

# The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

VOL. XLVIII  
ISSUE 6  
NOVEMBER / DECEMBER 2019





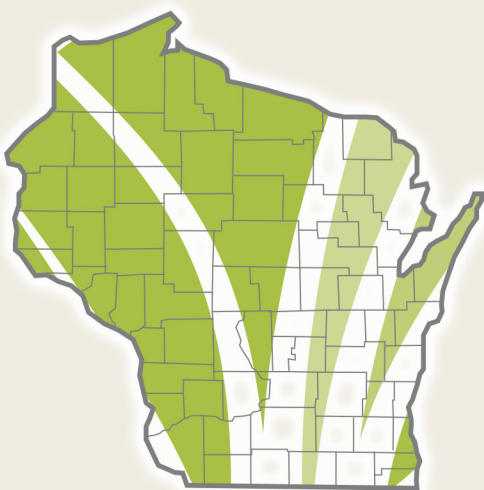
# From Reservoir to Rotor...

## Rain Bird has you covered.



We know there's a lot riding on your turf. Your professional success relies on your ability to maintain healthy grass and top playability. As the only manufacturer committed exclusively to irrigation, Rain Bird designs fully-integrated end-to-end solutions to address the challenges of maintaining healthy grass and top playability on the golf course. From water-saving nozzles to highly efficient pumps to leading-edge Control Technology, Rain Bird products make the most of every drop, delivering superior results with less water. Keeping the world and your golf course beautiful.

That's The Intelligent Use of Water.™



CLESEN  
PROTURF  
SOLUTIONS

Now The Rain Bird Golf Distributor For All Of Wisconsin

Clesen PROturf Solutions is now the Rain Bird Golf Distributor for all of Wisconsin and Minnesota.

Contact Dustin Peterson for further information and assistance with all of your irrigation needs.

Dustin Peterson

(309) 314-1937 | [dpeterson@clesenproturf.com](mailto:dpeterson@clesenproturf.com)

**RAIN**  **BIRD**®



# TABLE OF CONTENTS

THE PRESIDENTS MESSAGE So Many Opportunities, So Little Time, But a Goal of 3 More! . . . . .	4
WISCONSIN SOILS REPORT Re-Introducing the New Two-Year Turfgrass Certificate Program at UW-Madison . . . . .	6
WGCSA Golden Wrench Winner Goes Above and Beyond as Ozaukee CC's Equipment Manager . . . . .	10
MEMBER SPOTLIGHT Brad Wagner . . . . .	12
STUDENT ARTICLE Perceptions of Golf Course Resource Use: Why Efficiency is so Important. . . . .	16
WGCSA The Times, They Are A-Changin: 54th Golf Turf Symposium . . . . .	18
WISCONSIN PATHOLOGY REPORT Building for Future Success: A State of the UW Pathology Lab Report . . . . .	24
TOURNAMENT TIME SentryWorld Hosts 71st US Junior Girls Championship. . . . .	28
TOURNAMENT TIME Brown Deer Hosts Symetra Tour PHC Classic . . . . .	31
MUSINGS State of Wisconsin Golf . . . . .	34
TURFGRASS DIAGNOSTIC LAB Iron Sulfate For Dollar Spot Control . . . . .	36
WGCSA 2019 Fall Business Meeting . . . . .	40
EVENT SCHEDULE . . . . .	39
ADVERTISER INDEX . . . . .	41

## ABOUT THE COVER

Hole 14 at SentryWorld Golf Course recent host of the US Girls Junior Championship. The par 5 hole plays 575 yards.

*All men who have turned out worth anything have had the chief hand in their own education*

**By Scottish Novelist and Poet Sir Walter Scott, 1771- 1832**

This quote by Scott is fitting as we head into our education season and have opportunities to have a hand in our education for our betterment.

Visit our Website at  
[www.wgcsa.com](http://www.wgcsa.com)

## THE GRASS ROOTS

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

### EDITOR

David A Brandenburg, CGCS  
Rolling Meadows Golf Course  
PO 314 Theresa, WI 53091  
[grassroots@wgcsa.com](mailto:grassroots@wgcsa.com)  
920-960-1678

## WGCSA Board Of Directors

### PRESIDENT

Josh Lepine, CGCS  
Maple Bluff CC  
500 Kensington Drive  
Madison, WI 53704  
[joshl@mbcc1899.com](mailto:joshl@mbcc1899.com)

### DIRECTORS

Brian Bonlender  
West Bend CC  
5846 Hwy Z  
West Bend, WI 53095  
[brian@westbendcountryclub.org](mailto:brian@westbendcountryclub.org)

### VICE PRESIDENT

Jeff Barlow, CGCS  
Waupaca CC  
1330 Ware St.  
Waupaca, WI 54981  
[jj12barlow@gmail.com](mailto:jj12barlow@gmail.com)

Benjamin LeBarre  
The Ledge at Bristlecone Pines  
1325 E Bristlecone Dr.  
Hartland, WI 53029  
[blabarre@theledgeclubs.com](mailto:blabarre@theledgeclubs.com)

### TREASURER

Scott Anthes  
Brown County GC  
897 Riverdale Dr  
Oneida, WI 54155  
[anthes\\_sp@co.brown.wi.us](mailto:anthes_sp@co.brown.wi.us)

Timothy Schmidt  
Butte des Morts CC  
1411 South Bluemound Dr  
Appleton, WI 54914  
[tischmidt31@gmail.com](mailto:tischmidt31@gmail.com)

### SECRETARY

Garrett Luck, CGCS  
Hidden Glenn at Bentdale  
Farms  
778 Sherman Rd.  
Cedarburg, WI 53102  
[gluck@hiddenglengolfclub.com](mailto:gluck@hiddenglengolfclub.com)

Tim Wegner  
Brown Deer Park GC  
7835 N Green Bay Road  
Milwaukee, WI 53209  
[twegner4@wi.rr.com](mailto:twegner4@wi.rr.com)

### PAST PRESIDENT

Jon Canavan  
Milwaukee County Parks  
9480 Watertown Plank Rd  
Wauwatosa, WI 53226  
[jon.canavan@milwcnty.com](mailto:jon.canavan@milwcnty.com)

### VENDOR LIAISON

Rob Johnson  
Waupaca Sand & Solutions  
E3481 Royalton St  
Waupaca, WI 54981  
[rjohnson@waupacasand.com](mailto:rjohnson@waupacasand.com)

### CHAPTER MANAGER

Brett Grams  
WGCSA  
N9122 Virginia Dr.  
Waupaca, WI 54981  
[bgrams@wgcsa.com](mailto:bgrams@wgcsa.com)

### CLASS C REPRESENTATIVE

Kathryn Lifke  
Trappers Turn GC  
W1873 Allen Rd.  
Theresa, WI 53091  
[klifke9@gmail.com](mailto:klifke9@gmail.com)

### CLASS EM REPRESENTATIVE

Austin Wright  
Sand Valley Resort  
1697 Leopold Way  
Nekoosa, WI 54457  
[awright@sandvalleygolfresort.com](mailto:awright@sandvalleygolfresort.com)



## PRESIDENT'S MESSAGE

### So Many Opportunities, So Little Time, But a Goal of 3 More!

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

As we wrap up 2019 I wanted to express my gratitude and appreciation. Thank you to my family and MBCC team for helping me get through another taxing, stressful golf season. Grazie to our industry partners, allied associations, UW professors and most importantly, you, as WGCSA members, for your support and participation. Muchas Gracias to Brett Grams, our Chapter Manager, and the WGCSA Board of Directors and Committees. Your dedication is inspiring and the Association couldn't function without your efforts and volunteerism. Merci beaucoup to David Brandenburg.

I struggle getting this article to David on time. I can't imagine David's balancing act of family, work and putting this wonderful magazine together. Unbelievable. Domo Arigato to Jamie Staufenbeil for all of her continued efforts on another great Turf Symposium.

Our Association has so much to offer, so many ways to get involved and participate. I admit it is sometimes tough to balance work responsibilities, family and Association participation. It took me joining the board years ago to realize how much I was missing and how much work and volunteer hours went into planning

these events.

Please continue your current level of participation and consider as a goal to pick and complete 3 additional items off of this list as a New Year's Resolution. This list is in no particular order but is a brief summary of some of the great opportunities WGCSA and the Wisconsin Turf Industry has to offer. I can guarantee you won't be disappointed. I've already selected my 3 and will make it a priority to complete. Let's face it, that New Year's Resolution of diet, exercise and proper sleep will fail by GIS. 3 of these is much easier to accomplish!



#### WGCSA MISSION STATEMENT

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

#### WGCSA VISION STATEMENT

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

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




## PRESIDENT'S MESSAGE

- Attend the Golf Industry Show and Wisconsin Room celebration.
- Encourage your Assistant to attend the Assistants Seminar coming up this February.
- Attend or offer to host one of our free Equipment Manager Seminars or shop tours. (Looking at Fox Valley area as our next stop, hint, hint!)
- Attend Spring Business meeting and our Turf Symposium.
- Volunteer to assist in the Best Management Practices (BMP) review.
- Review the BMP photo list on the website and please send in some photos.
- Participate in the Par 4 Research Auction to support the UW Turf Research team.
- Consider hosting a First Green Event.
- Join and support the Wee One Foundation.
- Join and become active in the Wis-

- consin Turfgrass Association to support the OJ Noer Center, our professors and UW Turf Research.
- Contact our board if you are interested in serving, hosting an event or have seminar ideas, topics or speakers in mind.
- Support the Turfgrass Disease Diagnostic lab by becoming a contract member.
- Participate in Michael Bekken's Golf Course Resource Use Survey. The results will be combined with the University of Minnesota's Golf Course Urban Capital work to help demonstrate the value of golf courses to the community.
- Bring your wife or significant other to WGCSA's Couples Dinner. Such a great time for long and first time attendees.
- Write an article for The Grass Roots or submit news and/or happenings to share with the membership. Child births, big bucks and bass, job

movements and stories are all of interest to our members.

- Participate or peer pressure a colleague to be featured in the Member Spotlight column of The Grass Roots.
- Have your Equipment Manager or Technician consider joining the WGCSA's new EM classification.
- Become a Grass Roots Ambassador.
- Consider sending an employee to the Great Lakes School of Turf Management, Greenskeeper University or UW's new Farm and Industry Short Course-Turfgrass Management.
- Take advantage of the various Scholarship opportunities the WGCSA has to offer.
- Support the vendors that support our Association.

Which additional 3 will you choose? Enjoy this offseason. Refresh, revitalize and reconnect. 

## GOLFCREATIONS





Hawks Landing Golf Club  
Verona, WI



Before

*Meticulous detail   Versatile approach   Perfect tie-ins   Satisfaction guaranteed*

A division of: Lohmann Companies ♦ Marengo, IL ♦ 815.923.3400 ♦ [www.lohmann.com](http://www.lohmann.com)   \*ASGCA, GCBA, Better Billy Bunker Certified



## Re-Introducing the New Two-Year Turfgrass Certificate Program at UW-Madison

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

In 1959 O.J. Noer had a conversation with Dr. L.E. Engelbert (at the time, Chair of Soils Department), which resulted in the founding of the Turf and Grounds Maintenance Specialization in Soil Science. That program, which produced its first two graduates in 1964, has been the academic training grounds for a small but steady stream of turfgrass managers who've gone on to do great work in Wisconsin and beyond. The small numbers of students in the program relative to others was designed to match (not exceed) the demand of turf related job openings in Wisconsin, and the program has typically graduated four or five students a year. However, because of recent changes in the job market, the cost of education, and the economy in general, enrollment in the program has declined to the point where it has been consistently unable to meet demand. Job searches are going unfilled, and internship offers pile up with fewer and fewer students to accept them.

Because of the very close relationship between the Wisconsin turfgrass industry and the University of Wisconsin, the University felt obligated to try something new. In the fall of 2020, students interested in learning about turfgrass management will have the

opportunity to do that through the UW-Madison's Farm and Industry Short Course. The Farm and Industry Short Course is a historic program that has been going strong in the College of Agricultural and Life Sciences for over 130 years. In 1885, the Board of Regents accepted the recommendation that "a shorter course for the winter months confined to the term of two years, would be more popular and appropriate" for the education of farmers. The program was taught by UW faculty like F.H. King, Stephen Babcock, CALS Dean's Henry and Russell, who all have buildings or malls named after them on campus today. When thinking about how to expand our turfgrass program, we wanted to find a way to educate students in a compressed period, but without compromising the quality of the instructors or the content. We felt the Farm and Industry Short Course would be the ideal place to try this new idea.

The Farm and Industry Short Course is in-session over two 8-week periods (early-October through mid-December) and (mid-January through mid-March). This timing works well for prospective students who already work in the turf industry and want to their work experience with their Short

Course education. We are hoping to draw students from three main areas: 1) high school graduates interested in a career in turfgrass management, but without the means or desire to complete a four-year degree, 2) working turfgrass professionals interested in a certificate for career advancement, and 3) students that have earned a degree in a different field, but wish to switch careers.

Upon completion, the credential will not be a bachelor's or an associate's degree, but rather two certificates. The first certificate (earned in year 1) will be called the Foundations of Farm and Agribusiness Management, the second certificate (earned in year 2) will be the Turfgrass Management Certificate. The two certificates are designed to be taken sequentially. Students must complete the Foundations certificate in order to enroll in the Turfgrass Management Certificate.

The Farm and Industry Short Course offers over 40 courses taught by 25 faculty and staff at UW-Madison, all highly regarded in their fields. The faculty teaching the turfgrass courses will be myself and Dr. Paul Koch. While actual schedules will vary from student to student, here is a sample of the course work for the two certificates:

Year One	Year Two
Foundations of Turfgrass Management	Professional Turfgrass Management
Introduction to Soils (2 cr.)	Turfgrass Nutrient Management (2 cr.)
Agribusiness Communications (2 cr.)	Precision Agriculture (2 cr.)
Plant Science (2 cr.)	Turfgrass Irrigation and Drainage (1 cr.)
Agricultural Safety (1 cr.)	Farm Power (2 cr.)
Weather and Climate (1 cr.)	Safe and Effective Use of Pesticides (1 cr.)
Business Principles (1 cr.)	Turfgrass Integrated Pest Management (2 cr.)
Agricultural Human Resources Management (1 cr.)	+ Electives
Turfgrass Management (2 cr.)	
+ Electives	
Total: 12 or more credits	Total: 12 or more credits



CLESEN  
**PROTurf**  
SOLUTIONS



**YOU SPRAY  
WE'LL SPREAD**

For more information about *You Spray, We'll Spread*, contact your Clesen Sales Representative.

**Matt Kinnard**  
(262) 720-0251  
[matt@clesenproturf.com](mailto:matt@clesenproturf.com)

**Eric Styck**  
(262) 278-7055  
[estyck@clesenproturf.com](mailto:estyck@clesenproturf.com)

**Rob Wasser**  
(262) 221-5524  
[rwasser@clesenproturf.com](mailto:rwasser@clesenproturf.com)

**Steve Wasser**  
(920) 225-9658  
[swasser@clesenproturf.com](mailto:swasser@clesenproturf.com)

**Dustin Peterson**  
(309) 314-1937  
[dpeterson@clesenproturf.com](mailto:dpeterson@clesenproturf.com)

[clesenproturf.com](http://clesenproturf.com)

**- NEW FROM SYNGENTA -**

**Use Posterity Now and Pay June 2019**



**Posterity<sup>®</sup>**  
Fungicide

Posterity<sup>®</sup> fungicide, the most active SDHI in the turf market that elevates the control of key diseases including dollar spot, spring dead spot and fairy ring. Posterity delivers power that lasts, holding stronger for up to 28 days of dollar spot control, and setting a new standard for spring dead spot control. With Posterity, you can manage the toughest and most prevalent diseases with confidence.



**Secure<sup>®</sup>Action<sup>™</sup>**  
Fungicide

Secure<sup>®</sup>Action<sup>™</sup> fungicide includes a boost of acibenzolar-S-methyl (ASM) to better mitigate and quickly recover from biotic and abiotic stresses. Its enhanced formulation offers improved dollar spot control and brings the ASM defense to fairways and greens.

To Learn More, Contact Your Clesen Sales Rep or  
Visit: [clesenproturf.com/posterity](http://clesenproturf.com/posterity)  
[clesenproturf.com/secure-action](http://clesenproturf.com/secure-action)





# WISCONSIN SOILS REPORT

As the program grows, we will be able to add more courses to suit the needs of our students. That said, we feel this is a solid start. While I am not able to quote exact costs for this article, the cost of the program will be significantly lower than the cost of attending UW-Madison's normal turfgrass management program. In-state tuition for each certificate will be around \$5,000. Students housing is available at the Lowell Center for \$5,500. Approximately \$200,000 of scholarships are available each year, and several awards are ear-marked for students studying turfgrass. The average student receives \$3,000 in support each year, which covers a substantial part of the total costs.

We are very excited about this new direction but without strong enrollment, it may not be around long. Please help get the word out. Any student interested in enrolling in Fall of 2020 can start by visiting the Farm and Industry Short Course Web Site at [www.fisc.cals.wisc.edu](http://www.fisc.cals.wisc.edu) and/or contacting me at [djsoldat@wisc.edu](mailto:djsoldat@wisc.edu). The enrollment deadline for the fall semester is August 1, 2020. 🌱



**Students are the heart of the turf program at UW-Madison. The new certificate aims to get student numbers back up to meet the demand around the state.**

**Visit the Farm and Industry Short Course webpage to learn more about the program and to apply to attend. [www.fisc.cals.wisc.edu](http://www.fisc.cals.wisc.edu)**



# ALWAYS IN SEASON

## Toro Sand Pro 2040Z



### COMMERCIAL EQUIPMENT SALES

*John Jensen, Sales Manager*  
(414) 313-5130

*Derek Kastenschmidt*  
(414) 313-5260

*Mark Robel*  
(414) 313-5296

*Scott Neary*  
(608) 220-6593

*Bob Giesler*  
(920) 660-4227

*Reinders*

**Solutions & Supplies for the Green Industry**  
W227 N6225 Sussex Road,  
Sussex, WI (800) 782-3300  
[www.reinders.com](http://www.reinders.com)



## Golden Wrench Winner Goes Above and Beyond as Ozaukee CC's Equipment Manager

By John Reitman, Director of News & Education, Turfnet

*Editors Note: This article was originally printed on the Turfnet Website and is reprinted here in its entirety by permission.*

Dan Dommer of Ozaukee Country Club in Mequon, Wisconsin is the recipient of the 2019 TurfNet Technician of the Year Award, presented by Toro.

The TurfNet Technician of the Year Award, presented by Toro is given annually to a golf course mechanic who excels at a variety of tasks associated with maintaining the golf course. The criteria on which the recipient is determined might need updating after Dan Dommer of Ozaukee Country Club in Mequon, Wisconsin, won this year's award.

Besides excelling as a mechanic in a 100-plus-year-old shop at this historic 1922 William Langford-Theodore Moreau design, Dommer, 41, mows and topdresses fairways and is in charge of maintenance at Ozaukee's clubhouse.

**He has a whatever-it-takes attitude. He mows fairways, is in charge of our fairway topdressing program and fixes what needs to be fixed. He also is in charge of daily operations at the clubhouse, including everything in the kitchen, all mechanical needs, HVAC, everything. ... Nominating him for this award was a no-brainer. He's one of the best in the business.**

Since 2008, Dommer has been the equipment manager at Ozaukee, which was the home course to legendary superintendent Wayne Otto for more than 40 years. He was chosen from a field of three finalists that includes Jaime Bojorquez of Westbrook Village Golf Club in Peoria, Arizona, and Sean Brownson of Bethpage State Park in Farmingdale, New York.

Criteria on which candidates are judged include: crisis management;

effective budgeting; environmental awareness; helping to further and promote the careers of colleagues and employees; interpersonal communications; inventory management and cost control; overall condition and dependability of rolling stock; shop safety; and work ethic.

As the winner, Dommer receives the Golden Wrench Award and a spot in Toro Service Training University at the company's headquarters in Bloomington, Minnesota. Given all of Dommer's duties at Ozaukee, when he will find time to attend the Toro program is anyone's guess.

"He has a whatever-it-takes attitude. He mows fairways, is in charge of our fairway topdressing program and fixes what needs to be fixed," said Ozaukee superintendent Brett Hosler. "He also is in charge of daily operations at the clubhouse, including everything in the kitchen, all mechanical needs, HVAC, everything. "Nominating him for this award was a no-brainer. He's one of the best in the business."



Dan Dommer has served at Ozaukee Country Club since 2008.



Between operating equipment and checking on playing conditions around the property, Dommer spends about four hours a day on the golf course. With a topdressing program that includes applications on greens every two weeks and fairways and tees every three, he spends a lot of time on the grinder. Throw in his duties in the clubhouse and it's a wonder Dommer doesn't just keep a cot in Ozaukee's shop.

"I do spend a lot of time out there," he said. "I like to see how things are going out there."

The demands on his time mean he has to be fast and efficient when he is in the shop.

"I'm getting pretty good at grinding," he said. "I can do grinding for six greensmowers in about three hours."

Ozaukee was built on the site of an old dairy farm, and the barn from that farming operation serves as the club's shop.

"When that became the maintenance facility, they retrofitted it to what they needed in 1922, and they have not changed it in almost 100 years," Dommer said. "We have been able to update it a little, but it is most



**This classic barn serves as the maintenance facility at Ozaukee.**

definitely a barn."

Low ceiling heights prevented the installation of any kind of lift, so the only way to get underneath a piece of equipment is with a lot of jacks and a mechanic's creeper. Like a lot of people in this area, Dommer grew up on the family dairy farm, and if he absolutely needs a lift, he transports equip-

ment to his father's shop.

"It would be nice to have a lift here," he said. "But the ceiling heights make that impossible."

Previous winners include (2018) Terry Libbert, Old Marsh Golf Club, Palm Beach Gardens, FL; (2017) Tony Nunes, Chicago Golf Club, Wheaton, IL; (2016) Kris Bryan, Pikewood National Golf Club, Morgantown, WV; (2015) Robert Smith, Merion Golf Club, Ardmore, PA; (2014) Lee Medeiros, Timber Creek and Sierra Pines Golf Courses, Roseville, CA; (2013) Brian Sjögren, Corral de Tierra Country Club, Corral de Tierra, CA; (2012) Kevin Bauer, Prairie Bluff Golf Club, Crest Hill, IL; (2011) Jim Kilgallon, The Connecticut Golf Club, Easton, CT; (2010) Herb Berg, Oakmont (PA) Country Club; (2009) Doug Johnson, TPC at Las Colinas, Irving, TX; (2007) Jim Stuart, Stone Mountain (GA) Golf Club; (2006) Fred Peck, Fox Hollow and The Homestead, Lakewood, CO; (2005) Jesus Olivas, Heritage Highlands at Dove Mountain, Marana, AZ; (2004) Henry Heinz, Kalamazoo (MI) Country Club; (2003) Eric Kulaas, Marriott Vinoy Renaissance Resort, Sarasota, FL.

**KEEPING YOUR COURSE GREEN.**




- Well Drilling/Well Rehab
- Irrigation/Turbine Pump Repairs
- Pumpstation Installation & Retrofits
- Pumpstation Service & Repairs
- Fountains & Aerators
- Preventative Maintenance

**Pumpstation Professionals**  
A Division of Midwest Well Services, Inc.

**800.383.7412**  
**PUMPSTATIONPROFESSIONALS.COM**

Full Service Provider for Watertronics,  
Flowtronex & SyncroFlo Systems



# MEMBER SPOTLIGHT

## Brad Wagner

By Josh Lepine, Certified Golf Course Superintendent, Maple Bluff Country Club and  
Ben Labarre, Golf Course Superintendent, The Legend at Bristlecone

*Authors Note: As WGCSA Board members, we want to thank everyone who participated in the Membership survey. The information and feedback obtained was invaluable. The requests for more member spotlight stories inspired us to start this column. We hope to randomly highlight a few members each edition from all geographic areas, facility types and membership classifications. It may take us 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: **Brad Wagner**

Company Position: **Assistant Superintendent, Milwaukee Country Club**

Years as WGCSA Member: **4**

Membership Classification: **C**

**Bio:** I was born and raised in Wisconsin and I graduated from Plymouth High School in 2007. After that, I moved around a bit, spending time in New Jersey, New York, Utah, and Colorado before returning to Wisconsin in 2016.

I am currently the Assistant Superintendent at Milwaukee Country Club. I started at MCC in April of 2019. Prior to MCC, I was the Assistant Superintendent at The Legend at Bristlecone Pines and Lawsonia Golf Courses. I spent 6 years before that in Denver, where I worked at Cherry Hills Country Club and Pinehurst Country Club for four and two years, respectively. I have been working in the golf course industry for 12 years now.

### 18 Holes With Brad Wagner

**1. How did you get started in the turfgrass industry?** Not knowing anything about golf course maintenance or that it was even a job in the first place, I accepted a position at Blackwolf Run as a seasonal employee in 2007. I was raised on a dairy farm and enjoyed operating equipment as a child; this passion carried over into golf course management. I thoroughly enjoyed the opportunity to jump on a big mower or aerify fairways. As I learned more about the agronomic side of the golf course operation, the passion continued to grow as I realized this was not that far off from growing crops for agriculture use.

**2. What is the most rewarding part of your career?** Being able to fine tune an already beautiful property that the golf courses lie on.

**3. What would you consider to be your greatest career challenge?** Learning how to manage people and how to get the most out of staff on a day-to-day basis.

**4. Which three adjectives describes you the best?** Talkative, friendly, stubborn

**5. Tell us about your family.** I have been happily married for three and a half years to my wife, Kim. We were fortunate enough to have our first child earlier in 2019. My son's name is Arthur and he is 8 months old.

**6. Any pets?** We have two dogs: Dutch and Kona

**7. What drives/motivates you every day?** To continue to be better each and every day working on the golf course, as well as at home with my wife and son.

**8. Who Do You Admire?** My dad - that man can fabricate and fix anything with no specific knowledge of what he is working on.

**9. Who is the person in history you'd most like to meet?** Arnold Palmer - he seemed like he could show you how to have a really good time but also make you a much better person.



**Brad pulling roots from a drain at Milwaukee Country Club**



## MEMBER SPOTLIGHT



Brad and Kim with Arthur the skunk ready for trick or treat.



Brad and Arthur ready for a hike with friends in Wyoming.



*"The fairways are immaculate!"*



*"It was like playing on carpet."*



*"The course is in amazing shape."*

### When you can protect your fairways like your greens, you'll get rave reviews.

Golf's leading fungicide, Secure<sup>®</sup>, is now even better. New Secure<sup>®</sup> Action<sup>™</sup> fungicide now includes a boost of *acibenzolar-S-methyl* (ASM), giving turf abiotic benefits such as increased drought tolerance, heat tolerance and quicker recovery. The enhanced formulation also offers improved dollar spot performance, including an increased control interval of 14-21 days.

Visit [GreenCastOnline.com/SecureAction](http://GreenCastOnline.com/SecureAction) to learn more or contact:

Phil Spitz | 414-429-2015 | [Phillip.Spitz@Syngenta.com](mailto:Phillip.Spitz@Syngenta.com)

 **Secure<sup>®</sup> Action<sup>™</sup>**  
Fungicide

**syngenta<sup>®</sup>**

 @SyngentaTurf #Time4SecureAction



## MEMBER SPOTLIGHT

**10. What's a fun fact that people don't know about you?**

I went skydiving about 6 years ago when I was living in Denver (That is an adrenaline rush I had never experienced in my life and something I recommend all should try) My wife and I grew up about 15 minutes from each other in Wisconsin, but we met in Denver.

**11. What do you do in your spare time, favorite hobbies?**

I enjoy spending time with Kim and Arthur, going on hikes, mountain biking, snowboarding, golfing, and watching football and the Brewers. Boating on Lake Winnebago at my father-in-laws lake house and stopping at a few bars on the east and west shores. (We do not fish on this boat)

**12. If you could go anywhere in the world on vacation, where would you go?** So many amazing places to chose from, so I will go with 3 in no specific order: Thailand, Alaska and New Zealand

**13. What is the one thing you would like to learn/achieve someday?** To achieve a proper work/life balance that can help me become the best Superintendent I can be one day, while also being the best husband/father.

**14. What is your favorite turf management related tool or technique?** My cell phone – The ability to have a quality camera on me at all times is very beneficial. Whether to take pictures and send to friends in the turf industry to discuss potential issues. Or, to take pictures on the “dos” and “don’ts” for the staff. Maybe, I am just feeling really good

about how the golf course is looking one day and want to share with family and friends. Also, my cell phone provides access to many, many different resources online for diagnosing issues or gathering ideas on alternative methods.

**15. Favorites:**

**TV Show:** Schitts Creek

**Movie:** Tommy Boy

**Food:** Pizza

**Sports Teams:** Packers.

**16. Do you golf? Handicap? Best shot or golf story?** I do play golf. I do not have an exact handicap but generally I am happy with bogey golf. My golf game is pretty mediocre so nothing overly stands out, I have had a couple of chip ins or long putts for eagle.

**17. Top Bucket List Item?** Play golf at one of the top golf courses in the world. There are many but I would like to play at Pebble Beach, St. Andrews, or Cape Kidnappers in New Zealand.

**18. If you could provide one piece of professional advice, what would it be?** Have fun and enjoy the profession we work in. My wife is a social worker, she sees a lot of hardships that families go through, and her job is extremely challenging on a daily basis. So enjoy the opportunity we have to work outside, be in nature, and to make the golf course a truly special place for those who visit the property. ✓

## Sand is Important. Solutions are Essential.

Key support for your  
topdressing, bunker &  
construction mix decisions.



**WAUPACA**

**Waupaca Sand & Solutions**  
715-258-8566 - [www.WaupacaSand.com](http://www.WaupacaSand.com)



## MEMBER SPOTLIGHT



**The Wagners in Boulder Colorado**



**Arthur is always happiest outside.**

## HERFORT NORBY GOLF COURSE ARCHITECTS



Phone: 952.361.0644 Fax: 952.361.0645  
Email: [knorby@herfortnorbygolf.com](mailto:knorby@herfortnorbygolf.com) web: [www.HerfortNorby.com](http://www.HerfortNorby.com)



## Perceptions of Golf Course Resource Use: Why Efficiency is so Important

By Michael Bekken, Graduate Student, Department of Soil Science, University of Wisconsin – Madison

*Editor's Note: This is a student article that is eligible for the 2019 Monroe S. Miller Literary Scholarship. Michael Bekken is a graduate student pursuing a PhD in Soil Science with Professor Doug Soldat. Michael studies resource use on golf courses. Please consider participating in his survey, the UW-Madison Resource Efficiency Survey (UW-RES). His survey takes about 1 hour to complete. Every response is very valuable to Michael's research. The link to his survey can be found at [turf.wisc.edu](http://turf.wisc.edu).*

Ask any member of the general public what they think about resource use on golf courses and it's likely he or she will tell you that they use a lot of resources. As a third year PhD student in Dr. Soldat's lab studying resource use (water, energy, pesticide, and fertilizer) on golf courses I have heard this perception from friends, family and acquaintances many times.

To be clear, my research does not investigate social perceptions of resource use on golf courses; rather, I am studying how to quantitatively measure resources used such that superintendents can target more efficient use. In the course of my research, conversations with superintendents commonly drift toward the general public's perception of golf course resource use, and specifically focus on their perception that resource use on golf courses is very high. I'm unsure where this perception originates, but I suspect a combination of factors. First, I think the golf industry could benefit from further communicating total resource use, so that there is less room for speculation and rumor.

Secondly, golf courses are predomi-



**Alicante Golf Club in Spain. Water use on Spanish golf courses has on average three times the economic impact as the high value Spanish agricultural crop, strawberries.**

nantly located in urban and suburban areas where the resources used are highly visible to the general public. A pesticide spray on a rural farm garners much less attention than one on a fairway adjacent to a busy public street.

Thirdly, unlike agriculture, golf courses do not produce food and therefore may be held to a higher standard of resource efficiency by the general public. The industry has made significant progress in addressing all three factors by creating environmental programs such as the GCSAA National BMP Project, the GCSAA Golf Course Environmental Profile, and this organization (the WGCSA), which is supporting our research program at UW-Madison. In this article, I suggest it is important that the industry continue to address unfavorable public perceptions of golf course resource use by continuing a program of standardized data collection, striv-

ing for greater efficiencies, and communicating these results broadly.

To better communicate golf course resource use, the GCSAA recognized that the golf industry lacked baseline data on resource use and instituted the Golf Course Environmental Profile in 2007. These reports provided nationwide data on resource use in the golf industry and can be found on the GCSAA website under the 'Environment' tab. Several results from the survey are important to communicate broadly.

First, for example, golf courses use less than one percent of the nitrogen applied in all agricultural applications in the US and about 1.5 percent of all water applied as irrigation. The reports were published in two phases. The first phase was completed in 2012 and the second phase was completed in 2017. The 2017 reports indicate that golf courses are becoming more resource efficient.



## STUDENT ARTICLE

Secondly, golf course maintenance is highly visible to the public. The greater visibility can lead to greater concerns about resource use. During the golf course building boom of the 1990s, golf courses were built into housing developments which ensured that thousands of homeowners now have a front row seat to critique golf course maintenance practices. Anecdotal, I've met several Wisconsin superintendents who communicate closely with their surrounding communities to clarify potential misconceptions. Across the industry, programs like the USGA's Fore the Golfer series and the GCSAA's Friend of a Golf Course Superintendent address this issue.

Thirdly, golf courses are recreational facilities and do not produce food. As such, people may hold them to a higher standard of resource use efficiency. The industry can showcase the outsized economic benefit it provides for the resources that are used. A re-

cent study conducted in Spain found that the direct economic impact from water use on golf courses was 9 Euros (\$10) per cubic meter of water used. In comparison, the highest value Spanish crop, strawberries, had a direct economic impact of 3 euros (\$3.30) per cubic meter of water. This is a compelling statistic; water use on golf courses was on average three times more valuable to the economy than on the highest value crop. Clearly, water use on Spanish golf courses is an economically wise decision. Imagine if Spain's golf courses became even more water efficient, the value per cubic meter of water would be even greater. These data make a compelling argument in support of resource use on golf courses.

Taken together, the industry is addressing the public perception that golf courses use too many resources. One aim of my research is to help superintendents in Wisconsin quantify and contextualize their current re-

source use and to assist them in targeting strategies that can increase efficiency. A second aim of my research is to calculate economic metrics like the one that I reference from Spain, because I think metrics such as these will be especially helpful in communicating golf course resource use to a broader audience. The outcomes of this research can help address public concerns that I and superintendents commonly hear. Using this type of data driven approach, I think golf courses can achieve greater resource efficiencies while also positively shifting public perceptions about resource use on golf courses more generally.

Please help me to achieve these aims by participating in the UW-Madison Resource Efficiency Survey (a link to the survey is at [turf.wisc.edu](http://turf.wisc.edu)). While the survey takes about an hour to finish, every response helps me tremendously and I am confident that the results from my research will be equally useful to the industry.



### UW-Madison Resource Efficiency Survey

[Introduction](#)

[Study Participant Information](#)

[Facility Information](#)

[Resource Use](#)

[Management Practices for Fertilizers](#)

[Management Practices for Pesticides](#)

[Management Practices for Water](#)

[Management Practices for Energy](#)

The advertisement features a green oval at the top with the title 'The Turfgrass Information File Database' in orange and yellow text. Below this, the GCSAA logo is visible, followed by the URL 'www.wgcsa.com/member\_login.php' in orange. The text '200,000+ searchable records!' is prominently displayed in green. A starburst graphic contains the text 'Over 50% of TGIF Now Links to Full-Text!'. At the bottom right, there is a logo for the 'Turfgrass Information Center' and social media icons for Twitter, Google+, and Facebook. The entire advertisement is set against a light beige background with a green grass border at the bottom.



## The Times, They Are A-Changin - 54th Golf Turf Symposium

David Brandenburg, Editor

The Times, They Are A Changin title for the 54th Annual Golf Turf Symposium was taken from the Bob Dylan song released in 1964 as an anthem of change for the time. The world is constantly changing and the golf course management industry is no different.

The symposium committee brought in speakers to cover topics to address changes in the turf industry and how we can be better managers by adopting changes that are good for our facilities.

Many thanks to Jaime Staufenbeil, Agronomist for Milorganite and Milorganite for their hidden but essential support of this important educational event started by Charlie Wilson, James Latham and Bob Welch in 1966 as a tribute to O.J. Noer. Milorganite does not advertise it, but they not only put together the program, they also pay all the costs of the speakers travel,



### Dedicated to the Memory of O.J. Noer


lodging and meals. Without their support the cost for attendees would be substantially higher. Despite this important support, Milorganite hangs no banners and gives no sales pitches during the symposium. So on behalf of the attendees and the WGCSA, thank you Milorganite!

Attendance was down a bit this year with less out of state support due to

other state conferences being held during the same week. The calendar also did not help with the least number of days possible between Thanksgiving and Christmas putting members lives into a holiday rush. But this did not stop those in attendance from obtaining first class education at the first class American Club.

The only glitch was that the hors d'oeuvre's normally waiting in the hall after day one were a bit late due causing some to leave thinking they were cut out this year. Jaime's quick action reaching the hospitality staff had them bringing it right out.

The breakfast buffet again offered the best bacon known to man and the lunch offered the ever popular beer cheese soup.

Times are a changing but but after 54 years the symposium still brings quality education for our members at a economical price. 







Steve Randall, Director of Chapter Outreach for GCSAA gave the Keynote Address titled “Communicating for Success in Changing Times.” Steve gave a inspiring and interesting talk to increase our understanding of communication and how trust can build relationships. “Laggards kill moral, get rid of them” is a take home message for all the attendees.



Kurt Hockemeyer, Turfgrass Diagnostic Lab Manager, UW Madison spoke on changes from his perspective at the lab. Gray leaf spot has reached Wisconsin for the first time ever however snow mold trials have shown snow mold is less of a concern in the lower half of the state and we may be able to reduce applications for this once common disease

## ADVANCED TURF SOLUTIONS®

We provide fertilizer, chemical and seed solutions for the golf course, sports turf, landscape and lawn care markets. Contact your local rep for details.

**Mike Werth**

📞 608.214.7011

🐦 @werthashot

✉️ mwerth@advancedturf.com



**Todd Fregien**

414.949.1089 📞

@ToddFregien\_ATS 🐦

tfregien@advancedturf.com ✉️

**Rusty Stachlewitz**

📞 630.779.0761

🐦 @RustyStack

✉️ rstachlewitz@advancedturf.com



**1556 Advance Road, Unit C  
Madison, WI 53718  
608.571.0782**

advancedturf.com 📘 🐦 📷 @AdvancedTurf





Scott Wedge (left) and Owen Butler (right) both Financial Advisors for Northwestern Mutual gave a talk titled “We do not need to go for every green in two!”.

They gave attendees advice on how to make sound investment decisions based on your age to prepare for retirement by taking mild risk at the right time.

By having a plan a investor can have piece of mind despite the markets ups and down through a lifetime.

Their big advice to the youngest in the audience was starting small early leads to bigger later.



Chase Straw, Post doctoral Research Associate for the University of Minnesota presented new technologies for precision irrigation.

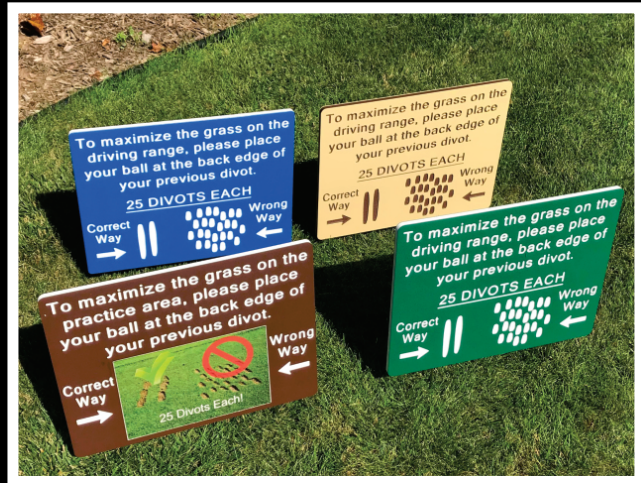
Chase discussed the value of moisture meters with and without gps mapping along with Toro’s pull behind precision sense providing readings every 8’.



Jerry Kienast, General Manager of Red Iron Equipment for Reinders discussed the new equipment and how to best maintain new equipment.

Jerry focused on what is still the same but also how new diesel equipment is different than the diesels of just a few years ago.





**GOLF COURSE SIGNS | TEE MARKERS | YARDAGE MARKERS  
SPRINKLER HEAD YARDAGE CAPS | FLAGS | ACCESSORIES**

**[www.NationalGolfGraphics.com](http://www.NationalGolfGraphics.com)  
Call Peter Meyer 877-710-9363**





**Todd Quinto, Senior Project Architect and VP of Design, Lohman Quinto Golf Course Architects spoke on “What’s Moving the Needle These Days in Golf Architecture.**  
Todd spoke on how the game is changing and what some facilities have done to “upgrade” their facilities to generate new play or increased use of facilities with putting courses or short courses. Revenue increases are usually the driving force for upgrades.



**Mark Baden, Chief Meteorologist for Channel WISN 12 spoke on climate, climate change and what we can expect as turf managers in the future.**  
Mark showed we are warming more in the winter than summer but summer nights are warming than summer days.  
Unfortunately we can expect more heavy rain events so we need to be prepared to remove that water from our playing surfaces.



**Travis Shaddox, PhD, Department of Plant and Soil Sciences, University of Kentucky spoke on Simplifying Soil Test Interpretation for Turfgrass.**  
He explained how soil test interpretation is far behind for turf compared to agriculture. Agriculture soil tests have been studied since the 1800’s but recommendations specifically for turf have only been around since the 1950’s.  
Soil testing for agriculture is easier to quantify because crops are grown for yield and quantity while turf is based on quality and color. Measuring clipping yield is a help but not the same as actual crop yield.  
Most soil tests for turf have too much information and we should need to look at pH, Phosphorous and Potassium more than other nutrients.





The esteemed panel discussed recent renovation work they have been part of at their courses. Jimmy Cavezza, The Club at Lac Labelle, Paul Bastron, Kenosha Country Club, Jim Van Herynen from South Hills Golf and Country Club with moderator Jens Arneson, Assistant Golf Course Superintendent at Maple Bluff Country Club.



Recently retired USGA Green Section Agronomist Bob Vavrek gave a 30 year career in review.

He discussed how poa annua has not changed in 30 years. There is no good seed available for putting greens, and it still dies if it gets hot, cold or dry. Aerification has seen improvements with the new machines and now air injection units.

Thatch and thatch layers are also still a problem are best avoided with regular applications of sand. In 30 years of visiting golf courses for the Green Section the number one complaint Bob took from golfers was over watered fairways, usually from regulars who play first thing each day.

Bob thanked the attendees for the support and friendship for the past 30 years and said he was not going away. Best of luck to you Bob and thank you for all you have done over the years.



## Building for Future Success: A State of the UW Pathology Lab Report

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

My 'state of the lab report' from last year was titled 'A Most Critical Year', and 2019 was indeed a critical year and a highly successful year. From the personal (my wife and I welcomed our first child in August) to the professional (I was granted tenure at the university level, which still needs final approval at the state level), 2019 is a year I will long remember. It was a time of turnover in our lab, as we graduated M.S. student Emma Buczkowski and saw postdoctoral researcher Michael Millican move on to his next project and welcomed new M.S. student Brian Schaefer and postdoctoral researcher Ming-Yi Chou. College research labs are in some ways like college football teams, you don't know how you're going to replace a key player (oh my god Melvin Gordon is gone!!!) and then a new person comes in and does great work (oh this Jonathan Taylor guy isn't bad). We continued several research projects in 2019 and started up several new ones. Following is a brief update on the major ones, and more detailed reports on many of these projects can be found at the TDL Website (<https://tdl.wisc.edu/results/>).

### Iron sulfate impacts on dollar spot

This project is a collaboration between Wisconsin and Minnesota and is being funded by the Wisconsin GCSA, the Minnesota GCSA, and GCSAA. Last summer was the second year of the two-year project and we once again observed some interesting results. First and foremost, iron sulfate was much more effective when applied every 7 days rather than every 14 days no matter the rate or the volume of applied water (**Figure 1**). Second, combining iron sulfate with higher rates of urea really didn't

provide any added benefits compared to just the iron sulfate alone. Third, at least at the Madison site, applying iron sulfate in higher water volumes (1.5 gal per 1000 ft<sup>2</sup> compared to 0.5 or 1.0) was more effective against dollar spot. We didn't observe this in 2018 so we need to do a more complete analysis to see whether this was a truly significant impact. We will be analyzing the results and submitting this for publication this spring, and the full report will be published in a future issue of The Grass Roots. This project was led by Kurt Hockemeyer.

### Quantifying the dollar spot pathogen

To date most research on dollar spot has involved how many individual dollar spots are produced. This makes sense since from a practical standpoint as turf managers this is

what we care about. However this has left our knowledge of how the fungus actually works greatly lacking, and we received 3 years of funding from the United States Golf Association (USGA) to help address this. We are collaborating with researchers from Rutgers and Massachusetts to develop an assay that can quantify the fungus in the soil even before symptoms have developed. That assay was developed in 2018 and last year in 2019 we used the assay to learn more about the dollar spot pathogen and how it reacts to environmental conditions, resistant bentgrass cultivars, and fungicide applications (**Figure 2**). One thing we also learned was that the majority of the dollar spot fungus is found in the upper thatch layer...NOT in the leaves and NOT in the soil. This project is being led by M.S. student Brian Schaefer.



**Figure 1: A picture from 2019 at the OJ Noer. The plot on the right receives 6 oz of FeSO<sub>4</sub> every 7 days in 1.5 gal of water compared to the non-treated plot on the left.**



# WISCONSIN PATHOLOGY REPORT



**Figure 2: Kurt Hockemeyer and undergraduate student Connor Cruz are collecting samples for analysis to determine the amount of dollar spot fungus present over a small area.**

## Continued dollar spot model research

The Smith-Kerns Dollar Spot model was released in 2018 and has been adopted around the world to better time fungicide applications targeting dollar spot. However, there is still more that we can learn about using the model. In 2019 we implemented two new studies related to the model. The first was determining whether 'early season' dollar spot fungicide applications would decrease dollar spot inoculum and allow for a higher model threshold to be used the entire year. An early season application in 2019 didn't appear to impact the spray threshold, however disease pressure on the plots was very low and didn't really develop until August. This project was led by Kurt Hockemeyer and will be repeated in 2020.

The second study using the model looked at whether the model could be used to determine when pressure was extremely high and whether a tightening of fungicide intervals would be required. The late onset of dollar spot also made this trial difficult, but some preliminary data indicate that 40% may be a threshold to tighten up the reapplication interval. This project was led by Kurt Hockemeyer and will also be repeated in 2020.

## Precision dollar spot management

Our research has shown that implementing the Smith-Kerns Dollar Spot model at your golf course can save anywhere from 1 to 3 fungicide applications relative to a calendar-based program without sacrificing disease control. This is a significant savings, but it pales in comparison to the savings that could be achieved if you only spray the areas

of the golf course that actually require disease protection. We received a 2-year grant from the USGA to test the practicality of using small weather stations with the dollar spot model embedded inside them to pinpoint where on the golf course disease is most active. In 2019 we partnered with Josh Friell and Walker Olson to test these stations at the OJ Noer center and at University Ridge GC. Unfortunately the stations we tested didn't work as planned, but new stations will be ready to test in 2020. **(Figure 4)** This project was led by Kurt Hockemeyer and will be repeated in 2020.

## The turfgrass microbiome – impact on pesticide degradation

The microbiome is the entire community of various microbes that interact in a given environment. In soils it's known that microbes are the primary drivers of pesticide degradation. However, it's also known that the structure and function of soil microbes differ throughout the season in response to temperature, soil moisture, etc. In other words, a pesticide applied in April may interact with different microbes and break down in an entirely different way than one applied in July. This is the research project that Toxicology PhD student Lily Gonzalez-Vazquez is conducting, using the herbicide 2,4-D as her example pesticide. Lily has collected 2 years worth of soil and turf samples and is in the process of analyzing a vast trove of data. This project is funded through a UW-Madison Hatch Act grant and the SciMed Graduate Research Scholars Program.

## Spray Only Where You Should!

*Experiencing GPS Spray Control is Amazing!  
Our experience sets us apart from anyone else.*



**Proven technology that pays!**

**Frost Inc**

**Spray Technology Products**

800-621-7910  
info@frostserv.com  
www.frostserv.com



## Screening of fine fescue cultivars and detecting new root diseases

This large, federally funded project is a joint collaboration with a number of institutions including the University of Minnesota, Rutgers, Purdue, Oregon State, and others. The scope of the project is large but seeks to address the problems with more widespread implementations of fine fescue and address them through a series of agronomic, breeding, and economic/marketing factors. Our specific role in this project is to help screen for more disease resistant fine fescue cultivars, develop rapid assays for detection of various root-infecting pathogens on fine fescue, and install a fine fescue demo plot on the University of Wisconsin – Madison campus. To date we have installed the demo plot on the campus and are working on developing a rapid, field-based assay that the turfgrass breeders can use to differentiate between the summer patch fungus and a new, root-infecting pathogen that produces symptoms similar to summer patch on fine fescue. This project is being led by Ming-Yi Chou and will continue through 2020.

## The Common Ground Initiative

I haven't spoken much about The Common Ground Initiative since unveiling it to the industry in 2017. To briefly

recap, The Common Ground Initiative is designed to provide incentive for turfgrass managers to reduce the non-target impact of their pest management programs. I wrote about the initiative at length in the November/December 2016 issue of *The Grass Roots*. While many support the initiative and have offered positive feedback, it has been the most controversial thing I have undertaken since I've been at UW. We have made numerous updates to the initiative in response to thoughtful feedback from many of you, these include considering a name change (there will almost certainly be a name change before we launch), considering different models to measure pesticide impact, providing more flexible options to the turfgrass manager, and conducting field studies to ensure disease control can still be achieved with lower pesticide impacts. The field study from 2019 showed again that that no decrease in dollar spot control or turf quality was observed with environmental impact reduced by as much as 75% of the statewide average. This effort is currently being entirely funded by internal turf pathology program funds.

## The Turfgrass Diagnostic Lab

The TDL has continued to grow in importance and stature under the management of Kurt Hockemeyer. The TDL is the premier turfgrass diagnostic site in the Midwest and beyond. In 2019 the TDL broke the record for most samples received in a year, and while most samples come from within Wisconsin there is a significant portion of samples that come from surrounding states like Minnesota and Illinois and others from as far away as Oklahoma. TDL Contract Members make up the foundation of the lab, and both Kurt and myself are extremely appreciative of the support provided by the 2019 TDL Contract Members (<https://tdl.wisc.edu/tdl-contract-members/>). If you weren't a TDL Contract Member in 2019, please consider becoming one in 2020. More information on the benefits of TDL Contract Memberships can be found at the TDL Website (<https://tdl.wisc.edu/contract-membership/>).

## Thank you and looking ahead

Conducting this amount of research requires a lot of support, and I remain continually humbled by the support we receive from the Wisconsin turfgrass industry. This includes funding from the WGCSA, WTA, WSTMA, NGLGCSA, Turfgrass Diagnostic Lab contract memberships, hosting of research projects, or through simply providing us with feedback on things you like or areas we can address. Finally, none of this work would be possible without a dedicated staff, and I'm incredibly fortunate to have a fantastic team of staff, graduate students, and undergraduate students (**Figure 4**). Best wishes on the start of a new decade and I look forward to seeing you at meetings or out on the course to continue our work improving our state's great turf industry. 🌱



**Figure 3: These small weather sensors with the Smith-Kerns Dollar Spot Model embedded in them were tested at the OJ Noer and University Ridge in 2019. We had some technical difficulties but new ones will be ready in time for 2020.**



# WISCONSIN PATHOLOGY REPORT



Figure 4: A huge thanks to the 'hardest working turf research crew in America'. Here we are, in order of finish, at the end-of-the-season mini-golf grudge match. From left to right: Connor Cruz, Paul Koch, Kurt Hockemeyer, Brian Schaefer, Audrey Simard, Reid Melton, Nuha Dolby, Lily Gonzalez-Vazquez, Ming-Yi Chou, Qiwei Lei, and Anna Backenger-Pryce.

FROM SMITHCO AND TEEJET® TECHNOLOGIES

## STAR COMMAND 2.0 The Next Generation of Sprayers

### EXPERIENCE TOTAL CONTROL

- Control droplet size for greater efficacy independent of rate or speed.
- Spray from 2 to 10 mph. Up to twice as fast as other sprayers.
- Get the ongoing support of Smithco and TeeJet®.
- Plus the dependability of the only GPS sprayers tested over 4 years by superintendents.

Start with the 2 finest sprayers Smithco makes. The Spray Star 3180 and 2000. Both factory-fitted with a DynaJet® Nozzle Control System and Aeros Field Computer from TeeJet.



**Smithco.com**

**Burris**  
**EQUIPMENT**  
burrisequipment.com

#### WAUKEGAN

2216 N. Greenbay Rd.  
Waukegan, IL 60087  
847.336.120

#### LAKEMOOR

27919 Concrete Dr.  
Ingleside, IL 60041  
815.363.4100

#### JOLIET

2001 Cherry Hill Rd.  
Joliet, IL 60433  
815.464.6650



## TOURNAMENT TIME

### SentryWorld Hosts 71st US Junior Girls Championship

By David Brandenburg, Editor

SentryWorld is well known as Wisconsin's first destination golf course bringing tourists to Stevens Point back in the 1980's to play the Robert Trent Jones Jr. design.

In 2013 Jones returned to oversee a major renovation that was led by on-course architects Bruce Charlton and Jay Blasi to replace tees, increase yardage and provide for a great variety of shots especially around the greens with closely mown roll out areas.

The U.S. Junior Girls Championship list of past winners includes the great Hollis Stacy, Nancy Lopez, Mickey Wright and more recently Inbee Park, Lexi Thompson, Ariya Jutanugarn and Mingee Lee. The junior is open to female amateurs who have not turned 19 on the events last day and have a handicap index below 9.4.

18 year old Lei Ye, a freshman at Stanford University, won the 36 hole championship match with a 3 foot par putt on the final hole to win 1 up over Jillian Bourdage.

16 year old Jo Baranczyk, a junior at Bay Port High School, was the Badger States lone representative at the championship. As reigning Division 1 High School Champion, Baranczyk entered the event with high hopes, but unfortunately missed the cut after the first 36 holes.

Matt Smith is the golf course superintendent and he is assisted by Dustin Schneider. The course was in terrific condition for the tournament despite the course receiving a storm with high winds 2 days before the championship was to start. With trees down and sticks scattered in playing areas the entire staff worked together to clean everything up before the first tee time.

Congratulations to Matt and the entire team at SentryWorld for producing a great product for the best junior girls in the country 🌱



**Above: Fixing ball marks and blowing debris on the 11th hole.**



**Above: The 14th Hole at SentryWorld is well protected by bunkering.**



**Left: The SentryWorld / Girls Junior Championship Logo were well displayed throughout the amazing property.**



# TOURNAMENT TIME

The Par 3 16 hole is home to the legendary 'Flower Hole' and annually features up to 33,000 flowers surrounding the green.





# TOURNAMENT TIME



**Top:** The transition from fairway to green surround on hole 9 shows how fast and challenging the new roll outs around greens can be for golfers.

**Upper Mid:** The par 4 1st Hole.

**Lower Mid:** Hand watering the par 3 12th hole.

**Bottom:** The par 4 13th hole allows golfers to pick off as much water as they choose on the left side for a closer approach shot.



## RICH IN ORGANIC MATTER

Milorganite fertilizer helps to improve drainage in heavy soils and increases the water holding capacity in sandy soils.

ORGANIC NITROGEN

**Milorganite**

FERTILIZER

EST. 1946

**HORST**

DISTRIBUTING, INC.

1-800-279-2341

*Reinders*

1-800-785-3301

08-270 APR 11

[www.milorganite.com](http://www.milorganite.com) 1-800-287-9645



# TOURNAMENT TIME

## Brown Deer Hosts Symetra Tour PHC Classic

David Brandenburg, Editor



**B**rown Deer Park Golf Course is a regular host of a the PHC Classic Symetra Tour golf event. The Symetra is the developmental tour of the LPGA and used to be known as the Futures Tour. In the tour's 39 years over 600 players have developed to the LPGA and have had 428 LPGA victories.

Robynn Ree shot a final day 6 under 66 to finish at 17 under for the tournament. The 22 year old Ree from Redondo Beach, CA won by 3 over Vicky Hurst to take the \$18,750 first place prize.

The PHC had players from 29 countries and 6 from Wisconsin (Allyssa Ferrell from Edgerton, Jessie Gerry of Madison, Jenna Peters from Kohler, Casey Danielson of Osceola, Lisbeth Brooks from Waunakee and Gabby Curtis from Altoona).

Each season the top 10 players on the money list earn a spot on the LPGA Tour for the next year.

Brown Deer Park Golf Course was designed in 1929 by George Hanson and revised by Andy North and Roger Packard. Brown Deer is the former home of the Greater Milwaukee Open and it is the premier course of the Milwaukee County Park System. The course is well remembered for being the host of Tiger Woods first professional tournament in 1966.

Tim Wegner has served as the Golf Course Superintendent at Brown Deer since 2002 while Jon Canavan is the Golf and Turf Manager for Milwaukee County Parks working with all 15 golf courses in the county.

The course conditions and layout of the historic links were well received by the players. Congratulations to Tim and the entire staff at Brown Deer and Milwaukee County Parks for hosting another great golf event. 🌱



**Top: A golfer blasts out of the fairway bunker on the 16th hole.**

**Min Lee's caddy is sporting some pretty loud pants on the 15th Hole.**

**Bottom: Kyung Kim putts out on the 16th hole.**



# TOURNAMENT TIME



**Top: Fairway mowers performing a dry evening cut on the 1st hole.**

**Middle Left: The Brown Deer Park Golf Club from the front provides a scenic picture.**

**Middle Right: The perfect golf course weathervane sits on top of the clubhouse.**

**Bottom: The 9th green and clubhouse with over-looking patio in the background.**





# TOURNAMENT TIME



**Top Left:** The Par 5 18th hole plays 557 yards and determines and has determined the winner in many tournaments through the years.

**Top Right:** Mowing the first cut on the par 5 4th hole.

**Middle Right:** Rolling on the 5th green.

**Middle Left:** The putting green is a busy location during tournament week.

**Bottom Left:** Tee mowing on the 417 yard par 4 2nd hole.



*Extraordinary*  
is Your New Ordinary

For more information on the Bayer portfolio of products, contact your Area Sales Manager, Chad Hauth at [chad.hauth@bayer.com](mailto:chad.hauth@bayer.com) (630) 945-2123

 **Stressgard®**

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS  
Bayer Environmental Science, a Division of Bayer CropScience LP, 5000 ControGreen Way, Suite 400, Cary, NC 27513. For additional product information, call toll-free 1-800-331-2867, [environmentalscience.bayer.us](http://environmentalscience.bayer.us). Not all products are registered in all states. Bayer, the Bayer Cross and Stressgard are registered trademarks of Bayer. ©2019 Bayer CropScience ES-419-GLF-86-A-R2



## State of Wisconsin Golf

By Jake Schneider, Seasonal Worker, Trondheim Golfklubb, Norway

This shouldn't be breaking news, but the Ryder Cup is coming to Sheboygan, Wisconsin in late September. Although my relative youth doesn't offer great perspective on matters of history, I imagine that you may have been committed had you offered such a prediction to anyone in the industry 30 years ago.

Sure, we had the Greater Milwaukee Open for a little more than four decades, but at least in recent history, its slot before the British Open typically didn't bring out the big guns. Most notably, a golfer named Eldrick Woods debuted at Brown Deer Park in 1996 and has since gone on to achieve moderate success on tour.

Since the Kohler Company started blazing the trail with high-end public golf course development in the late 80s, little old Wisconsin has been on a steady upward trajectory in terms of national relevance and prestigious men's and women's golf events. Given my hometown's proximity to Kohler, I can vaguely remember when the Andersen Consulting World Golf Championships were held in the mid-90s, and by my count, we have seen two US Women's Opens, a US Senior Open, three PGA Championships, and a US Open since then; not a bad 25 year stretch.

In more recent years, both Erin Hills and the golf courses at Sand Valley have

continued to bring exposure to players from around the world to the wonderfully manicured and natural landscapes of The Badger State. So, from outside appearances, it may seem as if things have never been better in the state of Wisconsin golf. But, of course, overall industry health is measured by more than the number of majors held.

**Heck, it seems as if it's even getting harder to convince turfheads to take a day off for golf, education, and socializing with colleagues. Even though golf courses rarely fall to ruin and usually benefit from additional networking and new insights, getting folks to attend the monthly and annual offerings of both the WTA and WGCSA has been an uphill battle.**

Just this fall, the little nine-hole course where much of my mediocre golf game was shaped, Sherwood Forest Golf Club, went to Sheriff's Auction, and I would be shocked if it isn't redeveloped. Not too far away, Bridgewood Golf Course in Neenah closed its doors forever after the 2019 season. More recently, it was announced that The Bull at Pinehurst Farms—a Nicklaus Design—will be auctioned off this January. On an almost yearly basis, the fate of the city of Madison golf courses seems to be up for discussion, and recent news came out saying that they need 35-52 million dollars of investment to cover three decades of neglect and twenty years of future needs. Etc, etc.

At our land-grant university, the turf program has ebbed and flowed significantly in the 2000s. In its current state, there are half as many professors as there were when I graduated in 2005, and the undergraduate enrollment has seen a more precipitous drop. While I most certainly don't understand everything that goes into what determines the solvency of degree tracts at UW-Madison, I have a

hard time believing that it will be possible to obtain a turf degree at my alma mater ten years from now unless something drastically changes.

Heck, it seems as if it's even getting harder to convince turfheads to take a day off for golf, education, and socializing with colleagues. Even though golf courses rarely fall to ruin and usually benefit from additional networking and new insights, getting folks to attend the monthly and annual offerings of both the WTA and WGCSA has been an uphill battle. Part of me thinks that some of the problems of declining undergraduate enrollment could be solved by superintendents exposing young workers to some of the additional perks of the trade such as industry events.

Geez, what a downer, huh? Well, it's not all doom and gloom. From what I understand, many courses—private and public, alike—have started to find a level of stability as the Great Recession continues to fade in the rearview mirror. And, while it may not bring the revenues of the heydays, survival is sometimes good enough.

Thriving may not return for quite a while, but by taking a more active role now, turfies can have a hugely positive impact on the future. In this the last year for the decade, ask not what your profession can do for you—ask what you can do for your profession. Who knows what can happen to the greater Wisconsin turf industry if everyone bands together? Heck, most never could have imagined hosting the Ryder Cup in the land of cows and cheese, but here we are. 🌱



**HELP MOTHER NATURE WAKE YOUR GREENS**

Help your plants recover from cold, wet weather by optimizing their own natural health defenses with ENC® and Renova®.

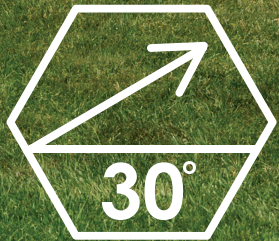
Contact your local Helena representative or visit [HelenaProfessional.com](http://HelenaProfessional.com) for more information.

**ENC** **Renova**

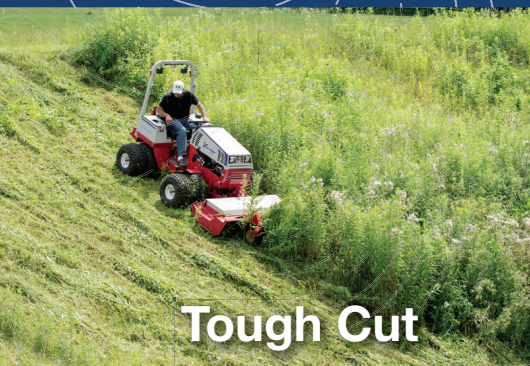
**Nutritional** **HELENA**

Always read and follow label directions. Helena, ENC, Ele-Max, Precision Nutrition and People... Products... Knowledge... are registered trademarks of Helena Holding Company. Renova is a registered trademark of Valagro SpA. © 2019 Helena Holding Company. HPG0319P





# VERSATILITY THAT WORKS



**Tough Cut**



**Contour Mower**



**Turbine Blower**



## HORST DISTRIBUTING, INC.

**Request more information or schedule a demo today!**

444 N. Madison St.  
Chilton, WI 53014  
(800) 279-2341

[www.horstdistributing.com](http://www.horstdistributing.com)

### SALES PRESIDENT

Grant Mortimer

[gmortimer@horstdistributing.com](mailto:gmortimer@horstdistributing.com)

### TERRITORY SALESMEN

Dennis Robinson

(920) 901-2124

Greg Kallenberg

(920) 858-9276



## Iron Sulfate For Dollar Spot Control

By Kurt Hockemeyer, Turfgrass Diagnostic Lab Manager, O.J. Noer Turfgrass Research and Education Facility

One of the more unique disease control studies we've done recently was looking at using iron sulfate to control dollar spot. Typically, iron sulfate has only been used as a fertilizer. More specifically for the rapid onset of dark green shortly after a foliar application of iron sulfate. Some research was done at Virginia Tech that showed that applications of iron sulfate could reduce dollar spot severity on creeping bentgrass. This was pretty groundbreaking stuff when it first occurred maybe 8 years or so ago. Then Or-

egon State started testing iron sulfate out for controlling Microdochium patch. They both were able to show that repeated applications of iron sulfate were able to reduce disease severity significantly. They theorized that the iron ions from the applications were acting as a fungistat, inhibiting the growth of fungi without actually killing the fungi. This is how most fungicides work anyways. So the word fungicide is a bit of misnomer. But that's a conversation for another day.

**Table 1. Mean number of dollar spots per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2019.**

Treatment	Rate	Application Interval	Application Code <sup>b</sup>	Dollar Spot Severity <sup>a</sup>		
				Jul 9	Aug 21	Sep 4
1 Non-treated control				13.5a	110.3a	316.0a
2 Urea	0.1 lb N/1000 ft <sup>2</sup>	7 day	CDEFGHIJKLMNOPQR	14.0a	47.0a	173.5b
3 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ	10.3ab	29.5ab	148.8b
4 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ	0.5b	0.0b	0.0d
Xzemplar	0.26 oz/1000ft <sup>2</sup>	28 day	CGKO			
5 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ	0.0b	0.8b	1.3d
Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	42 day	CIO			
6 Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	7 day	CDEFGHIJKLMNOPQR	0.8b	2.5b	9.8d
7 Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ	8.8ab	16.8ab	61.8c
8 Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ	1.0b	0.0b	0.0d
Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	28 day	CGKO			
9 Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ	1.5b	0.0b	0.0d
Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	42 day	CIO			
10 Urea	0.1 lb N/1000ft <sup>2</sup>	7 day	CDEFGHIJKLMNOPQR	0.0b	0.0b	14.3d
Iron Sulfate	6.0 oz/1000ft <sup>2</sup>		CDEFGHIJKLMNOPQR			
11 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ	0.8b	6.5b	80.0c
Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ			
12 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ	0.0b	0.0b	2.8d
Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ			
Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	28 day	CGKO	0.0b	0.0b	0.0d
13 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQ			
Iron Sulfate	6.0 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQ	0.0b	0.0b	0.0d
Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	42 day	CIO			
14 Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	28 day	CGKO	0.0b	0.8b	0.0d
15 Xzemplar	0.26 fl oz/1000ft <sup>2</sup>	42 day	CIO	3.5ab	16.8ab	4.5d
LSD P=0.05				10.52	17.38	39.86

<sup>a</sup>Dollar spot rated as number of dollar spot infection centers. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

<sup>b</sup>Application Code C=May 29, D=Jun 4, E=Jun 11, F=Jun 18, G=Jun 25, H=July 2, I=July 9, J=July 16, K=July 24, L=July 30, M=Aug 6, N=Aug 13, O=Aug 20, P=Aug 27, Q=Sep 3, R=Sep 10



# TURFGRASS DIAGNOSTIC LAB

**Table 1** shows the results of one of the iron sulfate studies conducted last summer at the OJ Noer. This study was meant to compare how iron sulfate, urea, and a standard fungicide all control dollar spot throughout the season, and also how those three elements interact with each other. Urea by itself did reduce dollar spot, but not anywhere near acceptable levels. Iron sulfate applied every 14 days performed slightly better, but still not tolerable. Iron sulfate applied every 7 days controlled dollar spot very well. Not surprisingly, all the treatments that contained Xzemplar, the standard fungicide, performed well. One of the more interesting tidbits from this study was that we could extend the application interval of Xzemplar out to 42 days, and by

adding iron sulfate, urea, or both, dollar spot was controlled to a very high degree.

**Table 2** shows the results of the second iron sulfate study conducted at the OJ Noer in 2019. This study intended to elucidate the interaction of iron sulfate rate, application interval, and water carrier volume. This study reinforced some of what we learned in the previous study. A 7-day interval performed much better than a 14-day interval. Increasing the rate of iron sulfate from 3 oz/M to 6 oz/M to 12 oz/M resulted in better control of dollar spot. Changing the spray volume had less of an effect, but the two higher spray volumes (1.5 gal H<sub>2</sub>O/M and 3.0 gal H<sub>2</sub>O/M) resulted in slightly less dollar spot.

**Table 2| Mean number of dollar spots per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2019.**


Treatment	Rate	Application Interval	Water Volume	Dollar Spot Severity <sup>a</sup>		
				Jul 9	Aug 21	Sep 4
1 Non-treated control				22.1a	142.9a	200.8a
2 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	4.4bcd	35.2b-f	47.8d-g
3 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	21.7a	31.3c-f	65.0cde
4 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	7.7a-d	26.0d-g	74.5bcd
5 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	4.9bcd	15.6e-h	31.5e-i
6 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	1.7d	10.2f-j	10.0f-i
7 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	2.5cd	6.4g-j	2.0i
8 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	0.6d	0.7ij	4.8hi
9 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	1.1d	0.0j	0.0i
10 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	2.7bcd	0.7ij	0.0i
11 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	14.4abc	71.7b	65.0cde
12 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	15.8ab	53.2bcd	53.8cde
13 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	6.0a-d	63.9bc	94.0bc
14 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	20.6a	29.3c-f	45.3d-h
15 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	13.9abc	14.0e-i	27.8e-i
16 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	13.8abc	24.2d-g	38.5d-i
17 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	8.1a-d	35.5b-e	51.3def
18 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	4.3bcd	2.5hij	8.3ghi
19 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	2.8bcd	0.5j	0.0i
LSD P=0.05				9.39	12.78	42.66

<sup>a</sup>Dollar spot rated as number of dollar spot infection centers. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).



## TURFGRASS DIAGNOSTIC LAB

So based on this year's results, last year's, and replicating these studies at the University of Minnesota and Virginia Tech, it appears that using iron sulfate to help control dollar spot is very promising. Many of the iron sulfate treatments looked very good for most of the growing season (**Figure 1**). Using lower rates of iron sulfate but going out every 7 days appears to be a better way to control dollar spot. Or using iron sulfate to supplement standard fungicides, allowing for lower rates or longer application intervals. These all appear to be viable options. But it is worth noting that late in the growing season (late August), it appeared that the repeated iron sulfate applications resulted in some phytotoxicity to creeping bentgrass (**Figure 2**).

To summarize, iron sulfate is fungistatic against the dollar spot pathogen. It shows promise in supplementing standard fungicide programs. Provides an increase in turf quality through a dark green color after application. Repeated applications may help control annual bluegrass, as it is more sensitive to iron phytotoxicity than creeping bentgrass. But there is still a lot we don't know about iron sulfate for disease control. High rates and/or repeated applications can be phytotoxic to desirable bentgrass fairways. And disease control intervals appear to be very short lived, as sometimes with even a 7-day interval we sometimes had breakthrough. 



**ABOVE: Figure 1. Iron sulfate treatment on the right with no dollar spot infections and a darker green color in July 2019.**



**BELOW: Figure 2. Iron sulfate phytotoxicity observed in late August.**

## IT'S ALL ABOUT PLAYABILITY...



Now's the time to be thinking about long lasting,  
**DEEP HYDRATION** with TV Base. It's the best value  
on the market!



**Dave Radaj (847) 366-5802**  
**Nick Baker (630) 621-5826**



# TURFGRASS DIAGNOSTIC LAB

## 2020 Event Schedule!

January 23 - (Thursday) Equipment Mangers - Erin Hills GC (AM) & Westmoor CC (PM)  
January 29 - (Wednesday) GIS WI Room - 6:30-9:30 Mago's, International Drive, Orlando, FL  
February 18 - (Tuesday) Assistants Seminar - Whispering Springs GC, Fond du Lac  
March 4 - (Wednesday) Northern Great Lakes GCSA Educational Conference - The Waters in Minocqua  
March 10 (Tuesday) WGCSA Spring Business and Education Meeting, South Hills G&CC, Fond du Lac  
April 29 - (Wednesday) WPGA/WGCSA Super Pro - Wild Rock GC, WI Dells  
May 4 - (Monday) National Golf Day GCSAA - Washington DC  
May TBD - (Monday) May Meeting (Looking for a host)  
June 9 - (Tuesday) WGCSA June Meeting - Lawsonia, The Links, Green Lake  
July TBD - WTA Summer Field Day - O.J. Noer Research Facility, Madison  
August 17 - (Monday) Joint NGLGCSA/WGCSA Member Guest - Waupaca CC, Waupaca  
September 14 - (Monday) Wee One Fundraiser - Pine Hills CC, Sheboygan  
September 25 - (Friday) Equipment Managers Meeting - Location TBD  
TBD - WTA Golf Classic - TBD  
TBD - Couples and Guest Evening - TBD  
November 30-31 - (Wed-Thur) 55th Golf Turf Symposium - American Club, Kohler

Visit our website at [www.WGCSA.com](http://www.WGCSA.com) for the most up to date calendar and registration forms.

## DON'T SPRAY BLIND!

Become a Turfgrass Diagnostic Lab member today and know what's affecting your turf...BEFORE you spray.



THE UNIVERSITY  
of  
**WISCONSIN**  
MADISON

[tdl.wisc.edu/contract-membership](http://tdl.wisc.edu/contract-membership)  
608-845-2535



## 2019 Fall Business Meeting

David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

President LePine called the meeting to a small but interested group of members. The meeting covered the usual reports and information. Some of the key points for members included:

- A reminder the Equipment Manager (EM) membership is only \$50 per year and the association will have two educational opportunities this year geared towards equipment managers. Thanks to Austin Wright for pushing for the classification and education.
- Chapter manager Brett Grams gave a financial report showing the association is finishing the year in good financial condition.
- Par4 Research Packets are out and we want to pass our success of last year with \$9,938 donated so we are asking all members to donate rounds when they can.
- The Board completed their Standard Operating Procedures (SOP's) to guide each board member in their responsibilities through the year.
- A new scholarship for a turf student attending any

school was created and will be available.

- A nearly full schedule of events was presented and can be found on page 39 of this issue. We are looking for a host for the May meeting if anyone has a desire to fill that spot.
- Feel free to reach out to any board member if you have a idea for a educational topic or speaker or if you want to help with a committee.

Past President Jon Canavan hosted the election for officers and directors and a unanimous ballot was cast as follows.

- President - (1 year) Josh Lepine, CGCS
- Vice President - (1 year) Jeff Barlow, CGCS
- Treasurer - (1 year) Scott Anthes
- Secretary - (1 year) Garrett Luck
- Director - (2 years) Brian Bonlender
- Director - (2 years) Tim Wegner
- Completing their terms for director for one more year are Tim Schmidt and Benjamin LaBarre.

# PENDELTON TURF SUPPLY

Ed Witkowski  
414-640-6447  
edward.witkowski@pendeltonturfsupply.com

805 Ela Avenue  
Waterford, WI 53185  
Phone: 262-534-3334  
Fax: 262-534-2990



Clark Rowles  
608-228-1782  
clark.rowles@pendeltonturfsupply.com

**FULL LINE OF TURF PRODUCTS**  
**CHEMICALS • TEE & GREEN SUPPLIES**  
**TIRES & TUBES • NEW PRODUCT INFORMATION**

**SATISFACTION  
GUARANTEED**





## SUPPORT OUR ADVERTISERS THEY SUPPORT US

### FULL PAGE ADVERTISERS

Clesen Pro Turf - Page 2  
DHD Turf & Tree Products - Page 7  
Horst Distributing - Page 25  
JW Turf - Page 5  
National Golf Graphics - Page 11  
Rain Bird - Page 21  
Reinders - Page 44 (Back)

### HALF PAGE ADVERTISERS

Advanced Turf - Page 31  
Burris - Page 23  
Lohmann Companies - Page 19  
Midwest Turf - Page 43  
Pendelton Turf Supply - Page 26  
Suez Advanced Solutions - Page 17  
Syngenta - Pages 13 & 27  
Waupaca Sand & Solutions - Page 35

### THIRD PAGE ADVERTISERS

Herfort and Norby - Page 34

### QUARTER PAGE ADVERTISERS

Frost - Page 40  
Milorganite - Page 38  
Pumpstation Professionals - Page 30

### EIGHTH PAGE ADVERTISERS

Bayer - Page 36  
Helena - Page 41

## Daconil Action™ Fungicide, A New Era in Turfgrass Management

The power of the active ingredient contained in Daconil® fungicide combined with a revolutionary Turf Protein Booster results in longer, more efficient, and broader spectrum turfgrass disease control.

- Boosts turfgrass natural defense proteins (PR proteins)
- Enhances overall plant health
- Increases tolerance to environmental stresses, like drought
- Suppresses activity of fungi, bacteria, viruses, and abiotic diseases

To learn more about Daconil Action, visit [DaconilAction.com](http://DaconilAction.com) or contact:

Phil Spitz  
Cell: 414-429-2015  
[phillip.spitz@syngenta.com](mailto:phillip.spitz@syngenta.com)



 **Daconil Action™**  
Fungicide

**syngenta.**



The most important part of the meeting is the presentation and approval of the scholarship and research funding for 2020.

• Scholarships funding amounts included:

- J.R. Love Scholarship \$1,500
- Legacy Scholarship \$2,000
- M.S. Miller Literary Scholarship \$1,000
- New Turf Scholarship \$1,500
- Great lakes Certificate Scholarships \$1,650

The research proposals that were presented and approved for funding of \$20,975 included:

- Compendium of Turfgrass Disease Update - Dr. Koch \$1,000
- Dollar Spot Control Using Urea and Iron Sulfate with work done at UW-Madison and Minnesota with work by Dr. Koch, Dr. Soldat, Dr. Horgan and Mr. Bauer will be funded for a second \$10,000. The EIFG is also supporting this research through the GCSAA.
- Growth Model to Optimize Nitrogen Applications on Greens with Dr. Soldat will be funded for the second of 3 \$9,975 payments.
- Microbial Communities Associated with Dollar Spot Suppressive Soils with Dr. Koch to be funded for \$10,000.

The meeting was adjourned until the Spring Meeting and we hope to see you then. 🌱



**Director Brian Bonlender presents the Golf and Arrangments Committie Report during the Fall Business Meeting held at the American Club before the fist day of the Golf Turf Symposium.**

## your water supply experts

### water well services

- well/pumps emergency maintenance services
- well rehabilitation & maintenance program
- pump sales & maintenance
- well drilling
- water system engineering/construction
- hydrogeological services



**Contact Us:**

888.769.9009

Oconomowoc, WI • Elburn, IL

[www.waterwellsolutions.com](http://www.waterwellsolutions.com)



Water Well Solutions is now  
**SUEZ Advanced Solutions**



**PRECISION**  
LABORATORIES

Results. Expect it!

Liquid and Granular Soil Surfactants,  
and Maintenance Chemistries

**Quest**  
Products Corp.

Finding new ways to improve  
the treatment of trees and plants.

**SAND  
TRAPPER**

The Logical Choice for  
Bunker Maintenance

**agrichem**

0-0-30 Turf Summer  
Stress Phiter

**KOCHEK**

Water Movement  
Solutions

**Ocean Organics**

Specialty Fertilizer Manufacturers  
3-0-1 Early Bird Organic

**Nature  
Safe**

Natural and Organic  
Fertilizers

**LebanonTurf**

More Brands.  
Better Performance.

Best of All Worlds™

Offering a Full Line of the Finest Fertilizers  
and Grass Seeds to Fit Any Budget

**QUALI-PRO**

Quality Turf and  
Ornamental Products

**Solu-Cal**

Calcium,  
The Forgotten Nutrient

**Emerald  
Isle, Ltd.**

Tru Foliar Nutrient and Iron Products  
Fortified with North Atlantic Sea Kelp

**BARENBRUG**  
Great in Grass®

The Industry Standard in  
Coated Grass Seed Technology

**DHD**  
TURF & TREE PRODUCTS

866.343.8733

“Committed to Your Success”

Danny H. Quast

danny@dhdproducts.com

920.210.8616

Joe Jehnsen, CGCS

jmehnsen@dhdproducts.com

920.344.4938

Mike Upthegrove

mupthegrove@dhdproducts.com

920.210.9059

Turf and Tree Supplies ♦ Fertilizers ♦ Plant Protectants ♦ Equipment





# JW TURF REWARDS

ENROLL IN J.W. TURF REWARDS TO

**Earn 5% credit on all  
parts and service work.**

## Visit [jwturfrewards.com](http://jwturfrewards.com).



Enroll once and you're in the program.  
It's simple and quick.

For every parts or service order you  
make with J.W. Turf in 2019, you earn  
a 5% credit towards future equipment  
purchases.



You also receive access to other  
exclusive members-only benefits,  
such as discounts and early access to  
special promotions.

*Program details available at [jwturfrewards.com](http://jwturfrewards.com).*

## **We also offer a new, easy online service tool.**

MyDealer allows you to schedule  
service appointments, order parts,  
and view invoices. It's compatible with  
your desktop, tablet or mobile device.

If you haven't yet signed up for a  
MyDealer account, call 847-683-4653  
and we will create your profile.