the staff with the same respect? Although hard at times, when a staff is respected, treated fairly, and rewarded for their efforts, it is amazing what can be accomplished. Well, how does one do it effectively?

Everyone has their own opinion of this and who am I to tell you how to do it. What I can tell you is I pride myself in treating the staff on the Greens and Grounds, the staff in the Pro shop and the staff in the club house pretty much with the same respect. As a manager, supervisor or boss it is your responsibil-

ity to lead by example and pay close attention to the needs and wants of each individual as everyone is quite different.

Let's face it, we do not have all of the answers all of the time and sometimes we can become somewhat complacent and it is refreshing to have young and new ideas brought to the forefront.

Above and beyond what we might do for the crew i.e., doughnuts, lunches, soft ball games, golf, or simply a few days off from time to time on a regular basis we have crew meetings with the Greens and Grounds staff as well as meetings with other Department Heads. While conducting these meetings ask your employees not only how everything is going, does anyone need any help with anything to learn more to become more efficient but also ask them if they have any thoughts on how we can do things better. It is amazing once you make the moment light in nature and individuals are willing to open up and share their thoughts the dialogue that pursues. It is enlightening to experience a 16 year old greenhorn speak up and have an idea that may or may not work. If you know it won't work ,simply explain why it won't but reassure that it is a valid question and idea and appreciate the fact that they are willing to share but more importantly showing they care in what they are doing. If the idea has merit, adopt it on a trial basis or permanently and it is amazing how good they feel that they have become a part of the overall end result or product.

When this happens I am also amazed at how many more individuals will step up to the plate and offer suggestions that continue to help the cause. Let's face it, we do not have all of the answers all of the time and sometimes we can become somewhat complacent and it is refreshing to have young and new ideas brought to the forefront. Not to mention the younger individuals can bring a valuable tool with respect to modern technology to keep us all abreast to our ever changing world around us.

Like many of you our staff is quite dynamic with high school students, college students and retired individuals, with one third of the staff being women. Due to the simple fact that the amount of time spent with these individuals is more than you spend with your immediate family embrace it, get engaged and become one with them as you would with your family at home and you will certainly be elated with the results in the end.

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

WGCSA VISION STATEMENT

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

• Enhancing the professionalism of its members by strengthening our role as a leading golf organization in the state.

- Growing and recognizing the benefits of a diverse membership throughout Wisconsin.
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WISCONSIN ENTOMOLOGY REPORT

A Relatively Mild Winter With Little Snow Cover: How Will It Effect Insects this Year?

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

The winter of 2015-16 was relatively mild compared to the previous two winters in Wisconsin and the Great Lakes Region, we experienced moderate temperatures with limited days reaching sub-zero. In addition, little snow cover was quite common in many areas, normally limited snow cover often results in greater or deeper frost depth, especially when sub-zero temperatures arrive before snow cover occurs. As a result of relatively mild temperatures, frost depths were rather limited this winter, rarely was frost any deeper than 8-10 inches isnmost places. Of course there are exceptions, some areas in the Wisconsin and Great Lakes Region had greater amounts of snow cover and frost depths. These types of weather occurrences often raises questions regarding the impact or affect that it will have on insects? Will insects be more abundant? Will they be more of a problem compared to winters where

temperatures reach below - 10°F consistently for several days, and when snow cover was more abundant?

Unlike warm-blooded humans and other mammals, insects are cold-blooded animals, their body temperature is comparable to that of their surroundings. Also, insects are not affected by wind chill like humans. Insects do not maintain a core body temperature similarly to warmblooded animals such as birds and other mammals. Depending on the insect species, most insects do not function well or develop at temperatures below 50°F. As temperatures fall below 50°F, their metabolic rate and body functions slow down dramatically. Once temperatures drop to or below freezing (32°F), they enter into a dormant state or overwintering stage. Some insect species are classified as being freeze tolerant, they are able survive sub-zero temperatures by avoiding freezing by a process called supercooling. Supercooling is a process whereby an insect produces a chemical similar to antifreeze into their blood (hemolymph), this lowers the temperature water will freeze and helps keep their body fluids liquid.

For most insects, survival of dehydrating or desiccating conditions is equally important to survival of low temperatures.

At sub-zero temperatures, freeze avoiding insects are susceptible to desiccation and may lose water due to a vapor dispersal between their supercooled body fluids and ice in their surroundings. This process stops once body fluids are frozen, so is not a problem for freeze tolerant species. Prolonged exposures at lethal low temperatures can also produce lethal effects (including death) even if the insect does not freeze; during long-term exposure to low temperatures the organisms may finally die from the exhaustion of energy reserves.

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WISCONSIN ENTOMOLOGY REPORT

Most insects have some ability to withstand cold weather by avoidance, one of the most common strategies is to bury themselves underground, beneath leaf litter, or to burrow under tree bark for protection and hibernate for the season. These protective maneuvers work fairly well most winters, allowing insect populations to remain relatively stable. Some insect species can tolerate freezing, these release proteins into their blood to help control where, when and how much ice forms. By controlling how their bodies freeze, insects can minimize damage to their tissues.

Insects often use more than one strategy for surviving winter weather. As a result, it is unlikely that even the relatively mild and in some cases colder temperatures that occurred in the winter of 2015-16 will dramatically positively (or negatively) impact insect populations this upcoming growing season. From a pest manager's perspective, it is always important to be prepared by proactively developing an appropriate Integrated Pest Management plan or strategy based on historical knowledge and insight of respective pests before the growing season begins. This approach will provide a greater likelihood of pest management success than merely taking a wait and see approach, or having no management plan.

The map shows Wisconsin low temperatures were above normal for the winter by 2 to 8 degrees.

Average Minimum Temp. (°F): Departure from Mean December 21, 2015 to March 19, 2016



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Sustainable Relationships In Golf Course Management

By Patrick Reuteman, Assistant Golf Course Superintendent, Westmoor Country Club

On February 3nd, 2016, fifty-five Assistant Superintendents, Superintendents and industry vendors braved the snowy weather to attend the 8th Annual Assistant Superintendent Seminar at Whispering Springs Golf Club in Fond du Lac, Wisconsin. This year's topic was sustainability. As golf course professionals we know that sustainability has more meaning then just environmental impact or growing long grass without watering it. We, as a committee, wanted to give everyone the opportunity to join us and think about the big picture. Have you thought about sustainability from the viewpoint of attracting and retaining top talent? How about the benefits associated with employee wellbeing, lower hiring costs, less mistakes during training and more efficiency in the field? We discussed these topics as well as looked at simple differences like toxicity levels of current pesticides in your program that would lessen the impact to the environment.

After the talk about the weather calmed down we started the day with Claudia Krepsky, Senior Recruiter, at the Kohler Company. She honed in on recruiting and sustaining quality employees. Claudia provided the group with useful recruiting tactics that she gained through her experience in the corporate environment at Home Depot and in hospitality at Kohler. These techniques included referral incentives and utilizing the power of social media to recruit potential employees. Once employees are brought on to the team, the focus becomes retaining them. Claudia gave the group strategies on how to drive engagement for employees in all generations. Her talk resonated well with the group as it becomes increasingly difficult to retain quality employees in the industry.

The next speaker was Dan Dinelli, CGCS of North Shore Country Club in Glenview, Illinois. Dan's overarching goal of the talk was for the group to have a better grasp on the sustainability of the phytobiome. The phytobiome is the system of factors that affect or are affected by plants. Dan spoke on the powers of topdressing with biochar and its impact on fertility, disease suppression and quality turf. Lastly, Dan showed us his sustainable composting techniques, specifically his vermicomposter. He explained that the biggest test to using quality compost is that it should, "smell earthy." Dan's countless years of on-course research provided the group with a wealth of information.

Then before lunch we heard from Dr. Paul Koch and Kurt Hockemeyer. Kurt is a new member to the UW research team. They discussed how to take part in reduced risk disease control and how to get credit for the efforts. The main methods to reduce risk are to: (1) reduce exposure, (2) use less hazardous products, and (3) spray less often.

Dr. Koch explained some of the tools available to turf managers to reduce risk. The Smith-Kerns dollar spot model and the Environmental Impact Quotient, or EIQ, are just a couple examples. Dr. Koch spoke on the public disconnect on pesticide use. He concluded saying that it is the responsibility of turf managers to begin marketing attempts on pesticide reduction.

Kurt Hockemeyer ended the day with a way to market these efforts. Kurt spoke about the, "Reduced Toxicity Initiative." He is

working on defining an EIQ baseline for golf courses. It would be the individual course's goal to reduce this baseline. Doing so would bring validity to the specific golf courses work on reducing their individual EIQ. Kurt is taking any and all suggestions on this topic and would be thrilled to hear from our membership.

The Assistant Superintendent Committee would like to thank all who attended. Special thanks go out to the outstanding speakers and our hosts at Whispering Springs, Mary Wolfe and Brandon Nebl for their help in keeping up with the snow and making sure the day ran smoothly for our attendees. Despite the weather, we enjoyed the day and were happy to gather a like-minded group of people dedicated to turf. Most importantly, we appreciate the networking relationships that are formed from our guests. Lastly, we would also like to express thanks to the WGCSA board for their continued support of the efforts from the Assistant Superintendent Committee.



Above: Dan Dinelli, CGCS of North Shore Country Club in Glenview, IL discusses phytobiome.

Below: Dr. Paul Koch discussed reduce risk disease control.





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Todd Marten, Robert Udelhofen and Roy Zehren

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

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

Name: Todd Marten

Company Position: Assistant Superintendent, Pine Hills Country Club Years as WGCSA Member: 20 Membership Classification: C

18 holes with Todd Marten:

1. How did you get started in the turfgrass industry? I started at South Hills CC in Fond du Lac, working for Scott Schaller. I needed a summer job, loved golf, and had a couple of friends that worked there, so I thought it would be a fun experience for the summer. At the time I had no intention of getting into the turfgrass industry, but the longer I worked there it became something I really enjoyed doing. I didn't mind the early and long hours, and it never felt like a "job", so it seemed to make sense to give it a shot long term.

2. What is the most rewarding part of your career? I love the planning and coordinating part of my job, especially on days when things aren't normal. Being able to have many different things come together and the course or projects turn out the way we want them to is very rewarding. Working outside on the beautiful summer days we have is just as rewarding. When I hear friends talk about wanting to get out and enjoy the nice weather after a day inside at the office, I'm reminded that I get to work in that everyday.

3. What would you consider to be your greatest career challenge? Balancing work with family life.

4. Which three adjectives describes you the best? Loyal, dedicated, competitive.

5. Tell us about your family. Married to Lisa for 18 years. Two kids - Marissa (age 15) and Zach (age 13).

6. Any pets? A dog - Cooper, after Cecil Cooper. Yes, we're Brewers fans. (You'd think we could find a more successful team to root for. Maybe the Cubs this year? Maybe not....).

7. What drives/motivates you every day? I have always loved competition - to be the best at whatever I'm doing. That includes work, golf, coaching, card games, or just trying to outdo Rod at some practical joke he started.

8. Who Would You Admire? My dad - taught me work ethic, loyalty, and to take pride in whatever I do. My wife - always willing to deal with and be supportive of the unpredictability of this job.

9. Who is the person in history you'd most like to meet? My maternal grandfather. He died right after I was born, but so many great stories and things I would've liked to have seen or experienced with him.



Top: Todd, Zach, Marissa and Lisa Marten in Washington D.C..

Bottom: Todd and Lisa Marten at a favorite destination - Miller Park.



THE GRASS ROOTS March / April 2016

10. What's a fun fact that people don't know about you? I have a pilot's license. Before I got into the turfgrass industry, I wanted to be a commercial airline pilot. I still have my private pilot's license, but haven't flown in years.

11. What do you do in your spare time, favorite hobbies? Coach my son's basketball and baseball teams, bowl, golf.

12. If you could go anywhere in the world on vacation, where would you go? Wow, that's tough. I'd love to get to Scotland and Ireland to play golf. Of the places I've already been to, though, I'd have a hard time not going back to Phoenix/Scottsdale. The weather is great, lots of golf courses, and my wife and I love baseball, so there are plenty of spring training games to get to.

13. What is the one thing you would like to learn/accomplish someday? Suck it up and go skydiving with my wife. She's always wanted to do it. I just can't get past why anyone would want to jump out of a perfectly operating airplane.

14. What is your favorite turf management related tool or technique? Chemical mix tank, with attached CleanLoad Chemical Mixer (know around here as the "Toilet Bowl"). It's made the whole process of mixing and loading chemicals a lot easier and quicker. 15. Favorites:

TV Show: 30 for 30 on ESPN

Movie: The Courne Movies

Food: Ribeye or Prime Rib

Sports Teams: Brewers, Mets, Packers

16. Do you golf? Handicap? Best shot or golf story? Yes. 9 handicap. Best story - being lucky enough to have 2 holes-in-one.

17. Top Bucket List Item? Get to a Ryder Cup, and my wife and I would love to get to every MLB stadium.

18. If you could provide one piece of professional advice, what would it be? Use every opportunity (seminars, past successes and failures, conversations with others in the turf industry, etc.) as a learning experience and a chance to make yourself and your golf course better. There is something to be learned from everything you do or every conversation you have.





Above: Todd with Marissa at Lambeau Field

Below: Todd and Zach at a Plymouth Baseball Tournament.





John M. Turner Sr. Sales Specialist - Golf Bayer Environmental Science

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Name: Rob Udelhofen Company Position: Golf Course Superintendent, Platteville Golf and Country Club Years as WGCSA Member: 27 Membership Classification: A

18 holes with Rob Udelhofen:

1. How did you get started in the turfgrass industry? I worked on the golf course during high school. After high school I joined the Navy for 4 years. Once I returned from the Navy, the superintendent of the golf course offered me a job as his assistant. Shortly after taking the assistant position, the superintendent retired and I became the superintendent.

2. What is the most rewarding part of your career? Creating a beautiful 18 hole golf course that all the members, guest, and public show appreciation for every day!

3. What would you consider to be your greatest career challenge? Having to run the golf course and the inside restaurant with my wife for 7 years, and continue to still raise my family.

4. Which three adjectives describes you the best? Funny, Harworking, Caring

5. Tell us about your family. I have a loving wife, Ann, of 27 years that has supported me in this industry and helped me raise our 3 wonderful children Jesse, Joshua, and Jamie. My oldest son, Jesse, is a head lineman at a local cheese factory and raises my two beautiful grandchildren, Sophia (5), and Sawyer (3). My middle son, Joshua, is pursing his dreams to become a professional golfer in Florida and my daughter, Jamie, is currently a preschool teacher in Dodgeville and loves her job! Lastly my older brother Steve, who has also supported and helped me on and off the golf course throughout the years!

6. Any pets? Zoey, my side kick rat terrier!

7. What drives/motivates you every day? To make the golf course the best it can be day in and day out and to continue to receive the compliments I do from everyone.

8. Who do you admire? I admire all of the volunteers and members that come out each and every day to help and make my job easier.

9. Who is the person in history you'd most like to meet? Pete Dye or any golf course architect.



Top: Grandchildren Sawyer and Sophia

Below: Ann and Rob Udelhofen on the "Classic" 1976 electric cart Rob is refurbishing.



10. What's a fun fact that people don't know about you? That I was able to see most of the west coast while in the Navy and played golf on many foreign courses.

11. What do you do in your spare time, favorite hobbies? Go to our cabin and go fishing or hunting!

12. If you could go anywhere in the world on vacation, where would you go? Australia!

13. What is the one thing you would like to learn/accomplish someday? To build a Par 3 golf course here at the Platteville Golf Course

14. What is your favorite turf management related tool or technique? Having an automatic watering system. It's nice not having to get up throughout the night to move sprinkler heads!

15. Favorites:

TV Show: Diners, Drive-In's and Dives.

Movie: The "Taken" Movies.

Food: Prime Rib.

Sports Teams: Packers and Badgers.

16. Do you golf? Handicap? Best shot or golf story? Yes, my handicap is 3. My best golf shot was my hole in one on #2, 180 yards in the rain. My best golf stories are when my son, Joshua, won the 2014 WSGA Match Play, and when my oldest son, Jesse, and I played against each other for the Club Championship in 2015 (He won on the 19th hole).

17. Top Bucket List Item? Go Elk Hunting, Go Fishing in Canada, Visit Austrialia again.

18. If you could provide one piece of professional advice, what would it be? Never give up on your dreams!





Top: Jesse, Jaimie and Joshua Udelhofen

Below: Band of Brothers with Mike, Steve and Rob Udelhofen



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2016 Wisconsin State Amateur Championship, July 18-21, North Shore Golf Club, Menasha

2016 Wisconsin State Open, August 15-17, Blackwolf Run, Kohler

2016 Symetra Tour - PHC Classic, August 19-21, Brown Deer Park Golf Course, Milwaukee

2016 Ryder Cup - Hazeltine National, Chaska, MN

2017 U.S. Open Championship - Erin Hills, Erin

2017 Thornberry Creek LPGA Classic - Green Bay

2020 Ryder Cup - Whistling Straits, Sheboygan

Name: Roy Zehren

Company Position: **Retired Owner of Natural Athletic Turf** Years as WGCSA Member: **39**

Membership Classification: Retired

Bio for Roy Zehren:

Born in Milwaukee, WI in 1930. After attending the University of Wisconsin, 1949-50, I switched careers and graduated from Photo school. I worked as a photo journalist and in photo labs before I was drafted into the U.S. Army in 1951. I served in Korea in 1952-53 doing six months as combat infantry, then 12 months as a combat photographer for the 23rd Infantry, 2nd Division. Recommended for the Purple Heart and Bronze Star.

Married in 1954, I worked briefly as a photographer before starting my company, ZLC (Zehren Landscape Co.). Having worked with my father, who pioneered in landscape construction, from age 13 to 18 I had experience in many aspects of landscaping. ZLC did residential, commercial and government contracts for 20 years.

In 1969 I joined ALCA (Associate Landscape Contractors of America) serving on the board of directors for the Midwest. I was one of the founders of the WLCA, (Wisconsin Landscape Contractors Association) serving as the 2nd, and 3rd President. WLCA then formed with others in the industry becoming WLF, (Wisconsin Landscape Federation). I served as a Board member.

It was at Purdue University with 8 or 10 others in the industry that STMA, (Sports Turf Managers Association) was formed. I also served on that Board. Later, I was one of the founders, and Board member, of the WSTMA, (Wisconsin Sports Turf Managers Association). In 1977 I joined the WGCSA, (Wisconsin Golf Course Superintendents Association) as an affiliate member.

In 1974 I was awarded the national franchise to build the PAT, (Patented Athletic Turf) sand systems for athletic fields from Purdue University who held the patent. It was then I formed a new company, NAT (Natural Athletic Turf). I was able to adapt the sand system to build and renovate golf course tees and greens, volleyball courts, and athletic fields. In the next 30 years NAT built, remodeled or upgraded approximately 500 baseball fields, 60 football and soccer fields, and more than 200 greens, tees, and bunkers.

In 1990 I formed STC, (Sports Turf Consulting) operating as a consultant on many sports related projects. When NAT was sold in 2004 I remained as a consultant for three years until I retired in 2007.

Looking back at the highlight of past accomplishments is rewarding. Early in the 60's ZLC completed the Performing Art Center, now the Marcus Center for Performing Arts in Milwaukee with its courtyard of 38 matching horse chestnut trees. NAT worked with the Kohler Company constructing tees and greens at Black Wolf Run and in 2001 completed the construction of Helfaer field, the Little League baseball field adjacent to Miller Park.

18 holes with Roy Zehren:

1. How did you get started in the turfgrass industry? By age 13 I was working with my father who pioneered in landscape construction running his business from 1920 to 1958. At age 14, with pay of .25 an hour, my dad put me in charge of doing the lawn seeding of St. Agnes Church. It was a success. I was hooked on turf.

2. What is the most rewarding part of your career? After graduating photo school in 1950 I worked as a photo journalist and in photo labs. Drafted and serving in Korea I spent 12 months as a combat photographer. I have always used my photos to help design and complete my work throughout my career. I was awarded the North American franchise to build "PAT" (Patented Athletic Turf) fields from Purdue University. It was the first sand base system to grow turf without soil. It was the catalyst for my business to move into sports turf for the next 30 some years.

3. What would you consider to be your greatest career challenge? Career challenges were changing from residential to commercial landscaping and then moving ahead into sport turf construction.

4. Which three adjectives describes you the best? Per my wife – patience, humor, and tenacity. How else could I have stayed in business for 54 years?

5. Tell us about your family. I have three sons from my first marriage with one granddaughter. My wife, Geri has a son and daughter and two grandsons. All grandchildren are adults happily following their own goals.

6. Any pets? ? No pets at this time. With less travel we may take on another cat.

8. Who do you admire? I admire my wife and the women in my family.

9. Who is the person in history you'd most like to meet? I had the opportunity to photograph the then General Eisenhower when I was in Korea. It would have been an honor to meet him.



Geri and Roy Zehren at a summer picnic. They have been married for 37 years.

10. What's a fun fact that people don't know about you? ? I am an open book. But I will admit to being crazy enough, just once, to do a snow angel after a late session in the hot tub.

11. What do you do in your spare time, favorite hobbies? Golfing was my favorite hobby for 70 years so it is my goal to throw away this walker for a putter.

12. If you could go anywhere in the world on vacation, where would you go? Destination Germany, doing river cruises.

14. What is your favorite turf management related tool or technique? My favorite tool was the old English reel push greens mower which I used to mow the home putting green. It is now at rest with Rod Johnson at Pine Hills CC.

15. Favorites:

TV Show: The Entire History Channel.

Movie: Bride Over The River Kwai.

Food: Spam (from my days in Korea)

Sports Teams: Packers and Brewers

16. Do you golf? Handicap? Best shot or golf story? Geri and I have been married for 37 years. We enjoyed many years of travel and golfing together. After knee replacement in August of 2012 I was back on the course in October. But another surgery caused nerve issues so my goal is to exchange the walker for a putter again. I have played golf since 1946, 70 years, with a handicap of 24 in 2011. The beauty & joy of the sport is now enjoyed from my easy chair.

18. If you could provide one piece of professional advice, what would it be? You must enjoy what you do and then do it well.



Top: Roy and Grandson Edward (now 23) pushing a antique English reel mower around the backyard putting green.

Bottom: Roy holding his picture from Korea. The picture is from a local newspaper that did a feature on his time in Korea.





Winter Work At The TDL

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

As we finish our normal winter, spring is right around the corner. Yes a normal winter when you consider lately there is no normal in Wisconsin Weather. In the last Grassroots there we a few mentions of the wet, warmer December. This left us wondering what would happen to our turf in terms of Snow Mold infections. As of the writing I have not heard of any major damage, YET.

With the early snow melt there is still ample time for Microdochium nivale (Pink Snow Mold) infection. The balance of March and early April can present us with the perfect conditions for Pink Snow Mold (PSM) development. Just a brief reminder that PSM does not require snow cover but does require a moist environment with temperature between 32-45 degrees. In the last few weeks we have had the moisture but the nighttime temperatures have dropped below freezing and this can inhibit PSM development. Telephone conversation with a few Illinois superintendents report that their turf came out of snow cover clean and green but two weeks later they had a healthy infection of PSM. Keep scouting your turf for PSM.

This winter Dr. Koch resumed his Winter Degradation Study for Snow Mold control products. His past research found



Figure 1: Winter Degradation plots after the snow melted.

that the a few products decreased to levels in the system where snow mold control was lost in mid to late winter. This past winter just as I had developed my system for snow removal from these test plots, Dr. Koch halted the study. Plants that were harvested and put in the Biotron (environmental control chamber) in early January showed signs of Snow Mold.

Unfortunately for me, I had the system

for shoveling and harvesting four-inch cores under down to an art and I had to halt venturing out in the middle of winter to shovel snow of fairway plots and drilling holes in frozen turf. As you can imagine I was fairly depressed for a few weeks. I have recovered from my sadness because I was told there is always next year. I should also tell you that when I took the early January samples I pulled the plugs this with a sharp cup cutter.



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TURFGRASS DIAGNOSTIC LAB

Halting of the winter degradation project allowed me to move into planning spring and summer projects. Last fall a decision was made to renovate 21 of our general turfgrass research plots. Past research had devastated these plots to a point where due to various weeds, bentgrass and mixtures of Kentucky Bluegrass, Perennial Ryegrass, Fine Fescue and quackgrass we could not do quality research. These plots were sprayed last fall with glyphosate and left fallow over the winter. This spring we will spray these plots two more times with glyphosate and prepare them for seeding. The question has been what mixture will we seed these plots? For our Trio of Professors they are looking into their crystal ball and attempting to forecast what mixtures they will need for future research. Kurt Hockmeyer and Dr. Koch have discussed doing a Summer Patch research project and they need a Low Mow Kentucky Bluegrass fairway. We have decided to leave a few plots fallow for future needs.

At the GIS I discussed our seed needs with various seed suppliers and many



have something new that they would like to have planted on our sight for future

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evaluation. The renovation of these plots will keep our facility current with newer seed varieties. There was also some interest in comparing possible seeding techniques and grow-in programs. All these options should give us some industry ready data to share with industry. There will be many conversations Turfgrass Diagnostic Lab O. J. Noer Turfgrass Research & Education Facility 2502 Highway M, Verona, WI 53593-9537 www.tdl.wisc.edu E-mail: bschweiger@wisc.edu Phone: 608-845-2535 Fax: 845-8162

with Tom Schwab and our trio of Professors. Your opinions would be welcome, so please get in touch with me to let me know if you have any other ideas.

Winter is also our time for Turf Diagnostics Lab contract renewals. Sending these renewal notices during the winter can create a few issues. Renewals can get lost in the winter paperwork, lost in the clubhouse mail system, or arrive when there is no income and put aside until spring arrives and cash flow begins. The substantial budget cuts to the University they do not directly affect the Lab but they trickle down and do impact the lab. If you have been a Contract Member in the past and have let your membership lapse or would like to be a new Contract member please consider showing your support.



TURFGRASS DIAGNOSTIC LAB



Figure 2: OJ Noer research map of the plots, Red plots have been sprayed with Glyphosate.



MADTOWN MUZINGS

What Are You Doing Here?

By Jake Schneider, LMD Production Manager, The Bruce Company

Those who attended the Golf Industry Show in San Diego this year faced at least two major problems: the threat of getting a sunburn was ever present and you had to go inside to attend the educational seminars and tradeshow. Yes, the weather was that nice. For a city that has the reputation for being 72 and sunny on a regular basis, it's tough to exceed the baseline, but 80 degrees without a cloud in the sky for a week did just that. Having been fortunate enough to have attended the conference in the town that Ron Burgundy loved so dearly, I've never enjoyed myself there more than in 2016.

Aside from the weather, we took an afternoon to take the short ferry ride to Coronado Island where we explored the grounds



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www.milorganite.com 1-800-287-9645 of the historic Hotel del Coronado and the adjacent, spectacular beach. The Pacific waters were a little too chilly for my liking, and my pasty torso was also blinding to the locals. If you have a few hundred bucks burning a hole in your pocket when you're in the San Diego area, a stay at del Coronado doesn't appear to be the worst way to spend it.

After making our way back to the mainland, we were treated to a well-attended closing session that was headlined by the hilarious Frank Caliendo whose brain runs a mile a minute. For those who don't know, Frank was born and raised in the Milwaukee area, and he spent some time on Jerry Kershasky's crew at Westmoor Country Club. Although he didn't admit to it, I have to assume that his time spent on triplexes largely explains Frank's Hollywood success.

While exceptions undoubtedly exist, it's refreshing that tips, tricks, and information is exchanged so freely amongst superintendents who are often fighting for the same golfers' dollars.

While blinding beachgoers and an hour of John Madden, Charles Barkley, and George W. Bush impressions were highlights of the visit, my favorite event of every show is the Wisconsin Room and this year was no exception. Year in and year out, Brett Grams and the WGCSA board do an outstanding job of finding a suitable location for a night of cocktails, food, and camaraderie where many current and former cheeseheads assemble for a few hours of networking and talking smart.

While I've always enjoyed the night of reconnecting, I've come to appreciate it even more now that my gig is outside of the golf industry. I've said it before, but the collegiality that exists within the golf course maintenance field is truly remarkable. While exceptions undoubtedly exist, it's refreshing that tips, tricks, and information is exchanged so freely amongst superintendents who are often fighting for the same golfers' dollars. Unless I'm out of the loop (which is a distinct possibility), local sharing of knowledge within the landscaping world is something that doesn't exist. For someone who was drawn to a career in the golf course maintenance, in part, due to the great people that I was exposed to while getting started at North Shore Golf Club, these connections are what I accordingly miss the most.

The title of this article-What are you doing here?-was posed to me several times while in sunny southern California, and from what I could tell, it was asked in a friendly enough manner. Aside from getting some fresh ideas and information that also translates into my segment of the green industry in a warm locale, catching up with many of you at the Wisconsin Room is a big reason why I pony up some of my own cash to attend the GIS. The only downfalls to our night: it goes way too quickly and the slight headache that I had the next morning.

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Spring Is In The Air

By Brett Grams, Chapter Manager, WGCSA

Spring has sprung for most of our members. Just about the time I became used to the cold and snow we saw a significant warming trend in March which caused the snow pack to melt quickly. I hope we can get some consistent weather to help jump start the 2016 golf season.

I wanted to let the membership know that our new website launched in December continues to be updated weekly. I am working the forum pages, the TGIC links to the Grass Roots Archive, and a few other pages to make them work like they are supposed to. The website will be an ongoing communication tool for our members so if you see something that is missing, would like some information to be listed that is not currently available or have any suggestions for improvement please let me know. This is YOUR website. The new system is more flexible than the previous version but is only as good as the content it contains.

The board has completed some significant changes to the Legacy Scholarships offered to family of WGCSA members. Take a moment to review and learn about this service offered. The deadline is now May 1st and all information is readily available on the website. It is the boards hope that we have increased interest and people applying for these scholarships this spring.

The PAR4 Auction is going to run again during Masters Week. This will be our 7th event and we hope to add to the \$60,000.00 plus funds that go directly to UW Madison and our sponsored research efforts. Thanks so much to those members and courses that have graciously donated golf rounds to raise these needed funds.

I was happy and proud to learn that WGCSA Board Member Mike Bremmer

of The WI Club will be representing us at the May 18th, We are Golf/National Golf Day in Washington DC. Mr. Bremmer will be speaking to our law makers directly and will be part of the day's events and activities on Capitol Hill. The current political climate and the election cycle are challenging times for our industry. Thanks to those members who are part of the GCSAA's Grass Roots Ambassadors Program. Please consider taking a turn as one of the WI Grass Roots Ambassadors as well.

I wish all members a successful golf season. If you should need assistance with anything WGCSA related please contact me as needed. I am happy to help as I can. Job Postings, education ideas, website improvements, and communication sharing are just a few things that I may be able to help you with.

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2016 Annual Meeting Results

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

A s your Chapter Delegate, I was honored to attend the GCSAA annual meeting on February 11th held in conjunction with the Golf Industry Show in San Diego. Chapter delegates voted for Officers and Directors of the GCSAA and the proposed bylaw amendments and Class A membership standards.

2016 Annual Meeting Election outcome: Officers

President: Peter J. Grass, CGCS, Hilands Golf Club, Billings, Montana

Vice president: Bill H. Maynard, CGCS, Country Club of Albans, St Louis, Missouri

Secretary/treasurer: Darren J. Davis, CGCS, Olde Florida Golf Club, Naples, Florida

Director positions

Rafael Barajas, CGCS, Boca Grove Plantation, Boca Raton, Florida
Kevin P. Breen, CGCS, La Rinconada Country Club, Los Gatos, California
John Walker (appointed to a one-year term), Bentwater Yacht and Country Club, Montgomery, Texas

John R. Fulling Jr., CGCS, Kalamazoo Country Club, Kalamazoo, Michigan and Mark F. Jordan, CGCS, Westfield Group Country Club, Westfield Center, Ohio remain on the board. John J. O'Keefe, CGCS, Preakness Hills Country Club, Wayne, New Jersey will serve on the board for one year as immediate past president. Keith A. Ihms, CGCS, retires from the board after serving the last year as immediate past president

New GCSAA President, Peter Grass,

CGCS has been a member of the national association's board since 2009. He is a 31 year member of GCSAA and also member and past president of the Peaks and Prairies Golf Course Superintendents Association.

A native of Mankato, Minnesota, the 56-year-old Grass earned a bachelor's degree from Eastern Montana College in Billings. President Grass has been employed by Hilands Golf Club for his entire 40 year Golf Course Management career. "A lot of people have told me how cool they think it is that someone from a 9-hole facility can serve on the board of directors and become president of the association," Grass said. "But if I can convince others that they too can benefit from being a GCSAA member, then I'll consider my year in office to be a success."



Our own Past President, Mr. Jeff Millies, CGCS, Edgewood Golf Course ran an excellent campaign for a GC-SAA Director position but came up just shy of John Walker from the Lone Star GCSA in Texas. The WGC-SA plans to fully support Mr. Millies if he chooses to continue pursuing a GCSAA Director position next year. Most candidates run multiple times prior to being elected to the GCSAA Board of Directors. As with most endeavors, persistence pays off, and we encourage and hope Mr. Millies will run again in 2017.

In addition to the election, delegates voted to approve revisions to the Class A member standards and passed 11 changes to the bylaws, which included a new definition of Class A and renaming the Superintendent Member class to Class B. I have attached the new Class A eligibility chart. Thank you again for the honor of representing the WGCSA at the Delegates meeting and Annual meeting. It was a great learning experience for me and one I will not forget.





Newly Elected GCSAA President, Peter J Grass, Hilands Golf Club, Billings, Montana.

CLASS A ELIGIBILITY

Determined by: Formal Education Value + Years Supt. Experience + Education Pts. = 20

Formal Education Category	Formal Education Point Value	+	Years of Superintendent Experience	+	Education Points	=	TOTAL POINTS REQUIRED
Bachelor's Degree or Higher in Turf/Plant Science Degree	15	+	3 or more	+	Variable	=	20
Other Bachelor's Degree or Higher, plus Assoc. Degree in Turf/Plant Science	15	+	3 or more	+	Variable	=	20
Other Bachelor's Degree or Higher	14	+	3 or more	+	Variable	=	20
Associate's Degree in Turf	13	+	3 or more	+	Variable	=	20
Turf Certificate/ Short Course	9	+	3 or more	+	Variable	=	20
Other Associate's Degree	8	+	5 or more	+	Variable	=	20
No Degree or Recognized Certificate	0	+	5 or more	+	Variable	=	20

A State Pesticide License or the successful completing of the GCSAA IPM Exam is required.

EXAMPLES:

Superintendent #1: I have a Bachelor's Degree in Turf (15 points) and have been employed as a superintendent for five years (5 points). I am now qualified for Class A status without needing any additional education points. (5 points). {15 + 5 + 0 = 20}

Superintendent #2: I have no degree (0 points); however, I have been employed as a superintendent for 10 years (10 points). To qualify for Class A status, I must now acquire a minimum of 10 education points (10 points), {0 + 10 + 10 = 20}

Superintendent #3: I have an Associate's Degree in Turf (13 points) and have been employed as a superintendent for two years (2 points). I must now acquire one more year as a superintendent to meet the minimum threshold of superintendent employment, then I must acquire a minimum of four education points (4 points) to become Class A. {13 + 3 + 4 = 20}



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Above: The 2016 Turf Bowl included 220 students and Team 20 from Penn State University lead by Dr. Ben Mc-Graw won. The team receives \$4,000 and the traveling trophy. The team members also get to work at the Players Championship. Photo by GCSAA

> Right: Comedian and impersonator Frank Caliendo entertained the group at the Closing Celebration. Caliendo worked at Westmoor Country Club in Brookfield during high school and college. Photo by GCSAA.

The CEO Roundtable included GCSAA CEO Rhett Evans. PGA of America CEO Pete Bevacqua. NGCOA CEO Jay Karen. CMAA CEO Jeff Morgan. Golf personality Geoff Shackelford served as the host/moderator. The industry leaders discussed the state of the game. Photo by GCSAA

The photo spread of the hospitality room on pages 26 and 27 was produced by Brett Grams.



GCSAA Col John Morley Distinguished Service Award Winners

Those with Wisconsin ties include O.J. Noer (A 3 time winner), Dr. James R. Love, Danny Quast and Monroe Miller.

Please check out the January issue of Golf Course Managment to learn more about this years winners.

1932: Col. John Morley 1935: John MacGregor 1940: Col. John Morley 1941: Frank W. Ermer; William H. Johnson 1952: Oyvind J. Noer 1954: Fred V. Grau, Ph.D. 1957: Thomas Dawson Jr.; Herbert Graffs 1958: Glenn Burton; L.F. Dickinson, Ph.D.; Malcolm R. McLaren; H. Burton Musser, Ph.D.; Joseph Valentine 1959: John Monteith, Ph.D.; Oyvind J. Noer; **Richard S. Tufts** 1960: Joseph C. Dey Jr.; Helen F. Lengfeld; **Oyvind J. Noer** 1961: Jesse H. DeFrance, Ph.D.; Eugene B. Marzolf; James Smith 1964: Theodore W. Woehrle 1973: Walter R. Boysen 1975: Raymond H. Gerber 1976: Joseph M. Duich, Ph.D.; Leo J. Feser; Thomas C. Mascaro 1977: Harold W. Stodola; Paul E. Weiss Sr.; Robert M. Williams 1978: Roy L. Goss, Ph.D.; John C. Harper II, Ph.D.; Arthur A. Snyder 1979: C. Reed Funk, Ph.D. 1980: Manuel L. Francis; John Madison, Ph.D. 1981: Geoffrey S. Cornish; Ralph Engel, Ph.D.; Hans C. Schmiesser 1982: Milton J. Bauman; Sherwood A. Moore, CGCS Retired; Alexander M. Radko; Ben O. Warren Jr. 1983: James B. Moncrief; Joseph Troll, Ph.D.; James R. Watson, Ph.D. 1984: Warren A. Bidwell; Keith Nisbet 1985: James L. Blackledge; William C. Campbell; Clifford A. Wagoner, CGCS Retired 1986: Andrew Bertoni; John B. Steel, CGCS; Howard Kaerwer; Chester Mendenhall 1987: David S. Gourlay Sr.; James R. Love, Ph.D. 1988: Jack Butler, Ph.D.; William B. Davis; Kenyon Payne, Ph.D.; Eberhard Steiniger, CGCS Retired 1989: James W. Brandt, CGCS Retired; C. Richard Skogley, Ph.D. 1990: William Bengeyfeld; Thomas Watschke, Ph.D. 1991: Noel Jackson, Ph.D.; W. Bruce Matthews;

Eliot C. Roberts, Ph.D. 1992: George M. Kozelnicky; C.E. "Tuck" Tate, CGCS Retired 1993: James B. Beard, Ph.D.; Victor Gibeault, Ph.D. 1994: Allan MacCurrach; John J. Spodnik 1995: Milton Engelke, Ph.D.; Ali Harivandi, Ph.D.; Michael Hurdzan, Ph.D. 1996: Randy Nichols, CGCS; Paul Rieke, Ph.D. 1997: Gerald L. Faubel, CGCS; J.M. Vargas Jr., Ph.D.; Coleman Y. Ward, Ph.D. 1998: David Mastroleo 1999: Anthony B. Caranci Jr.; Dan Jones; Palmer Maples Jr., CGCS Retired 2000: Michael R. Bavier, CGCS; Gary T. Grigg, CGCS, MG; George B. Thompson, CGCS 2001: Euel Coats, Ph.D.; L.W. "Sonny" Du-Bose Jr., CGCS Retired 2002: Houston B. Couch, Ph.D.; William F. Ploetz; Bruce R. Williams, CGCS 2003: Robert D. Emmons; Joel D. Jackson, CGCS Retired; Dudley H. Smith 2004: Gordon LaFontaine; Danny H. Quast, CGCS Retired; Gordon Witteveen 2005: William Fielder, CGCS; Tommy D. Witt, CGCS 2006: Thomas W. Cook; Stanley Zontek 2007: Stanley E. Metsker, CGCS Retired; William A. Meyer, Ph.D. 2008: Donald Hearn, CGCS; H. James "Jim" Loke, CGCS; Oscar Miles, CGCS Retired 2009: Mark Esoda, CGCS; George Hamilton, Ph.D.; Monroe Miller 2010: Robert A. Dickison, CGCS; James C. Husting, CGCS; Douglas W. Petersan 2011: Frank Dobie 2012: Pete Dernoeden, Ph.D. 2013: Roch Gaussoin, Ph.D.; Frank Lamphier; Dennis Lyon, CGCS; Ken Mangum, CGCS 2014: Stephen G. Cadenelli, CGCS; Bruce Clarke, Ph.D.; Samuel Bruce Martin, Ph.D. 2015: Melvin B. Lucas Jr., CGCS Retired; Cal Roth 2016: Dave Fearis, CGCS Retired, Paul McGinnis, CGCS; Al Turgeon, Ph.D.



2016 Old Tom Morris Award Winner: Herb Kohler Jr received his award at the Golf Industry Show in San Diego. Photo by GCSAA.

Herbert V. Kohler Jr, who served as the face of the Kohler Company for 43 years received The Old Tom Morris Award at the Golf Industry Show in San Diego.

As GCSAA's top award, the prize exemplifies the spirit of Old Tom. Since 1983 the award has been given to a recipient who through a lifetime commitment to the game of golf as shown through their leadership.

Old Tom Morris was a 4 time British Open Champion and longtime superintendent at St. Andrews in Scotland.

Mr. Kohler has increased the level of golf and hospitality in Wisconsin and throughout the world! He worked with famed architect Pete Dye to build 4 Championship Golf Courses at two venues near Kohler.

Blackwolf Run and Whistling Straits are premier destination courses that have put Wisconsin on the golf map. The four courses have hosted PGA and USGA Championships on a regular basis.

Herb Kohler has given back to our industry not only through his ownership and management of top golf venues but also by serving two three-year terms on the board of trustees for the Environmental Institute for Golf (EIFG), the philanthropic organization of GCSAA.

The Kohler Company started with Herb's grandfather John who started a foundry in Sheboygan in 1873. In 1912 the Village of Kohler was incorporated and Herb Kohler Sr. took over the company in 1941. Kohler Company has been a pioneer in the manufacturing of plumbing fixtures, engines and generators.

Herb Jr. became chairman and CEO in 1972 at the age of 33 after growing up working in every department he could to learn the business. Kohler starting with a major in theater at Yale University before changing to business.. Through a friendship with actor and director Kevin Costner Kohler appeared in the 2003 drama "Open Range" directed by Costner.

Herb Kohler stepped down as CEO in April of 2015 and his son David took over as the 4th generation Kohler to lead the successful company.

Herb Kohler Jr. has been a leader in the game of golf for Wisconsin and the world and we proudly welcome him as the newest Old Tom Morris Award recipient!

Old Tom Morris Award Winners

1983: Arnold Palmer 1984: Bob Hope 1985: Gerald R. Ford 1986: Patty Berg 1987: Robert Trent Jones Sr. 1988: Gene Sarazen 1989: Juan "Chi Chi" Rodriguez 1990: Sherwood A. Moore, CGCS 1991: William C. Campbell 1992: Tom Watson 1993: Dinah Shore 1994: Byron Nelson 1995: James Watson, Ph.D. 1996: Tom Fazio 1997: Ben Crenshaw 1998: Ken Venturi 1999: Jaime Ortiz-Patiño 2000: Nancy Lopez 2001: Timothy W. Finchem 2002: Walter Woods, Esq. 2003: Pete Dye 2004: Rees Jones 2005: Jack Nicklaus 2006: Joseph M. Duich, Ph.D. 2007: Charles Sifford 2008: Greg Norman 2009: Col. John Morley 2010: Judy Rankin 2011: Nick Price 2012: Peter Jacobsen 2013: Mike Hurdzan, Ph.D. 2014: Annika Sorenstam 2015: Dan Jenkins 2016: Herb Kohler Jr.

Major Events at the Kohler Golf Courses

1995 Anderson Consulting World Championship of Golf at Blackwolf Run (Mark McCumber)
1996 Anderson Consulting World Championship of Golf at Blackwolf Run (Greg Norman)
1997 Anderson Consulting World Championship of Golf at Blackwolf Run (Ernie Els)
1998 USGA U.S. Women's Open at Blackwolf Run (Se Ri Pak)
2004 PGA Championship at Whistling Straits (Vijay Singh)
2007 USGA U.S. Senior Open at Whistling Straits (Brad Bryant)
2010 PGA Championship at Whistling Straits (Martin Kaymer)
2012 USGA U.S. Women's Open at Blackwolf Run (Na Yeon Choi)
2015 PGA Championship at Whistling Straits (Jason Day)

2020 PGA Ryder Cup - Whistling Straits

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Advocating For The Industry

By Shane Conroy, Field Staff - Great Lakes Region, GCSAA

'If we're not at the table, then we're going to be on the menu.' This line spoken by Kenneth Gorzycki, CGCS on GC-SAA Grassroots Ambassadors hits the nail on the head when describing the program. The goal of the Grassroots Ambassador Initiative is to pair a GC-SAA member to each member of congress in an effort to increase advocacy to key policy makers about the benefits of our industry.

Regulatory pressure and attention from special interest groups have long been an issue for the golf course management profession. Whether it's applying and paying for costly permits, dealing with pesticide and fertilizer bans or navigating labor restrictions, there are a number of concerns our industry faces off the golf course. Advocating to decision makers who deal directly with these rules and laws is a huge step in making sure the turfgrass industry is well-represented.

Currently there are over 225 GCSAA Grassroots Ambassadors throughout the country, including six WGCSA members. The goal of these ambassadors is to connect with their assigned state senator or representative to make



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sure the elected officials are aware of issues facing the golf course management Ambassadors industry. Grassroots build strong relationships with their state representative and act as the goto person for issues facing the profession. GCSAA, with the support of the local ambassadors are acting as leaders in advocacy for the entire golf industry. Grassroots Ambassadors deliver strong messages to elected officials and their staff, as well as promote our industry as highly regarded professionals and environmental stewards.

Getting involved is easy, and open to all GCSAA Class A, SM and C members. GCSAA provides the tools and training materials necessary to get started, as well as informs ambassadors on issues currently effecting the industry. GCSAA also offers the proper channels for communication with the state senator or representative. We understand maintaining a golf course is a more than a full-time job in itself, that's why becoming a Grassroots Ambassador is a nominal time commitment, calling for only a couple hours each month. Bob Helland, GCSAA's Director of Congressional Affairs is based in Washington D.C. and is readily available to help Ambassadors get in contact with their elected official and staff. Additionally, Chava McKeel, Director of Government Affairs and Kaelyn Seymour, Government Affairs Specialist help get you started with the program and offer support throughout. Each year while completing the Grassroots Ambassador Program, GCSAA service and education points are awarded to the participant.

Ambassadors make big impacts by sharing their stories with members of congress and advocating on not only themselves, but superintendents nationwide. It is a great way to unite the industry in a common voice and reach influential officials in locally and nationwide.

Advocacy is one of the best ways to impact public policy, and successful association advocacy depends on member participation. The program is gaining steam and there have already been some great success stories stemming from the program. Many senators and representatives play golf and enjoy the opportunity to meet superintendents, as well as get involved in local projects that shine a positive light on the turfgrass industry.

We all know the professionalism superintendents and assistants exhibit on a daily basis, and how those who work within golf course management have the local environment's best interest at heart. Relaying this information to elected officials is a huge step in advocating to those who aren't aware of the details behind managing a golf course. With new laws and regulations constantly effecting the industry, it's important we advocate on our behalf, no one else will. If you have any questions on the program or would like to get involved please reach out to me at sconroy@gcsaa.org

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Tissue Testing For Potassium

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

ver the past several years, the picture of how to best manage potassium has come into focus. In the early 2000s, researchers (notably Drs. Wayne Kussow and Frank Rossi) showed that soil test potassium requirements for growing healthy turf were much lower than previously thought. Potassium has been labeled a stress nutrient, a fitting label given that plants low in potassium will often show a stress response long before a general decline in color or growth will occur. For example, low potassium in annual bluegrass has been shown to lead to increased winter kill and anthracnose. Interestingly, snow mold damage (pink and gray) is worse when potassium levels are high.

There are two ways to measure the potassium status of your turf: soil tests and tissue tests. Soil tests are meant to approximate the plant availability for good growth over a season or even multiple seasons. In general, the current research shows that if your soil levels of potassium (as measured by the Mehlich-3 method) are above 40 ppm then adding potassium is not required to achieve a healthy turf. However, the picture painted by turfgrass researchers is showing that potassium fertility is more complicated and I feel strongly that tissue testing for potassium is now the best course of action for optimum results.

For most situations experts recommend soil testing over tissue testing because tissue nutrient levels will fluctuate while soil levels remain fairly stable. However, it is for precisely this reason that I recommend you tissue test – we want to control and manage the fluctuations within the year. Conveniently, annual bluegrass and creeping bentgrass have different requirements for potassium, allowing you to customize your potassium program to manage for the grass you want to keep.

Maintaining Healthy Bentgrass at the Expense of Annual Bluegrass: If you have a majority bent stand, you can take one of two approaches. The first would be to maintain your tissue levels around 1.5% year round. These levels can be achieved when soil test potassium levels are relatively low (~50 ppm) and you add no extra potassium during the year. Bentgrass has shown to have good quality and performance at 1.5% tissue levels of potassium, where annual bluegrass will suffer from anthracnose and low temperature kill at these levels. If this approach scares you a bit, you can add potassium in a 1:1 ratio with N in the spring and summer, and then take the potassium away in August so the levels can drop before winter, leaving the annual bluegrass more susceptible to winter injury.

Maintaining Healthy Annual Bluegrass

If your surfaces have significant Poa populations, the research indicates that you want to keep you potassium tissue levels above 2% for the entire year. This will help ward off anthracnose in the summer and minimize low temperature kill over winter. You may find that your soil levels are high enough that you can get tissue levels of 2% without adding more potassium. However, if your tissue levels are lower than 2%, Dr. Kussow's research shows that the best way to get potassium into the leaf is to add nitrogen at the same time. I like to spoon feed potassium along with nitrogen in about a 1: 1 ratio.

How to Test Your Tissue for Potassium Sampling once in the spring, summer, and fall will be sufficient to check on and adjust (if necessary) your potassium level of your turf. Having a very clean sample is key for ensuring accurate results. Just a few sand grains included in your tissue can really throw off the analysis. For this reason, it's important that you put your clipping sample in a bucket of water and gently stir. The sand and other debris will sink to the bottom and the clippings will remain on the surface. Take a handful of the clippings out of the bucket and squeeze dry them before spreading them thinly over a newspaper or paper towel to dry for 24 hours or so. If the clippings remain wet, they will continue to decay and your nutrient analysis may be erroneous. Put the dried clippings in a paper bag marked with the appropriate label (F1 for #1 fairway, G5 for #5 green, etc.). The bagged clippings should be sealed well by folding the paper bag over and stapling it shut or by rolling the excess bag around the sample and securing the bag with a rubber band. The samples can be shipped to your preferred analytical laboratory for analysis.

While many laboratories offer tissue testing services, the University of Wisconsin Soil & Forage Analysis Laboratory in Marshfield, WI routinely conducts tissue testing for farmers all over Wisconsin. They recently added an option to test turfgrass tissue for N, P, K, Ca, and Mg for approximately \$20/sample. You can visit the lab website for the submission form here: https://uwlab.soils. wisc.edu/forage/feed-forage/ If you have any questions about tissue testing and interpretation of the tests, do not hesitate to contact me at djsoldat@wisc.edu or 608-263-3631.



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NGLGCSA

Spring Educational Conference

By David Brandenburg, Editor, The Grass Roots

The Northern Great Lakes Golf Course Superintendents Association or the NGLGCSA Spring Educational Conference was held at the Radisson Hotel and Conference Center connected with the Oneida Casino in Green Bay. The Radisson served to be a terrific venue for the group with very comfortable rooms and a lot of amenities.

Tuesday afternoon started with the annual meeting and election of officers. The NGLGCSA has about 100 members with nearly 20 from the Upper Peninsula of Michigan and the rest spread throughout Wisconsin. There are a few southern stragglers like me but most of the members are from the North.

For a small group they raise a lot of money for turfgrass research and put on a terrific educational session each spring. The group has some great volunteers, elected leaders and vendor support. All of them should be commended on a job well done.

Besides the conference they host three golf events with a June Rounds for Research Outing, a joint meeting with the WGCSA and a fall crew outing. They have a new website at www.nglturf.org you can check out to keep up with the association news and events.

The slate of officers for 2016/2017 was presented to those attending as follows; President, Kevin Henriksen; Vice president, Todd Clendenning; Secretary, Dan Belland; Treasurer, Jay Pritzl; Directors; Scott Allsup, John Holberton, Glen Rochester, Brian Tameling and Rich Victorson.

Tuesdays hospitality event provided a opportunity to catch up with old friends, make new friends and enjoy drinks and some tasty hors d'oeuvres. There was enough food attendees did not have to go out to dinner.

Wednesday's education started with Wayne Horman with Landmark Seed discussing 'Current Trends in Turfgrass Breeding"

In bluegrass the elite types produce less seed per acre so growers are moving away from them and to more common



Wayne Horman discussed current trends in turfgrass breeding.

types. This is reducing availability and increasing pricing. Of course for us on the golf course the elite types are a must have to provide quality conditions.

Wayne expressed the importance of knowing what is in your blend of seeds and comparing different blends by price per seed count, not just price per bag. The seed that is cheapest by the bag may have larger individual seeds and a higher seeding rate compared to a elite blend with more seeds (plants) per pound. In the end you will pay more for a inferior product.

The supply of ryegrass is down but so is the demand so the price is steady. Fine fescues have held steady in price and availability.

Horman spent a lot of time discussing the National Turfgrass Evaluation Program (NTEP) and the importance of looking at multiple sites under similar growing conditions and maintenance levels.

Then Wayne decided to hit a nerve as he discussed bentgrasses and stated "friends don't let friends plant Pencross"! Those were fighting words to a few in the crowd and I must admit we use Pencross for overseeding, divot mix and tees. His point was in 1954 pencross was the best bentgrass ever and for many years it was king but over time new varieties have been developed that are dollar spot resistant, provide better spring and winter color, drought tolerance and other improvements.

Horman finished with a discussion on overseeding or interseeding into existing stands. Research is continuing to show that aerifying or poking holes in the existing turf is key to increasing germination and viability of the new seeds.

Up next Dr. Jim Kerns was supposed to join us from North Carolina but was not able to make the trip. Fortunately Dr. Paul Koch was in Green Bay administering a Pesticide Applicators Session so he was able to come over and fill in with no problem.

He started with a discussion on Snow Mold, "What Works and Why The Hell It Didn't Work at My Place". Paul discussed the different types of snow mold and what environmental factors bring on infections. He expected mixed results this year due to heavy rains and warm weather shortly after products were applied last fall.

His research is showing that snow mold products are usually degraded by midwinter, especially during warm spells and snow melts or rain events.



Dr. Paul Koch discussed snow mold control and reducing pesticide risk.
NGLGCSA



Jake Britton presented the latest information in pond management.

With the product effectively gone long before winter is over how do we get control through the winter. The answer is twofold. First conditions may not be conducive for snow mold development. Secondly the application in fall reduces the funguses population and it takes time for the popluations to rebound. In the case of this past winter early spring treatments for pink snow mold may be needed.

In trials many products are working well in most places but a combination of products provides better control.

The next segment of Dr. Koch's talk focused on pesticide use and risk. When we use a plant protectant there is a risk but there is also a benefit. What if we can get the same benefit but reduce the risk? Paul dug deep and quoted Paracelsus in saying "Poison is in everything, and no thing is without poison. The dosage makes it either a poison or a remedy."

We can reduce risk by applying less often by using disease prediction models or spraying less area by applying to micor climates different than general areas.

Risk can also be reduced by applying reduce risk products based on Environmental Impact Quotient (EIQ).

Although we as turf managers know our practices and products today are better than in the past the public does not understand the difference between old pesticides such as DDT and modern products. Even if we are callous and not worried about our environment we need to worry about the loss of good products though greater regulations.

Next up was Jake Britton with SePro to discuss pond managment. Jake discussed the different active ingrediants and the problems they solve. Weed identification is key to proper control. Specialized herbicides can do a great job on Milfoil but not touch coontail or vice versa.

Britton discussed that for ponds with historic algea problems early treatments are important to control the weeds while they are young. This should be followed up by regular timely applications.

After more networking and a delicious lunch Dr. Richard Rees discussed pesticide and fertilizer formulations and why some products work better than others. Dr. Rees serves as Director of Research Development for Bayer Corp and grew up in Jersey England. (yes where the Jersey cows are from).

Dr. Rees discussed the life of a formulation from manufacturing, licensing, active ingrediant manufacturing, regula-



Dr. Richard Rees gave in depth information on pesticide formulations and how a molecule becomes a product we can use.

tory, research and development and then field testing. All for a product that may not make it to market.

Rees estimated a cost of 275 million dollars to register a active ingrediant with the EPA. The toxicology studies are wide and varied and a slow process.

A question was asked about using spreader stickers if the label does not mention it. Dr. Rees explained it is best to consult the supportive literature to get the complete information.

It was clear Dr. Rees did not just spend time in the lab but had a lot of practicle information for the end user.

Next years conference is tentatively scheduled for March 1st. If you put it on your calendar you will not be dissapointed.



The raffle table gave everyone a good chance at taking home some new gear.



The silent auction was a popular place to shop for good deals for home or work.

Spring Business and Educational Meeting

By David Brandenburg, Editor, The Grass Roots

Water – What you NEED to KNOW was the title for the spring education and business meeting held on March 14th at South Hills Golf and Country Club in Fond du Lac. The day was a bit cool, misty and cloudy to help attendance during a stretch of otherwise good weather as some courses were trying to get out on the course to prepare for the season.

The day started with Scott Bartosh introducing his friend Vic Hammer and projects he is working on to bring water to people in Kenya. Scott met Vic on a flight and was intrigued by the work he is doing to bring something we take for granted to people who have little water for drinking, bathing or their cattle to drink.

Mr. Hammer was not able to make the meeting but Scott presented us with some of his projects through different agencies including 4KenyasKids.

Kenya has a rainy period but through much of the year it is common for women and children to walk up to 5 miles for water that is polluted by animals and the environment. Through volunteer efforts and fund raising, Hammer and his partners have put in solar powered wells and filtration systems to help families and villages survive. They not only install the wells but train the local residents how to maintain the well for long term use and stainability.

Scott then introduced Greg Stromberg a Milwaukee man who felt blessed to be successful and have a healthy family and is now helping others through Cannedwater4kids incorporated. Greg took a day off from his regular job as a sales director for INK International to tell us more about bringing water to those who need it.

Stromberg discussed the Global Water Center in Milwaukee and Stonehouse Water Technologies also in Milwaukee. Stonehouse has developed a new Pod type water filtration system that can provide clean water with less cost and less waste. In common current processed it takes 5 gallons of water to make one gallon of bottled water. Greg provided us small amount of his wealth of knowledge regarding water production and bottling as well as providing water for those around the world.

Canned water is used by this group because cans are the best carrier for beverages and aluminum can be easily recycled into new cans. Plastic on the other hand is harder to recycle and is often not recycled as new bottles.

Cannedwater4kids is a non-profit volunteer group with all proceeds going to charity to help others obtain water. Clubs can purchase the water for sale or to give away to customers and vendors as a way to help. Greg had brought both aluminum cans and bottles for us to try. For more information on this great group visit their website at www. cannedwater4kids.com .

Gabe Lopez from Irrigation Protection Services spoke next on "Irrigation Spring Start up". Gabe started in golf at Lake Lawn Lodge and most of us know him from his time at Reinders Irrigation Service division and now he is owner and operator at IPS.

Lopez started with discussing the how to do a physical assessment of controllers early in the season before you need them. Doors, seals and hatches should all be inspected while the presence of insects and rodents should be noted and taken care of.



Above: Scott Bartosh introduces CannedWater-4Kids and Greg Stromberg (below). Greg is the Founder and CEO of Cannedwater4ids a non profit organization that supplies drinking water in aluminum cans to raise funds to help those who do not have access to clean drinking water here and abroad.



THE GRASS ROOTS March / April 2016

Clean, clean, clean is how the season should start. Components can be vacuumed or blown out, connections can be tightened and grounding checked.

In the pumphouse Gabe's motto is safety first and then clean, clean, clean. High voltage and high amperage is nothing to mess with by untrained staff. When working in panels eliminate all distractions and ensure panel doors are closed when the water pressure is on. The building itself should be checked for frost damage, rodents, roof damage and proper ventilation.

When pressurizing the system care should be taken to slowly fill with water while the air is purged. Blowout and spring fill up can be damaging to the system. He suggested filling the pumpstation only at first while stopping at 20 psi and 50 psi to check for leaks in the building. During this time the digital pressure gauge and mechanical gauge should be checked for accuracy.

During pressurization Gabe advised using 150 to 200 gallons a minute to reduce pipe damage. Overall he gave attendees great advice and keeping the irrigation system up and running for the season.

Bob Helland, Director for Congressional and Federal Affairs, GCSAA joined us to discuss a Government Affairs Update. Helland was previously a lobbyist for the law firm of Redd and Smith serving GCSAA so his transition as a new employee was smooth.

Helland started with discussions on the presidential election process. He was quick to point out no matter who wins, advocates for golf are still going to have to fight for our rights and believes. He spent time explaining delegate counts, unbound delegates and other primary quirks. With the possibility of no republican candidate receiving the required number of delegate votes it could be an interesting convention. Candidates, who drop out of the race, suspend their campaign so they can keep raising funds but also so they can keep control of their



Gabe Lopez presented tips on irrigation start up.

delegates.

At the convention delegates are required to vote for the candidate their states primary said they should vote for. However, if no one receives the required 1237 delegates during the first vote all bets are off and they can vote any way they want for the second vote.

After the easy topic Bob entered into the scary topics of regulations and laws. Regulations that come from a government department have the same power as a law passed by congress only the regulations come without a vote.

The Clean Water Rule commonly referred to as WOTUS defines what a water of the United States is. In simple terms under the new rules almost every body of water is a water of the U.S.. WOTUS was put in place to work with NPDES Permitting to require golf courses and other entities to get federal permits to apply pesticides to or around or near any WOTUS waters. Fines of up to \$26,000 per day per violation for violations of paperwork or reporting obligations could be leveled. 31 states and multiple industry groups have filed legal action against this move by the EPA and for now the US Court of Appeals for the 6th Circuit has stayed implementation of the new regulations.

GCSAA and other groups are working with the legislature to pass bills reducing the requirements of the rules.

The H2-B visa program does not affect Wisconsin as much as other states but new rules there have pretty much made it impossible to use the program to find workers. The process is long and expensive for companies to try to fill positions. It seems the agency is just making the program so hard to use, no one will use it because the agency does not agree with the program.

Bob finished with a discussion on Regulatory Accountability Act of 2015 Senate Bill 2006 or House Bill 185 to reduce agency rules that have high or major impact citizens and industry. The act requires the agency review both the cost and benefit of new rules as well as alternatives to them.

High impact rules are those that cost the economy over 100 million a year, reduce jobs or have significant adverse effects on the competiveness of a United States Industry.

Bob reminded us that no matter who is in the oval office or leads congress we need to be our own ambassadors and fight for our rights and believes. The GCSAA Ambassador Program is a great way for you to reach out to your representatives. GC-SAA also has information on what key topics to address and talking points you can use to convey our message.

After a great lunch and apple pie it was time for the association's business meeting. Chapter manager Brett Grams gave an update on association business and the closeout of the books for 2015. The association is in good shape financially and able to give \$25,993 in research and scholarship funds. Industry support is a key part of our financial success and Brett reminded everyone to use and thank the vendors who support our events and advertise on the website and in the pages of The Grass Roots.

The new website is up and running with a few glitches that will be taken care of shortly. It came with a free forum feature so feel free to use that. About 16% of members have yet to renew so be sure to keep an eye out for a notice if you are on that list. Our membership numbers remain strong.

President Van Herwynen presented the board is working on a set of Standard Operating Procedures to allow future boards to seamlessly carry on business without forgetting any of the many responsibilities they have. The board is also working on a system of Best Management Practices following the lead of other chapters who are using them to show government agencies and interested parties how golf courses operate using as little inputs as needed.

He congratulated Jeff Millies on his run for the GCSAA Board of directors and although he fell just short this year we expect success in 2017.

Mike Bremmer is going to represent the chapter at the National Golf Day in Washington DC on May 18th. Mike serves as our chapters Governmental Regulations and Environmental Committee Chair. Feel free to contact him if you have questions about WGCSA and GCSAA projects, more information on the GCSAA Ambassadors program or to update him on upcoming regulations.

Scholarship and Research Chair Josh Lepine discussed changes to the Legacy scholarship for 2017. The deadline has been moved to May 1 to allow high school seniors to apply with acceptance letters from their accepted college and we will be rewarding two \$1,000 scholarships. The application can be found on the WGCSA website.

Scott Bushman presented the event calendar for 2016 which can be found on page 47 of this issue. Feel free to contact the board if you have any questions of suggestions and we look forward to seeing you at our first meeting which will be the super-pro on Wednesday April 27th at Hidden Glen at Bentdale Farm in Cedarburg. It is a great event to come with your PGA Professional or any partner.





Monroe Miller presented Nicholas Gmeinder with the Monroe S. Miller Literary Scholarship. Nicholas penned a article "A Jouney Through Turf Managment" in the November 2015 issue of *The Grass Roots*. Nicholas has worked at Chenequa Country Club, Maple Bluff Country Club and Oakmont Country Club and plans to return to Oakmont after graduation from UW Madison in May.

25 YEAR MEMBER AWARD

Eric Jasin, Superintendent at Lake Arrowhead Golf Club will be presented a plaque to commemerate 25 years of membership to the WGCSA.

Eric was born and raised in Menomonee Falls. Eric and his wife Lynn will be celebrating their 30th anniversary this June. They have two sons, Troy and Zach.

Eric's first job was at North Hills under Bob Musbach and Mark Kienert. While Eric was going to school for engineering at UW-Milwaukee he was working at North Hills and enjoyed working on the course so much he decided to change majors and schools. Eric is a graduate from Michigan State University. After graduation Eric spent 5 years at the Old Baldy Club in Wyoming. He moved back to Wisconsin in 1991. The last 25 years Eric has worked at Ville du Parc, North Hills Country Club, Muskego Lakes and the last 15 years at Lake Arrowhead.

During Eric'c free time he enjoys fishing, geocaching and curling.

Congratulations Eric.

The Legacy Scholarship Program Improvements

By Josh Lepine, CGCS, Maple Bluff Country Club

NEW DEADLINE: MAY 1, 2016 - TWO \$1,000 AWARDS

The WGCSA Legacy Scholars Program was developed to recognize outstanding students and offer educational aid to children/ stepchildren/grandchildren of WGCSA members who are active Class A, Superintendent Members, Class C, Class A-retired, or Class AA and in good standing with the association. After receiving feedback from our membership and researching other Chapter's offerings, the Scholarship and Research Committee and WGCSA Board of Directors have made a few changes to the program. The new application is available on the WGCSA website.

The first change was to move the deadline to May 1st. The old October 1st deadline made it extremely difficult for high school seniors to apply as most would not have their college acceptance letter that early in their senior year. Spring is a more typical time for seniors/students to be applying for scholarships and it makes it easier on the applicant as they are most likely already gathering transcripts and recommendation letters.

The second major change was to offer two scholarships at \$1,000 each. Due to rising tuition costs, your WGCSA Board felt an increase in the award was prudent.

Also, in an effort to spread the award around among our members, a new rule was added:

"Past winners are ineligible to reapply the following year, but may apply thereafter."

The two annual \$1000.00 awards will be funded by the WGCSA and administered by the Scholarship and Research Committee and the Board of Directors of the WGCSA. Scholarships will be awarded based on the availability of funding. Applications will be reviewed and selected by the Scholarship Committee. All decisions of the committee will be final. The winners will be selected by July 1st. All scholarship award check(s) will be made payable to the applicant by August 1st and announced at the Fall Business Meeting. Please encourage your family to take advantage of this great member benefit.





WISCONSIN PATHOLOGY REPORT

Precision Disease Management: The Wave of the Future? By Dr. Paul Koch, Department of Plant Pathology, University of Wisconsin – Madison

odern disease management en-L compasses a wide array of cultural factors such as proper fertility, irrigation, traffic management, air movement, sunlight penetration, mowing height, and traffic management. But in most cases, especially with a disease like dollar spot, cultural practices alone are not completely effective at managing disease. Hence, fungicides are often required at multiple points throughout the year to adequately suppress disease. Traditionally, fungicides have been applied at regular intervals throughout the growing season to the vast majority of putting greens, fairways, and tee boxes on any given course. However, increased regulatory and social concern surrounding pesticide usage and ever tightening budgets make developing more efficient and precise means for pesticide application scheduling necessary for effective disease management in the future.

For the basis of this article, I will define precision disease management as using the minimum amount of pesticide required to control a particular disease. In my opinion, precision can be increased through two primary ways; 1) only applying pesticides WHEN they are required and 2) only applying pesticides WHERE they are required. Let's look into each one of these aspects in a little more detail.

The When: Using Disease Predictive Modeling For Improving Precision

Currently most superintendents use a mixture of models, soil temperatures, indicator areas, and gut instinct for properly timing fungicide applications. These methods have worked relatively well for a number of diseases like take-all patch, fairy ring, and summer patch. However, models developed for dollar spot fungicide timing have been mostly ineffective, either instructing the applicator to apply more than they would when using a strict calendar-based method or applying too little and leading to widespread disease outbreaks. However, a new model developed mostly by Damon Smith while he was a professor at Oklahoma



Figure 1: Dollar spot severity when fungicide applications were made according to five different Smith-Kerns dollar spot probabilities. The number in parentheses following each treatment is the number of Banner MAXX (2 fl oz per M rate) applications made over the course of the 2015 growing season.

State (Dr. Smith is now an assistant professor at UW-Madison working on row crop pathology) and with assistance from Jim Kerns when he was at Wisconsin is providing a more accurate picture of when dollar spot is most active and in need of a fungicide application. This 'Smith-Kerns Model' has been effective in our research, and we anticipate it will be a critical piece of precision dollar spot management strategies in future years (Figure 1). The Smith-Kerns Model uses a 5-day rolling average of air temperature and relative humidity to calculate a probability that dollar spot will occur on any given day. When the probability reaches a certain threshold, a fungicide application is made and the model can be ignored until the reapplication interval has expired. While the other pieces of the superintendent's fungicide application strategy cannot be ignored (indicator areas, instinct, etc), an effective dollar spot model can provide further guidance on when is an optimal time to spray and improve the precision of dollar spot management.

The Where: Using Modern Technology to Only Spray Where the Diseases Are

One of the reasons that models have not been as effective in turf as they have been in many agriculture settings is the various microclimates that exist on any given golf course. A green tucked away in the woods will usually have a much higher level of disease pressure than one out on an open ridge due to reduced air movement and higher humidity surrounding the green in the woods.

So a model predicting one level of disease over an entire golf course will either underpredict the amount of disease on the high-pressure site or overpredict the amount of disease on the low-pressure site...or both!

WISCONSIN PATHOLOGY REPORT

This means that using a model to predict disease at a single site will recommend too much fungicide for some areas of the course and too little for others.

So how do we get around this conundrum? The most straightforward way would be to predict disease probability at different spots around the course and schedule fungicide applications on a site-by-site basis. This would require simple weather stations to be installed around the course that would wirelessly transmit their data, and the disease probability for that site, to a central computer. In the past this would have been an inordinately expensive process, but with the decreasing cost and increasing ability of many current weather stations this is no longer outside the realm of possibility with just a few more technological advances.

University Ridge: A Case Study

To illustrate how this might work at an actual course, let's use our venerable University Ridge golf course as an example. Most of you are familiar with the course and know that the front nine is relatively open and trees are tight to play in only a few areas (Figure 2). However, once the turn is made to the back nine most holes are completely lined with trees down both sides and many putting surfaces are completely surrounded by dense forest (Figure 3). From our recent discussion, we know that the back nine greens are most likely going to experience higher disease pressures and will likely require more

fungicide to provide adequate disease control than the front nine. But just one weather station on site won't be able to tell the difference between the two environments, not to mention the various different microclimates that occur even within the back nine greens. The result is that all 18 holes will often get sprayed even though half or less will actually need it.

However, if they installed small weather stations on each putting surface (or fairway) over the entire golf course and used our Smith-Kerns dollar spot model to predict when each hole had conditions favoring disease we could more precisely pinpoint our fungicide applications to only the holes that need it... and in the process save money and time without sacrificing turfgrass quality.



Figure 2: This picture of the 5th and 6th holes at University Ridge show the relatively open, prairie-style design of the front nine. Disease conditions would be generally predicted to be lower on the front nine relative to the back. Picture from University Communications (photos.uc.wisc.edu).



Figure 3: This picture of the 10th hole at University Ridge shows the densely forested nature of the back nine, which generally has higher levels of disease pressure relative to the front. Picture courtesy University Communications (photos.uc.wisc.edu).

WISCONSIN PATHOLOGY REPORT

The Tools Needed to Make This A Reality

As you have probably guessed, we don't quite have the tools to make this happen...but we're also not that far off either. First, we need an effective model for not only dollar spot, but also all of our other common turf diseases. While we are continuously refining and improving our dollar spot model, development of additional models for other common diseases is needed. Second, we need the weather station technology and data management software to assess the local environmental variables, plug the numbers into an algorithm, and present the disease probability. This part is (for the most part) already available, as small weather stations like Toro's Turfguards and other stations from Spectrum and Campbell Scientific are available or will be in the near future. As the cost of these stations continues to drop, I don't think it will be financially impractical to install a weather station on every hole of the course in the very near future. Third are the tools to effectively and efficiently spray pesticides over a small area. Right now our sprayers are designed to spray multiple acres, and spraying only a few hundred thousand square feet is oftentimes overly burdensome. But current technologies like the Hahn Spray Bug are already available and in use at courses around the country (Figure 4), and future technologies such as spraying by drone have already started to appear in agriculture and are ideal for small, precision sprays that are often needed in turf (Figure 5).

The good news is that many of you are already familiar with precision turf management in the form of your Spectrum TDR Moisture Probe (Figure 6). These widely used devices give superintendents immediate feedback on the moisture levels all around the golf course, and have allowed them to develop site-specific irrigation plans that have significantly cut water usage and actually improve the conditioning and playability of the golf course. While additional disease management efficiencies will undoubtedly be developed in the coming years, the strategies outlined above may finally help to bring some of the efficiencies currently employed in other areas of course management to the forefront in disease management.



Figure 6: Precision turf management is already well established in the form of water management with the widespread use of Spectrum's FieldScout TDR Moisture Probe. Picture from specmeters. com.



Figure 4: The Hahn Spray Bug sprayers are already in use at many golf courses around the country, and they have additional applications in the realm of precision disease management.



Figure 5: Drone pesticide sprayers are being developed for agricultural purposes and may provide ideal for small, site-specific applications in turfgrass.



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Spring 2016 News

By David Brandenburg, Editor, The Grass Roots

Ervin A. Graf passed away on December 30, 2015 at the age of 86. Erv is survived by his wife Patricia and children Kathy (Terry) Stoikes, Cary (Susan) Graf, Kevin (Vickie) Graf and David Graf and 7 grandchildren.

Erv was born in Verona on the family farm and moved to Madison when his father Ervin H took a position as grounddkeeper at Nakoma Country Club in 1935. His time at Nakoma started his love affair with the game of golf. He played high school golf and caddied at Nakoma. One of his favorite memories was when he caddied for Sam Snead who was in town for a exhibition match.

Ervin was drafted in to the U.S. Army and served overseas during the Korean War. The war delayed his wedding but after serving Erv and Patricia were married in 1953 at Nakoma Country Club.

In 1955 Erv was offered a groundskeeper position at Odana Hills Golf Club during the construction phase. A few years later he helped design and construct Yahara Hills Golf Course and in 1975 was promoted to superintendent of Madison's 4 city golf courses.

In 1990 Erv retired from the city and worked part time as a consultant/greenskeeper at Vitense Golfland. Erv's father Erv H. spent 48 years as the Superintendent at Nakoma and Erv followed in his footsteps putting in 35 years with the city of Madison courses.

Erv penned a short autobiography in the May 1990 issue of *The Grass Roots*. That article can be found at the Michigan State Turfgrass Information File.

Peter Trenchard passed away on March 2 at Scandia Village in Door County where he entered the golf industry in 1976 when he purchased Bay Ridge Golf Course in Sister Bay. Pete also owned and operated Cherry Hills Golf Course from 1987 until 2004.

Not satisfied to just own a course Peter was very involved in the industry as a founding member of the National Golf Course Owners Association and he served on the Executive Committee of the United States Golf Association for 3 years.

Before the golf industry and Door County called him Pete served as a stockbroker in Chicago for 25 years.

Trenchard also was well known for his support of the Door Community Auditorium, Peninsula Music Festival, Midsummer's Music Festival and the Peninsula Players where he was named an honorary board member for life.

Peter is survived by his wife Dianne, daughters, Stephanie (Jeremy Popelka), Meg (Todd Langeness), Jane (Bill Backes), daughters of Sherry Trenchard; step-daughter Kim (Dan Kelleher), step-son Erik (Halle Aten) and eight grandchildren.

Job Changes

Jordan Mock who was the assistant golf course superintendent at The Golf Courses of Lawsonia is the new superintendent at Trappers Turn Golf Course.

Marc Davison is the new superintendent at Bishops Bay Country Club in Middleton. Marc was previously superintendent at Green Bay Country Club.



Gene Haas, former Executive Director of the Wisconsin State Golf Association provided this drawing in memory of Erv Graf who passed away in late January. Gene and Erv had become close friends over the years they served the industry.

Grayson Harms who was the superintendent at Bishops Bay Country Club is now the regional superintendent for Reliable Golf Services.

Greg Braun is the new superintendent at LaBelle Golf Club in Oconomowoc. He had been both assistant and superintendent in the past when it was Lac Labelle. Now that new owners have come in he has returned.

Greg Schernecker is the new superintendent at Horicon Hills Golf Club.

Brian DiGise was named the official superintendent at the Beloit Club.

Joe Sell who was an assistant superintendent at Whistling Straits Golf Course is now the assistant superintendent at North Shore Golf Club.

EDITOR'S NOTEBOOK

Kenosha Country Club golf course superintendent Paul Bastron and his staff will be busy for the season as the course undergoes a "comprehensive design-reinstatement."

The club was founded in 1898 and the current location was designed by Donald Ross in 1920. The goal is to return the property to the original Ross design.

The work includes tree removal, irrigation redesign, fairway and approach realignments and bunker work. The greens and collars will be expanded to original dimensions.

Bastron along with architect Drew Rogers are using aerial photography dating back to 1937 and the original Ross routing plans.

Good luck to Paul and the Kenosha Country Club as they return this classic to its original layout.

Congratulations to Dr. Joseph Vargas who will be installed in the Michigan Golf Hall of Fame this summer. Dr. Vargas is well known for his regular educational sessions at the Reinders Turf Conference in Waukesha every other spring. Dr. Vargas is known around the world for his work in Plant Pathology and is the author of the book "*Management of Turfgrass Diseases*".

Course Closings Continue to Outnumber Openings

Year	Openings	Closings	Net Loss
2015	9	234	225
2014	42	185	143
2013	14	158	144
2012	14	155	141
2011	30	150	120
2010	46	107	61
2009	50	140	90
2008	72	106	34
2007	113	122	9
2006	120	146	26
Total	510	1503	993

For the tenth year in a row course closings outnumbered openings across the country. The numbers shown in eighteen hole equivalents are from Pellucid Corp. and Edgehill Consulting.

In their January presentation at the PGA show they stated the industry could stand to lose another 500 courses but the key is are they the right courses. Many of the losses have been to entry level courses which not only reduce a place for beginners and casual golfers to play but also has little effect on the overall golf economy.

Overall rounds are expected to be close to 457 million or up 2% but much of the increase can be attributed to the weather.

More and more industry talk focuses on paying attention to your own operation and customers and treating them well to attract repeat play rather than trying to steal the neighbors players with below market prices.

Hopefully most courses in the Badger State had a good year and are able to invest in their courses and equipment fleets.



Aaron Goninen was named 2015 Salesperson Of The Year for golf irrigation sales. Aaron was given the Blue Blazer award at the Golf Industry Show in San Diego. Shown are Steve Snow-Toro Director of Golf Irrigation Sales, Aaron Goninen of Reinders, Tom Rasmussen -Toro Golf Irrigation Sales Manager, Steve Crain-Toro East Regional Manager

So far March has produced a mix of weather. Some courses were able to open early in the month but then rain and now snow has them treading water waiting for the weather to improve.

Our course was able to open March 9th but have had more poor weather days than good. It is good to see the players again and after 3 weeks the course is no worse for wear.

This issue will go to press tomorrow and as I write this on March 24th we have 4 to 5 inches of snow on the ground so who knows what will happen.

Spring high school golf can start Monday the 28th so I am sure a lot of coaches and players are hoping for warm weather. We host 4 boys teams in the spring and one girls team in the fall. The spring golf season can be tough for not only the golfers but the golf courses to fit in the players.

If I was king, I would have the boys golf season move to the fall to allow students to practice all summer and enjoy better early season weather. It would also work out better for the golf courses as play usually slows down come labor day as bowling and other activities start up.

From the event calendar on the next page you can see the we have opportunities to visit some great facilities around the state. I learn something from every course I visit and when you add in the networking our meetings are well worth the cost of admission.

I know... your too busy, you have kids, you are short staffed, your members want to see you every day etc. etc. If you have never been to a meeting please try one. We have a great group of members to interact with. If you normally attend one meeting, attend two this year and bring someone from a nearby club to introduce them to the group.

I hope to see all of you at one of our events even if it is just for lunch. Good luck to everyone as we enter the 2016 golf season.

EDITOR'S NOTEBOOK

Event Schedule!

April 27th, Wednesday - Super/Pro Outing w/PGA -Hidden Glen at Bentdale Farm, Cedarburg May 23rd, Monday - May Morning Golf Meeting - Blackwolf Run (Meadow Valley), Sheboygan June 13th, Monday - June Meeting - Janesville CC, Janesville July 26th, Tuesday - WTA - Summer Field Day - OJ Noer Research Facility, Verona August 15th, Monday - Joint meeting w/NGL - Thornberry Creek GC, Oneida September 19th, Monday - Wee One Fundraiser - Pine Hills CC, Sheboygan October 3rd, Monday - WTA Golf Fundraiser - Butte des Morts CC, Appleton November 5th, Saturday - Couples Dinner - Wisconsin Club – City Club, Milwaukee November 30 - December 1 - Wisconsin Golf Turf Symposium - American Club, Kohler February 4-9, 2017 - Golf Industry Show, Orlando, FL March 1, 2017, Wednesday - NGLGCSA Spring Education Conference, (Location TBD) March 15 & 16 - Reinders Green Industry Conference, Waukesha

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THE GRASS ROOTS March / April 2016



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Turf Star at Pebble Beach



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