

# The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

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## ABOUT THE COVER

Par 3 third hole named Sleepy Hollow at Westmoor Country Club, recent host of the Wisconsin Turfgrass Association Golf Outing Fundraiser.

*"The greatest weapon against stress is our ability to choose one thought over another."*

**By American Philosopher, William James, 1842-1910**

This quote by James can remind us to not only reduce negative thoughts while promoting positive thoughts but to concentrate on what we can control, over what we cannot.

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## THE GRASS ROOTS

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## PRESIDENT'S MESSAGE

### Golf Is Open For Business!

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

With everything going on in the country and world for that matter, global pandemic, civil unrest, I'd be negligent not to mention it. My message is simple: I hope you all are happy, safe, and healthy. These are troubling times for everyone and I believe we will all be glad to put 2020 in our rearview mirror. I can only hope we can come out better on the other side.

I want to thank the entire golf industry for the collaborative effort to get golf open this spring. Our association partnered with the Wisconsin PGA, State Golf Association and Golf Course Owners to fund a lobbying effort to open golf. Joe Stadler and Rob Jansen spearheaded the operation and we were honored to partner with them.

I also want to thank Brett Grams for organizing our communication plan during the safer at home order and subsequent changes that impacted our industry. We attempted to get the word out to our members as quickly as possible as new information became available. It was a challenging spring as many of us had to layoff employees while doing our best to define and perform "essential maintenance only" on the golf course. 'Working from home' isn't in a Golf Course Superintendent's vocabulary. For most of us, the golf course is a second home, or at least it feels that way.

I can only assume that you all have had some budget implications related to COVID-19. Staff and expense cuts on top of an overwhelming pent up demand for golf is a real challenge. We are setting records on golf rounds to date. To our golfing cus-

tomers, the golf course is also a home away from home. Being busy is good issue to have, although getting maintenance done when the tee sheet is booked solid from 7:00am until 6:00 pm has it's challenges. I'm thinking about all you guys and gals as you balance golfer experience and financial prudence for your operation.

I'm also sympathetic to our industry partners who, for the most part, until recently, haven't been able to get out and make visits to facilities. We miss you and are happy to talk shop, albeit while practicing social distancing. Thank you to our vendors for continued support.

Due to COVID-19 we delayed the Par 4 Research auction and our scholarship application deadlines. I don't know how Brett did it but he managed to have the auction start at the same time as golf reopened in Wisconsin. It was a successful auction and we appreciate all that donated. UW Turfgrass research support is one of our most important missions and the Par 4 Research program is our main fundraising effort.

Our Symposium Committee is meeting monthly to discuss the annual Golf Turf Symposium. WGCSA member safety, speaker travel, member participation, potential COVID re-infection spikes this fall, and regulatory restrictions on gatherings are all topics of discussion and I wish I had more answers.

Please be on the lookout for email and website updates as our event calendar progresses. God bless you all, keep your chin high and families safe. ✓



#### WGCSA MISSION STATEMENT

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

#### WGCSA VISION STATEMENT

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

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



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## Communication During Challenging Times

By Shane Conroy, Great Lakes Regional Representative, GCSAA

What a few months it has been. During this time communication has been difficult, however that does not mean it is any less important. Whether in a professional setting, with your significant other or with friends, an open line of communication usually leads to increased success. Technology has afforded us new avenues to communicate 'face-to-face' and across multiple platforms. Communicating with the proper individuals and entities both on and off the golf course is essential. As golf courses across Wisconsin have had to adjust practices, it is critical that those who are involved with your facility are all working and communicating together.

### Management/Legal Teams

Due to the current situation, in person meetings have been challenging. How are you communicating and ensuring everyone is well versed on your agronomic practices and the practices of the facility? What are the expectations of you and the golf course from the owners, GM or boards as you adjust practices or work with limited staff? Connect with your management

teams to ensure all are on the same page and there are no question marks on your role and expectations during this uncertain time. Communicating with superiors is essential to ensure a successful season.

### State and Local Authorities

In many parts of the country, enforcement of the executive orders has been at the local level. It's paramount the appropriate authorities know about your operations as you remain open for play. As executive orders begin to ease restrictions, please be sure to connect with local authorities to know their interpretation of the orders and to educate them on your practices.

### Wisconsin GCSA

I can't stress this enough, if you have questions or concerns, please touch base with WGCSA leaders. Whether it is Brett Grams, President Josh Lepine, CGCS or a board member, these individuals are on the front lines and will have the most up-to-date information from across the state. Chapter leaders are a great resource and I commend each of them as this has been a particularly demanding time, especially

for executive directors and presidents.

### University of Wisconsin/Vendors

University of Wisconsin professors have been an excellent resource and have done a great job connecting with superintendents throughout the state. Additionally, vendors have been in touch with superintendents and continue to offer resources for superintendents and their staff. Be sure to utilize their resources as they are made available for you.

### Staff

Ensure staff are familiar in their roles and responsibilities. This includes staff who are currently working at the golf course, those who may have been furloughed or laid off, as well as the seasonal staff who may have not yet started. I've heard great stories from superintendents who are using this time to develop deeper bonds and relationships with staff members who are still working. There are also countless instances of superintendents cooking out for crews (with proper social distancing requirements of course), ordering takeout, or providing crews with food from the clubhouse. We know this is a stressful time for you as try to maintain the golf course with limited resources, just as it is for the crew members who are trying to do the same. Superintendents are not only prioritizing their staff's physical health, but also focusing on their mental health and helping their staff where they can.

### Golfers

Golfers also must play their role while at the golf course. It is important golfers are well-versed on the proper social distancing requirements at your facility and know how to proceed as they arrive on property, during their round and once their round is completed.

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Be sure to work with clubhouse and proshop staff as you collaborate on golfing procedures and golfers are well-informed.

## Media

I know not everyone has had media requests during this time, however, as state executive orders have been announced, we have seen increased local media coverage on certain aspects of our game. If you do receive a media request, please feel free to reach out to your local chapter and GCSAA. Resources are available to help you navigate and prepare for these requests should you receive one.

## Develop a Plan

Ultimately, this is what it is all about. Once you have communicated with the appropriate parties and determined which course of action you and your team are going to take, it is important to develop the appropriate plan. Once your plan is developed, it's important to communicate it with all involved. As executive orders ease restrictions on golf, ensure everyone is aware of your specific facility processes and know their roles moving forward. GCSAA has created a BACK2GOLF toolkit to help you prepare your course, facility, and crew during this time.

## Get Involved

Local affiliated GCSAA chapters and

chapter leaders have been at the forefront of how COVID-19 has affected the golf industry. If you would like to be part of your local chapter, please reach out to your chapter executive director or board. GCSAA grassroots ambassadors have also been instrumental in communicating the value of golf to state and federal lawmakers.

I commend each superintendent as you have continued to represent the industry at the highest professional level and ensured your staff members remain safe in these challenging times.

Shane Conroy can be reached by email at [sconroy@gcsaa.org](mailto:sconroy@gcsaa.org) or by calling 800-472-7878 ext 3635. ✓



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# WISCONSIN PATHOLOGY REPORT

## Dollar Spot Control Using Urea and Iron Sulfate

By Kurt Hockemeyer, Paul Koch, Department of Plant Pathology, University of Wisconsin – Madison

Doug Soldat, Department of Soils, University of Wisconsin -Madison

Eric Watkins, Department of Horticultural Science, University of Minnesota

Sam Bauer, Executive Director, North Central Turfgrass Association (Previously University of Minnesota)

Chase Straw, Department of Soil and Crop Sciences, Texas A&M University (Previously University of Minnesota)

Dollar spot, caused by the fungus *Sclerotinia homoeocarpa*, is the most economically important disease of golf course turfgrass (Smiley et al. 2005). Cultural control measures for dollar spot have historically been inadequate and have resulted in heavy reliance on fungicides to maintain acceptable disease suppression. In some cases, upwards of ten or more fungicide applications targeting dollar spot are required for complete disease control, costing the facility tens of thousands of dollars annually. Additional concerns over fungicide resistance, increasing government regulation, and societal pressures surrounding non-target pesticide impacts make future reliance on chemical control uncertain (Latin 2011). These concerns highlight the need for additional dollar spot control options that are effective, easy to implement, and cost effective for the superintendent.

Iron sulfate ( $\text{FeSO}_4$ ) has been used for decades in the turfgrass industry for its ability to improve turfgrass color and to suppress annual bluegrass populations (Reams

2013). Recent research out of Oregon State showed that  $\text{FeSO}_4$  can provide excellent control of pink snow mold when applied at regular two-week intervals (Mattox et al. 2017). In addition, researchers at Virginia Tech demonstrated that  $\text{FeSO}_4$  can also provide significant reductions in dollar spot on a creeping bentgrass putting green when applied at high rates (1 lb/1000 sq. ft.) every two weeks (McCall et al 2017). However, in both cases the  $\text{FeSO}_4$  injured the putting surfaces to an unacceptable level after repeated applications.

Dollar spot has long been known as a 'low nitrogen' disease, but simply increasing nitrogen doesn't necessarily lead to effective control unless the amount added is dramatic. Recent research from Wisconsin demonstrated no decrease in dollar spot relative to a non-treated control on creeping bentgrass with biweekly urea applications of 0.1, 0.2, and 0.4 lbs per 1000 sq. ft. It wasn't until 0.6 lbs of urea were applied per 1000 sq. ft. every 2 weeks that a reduction in dollar spot was observed, and the reduction was dramatic and comparable to a fungicide program (Townsend et al. 2016). However, few superintendents would be willing to apply this amount of nitrogen due to nearly unmanageable clipping and thatch production.

A pilot study conducted by authors Koch and Soldat at Wisconsin in the summer of 2017 also looked at the impact of urea (0.6 lbs/1000 sq. ft.) and a low rate of  $\text{FeSO}_4$  (3 oz/1000 sq ft) applied separately to target dollar spot (data unpublished). Reductions in dollar spot were observed with both treatments, however once disease pressure increased during mid-summer both treatments were unable to provide acceptable dollar spot control. Though each treatment individually was unable to provide acceptable dollar spot control, it was thought that combining regular applications of urea with  $\text{FeSO}_4$  could provide a far greater reduction in disease and the possibility for significant reductions in fungicide usage. Indeed, multiple superintendents experimenting with this approach have reported notable reductions in dollar spot and significant extensions of fungicide reapplication intervals. The objectives of this research were to (1) determine the impact of  $\text{FeSO}_4$  and urea, both alone and applied as a tank mixture, on the development of dollar spot and (2) identify the appropriate reapplication interval and water volume that provides effective dollar spot control and optimal turf quality.

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# WISCONSIN PATHOLOGY REPORT

This research was funded through the GCSAA's research grant program; however, the WGCSA and the MGCSA chapters contributed 2/3rds of the entire budget for this project. We sincerely thank both associations for their financial and moral support of this work and hope the insight gained from this study will immediately benefit superintendents interested in identifying new methods to control dollar spot. New management techniques often come with a high cost that only higher budget clubs can afford, but the low cost of urea and iron sulfate ensures that any interested club can explore these techniques.

## MATERIALS AND METHODS

The study was conducted at sites in Wisconsin and Minnesota. In Wisconsin the study was conducted at the O. J. Noer Turfgrass Research and Education Facility on a stand of creeping bentgrass (*Agrostis stolonifera*) maintained at 0.5 inches. In Minnesota the study was conducted on the 18th fairway at Minnesota Valley CC in Bloomington, MN on a mixed stand of creeping bentgrass and annual bluegrass (*Poa annua*) maintained at 0.5 inches. Individual plots measured 3 feet by 10 feet and were arranged in a randomized complete block design with four replications. Treatments were applied at a nozzle pressure of 40 psi using a CO<sub>2</sub>-pressurized boom sprayer equipped with two XR Teejet AI 8004 VS nozzles. All treatments were agitated by hand and applied in the equivalent of 1.5 gallons of water per 1000 ft<sup>2</sup>. In 2018, all WI treatments were initiated on May 17th and all MN treatments were initiated on May 23rd. In 2019 all WI and MN treatments were initiated on May 29th. In both years and at both sites subsequent applications were made at 7, 14, 28, or 42-day intervals. Number of dollar spot foci per plot and turfgrass quality (1-9, 9 being excellent, 6 minimally acceptable, and 1 bare soil) were

visually assessed every 2 weeks. Turf quality and disease severity were subjected to an analysis of variance and means separated using Fisher's LSD ( $P = 0.05$ ).

## WHAT COMBINATION OF IRON SULFATE AND UREA IS BEST FOR CONTROLLING DOLLAR SPOT?

While the full report (with all 16 data tables) can be downloaded and viewed on the UW-Madison Turfgrass Website ([turf.wisc.edu](http://turf.wisc.edu)), we will provide an overview of the most important findings here. We had more intense dollar spot pressure in 2018 than in 2019 at both sites. **Table 1** shows the dollar spot data from Minnesota in 2018 which was our strongest outbreak of dollar spot. Ten of the 14 treatments reduced dollar spot relative to the non-treated control. No reductions in dollar spot were observed with urea applied alone at either interval or with iron sulfate applied on a 14-day interval. Mixtures with Emerald fungicide provided the most effective control, even with a 42-day reapplication interval, though the addition of iron sulfate and/or urea did not improve upon Emerald applied as a stand-alone product. For treatments without a fungicide, applying iron sulfate at 6 oz/1000 ft<sup>2</sup> every 7 days was the most effective way to reduce dollar spot, and was statistically similar to Emerald on two of the three rating dates in both 2018 and 2019. Urea, applied at 0.2 lbs N/1000 ft<sup>2</sup> either alone or with iron sulfate did not have an effect on dollar spot severity. This was not unexpected and confirms that the dollar spot reduction is associated with the iron, not the nitrogen at the rates used in this study. Anecdotal evidence suggested localized dry spot, when observed, was more severe on iron sulfate-treated plots, but no statistical analysis was done to test this. **Figure 1** shows untreated control plots next to an iron sulfate plot treated every 7 days from the study site in Wisconsin.

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# WISCONSIN PATHOLOGY REPORT

Treatment	Rate	Application Interval	Application Code <sup>b</sup>	Dollar Spot Severity <sup>a</sup>		
				Jun 20	Jul 18	Aug 29
1 Non-treated control				87.3a	146.0a	130.8a
2 Urea	0.1 lb N/1000ft <sup>2</sup>	7 day	CDEFGHIJKLM-NOPQRTU	67.8ab	119.0ab	97.3ab
3 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	61.8ab	119.8ab	108.3a
4 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	19.8cd	24.0d	31.5de
Emerald	0.18 oz/1000ft <sup>2</sup>	28 day	CGKOS			
5 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	12.5cd	0.3d	2.8e
Emerald	0.18 oz/1000ft <sup>2</sup>	42 day	CIOU			
6 Iron Sulfate	6 oz/1000ft <sup>2</sup>	7 day	CDEFGHIJKLM-NOPQRTU	17.8cd	76.0c	39.8cd
7 Iron Sulfate	6 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	41.3bc	119.3ab	99.0ab
8 Iron Sulfate	6 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	3.5d	9.0d	8.0de
Emerald	0.18 oz/1000ft <sup>2</sup>	28 day	CGKOS			
9 Iron Sulfate	6 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	4.5d	2.5d	1.3e
Emerald	0.18 oz/1000ft <sup>2</sup>	42 day	CIOU			
10 Urea	0.1 lb N/1000ft <sup>2</sup>	7 day	CDEFGHIJKLM-NOPQRTU	18.5cd	99.0bc	33.3de
Iron Sulfate	6 oz/1000ft <sup>2</sup>					
11 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	27.0cd	152.0a	69.8bc
12 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	6.8d	7.8d	14.5de
Iron Sulfate	6 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQSU			
Emerald	0.18 oz/1000ft <sup>2</sup>	28 day	CGKOS	4.8d	3.0d	1.8e
13 Urea	0.2 lb N/1000ft <sup>2</sup>	14 day	CEGIKMOQSU			
Iron Sulfate	6 oz/1000ft <sup>2</sup>	14 day	CEGIKMOQSU	17.3cd	7.0d	28.3de
Emerald	0.18 oz/1000ft <sup>2</sup>	42 day	CIOU			
14 Emerald	0.18 oz/1000ft <sup>2</sup>	28 day	CGKOS	9.8cd	2.3d	2.3e
15 Emerald	0.18 oz/1000ft <sup>2</sup>	42 day	CIOU	9.8cd	2.3d	2.3e
LSD P=0.05				31.99	42.42	35.02

<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 23, D=May 30, E=June 6, F=June 14, G=June 20, H=June 27, I=July 3, J=July 11, K=July 18, L=July 25, M=Aug 1, N=Aug 8, O=Aug 15, P=Aug 21, Q=Aug 29, R=Sep 5, S=Sep 12, T=Sep 19, U=Sep 26

**Table 1. Mean number of dollar spots per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2018.**

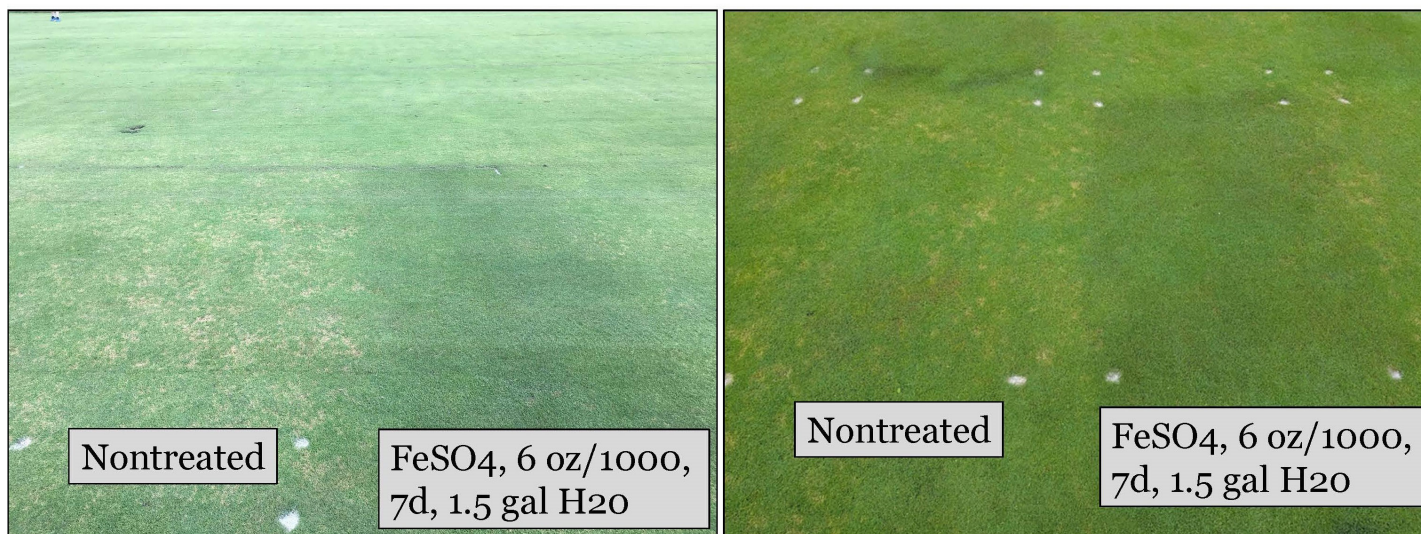


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# WISCONSIN PATHOLOGY REPORT



Wisconsin, Bentgrass Fairway 2018

Wisconsin, Bentgrass Fairway 2019

Figure 1. Images of dollar spot control on fairways in 2018 and 2019 associated with applying iron sulfate at 6 oz/1000 ft<sup>2</sup> every seven days in 1.5 gallons of water per 1000 ft<sup>2</sup>.

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# WISCONSIN PATHOLOGY REPORT

## HOW DOES SPRAY VOLUME AND IRON SULFATE RATE AFFECT THE APPROPRIATE RE-APPLICATION INTERVAL?

After learning that iron sulfate at 6 oz/1000 ft applied every 7 days is a good fungicide alternative for dollar spot control, we wondered if we could adjust iron sulfate application rates and spray volumes to try to get 14 day control. In short, the answer is no.

Overall, the most effective dollar spot suppression was observed with the 12 oz iron sulfate rates applied on a 7-day interval. Significant suppression was also observed

(as before) with the 6 oz iron sulfate rates on a 7-day interval. Water volume did not appear to impact dollar spot suppression no matter the reapplication interval or iron sulfate rate.

No iron sulfate treatment provided effective dollar spot suppression at the 14-day interval. While the 12 oz iron sulfate rate was the most effective, it caused significant darkening of the turf for several days after the application, which affected turfgrass quality and may be undesirable depending on the superintendent. Data from the Wisconsin fairway in 2018 are shown in **Table 2**.

Treatment	Rate	Application Interval	Water Volume	Dollar Spot Severity <sup>a</sup>		
				Jul 12	Aug 8	Sept 7
1 Non-treated control				20.5a	25.5ab	1.8a
2 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	1.8a	16.0a-d	1.0a
3 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	0.3a	10.8c-g	0.0a
4 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	0.8a	12.0c-g	0.0a
5 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	1.8a	4.5d-g	0.0a
6 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	0.0a	4.0d-g	0.0a
7 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	1.8a	8.5c-g	0.0a
8 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	0.75 gal/1000 ft <sup>2</sup>	6.5a	1.8fg	0.0a
9 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	1.5 gal/1000 ft <sup>2</sup>	0.5a	2.0efg	0.0a
10 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	7 day	3.0 gal/ 1000 ft <sup>2</sup>	1.3a	0.8g	0.0a
11 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	2.8a	18.5abc	0.0a
12 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	1.0a	26.0a	0.0a
13 Iron Sulfate	3 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	0.0a	14.5a-e	0.0a
14 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	2.0a	11.5c-g	0.0a
15 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	1.5a	13.8a-f	0.5a
16 Iron Sulfate	6 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	0.8a	8.8c-g	0.0a
17 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	0.75 gal/1000 ft <sup>2</sup>	3.5a	13.3b-g	0.0a
18 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	1.5 gal/1000 ft <sup>2</sup>	2.0a	6.0c-g	0.0a
19 Iron Sulfate	12 oz/1000 ft <sup>2</sup>	14 day	3.0 gal/ 1000 ft <sup>2</sup>	3.5a	5.5d-g	0.0a
LSD P=0.05				12.23	12.55	1.33

<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).

**Table 2. Mean number of dollar spots per treatment at fairway height at the OJ Noer Turfgrass Research Facility in Madison, WI during 2018.**



# WISCONSIN PATHOLOGY REPORT

## CONCLUSIONS AND FUTURE STUDY

This study clearly indicated that iron sulfate provides significant, and many cases commercially acceptable, control of dollar spot across two sites in the Upper Midwest over two years. Iron sulfate significantly reduced dollar spot relative to non-treated areas under severe dollar spot conditions, but failed to provide acceptable control and our data was inconclusive on the ability of iron sulfate to lengthen the control period when mixed with a fungicide. Additional important findings from this study include: 1) regular applications of urea fertilizer failed to suppress dollar spot, either alone or in concert with iron sulfate, 2) 7-day reapplications of iron sulfate were far more effective at suppressing dollar spot relative to 14-day intervals, and 3) no consistent effect of water volume on dollar spot suppression was observed. We are excited to continue working with iron sulfate for dollar spot control and studies in 2020 are focused on timing iron sulfate more appropriately with actively growing dollar spot to improve dollar spot suppression while simultaneously reducing the total number of iron sulfate applications needed for acceptable control. We hope this will allow you to benefit from the excellent and cost-effective control of dollar spot with iron sulfate, while reducing your fairway sprayer mileage.

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## The Value Of A Tree Survey

By Robert Vavrek, Green Section Agronomist, Great Lakes Region, United States Golf Association

*Editors Note: Robert Vavrek retired after 30 years with the USGA Green Section in 2019.*

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**High-quality trees are an asset to a golf course, but trees in advanced stages of decline can be a liability. A comprehensive tree survey can help separate the prime wood from the firewood.**

Sage advice from Green Section agronomists is to avoid planting additional trees on a course until the trees already on the property are properly maintained. However, it is impossible to determine a suitable budget for annual tree care when the facility has no clue regarding the number of trees, species of trees, or the health of the trees scattered throughout the course. A professional tree survey provides the solid foundation needed to develop a sound tree management program.

The most valuable tree surveys are far more than a simple list of what kind and how many trees are growing on a course. A useful tree survey would be a document that includes:

- A map of the facility and the GPS location of each tree.
- Identification by species and permanent tags placed on trees that are cross referenced to location.
- A maintenance schedule for general tree care and detailed recommendations for trees with special needs.
- Classifying trees according to factors such as life expectancy, health, safety concerns, value, and special maintenance requirements. An example of a 9-point classification (1-5 scale) system for tree surveys developed by horticultural consultant Kris Bachtell can be found in the appendix.
- A list of tree species recommended for use on golf courses, taking into consideration factors such as the soil type, drainage, plant hardiness zones, maintenance requirements, and the mature height of the trees.

### EMERGING PEST PROBLEMS

Information regarding how many trees of a particular species exist on a particular golf facility is especially valuable when a new insect pest or disease is discovered. For example, a course with 50 ash trees can probably address the eventual decline of the trees caused by emerald ash borer using the equipment and labor of the maintenance staff.



**Golf facility leadership tends to shift obvious tree care issues to the back burner, even if neglected maintenance adversely affects the appearance of the course.**



**Most courses have key specimen trees that are a considerable asset to the property. A comprehensive tree survey can help identify key trees and provide maintenance schedules that prevent premature decline.**

## USGA GREEN SECTION



Far too many golf courses have overplanted the property with only a few, inexpensive, rapidly growing species of trees in the hope of quickly transforming a cornfield into a forest. The folly of this practice becomes apparent when a new pest, such as the emerald ash borer, becomes established in a site that was overpopulated with susceptible trees.

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## USGA GREEN SECTION

In contrast, a course with 500 ash trees will need to significantly increase the tree care budget to hire an arborist or tree care service to address the loss of so many trees within a short period of time.

### DIVERSITY

Unfortunately, many old, classic courses were overplanted with marginal-quality, rapidly growing trees as a knee-jerk reaction to the loss of American elms to Dutch elm disease. The abundance of shallow-rooted, weak-wooded silver maples found on most Midwestern courses that have been in play longer than 30 to 40 years confirms this mistake. Similarly, new courses built during the golf boom of the 1990s were often overplanted with inexpensive, poor-quality trees in an ill-advised attempt to rapidly transform a farm field into a forest.

A tree survey can document the imbalance of tree species on a golf course and provide a clear road map to achieve a more diverse population of trees. Diversity is the insurance that protects the course from the next emerald ash borer or Dutch elm disease disaster.

### PROTECTING YOUR ASSETS

No doubt, some species of trees have a longer life expectancy and age more gracefully than others. However, the decision makers at most golf facilities tend to be in a state of denial when it comes to removing old, decaying trees that are long past their prime and more so when trees affect the playability of a hole. Nonetheless, trees that frequently come into play are those most likely to endanger golfers or employees when they reach advanced stages of decline.

Felling large, hazardous trees is expensive. The necessary information needed to prioritize tree removal can be found in a tree survey. Don't overlook the added value of using an objective survey to support controversial tree management decisions. Every tree that even remotely comes into play is likely some golfer's favorite tree, and the survey can help take the emotion out of the decision-making process.

### SHIFTING PRIORITIES

Plenty of marginal-quality trees have been planted on golf courses as memorials that often achieve an iconic status to the point where the perceived value of the tree far exceeds the real value of the adjacent playing surfaces. As a result, turf on greens and tees suffers needlessly.

A comprehensive tree survey will identify many important specimens that might benefit from removing adjacent trees, crown thinning, lightning protection, cabling/bracing, and other restorative procedures. Wouldn't a far better legacy be achieved by donating the resources to maintain a key tree that has already become well established on the course? Why not adopt a tree instead of planting a tree? Should an adopted tree need to be removed, the resources, as well as the memorial plaque, can be shifted to the next important tree that needs a helping hand. Few memorial trees ever live long enough to achieve star status, so why not achieve instant gratification?

As mentioned above, take care of the trees you have and only then add trees to the course as needed. Use the survey to choose trees appropriate to a site. Avoid the shotgun method of planting a dozen trees in an area, hoping two or three will survive. This mentality tends to produce dense thickets of overcrowded, misshapen trees on golf courses that adversely affect the health of the turf and the flow of traffic.

### WHAT IT IS AND WHAT IT ISN'T

You wouldn't let a dentist perform your open heart surgery, though he may be a skilled medical professional. Likewise, don't expect a tree survey to take the place of an architectural master plan for improvements to a golf course. The survey's reasons for removing a tree will likely have little to do with how the course is intended to be played.

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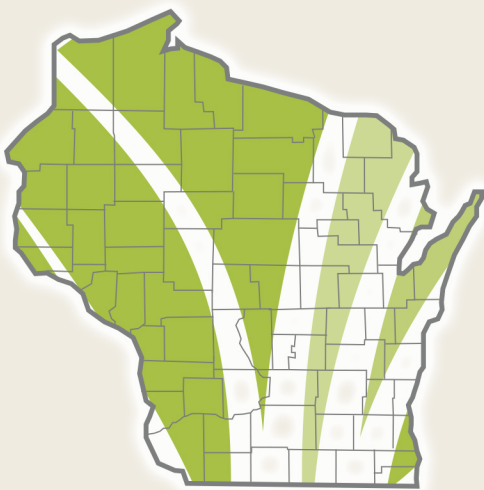
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## USGA GREEN SECTION

Use an experienced golf course architect to determine where to add and remove trees with respect to course strategy, and use the survey recommendations to determine the appropriate species for the site.

### WHERE TO LOOK

Contact local universities, especially those with highly regarded forestry departments, for professionals capable of producing a tree survey for your course. The staff at a local arboretum or the more experienced staff at large tree-care companies are also excellent sources of expertise for a survey.

Many courses have found the value far exceeds the modest cost of a comprehensive tree survey and that this document provides sound advice and direction for many years.

### APPENDIX — CONDITION CLASS

This provides vital information about tree size, health, and expected longevity.

**CLASS 1.0:** Recently planted tree; not established yet, expected to live a long time.

**CLASS 1.5:** Recently planted tree; not established yet but has a severe limiting factor such that treatment(s) may be necessary to prevent premature death.

**CLASS 2.0:** Established tree; not mature yet and expected to live a long time.

**CLASS 2.5:** Established tree; not mature yet, but has a severe limiting factor such that treatment(s) may be necessary to prevent premature death.

**CLASS 3.0:** Mature tree; healthy; expected to live more than 20 years.

**CLASS 3.5:** Mature tree with some limiting factor that may warrant treatment(s) to prevent premature death. Any key tree that rates a 3.5 should strongly be considered for fertilizing, special irrigation, pruning, cabling, mulching, or other arboricultural treatment.

**CLASS 4.0:** Mature tree with such a severe limiting factor that tree death is likely within 20 years regardless of any treatments. Under certain circumstances, treatment is warranted to attempt to prolong life.

**CLASS 4.5:** Removal is recommended. Reasons for this recommendation include: the specimen is in such poor condition that recuperative treatment is not recommended, the tree has a serious structural defect, and the tree is considered an undesirable species (e.g., Siberian elm, mul-

berry, buckthorn). Immediate removal is not usually necessary for safety reasons, unless noted as such.

**CLASS 5.0:** Dead tree; removal is recommended or tree removed since inventory conducted. 



**Trees should be identified by species, tagged, and mapped. The best surveys also include classifying the trees into groups according to factors that can include life expectancy, safety, value, and special needs.**



# USGA GREEN SECTION



Many tree management decisions are driven by emotion versus common sense. Once a key to how the hole is played, this tree lost its value long ago.



A comprehensive tree survey can provide valuable information on the proper way to brace and cable key trees as they age and which trees are good candidates for aggressive preventative maintenance procedures. Haphazard attempts to prolong the life of severely damaged trees will likely do more harm than good.

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### What Will Spring 2020 Bring?

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

It is April, the snow has melted, the frost is gone and I am waiting for the grass to grow. In my 40 plus years in this business, annually waiting for grass to turn green has always been a joy. This year is different. I have checked multiple weather apps and weather telecasts, the warm rain will begin Friday, April 3rd. The temperatures to follow will be in the upper 50's and 60's, maybe even a 70 degree day next week. More rain is in the forecast for Monday through Wednesday. The turf should turn green and really begin to grow. With all the Covid-19 restrictions, social distancing, lack of staff, ability to hire staff and hiring on hold, what will April and May bring? If I am required to do it with my staff of three, me, myself and I, I have fashioned a plan to maintain the O.J. Noer Facility until Memorial Day. Golf in Wisconsin is closed but research will still march on. We feel we can social distance and adhere to the hand

washing and disinfecting protocols. By the time you read this WE WILL BE MAKING IT HAPPEN! What will happen the rest of the growing season? Will membership levels fall, advertising dry up, will there be more mandated closings or will we see business as usual? Due to this is new uncharted territory, no one can make that prediction with any accuracy. Those predictions are way out of my league, my job will be to adapt and do the best I can.

Since I cannot predict the future, let me share with you some of the events that have happened here in the past month. In early March the University of Wisconsin-Madison was making it clear there were going to be changes to life as we knew it. On March 11th the decision was made to have all non-essential workers tele-work or have some paid time off if they could not do their normal work by tele-commuting. Additionally, travel outside of Dane

County was halted. Dr. Koch and I were presenting Pesticide Applicator Training that day in Pewaukee. When I finished my portion of the morning session, my phone was slammed with texts and emails from a wide variety of people. What did that mean? No one knew for sure, so the waiting began. I was told that when I returned to the O.J. Noer Facility that evening, I was not allowed to leave Dane County. I informed my boss that the next day I was scheduled to be the lunch speaker at an event for Carlin Sales in Milwaukee. We agreed that cancelling on them at this late hour would be unfair. My boss went to bat for me and got approval from his bosses for me to attend the next day meeting. The following day the limitations and restrictions for what I would be allowed to do were well explained. Besides the UW, many businesses had informed their personnel they were to return home or they were granted permission to attend the event but after the event, all travel was cancelled indefinitely. The Carlin meeting went off without a hitch except for the attendees that did not or could not attend as they missed an excellent lunch speaker!

Soon thereafter the University of Wisconsin-Madison went through the process of determining who was essential and who would be deemed non-essential. This was done mid-March and at that time Audra and I were deemed non-essential. As such, we were informed that at the end of the day, we were not to physically report to work until April 13th. As we all know, soon thereafter Governor Evers declared the Executive Order, "Safer at Home." What would this mean for the O.J. Noer Facility? It meant the Noer was closed to all users. Dr. Koch was able to get permission to remove tarps and conduct his snow mold ratings.



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## NOTES FROM THE NOER

After that both Dr. Koch and Dr. Soldat were required to submit paperwork to convince the University of Wisconsin-Madison that their work was essential. As you would expect, they submitted the necessary paperwork and as of now their research is essential. They may scale back a few projects as they see fit but this meant the O.J. Noer Facility would re-open sooner rather than later.


A few days after I was sent home, I was reclassified and told I was to make security checks on the property only, until further notice. Audra and I were also informed we could tele-work. Until I was required to do this, I did not realize how much time each day Audra and I spend working on various projects for the UW, the Noer and the WTA. We both sent many emails and exchanged many telephone calls each day. As we headed toward late March, I was informed I would be returning to the O.J. Noer Facility as a half time, semi-essential staff. The O.J. Noer Facility was to remain closed to the public and only open to University of Wisconsin-Madison staff who had filled out the necessary paperwork. As the weather warmed, I was able to begin spending time outside getting clean-up work done and finishing equipment repair. As of now the O.J.

Noer Facility is just about ready for Spring.

Just this week came the news that there may not be summer staff for quite a few weeks, possibly all summer long. All summer staffing positions are on hold. My one staff member (Larry) informed me just before the Covid-19 pandemic that due to family commitments he would not be returning to work for the Summer of 2020. I was lucky enough to post his position just before all the Covid-19 issues ratcheted up. I am hoping that on May 1st I will be able to bring on my one 25-30 hour per week employee. Now I just need to find that person.

Hoarding has been an issue for at least a month. We all have seen this firsthand but let me tell you my stories. My neighbor went to Walmart to buy a few basic things and a dozen eggs. When she arrived at the egg case, a lady had five 18 packs of eggs, another gentleman grabbed the last 18 pack. The war of words ensued. She made a scene, he tried to reason with her saying that 90 eggs should be more than enough for one family, but to no avail, so he returns the 18 pack of eggs he had put in his cart back to the case. She promptly took it and placed them in her cart, where he then punched his fist through all six

18 pack of eggs. My neighbor quickly moved on to the next aisle. While at Whole Foods doing our normal shopping, my wife was looking at buying two cans of spicy beans, there were ten cans left. She turned to me to make a comment on how empty the shelves were. A man squeezed between us and took all the spicy beans and 15-20 other cans of beans. Thinking quickly, I ask the man if he had dropped a five-dollar bill in the aisle, when he looked, I took two can of spicy beans out of his cart and we walked off. Carol yelled at me all the way home.

In mid-March the CDC issued the guidelines for helping “flatten the curve.” In those guidelines we all heard the elderly were at the greatest risk. Their definition of elderly was 60 and over! I did not hear the announcement when it was released but within minutes my twin sons both texted me that according to the CDC, I am now elderly. I thanked them for letting me know! My family is staying home as much as possible and interacting with the outside world as little as possible. As of this writing my family is healthy. Hopefully when you read this, we are all still healthy. I hope you and yours are equally healthy and being safe. We will get through this together! 

### Noernet Is Alive Again!

When Noernet was introduced, many, many years ago it was cutting edge. As time has progressed there are many more ways for the industry to communicate and get answers to questions. Noernet is still mainly a Wisconsin group.

Last year I was informed, as Noernet administrator, that the Wisconsin List Serve was being retired and replaced by a new service. I pondered, did the industry need Noernet or was it time to retire this communication tool like the man who started it, Tom Schwab? I asked a wide variety of people and although most felt it was outdated it was still useful. It gives the UW turf program, WTA and its members another way to easily communicate.

While it is not used as frequently as other forms of communication it can be very useful:

- Announcements and reminders for WTA events
- Announcing the UW Turfgrass Short Course cancellation

- Pest alerts
- Questions for other turf professionals
- A good way for members to move used equipment

I felt that Noernet should continue into the future. Last month I worked with the UW IT Department and made the required shift to the new platform. In the last month I have sent out a couple of Noernet postings from the new system and have seen no issues.

Now what you need to do to make the migration to the “NEW” Noernet:

**Change the address in your contact list to [noernet@g-groups.wisc.edu](mailto:noernet@g-groups.wisc.edu). That is all you need to do!**

UW IT and I have taken care of the rest. Now get back to growing turfgrass and feel at ease knowing that Noernet is still there for questions, answers, comments, used equipment and news.



## The Same, But Different

By Jake Schneider, Seasonal Worker, Trondheim Golfklubb, Norway

As I write this article on the 15th of May, the wind-driven snow is falling for the fifth straight day. Our year-to-date high temperature has yet to crack the 60-degree mark, and I'm unsure as to whether or not the sun does actually exist behind the constantly-overcast skies that have been matching my mood for several weeks. Even for mid-Norway, this is far from normal, but abnormal seems to be the new normal.

Last year, the golf course opened in early May, and barring an unexpectedly warm and dry stretch, allowing play before the calendar turns to June will seem like a victory. I've learned that seven months of winter is my limit, and Wisconsin is going to seem like Florida when we move back. Oh, and have you heard about this whole coronavirus thing?

Back in early February, I traveled back to Wisconsin for the annual ski trip with my buddies and there were a fair amount of people in the Amsterdam airport wearing masks, but it really didn't seem like a big deal. Prior to boarding, the gate agents asked passengers if they had been to China recently, but other than that, there weren't any additional measures in place.

One short month after returning to Norway, the first round of government-imposed restrictions were put into place, and most of life came to a grinding halt. We were still free to go out as we saw fit, but most restaurants and stores closed as did the gyms and bars. We turned our second bedroom into a makeshift office so that Melissa could work from home, and things got boring in a hurry.

Living in a small apartment, not having a car, and being told to avoid public transportation created a bit of claustrophobia for this guy. My days

mostly consisted of running, putting together puzzles, doing yoga, learning Spanish, and checking the news 758 times per day to get the latest updates. It kind of sucked and still isn't great, but as a whole, Norwegians seemed to do a great job of following the orders. The joke was that, given their quiet, anti-social tendencies, they had been preparing for these times of isolation for their whole lives. As of today, we've had half as many deaths as Wisconsin (with a half million less people in Norway), and things have been re-opening piece-by-piece over the past several weeks. And, no, we aren't re-

**Comparing Wisconsin and Norway is certainly an apples-to-oranges exercise as the respective population sizes are just about the only similarity. If Wisconsin had a \$1 trillion dollar sovereign wealth fund to fund the vast social programs that it does here, I would like to think that people would have a different attitude about the government's role in the crisis,**


quired to wear masks.

Comparing Wisconsin and Norway is certainly an apples-to-oranges exercise as the respective population sizes are just about the only similarity. If Wisconsin had a \$1 trillion dollar sovereign wealth fund to fund the vast social programs that it does here, I would like to think that people would have a different attitude about the government's role in the crisis, but it's safe to say that we're glad to be here during these crazy times.

One of the trademarks of Nordic societies is that they generally trust the government, and while they acknowledge that they aren't perfect, the

citizens believe that they are making the most well-informed, best decisions possible. Wisconsin and America (politicians, citizens, and media, alike) have a bit of work to do in this category.

Only history will tell us whether we overreacted, underreacted, or hit the nail on the head with our various strategies, and it will be interesting to see how the events of today shape the actions of tomorrow. One thing that I think has been cemented is the importance of golf to society and the amount of sanity that a little bit of fresh air can offer. I was both surprised by and supportive of the commonsense decision that was made to open Wisconsin's courses after a brief closure.

Unlike the US government, it has been refreshing to see the amount of innovation and collaboration between golf courses along with the local and national organizations that support the industry. The sharing of ideas that happened on the Noernet exhibited the type of camaraderie that will be needed both now and in the months and years to come. 





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## The Hockemeyer Snow Mold Prediction Model: The Follow Up

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

Prediction Scale	Percent Snow Mold in Nontreated	Description
Snow Mold Utopia	75-100	Just about absolute perfect conditions for snow mold infection for a long time. Early snow cover, deep snow, all winter long.
That's a lot of snow mold	50-75	Might have been a short period where snow mold conditions were not ideal resulting in slightly less snow mold infection.
I've had better snow mold	25-50	Decent amount of infection, but Dr. Koch would not tweet a GIF of an excited puppy if he saw a picture of it on Twitter.
"Baby Bear" snow mold	10-25	Just the perfect amount of snow mold. Enough that you feel like your snow mold app was worth it, but not a single sclerotia more.
What's snow mo'u'ld?	0-10	So little snow mold infection you can't even spell it right.

For my last Grass Roots article, I wrote my predictions on how much snow mold pressure we would have at each of our snow mold research sites. I believe I was correct on some accounts and very, very wrong on others. As a reminder, above is my rating scale for predicting snow mold. Let's get into it.

### Marquette, MI

**Prediction: Snow Mold Utopia-75-100% disease**

**Result: Snow Mold Utopia-87.5% disease in the nontreated plots**

I was correct on this prediction, but that is not really an accomplishment as snow mold pressure is almost always going to be very high in Marquette. That's why we drive 6 hours to get up there! Very early snow cover to insulate the soil and long snow cover to give the snow mold time to grow results in lots and lots of disease.



Paul Koch  
@uwpaul

Of all the years to have a devastating global pandemic cancel our Snow Mold Field Day, this was an unfortunate one. Disease pressure at all our research sites, including here at @MarquetteGolf was 🙌👍👍👍. Reports and pics will be posted in the next couple weeks @kurtaculous



10:28 AM · Apr 10, 2020 · Twitter for iPhone

**Figure 1. Dr. Kochs tweet after rating the snow mold plots in Marquette.**





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# TURFGRASS DIAGNOSTIC LAB



**Minocqua, WI**

**Prediction:** I've had better snow mold-25-50% disease

**Result:** Snow Mold Utopia-98% disease in the nontreated plots

I was way off on this one. I did say this would be the most interesting prediction though. Typically, Minocqua also gives us great disease pressure being so far north, but I just thought that maybe this was one of the few years where snow mold would not be as severe. Oh well. I'd rather be wrong this way, than the other way. Predicting lots of disease and getting very little.

**Figure 2.** The plots in Minocqua were obliterated with snow mold. Some of those plots even received a very good fungicide application, but just were applied too early to control snow mold.

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## TURFGRASS DIAGNOSTIC LAB



**Wausau, WI**

**Prediction: That's a lot of snow mold-50-75% disease**

**Result: That's a lot of snow mold-71% disease in the nontreated plots**

I have to confess I cheated a bit here because there was a second study at our Wausau location that had 88% disease. So maybe I only get half a point here. Regardless pressure in Wausau was very high this year due to some early and long lasting snow cover. Better than ice damage from the year before right? At least you can protect your turf from snow mold.

**Figure 3. Our experimental plot is on the left and the regularly treated fairway is on the right. The nontreated border around our plot got smoked.**

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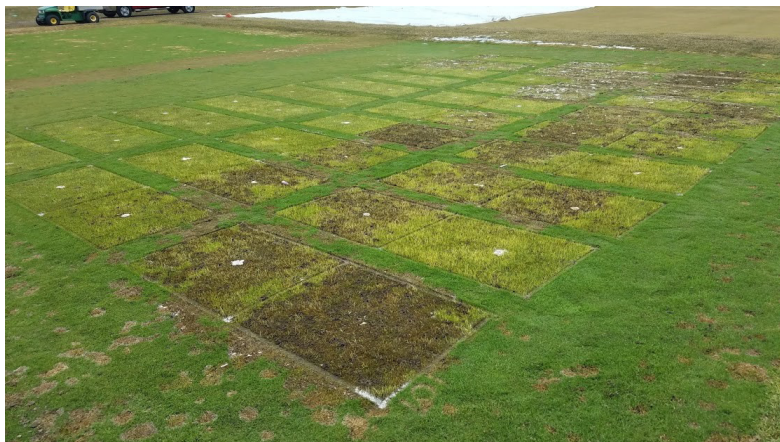
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## TURFGRASS DIAGNOSTIC LAB



**Figure 4. The pink snow mold trial where we inoculated the plot and artificially insulated it. The first few rows have plenty of disease, but then for some reason the last few rows have almost none.**

So in summary I was 2 for 5 in accurately predicting snow mold pressure at each of our research locations. Sounds like the free throw stat line of a Badger basketball player. Ha! Let's hope I do better next year. Thanks for humoring me and my silly article. Now on to summer diseases..... 

Madison, WI

**Prediction: "Baby Bear" snow mold (10-25%) & That's a lot of snow mold (50-75%)**

**Result: That's a lot of snow mold (56.3% disease in the nontreated plots) & I've had better snow mold (36.7% disease in the nontreated plots)**

Again I was way off here. I thought the plot in which we artificially insulated the plots would be a no brainer. It has worked well in years past too. But for some reason the disease pressure there was inconsistent. The first rep had tons of disease and the second and third rep had very sporadic disease pressure. Then the plot which we did not inoculate and did not cover of course had way more disease than I predicted. I guess that goes to show that Mother Nature still can do it way better than I can. That is infecting turfgrasses of course.

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## 2021 Golf Industry Show To Be Presented Virtually

By Shane Conroy, Great Lakes Regional Representative, GCSAA



### The 2021 Golf Industry Show is going virtual.

Amid the ongoing coronavirus pandemic, GCSAA announced that the annual education conference and trade show will be presented in a virtual format instead of the previously planned in-person event in Las Vegas.

The decision was made in conjunction with GCSAA's presenting GIS partners, the American Society of Golf Course Architects (ASGCA) and the Golf Course Builders Association of America (GCBA). The organizations say the virtual event will offer an experience that continues the Golf Industry Show's long tradition of connecting attendees, exhibitors and industry experts through a week of unparalleled educational opportunities and access to golf facility solutions for industry professionals.

In addition to the education, trade show and special events that will take place live on the virtual platform the first week of February, attendees will also have the option to view or review all content from the show for an extended period after the event concludes.

The theme of GIS 2021 — "Your space. Your pace. All in one place." — not only reflects the ability of participants to attend the show from the safety of their homes or offices and consume the content when they want to, but also speaks to the convergence of industry experts that is a hallmark of GIS and will remain so in the virtual format.

"As we monitored the national landscape and sought input from our members and exhibitors, it was clear that a virtual event would offer the safest and best way to provide

a quality GIS experience," said GCSAA President John R. Fulling Jr., CGCS. "We are confident our attendees will embrace this interactive, cutting-edge virtual platform. In addition, we believe the virtual event will offer opportunities for those who may have not been able to attend in-person shows due to travel costs or time away from work. It is a unique situation where we have the ability to connect more industry professionals from all corners of the world than ever before."

Registration for the 2021 Golf Industry Show will open Oct. 13 on the Golf Industry Show website.

### GIS 2021: Q&A with GCSAA CEO Rhett Evans

GCM sat down with GCSAA CEO Rhett Evans to discuss the move to a virtual GIS, the reasons behind it, what attendees can expect, and what the future might hold for other upcoming conferences and trade shows.

**Q: At the time of this interview in early August, we're six months out from the scheduled dates for an in-person GIS 2021. Why did GCSAA decide now was the right time to make this decision?**

A: The short answer is that it was simply the right thing to do — for our members, our exhibitors, our GIS presenting partners, and our staff who work so hard to plan and execute the Golf Industry Show each year.

As any organization that conducts an event as substantial as GIS would do, we have been carefully monitoring the situation, tracking its effect on the event and trade show

industry, and gathering feedback from GCSAA members and longtime GIS exhibitors. In addition to planning for an in-person event in Las Vegas, we were working concurrently on several contingency plans, all with the safety, health and comfort of all GIS attendees at the forefront of our thinking.

As we entered the month of August, circumstances made it clear that now was the time and that an all-virtual event was our best course of action. The pandemic remained a source of great concern for all of our constituents, and it was clear that concern would likely continue into the new year. Additionally, several other prominent events we had been watching closely — most notably, the 2021 Consumer Electronics Show and the 2020 GIE+EXPO — announced that their events would either go virtual (in the case of CES) or be postponed (in the case of GIE+EXPO).

We were also cognizant of the need to give time for all involved to adjust and plan for any changes to GIS that we might need to make. When you take all of that into consideration, it became clear that transitioning to a virtual event was our best option, and the time to make that decision was now.

**Q: You mention the contingency plans you had been considering during GIS 2021 planning. Why was an all-virtual event selected as the best scenario to pursue?**

A: As we began to plan in earnest for GIS 2021, all in the midst of the pandemic, we felt it prudent to work concurrently on other potential scenarios for the event. Those ranged from a normal, in-person GIS, to a hybrid event

that would offer both in-person and online offerings, to an all-online, virtual conference and trade show.

We ultimately decided on the virtual-event option, because it was clear it was the one that best took into account the clear preferences of our members and exhibitors while still offering those groups an experience they would find valuable, educational, interactive and profitable.

**Q: What factors and feedback were considered in the decision-making process?**

A: We kept close tabs on national developments in the event and trade show industry, with a specific eye on Las Vegas and the state of Nevada. To assist in that effort, we engaged with a veteran trade show consultant to guide us through the process and offer his analysis on trends and best practices that were available to us.

We also conducted surveys of our members and GIS attendees to gauge their preferences and comfort levels with an in-person event versus an online, virtual offering, and the data from those surveys made it clear that a virtual option was strongly preferred. In addition, we also regularly worked with our GIS exhibitors to make sure their feedback was received and considered as we came to this final decision.

There were other factors that we took into consideration, from virus-related travel restrictions to progress on the development of effective treatments and vaccines for the disease. But in the end, based on the best available information, we think we made a sound decision that best serves everyone involved with GIS.

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**Q: How will this virtual GIS be delivered to attendees? Have you determined a technology partner yet?**

A: We evaluated several potential vendors who all offered cutting-edge products, but ultimately selected one whose platform we all agreed was highly interactive, visually engaging and easy to use. The core content offered on this platform will be the same world-class offerings that you'd find at an in-person GIS. The lineup will include concurrent education sessions, networking opportunities, special events and a virtual trade show along with some fun features and special guests that are unique to the virtual platform.

**Q: There is official GCSAA business conducted each year at GIS, from the presentation of major awards to the association's annual meeting and election, plus special events such as Celebrating Certification and the Health in Action 5K run. How will those be affected by this decision?**

A: GIS always presents such a great opportunity to acknowledge excellence in our industry and to recognize the notable work of our members. That will certainly be a different exercise in a virtual setting, but we're committed to doing it in a way that will make it a special and memorable occasion for those being honored, whether those are Distinguished Service Award winners or members who have earned or maintained their status as certified superintendents.

Similarly, our annual meeting and election are crucial elements to the business of our association, and those events will also take place in the virtual format. We must make sure those are conducted in accordance with association bylaws, but we will have an annual meeting and election in February.

**Q: What does this mean for the GCSAA Golf Championships? Will those events be conducted as scheduled, or are changes planned?**

A: We know how important the golf tournament is to so many of our members and how much they were looking forward to our return trip to Palm Springs (Calif.). Regrettably, though, the decision to transition GIS to an all-virtual event means that the GCSAA Golf Championships will not take place as planned.

We do remain strongly committed to this tournament. We have a wonderful corporate partner in The Toro Co. that has supported it for the past 26 years and a host of loyal and enthusiastic participants who take part year after year. As a result, we're hopeful we'll be able to offer an alternative event later in 2021, if conditions warrant, and I can say that we'll do all we can to bring this event back to Palm Springs just as soon as we can.

**Q: What will a virtual event provide for someone who has never had the opportunity to attend an in-person GIS before?**

A: Quite a lot, actually. In fact, one of the things we're most excited about in this transition to an all-virtual event in 2021 is what it can offer those who have been unable to attend an in-person GIS in the past or haven't been able to take part as frequently as they would have liked.

We are certainly aware that there can be obstacles for some who are interested in taking advantage of an in-person GIS. There are financial constraints, time constraints, family obligations. It is our hope that savings in travel costs — airfare, lodging, food, etc. — from not having an in-person event,



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**GCSAA CEO Rhett Evans. Photo by Montana Pritchard**

along with the flexibility offered by a virtual platform, and the fact that registered attendees can access GIS information for a period of time after the event ends will be enticing to those members.

Similarly, we think the virtual platform opens up significant opportunities for international attendees for many of those same reasons. There's also a tool within the virtual platform that will translate select GIS content into as many as 10 different languages, which we think will broaden the appeal even further.

**Q: What would you say to members or industry partners who might be skeptical that a virtual GIS experience will deliver the same value they receive at an in-person event?**

A: I would say those feelings are understandable. GIS is

such a unique event that delivers so much to so many. It offers an unmatched opportunity to bring our industry together and focus attention on what makes superintendents such an integral part of the game of golf. We share in the disappointment that we're not going to be able to experience that in person in 2021.

That said, we are extremely confident that we've settled on a virtual option that will create a memorable and valuable experience for attendees and exhibitors alike. We took great pains to make sure we found a tool that looked good, would be easy to use, and would be interactive. When you pair that with the world-class content delivered by industry experts from around the globe, we're confident that GIS 2021 will be a great experience for all involved. ✓





with the Turf Docs

Thursday, January 21<sup>st</sup>, 2021  
2-4pm

## Save The Date!

Take the afternoon off, curl up with a beverage of choice and join the Wisconsin Turfgrass Association as we host *Happy Hour with the Turf Docs!*

Although COVID will not allow us to meet in person for Research Day 2021, we can still come together virtually and talk turf with some of the leading turf scientists in the world. Dr. Frank Rossi of Cornell University will lead a discussion with UW's Dr. Doug Soldat and, Dr. Paul Koch, along with Dr. Bill Kreuser and Glen Obear from the University of Nebraska. This no cost, informal discussion will highlight industry trends, challenges, current research, and hot turf topics. More importantly, it is an opportunity for our WTA members to ask questions and spark discussions on issues we face as turf managers.

We will be meeting via Zoom with an email invitation sent the day of the event. To receive the invite for this no cost event, you must sign up on the WTA website. We ask that you log on, sign up, include a preferred email address for the Zoom invite and submit a question or two. While on the website, please renew your WTA membership for 2021. Bring a friend or colleague, showcase what our great Association has to offer and encourage them to join and support the WTA, its mission, and the University of Wisconsin Turf program.

The WTA's mission is to support turfgrass research and education at the University of Wisconsin-Madison. This includes funding of programs in turfgrass management and allied disciplines that enhance the understanding and general knowledge of the art and science of maintaining turfgrass. We need your support, now more than ever, to continue this mission.

Please sign up for the Happy Hour and renew your WTA membership today!

Please contact Audra Anderson at [audra.anderson@wisc.edu](mailto:audra.anderson@wisc.edu) or 608 845-6536 if you have any questions.

**Event:** *Happy Hour with the Turf Docs*

**Date:** Thursday, January 21<sup>st</sup>, 2021

**Time:** 2-4pm

**Cost:** FREE (GCSAA CEU's applied for)

**Platform:** Zoom (invite sent via email on January 21<sup>st</sup>)

**Sign up:** Wisconsin Turfgrass Association website

Enter name, preferred email address for zoom invite and turf related questions.

## About the Turf Docs



Frank Rossi, Ph.D., is an associate professor and extension turfgrass specialist in the Horticulture Department at Cornell University. Dr. Rossi administers a broad-based research and education program focused on ecological aspects of turfgrass science. The goal of his research and education efforts for undergraduates, graduate students and industry professionals is to improve the environmental compatibility and economic feasibility of turfgrass management systems.



Doug Soldat, Ph.D., is a professor in the Soil Science department at the University of Wisconsin-Madison. He earned both his bachelors and master's degrees in soil science at the University of Wisconsin and Ph.D. in horticulture at Cornell University. He focuses on turfgrass, urban soils, nutrient management, water resources, soil testing and landscape irrigation.



Paul Koch, Ph.D., is an associate professor in the Department of Plant Pathology at the University of Wisconsin-Madison. He earned his bachelors, masters, and Ph.D. in Plant Pathology at the University of Wisconsin-Madison. His research is focused on three areas: precision disease management using predictive models, pesticide fate and impact on turfgrass landscapes, and the turfgrass microbiome. Research in each area includes both fundamental and applied objectives to gain a broad biological understanding of the system with the intent of developing pest management recommendations for the turfgrass industry that are both effective and reduce non-target impacts.



Bill Kreuser, Ph.D., is an extension specialist and assistant professor at the University of Nebraska-Lincoln. He earned his bachelor's and master's degrees at the University of Wisconsin-Madison and his Ph.D. at Cornell University. Dr. Kreuser's research focuses on turfgrass soil, water, and nutrient management. Current interests include the relationship between turf crown moisture and temperature stress tolerance, sustainable lawn management, use of nitrogen sensing technology to increase fertilizer application precision, and the cause and management of impermeable iron-oxide layers in sand based putting greens.



Glen Obeir is the Director of Innovation with Tria Global Solutions. Glen's work focuses on developing innovative technologies aimed at improving soil health, plant health, and water quality. Glen has spent over a decade as a researcher in the plant and soil sciences fields and is an expert in turfgrass soil and water chemistry. Glen earned M.S. degrees in Entomology and Soil Science at the University of Wisconsin-Madison and is currently completing a Ph.D. in Agronomy and Horticulture from the University of Nebraska-Lincoln.



## 2020 Chapter Delegates Meeting - Key Messages

By GCSAA,

**The President's Message** was provided by John R. Fulling, Jr., CGCS. Mr. Fulling recognized the challenges in governing during a year like 2020 with a global pandemic and he highlighted GCSAA's success in the face of the multitude of challenges that presented themselves. The association was able to be successful due to the dedicated board, volunteers and GCSAA members who worked tirelessly to ensure golf facilities stayed open.

**Association Report** – CEO J. Rhett Evans briefed the delegates on the state of GCSAA and the strength of GCSAA members. He highlighted:

- Disaster Relief Funding - Fires, Hurricanes, Flooding, and COVID-19 challenges spurred GCSAA members to help each other by raising over \$50,000 for Disaster Relief Funding.
- GCSAA/EIFG financial overview for the association – GCSAA is currently in a strong financial position to continue to provide member programs and services with investment funds totaling \$10.4 million for the EIFG and \$8.2 million for GCSAA. And though revenues have been negatively impacted somewhat in 2020 from the pandemic, GCSAA is projecting to surpass its bottom line 2020 goals through prudent reductions in expenditures.
- GCSAA membership numbers remain strong.
  - 2019 – 18,125
  - 2020 – 18,602

Collaboration with the FFA and growth of the First Green program will also bring more students into the industry.

**State BMP Implementation Update** – The delegates received an update of GCSAA's goal to have all 50 states with BMPs in place by 2020. Mark Johnson, Associate Director, Environmental Programs thanked the chapters and volunteers who have worked diligently to achieve this goal. Mr. Johnson is confident the state goal will be reached. Facility Adoption of BMPs is beginning to gain momentum as well. As of the meeting date:

- 40 states with BMP's in place and the remaining 10 are nearing completion.
- 9 GCSAA Workshops
- 4 Self-Initiated Workshops

**Government Affairs** – Government Affairs Director Chava McKeel addressed the delegates regarding the Grassroots Ambassador goal of all 535 members of Congress matched

with a GCSAA Grassroots Ambassador. GCSAA currently has 98 open spots. The delegates were encouraged to help find qualified individuals to fill these positions.

**Rounds 4 Research** – Mischia Wright, Associate Director, EIFG shared the outcomes of the 2020 Rounds 4 Research Auction and shared plans for the 2021 auction.

- Strong chapter support for this year's auction as evidenced in outcomes of surveys that were sent out. \$263,000 was raised.
- 2021 Auction dates are April 26th – May 2nd
- Goals are 1,500 rounds and \$367,500 raised

**Chapter Outreach** – Steve Randall, Director of Chapter Outreach shared the work of field staff in supporting chapters during the pandemic. The use of virtual platforms and safety protocols allowed GCSAA to stay connected with chapters and members. Mr. Randall briefed the delegates on several tools that are available to keep chapters on track – Chapter Pulse and Strategic Playbook and the Chapter Assessment Survey.

**Member Dues and CPI Increase** – Kevin P. Breen, CGCS, GCSAA Secretary/ Treasurer, and Cam Oury, Chief Financial Officer. GCSAA follows a dues increase process which was created in 2006 with input and approval from chapter delegates. The process is tied to the Consumer Price Index (CPI). CPI is a tool to keep track of inflation over a period of time. Increasing the dues based on CPI equates to smaller and more frequent increases in dues rather than infrequent, but larger increases, which have a negative impact on membership retention. This year's proposal is the following:

- 3.3% increase in CPI since over the last two years
- \$15 increase for A and B (new dues amount of \$415) and \$10 increase for C (new dues amount of \$215)
- Approval rate for dues increases using this process has ranged from 87% - 96%

The delegates offered their thoughts on the dues increase to the board during small group breakouts. The GCSAA Board of Directors will consider delegate feedback as they discuss the proposal. Delegates are encouraged to communicate the proposed dues increase with their membership and provide chapter feedback to GCSAA.

**Certification Program** – Jeff White, CGCS, Vice Chair, Certification Committee briefed the delegates on efforts underway to modernize the program. The program will celebrate its 50th anniversary in 2021.

**Golf Industry Show Update** - Robert Randquist, CGCS, GCSAA COO and Ed Several, Ensemble IQ shared highlights of the platform for the 2021 GIS virtual event that will support an interactive experience. Attendees will have the ability to network with colleagues, check out products on the trade show “floor” and will have access to over 80 hours of education during the three-day conference. The demo highlighted the following:

- Ease of access
- Lobby area highlighting the schedule of education
- Basic and All Access Packages built for every budget and the entire facility
- Mixer events that will encourage networking
- An interactive virtual trade show that will be staffed

**Town Hall Session** – The GCSAA Board of Directors and delegates participated in a town hall session. The session facilitated by GCSAA President John R. Fulling, Jr., CGCS included questions surrounding the dues increase proposal, virtual GIS, and a potential bylaws amendment that would provide the ability for the Board of Directors to remain in place during times of duress.

**Candidate Breakouts** – the delegates had the opportunity to meet and question the candidates running for the 2021 GCSAA Board of Directors. The candidates are:

**For President** – Mark F. Jordan, CGCS

**For Vice President** – Kevin P. Breen, CGCS

**For Secretary/Treasurer**

- Kevin P. Sunderman, CGCS
- Jeff L. White, CGCS

**For Director (electing three)**

- T.A. Barker, CGCS
- Paul L. Carter, CGCS
- Jon M. Christenson
- Christopher A. Reverie
- Marc E. Weston, CGCS

There are three open positions for director. The terms of Barker, Carter and White are expiring. All three director positions will be for two-year terms. If White is unsuccessful in his bid for Secretary/Treasurer, his name may be submitted as a candidate for a director position from the floor. Sunderman is in the middle of his two-year term as director. If he is unsuccessful in his bid for Secretary/Treasurer he will remain on the board as a director. If Sunderman is elected Secretary/Treasurer a one-year director position will be open and voted on by the delegates to fill the remaining year of the two year term.

Current President John R Fulling, Jr. CGCS will stay on the board as Past President for the next year. ✓

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## Deja Vu

By David Brandenburg, Editor

To quote baseball great Yogi Berra "It's like deja vu all over again." Just over a year ago, I as your editor was apologizing for getting behind in these issues over the 2019 golf season. I had even said I made steps to ensure it would not happen again in 2020.

Well obviously since you are receiving the May June issue in January I did not make good on my promises. Once again I allowed the golf season to get in the way of my work with these pages. I apologize once again and can honestly say that was not my intention.

In result we are making some changes. First and foremost I am giving up the layout work and will just concentrate on editing and writing. Chapter Manger Grams has found our printer can do the layout at a economical cost and what I takes me 80 hours they can do in 10.

The other change is *The Grass Roots*

will reduce from 6 to 4 issues in 2021. In these times of e-mail, twitter and facebook print is not less important, however it is not the only communication tool we have.

WGCSA Member Randy Witt said it best at a board meeting some years ago, "The Grass Roots is the only contact some of our members have with the association."

That statement was true then and is still true today. It is a valuable local resource you can hold in your hand and enjoy. For a variety of reasons many of our members never attend a golf or educational meeting so these pages are their best educational opportunity. The research articles provided by our UW Team is second to none.

Coming soon will be the last three issues of 2020 and then 2021 will start with a new layout and 4 issues.

Again, I apologize for getting behind,

but like many of us in this industry, work at the golf course gets in the way of other parts of life.

\*\*\*\*\*

Former USGA Green Section Na-



tional Director Jim Snow passed away on Nov. 25th. Snow served the USGA Green Section for 35 years including 21 as its leader.

Snow may be best known for his work with Jim Moore and Norm Hummel, PhD. to update the USGA Recommendations for a Method of Putting Green Construction.

Along with his work in turfgrass Jim was involved as a Boy Scout Leader in Basking Ridge, NJ. He will be missed by many.

\*\*\*\*\*

As a reminder we do welcome superintendent or staff articles in these pages. They can be written for education, entertainment or to provide your opinion.

They can be 1 to 5 pages and pictures tell a story everyone can understand. So please share your successes and even your trials and tribulations to educate your fellow members.

We do the layout so just type it up and e-mail it in with the pictures attached. The members want to hear your story!

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## EDITOR'S NOTEBOOK

According to GCSAA Great Lakes Regional Representative Shane Conroy, Wisconsin has filled our 10 GCSAA Grass Roots Ambassador positions.

The goal of the program is to match a member of GCSAA with each member of Congress and build strong relationships between them. The program will establish a network of committed volunteers to serve as the “go-to” people for lawmakers and their staff on golf course management issues. Simply put, it is a great opportunity for GCSAA members to share their story with lawmakers.

Ambassadors will receive the tools and training needed to become effective advocates for the profession. Resources include a welcome packet to be sent upon signing up, access to online advocate training videos available on demand in Ambassador Central, and invitations to participate in advocacy webinars throughout the year.

Patrick Bastron - WI-01 Steil

Jens Arneson - WI-02 Pocan

Greg Willman - WI-03 Kind

Mike Bremmer - WI-04 Moore

Patrick Reuteman - WI-05 Sensenbrenner (Fitzgerald starting in 2020)

David Brandenburg - WI-06 Grothman

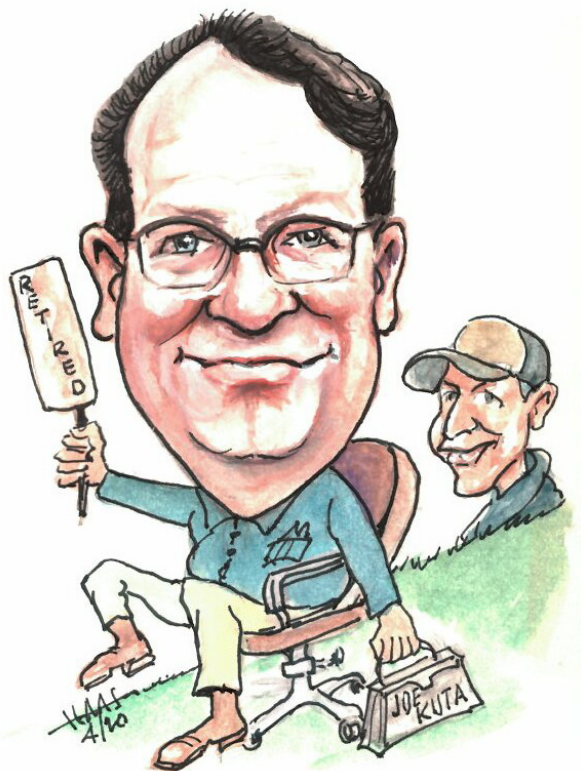
Todd Clendenning - WI-07 Tiffany

Brett Grams - WI-08 Gallagher

Jon Canavan WI-Senate Baldwin

Harrison Beal WI-Senate Johnson

Although all the spots are full, feel free to reach out to your local representatives ambassador to help them or in some cases take over the position when they are ready to move on. ✓

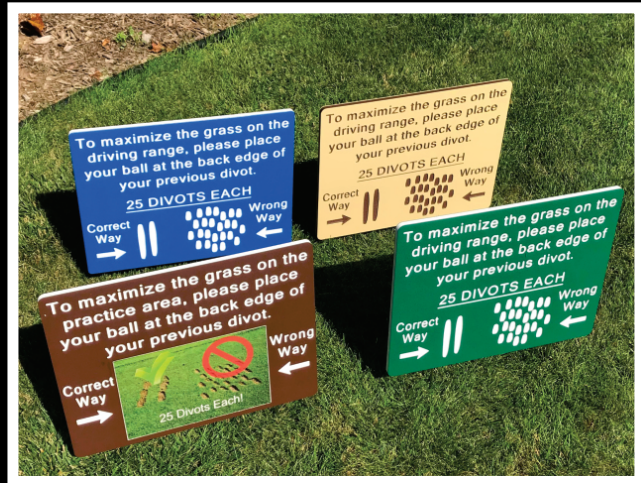


Gene Haas, Retired Executive Director of the WSGA, submitted this picture of the recently retired Joe Kuta with the caption “Hard to Believe Joe Kuta is now retired... but it happens to all of us... we hope!” With Joe Retired after serving Hartford Golf Club for 33 Years. Michael Rzaszski (background) took over as superintendent.



Aaron Ehlenfeldt, Superintendent, Old Hickory Golf Club (Second from left) volunteered at the BMW Championships held at Olympia Fields Country Club in IL in August. Picture submitted by Mike Werth, Sales Representative, Advanced Turf.





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