# Hole Notes

The Official Publication of the MGCSA


## *Member Driven Research: Dollar Spot Control Using Iron Is it practical?*

Vol. 55, No. 5 June 2020

**Meet The MGCSA:**
**Jeff Johnson**
**Superintendent at The Minikahda Club**
**Pages 42 -45**

# On The Cover

**Two years ago the MGCSA teamed up with the GCSAA and WCGSA to conduct studies into dollar spot disease control using iron sulfate alone and/or in combination with urea. Read more about this collaboration on pages 6 - 18**

***Is your personal information "up to date?" Please log on to mgcsa.org and make any changes necessary***

Hole Notes (ISSN 108-27994) is digitally published monthly except bimonthly in November/December and January/February by the Minnesota Golf Course Superintendents' Association, 10050 204th Street North, Forest Lake, MN 55025. Jack MacKenzie CGCS publisher. Please send any address changes, articles for publication, advertising and concerns to jack@mgcsa.org.

Minnesota Chapter
GCSAA
Golf Course Superintendents Association of America

Hole Notes Magazine
Vol. 55, No. 5
June 2020

## Feature Articles:



## Monthly Columns:



## Editors:

Matt Cavanaugh
MATTC@UMN.EDU
Liza Chmielewski
LIZA@GERTENS.COM

# Presidential Perspective

**by Scott Thayer, Legends Club**

2020 will definitely be a year to remember. In my short time as the MGCSA President, there have been so many unbelievable events that I didn't think, in my whole life, I would ever have to talk about. The Pandemic obviously shook our lives: from kids not going to school, no eating out and how we work on our golf courses every day. Now, "What pandemic"?!!!

We watched as our metro cities got taken over by looters and protestors, setting buildings on fire and creating havoc through the area. The catalyst of this mayhem was so bad that it struck a figurative earthquake throughout the country causing more riots in cities all over the US. My thoughts and prayers go out to all the families affected and I am sick to think that these actions are thought to be acceptable in any way. I am thankful for the National Guard to coming in and aiding the cities to control the violence and limit damage to property, city infrastructure and people's wellbeing.

How did this affect golf? Well, when they set the curfews, some of my staff, those that live in St. Paul, could not get to work on time. More crazy things to figure out; golf starts at 6 am, curfew is lifted at 6 am, my employees can't get to work until 6:30 am and we don't have enough guys to mow greens and set up the course. With the incredibly busy tee sheets we now have, in part due to the pandemic, this spur of the moment schedule rearrangement was just another "curious" issue we had to figure out. I hope all are staying safe and are well after all that has happened to our city and all the riots.

On June 1st, restaurants were allowed to open with outside dining under restrictions. I know our club was excited to be moving forward

with a little outside food and beverage service. The first day we were open to outside dining it was 90 degrees. Great weather for a burger and a beverage of your choice!

The Pandemic is still affecting us and we all have learned a little more each day about what we can and cannot do, but it is nice to see that things are opening up a little more each week here in MN and I am glad we are moving forward. Not sure what will happen with golf events, more than one per cart and the lifting of other restrictions we are living with. Well thought out baby steps I assume. Hopefully, and before we know it, some kind of normality will be back in place. Our course has been very busy, breaking numbers of rounds which is always great to see, but getting jobs done has been very hard.

The new norm: making adjustments on the fly and figuring out new ways to get work done! We love a good challenge don't we? Don White match play has begun recently and it looks like a lot of you are participating again this year. It makes me happy to see this event continuing as it is good for our association. The event is a great way to get out and play golf against MGCSA members that we would not normally play golf with, or interact with, on a daily basis. Also, it removes us from our daily routine and allows us to play a golf course we don't normally enjoy. All in all, just a fantastic networking opportunity within the best golf course superintendent association in the country!

I have had some questions about the other events in the MGCSA because, with everything going on, we are waiting to see if restrictions get lifted. The Championship, Scramble and Wee One are the only golf events planned on the calendar as of now and, since they are late in the summer or October, hopefully the restrictions will be lifted and they can be a regular event. We will have to see how the year progresses before these events are decided on.

On behalf of the MGCSA Board of Directors, thank you for all you do to support the MGCSA. Please stay safe until we speak again.

 Page 5

# Dollar Spot Control Using Urea and Iron Sulfate

## Final report prepared for the GCSAA, MGCSA, and WGCSA

***By Kurt Hockemeyer, Paul Koch and Doug Soldat, University of Wisconsin***
***Eric Watkins, University of Minnesota***

**OBJECTIVES**

The objectives of this proposal were to (1) determine the impact of FeSO4 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.

**MATERIALS AND METHODS**

Each objective was assessed independently at sites in Wisconsin and Minnesota (Minnesota data shown in this article). In Minnesota the studies were 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 0.450 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 CO2-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 ft2. In 2018, all MN treatments were initiated on May 23rd. In 2019 all 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).

## OBJECTIVE 1: RESULTS AND DISCUSSION

**Minnesota 2018:** Dollar spot pressure was high throughout most of July and August 2018 on the experimental area (Table 1). 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. Turfgrass quality generally reflected disease severity but severe localized dry spot was

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

| | Treatment | Rate | Application Interval | Application Code[b] | Dollar Spot Severity[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 20 | Jul 18 | Aug 29 |
| 1 | Non-treated control | | | | 87.3a | 146.0a | 130.8a |
| 2 | Urea | 0.1 lb N/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTU | 67.8ab | 119.0ab | 97.3ab |
| 3 | Urea | 0.2 lb N/1000ft2 | 14 day | CEGIKMOQSU | 61.8ab | 119.8ab | 108.3a |
| 4 | Urea<br>Emerald | 0.2 lb N/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 19.8cd | 24.0d | 31.5de |
| 5 | Urea<br>Emerald | 0.2 lb N/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 12.5cd | 0.3d | 2.8e |
| 6 | Iron Sulfate | 6 oz/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTU | 17.8cd | 76.0c | 39.8cd |
| 7 | Iron Sulfate | 6 oz/1000ft2 | 14 day | CEGIKMOQSU | 41.3bc | 119.3ab | 99.0ab |
| 8 | Iron Sulfate<br>Emerald | 6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 3.5d | 9.0d | 8.0de |
| 9 | Iron Sulfate<br>Emerald | 6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 4.5d | 2.5d | 1.3e |
| 10 | Urea<br>Iron Sulfate | 0.3 lb N/1000ft2<br>6 oz/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTU | 18.5cd | 99.0bc | 33.3de |
| 11 | Urea<br>Iron Sulfate | 0.2 lb N/1000ft2<br>6 oz/1000ft2 | 14 day | CEGIKMOQSU | 27.0cd | 152.0a | 69.8bc |
| 12 | Urea<br>Iron Sulfate<br>Emerald | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>14 day<br>28 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CGKOS | 6.8d | 7.8d | 14.5de |
| 13 | Urea<br>Iron Sulfate<br>Emerald | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>14 day<br>42 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CIOU | 4.8d | 3.0d | 1.8e |
| 14 | Emerald | 0.18 oz/1000ft2 | 28 day | CGKOS | 17.3cd | 7.0d | 28.3de |
| 15 | Emerald | 0.18 oz/1000ft2 | 42 day | CIOU | 9.8cd | 2.3d | 2.3e |
| | | | | LSD P=0.05 | 31.99 | 42.42 | 35.02 |

[a]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).
[b]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

observed on much of the treatment area and impacted turfgrass quality (Table 2). Anecdotal evidence suggested localized dry spot was more severe on iron sulfate-treated plots, but no statistical analysis was done to test this.

**Minnesota 2019:** Higher levels of dollar spot did not develop in the experimental area until early August 2019. Treatments 5, 8, 9, 12, 13, 14, and 15 resulted in the best control of dollar spot throughout the course of the season. Urea by itself did not result in acceptable control of dollar spot regardless of the rate or interval. Iron sulfate on a 7-day interval resulted in much better control of dollar spot than on

Midwest top choice

# BUNKER SANDS

**Plaisted bunker sands meet USGA guidelines and are delivered washed and screened. We extend our thanks to the area clubs that have chosen Plaisted sands and Best Signature Series sands:**

### Best Signature Tour Blend

*Off-white color, firm*

- Bemidji Town & Country Club
- Brookside Golf Club
- Bunker Hills Golf Club
- Deacon's Lodge
- Fargo Country Club
- Grand National Golf Club
- Hazeltine National Golf Club
- Interlachen Country Club
- Mankato Country Club
- Minneapolis Golf Club
- Minnesota National Golf Club
- Minnesota Valley Country Club
- Oak Ridge Country Club
- Oxbow Country Club
- Olympic Hills Golf Club
- Ridgeview Country Club
- Rochester CC
- Rum River Hills Golf Club
- Rush Creek Golf Club
- Spring Hill Golf Club
- The Minikahda Club
- The Refuge Golf Club
- The Meadows at Mystic Lake
- The Royal at Tartan Park
- White Tail Run Golf Club,
- Windsong Farm Golf Club
- Wayzata Country Club
- Woodhill Country Club

### Best Signature 100% Crushed

*White color, very firm*

- Black Bear Golf Club
- Edina Country Club
- Northfield Country Club
- North Oaks Golf Club
- The Classic at Maddens Resort
- The Legend & The Quarry Courses at Giants Ridge
- The Wilderness at Fortune Bay Casino

### Plaisted's Pro Crushed Bunker Sand

*A natural tan color blended with our crushed sand*

- Braemar Golf Course
- Edinburgh, USA
- Inverwood Golf Club
- Keller Golf Club

Plaisted Companies INCORPORATED

Elk River, MN • plaistedcompanies.com • 763.441.1100

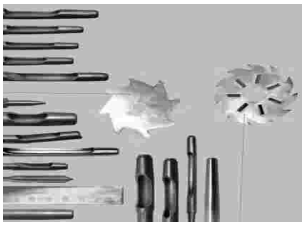
THE SOIL EXPERTS.

**Table 2 Mean turfgrass quality per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2018.**

| | Treatment | Rate | Application Interval | Application Code[b] | Turfgrass Quality[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 20 | Jul 18 | Aug 29 |
| 1 | Non-treated control | | | | 6.8a | 6.1cde | 6.1a |
| 2 | Urea | 0.1 lb N/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTUV | 7.0a | 6.3b-e | 6.1a |
| 3 | Urea | 0.2 lb N/1000ft2 | 14 day | CEGIKMOQSU | 7.0a | 6.3b-e | 5.9a |
| 4 | Urea<br>Emerald | 0.2 lb N/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 7.1a | 6.8abc | 6.3a |
| 5 | Urea<br>Emerald | 0.2 lb N/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 7.5a | 7.0a | 6.4a |
| 6 | Iron Sulfate | 6 oz/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTUV | 7.1a | 5.8e | 6.0a |
| 7 | Iron Sulfate | 6 oz/1000ft2 | 14 day | CEGIKMOQSU | 6.9a | 6.0de | 5.8a |
| 8 | Iron Sulfate<br>Emerald | 6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 6.9a | 6.9ab | 6.0a |
| 9 | Iron Sulfate<br>Emerald | 6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 7.3a | 6.4a-e | 5.8a |
| 10 | Urea<br>Iron Sulfate | 0.4 lb N/1000ft2<br>6 oz/1000ft2 | 7 day | CDEFGHIJKLM-NOPQRTUV | 7.1a | 6.3b-e | 6.0a |
| 11 | Urea<br>Iron Sulfate | 0.2 lb N/1000ft2<br>6 oz/1000ft2 | 14 day | CEGIKMOQSU | 7.0a | 6.1cde | 5.9a |
| 12 | Urea<br>Iron Sulfate<br>Emerald | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>14 day<br>28 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CGKOS | 6.9a | 6.4a-e | 6.4a |
| 13 | Urea<br>Iron Sulfate<br>Emerald | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.18 oz/1000ft2 | 14 day<br>14 day<br>42 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CIOU | 7.1a | 6.5a-d | 6.1a |
| 14 | Emerald | 0.18 oz/1000ft2 | 28 day | CGKOS | 7.0a | 6.8abc | 6.5a |
| 15 | Emerald | 0.18 oz/1000ft2 | 42 day | CIOU | 7.1a | 6.6a-d | 6.1a |
| | | | | LSD P=0.05 | 0.54 | 0.631 | 0.524 |

[a]Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).
[b]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


Superior Tech Products
Leading Edge Turfgrass Solutions
Golf Courses | Sport Fields | Parks
952-546-3678
www.stproots.com
stp@stproots.com

* Liquid & Granular Fertilizers
* Organic Fertilizers
* Post Patent Pesticides
* Aerification Tines & Bedknifes
* Natural & Artificial Turf grooming equipment.

GRO POWER FLORATINE DryJect JRM Inc.
Armor Tech SipcamAdvan GreensGroomer POGO

a 14-day interval. The combination of urea and iron sulfate resulted in moderate control of dollar spot, with better results when applied on a 7-day interval. Xzemplar by itself on a 42-day interval resulted in moderate control of dollar spot, but the addition of iron sulfate or iron sulfate and urea increased control. (Tables 3 and 4).

## OBJECTIVE 2 RESULTS AND DISCUSSION

**Minnesota 2018:** Dollar spot pressure was very high on the experimental area throughout July and August 2018 (Table 5). In July pressure was very high and only minor treatment differences were observed among treatments hav-

**Table 3. Mean number of dollar spots per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2019.**

| | Treatment | Rate | Application Interval | Application Code[b] | Dollar Spot Severity[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jul 24 | Aug 6 | Sep 4 |
| 1 | Non-treated control | | | | 9.3cde | 29.0abc | 241.0a |
| 2 | Urea | 0.1 lb N/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 20.0a | 39.3a | 195.0b |
| 3 | Urea | 0.2 lb N/1000ft2 | 14 day | CEGIKMOQSU | 14.5abc | 42.0a | 202.5ab |
| 4 | Urea<br>Xzemplar | 0.2 lb N/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 7.0cde | 33.3ab | 14.0e |
| 5 | Urea<br>Xzemplar | 0.2 lb N/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 4.3de | 17.3bcd | 8.5e |
| 6 | Iron Sulfate | 6 oz/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 0.8de | 3.3d | 66.5d |
| 7 | Iron Sulfate | 6 oz/1000ft2 | 14 day | CEGIKMOQSU | 19.0ab | 40.0a | 161.5bc |
| 8 | Iron Sulfate<br>Xzemplar | 6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 1.0de | 0.0d | 0.3e |
| 9 | Iron Sulfate<br>Xzemplar | 6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 0.0e | 0.3d | 0.0e |
| 10 | Urea<br>Iron Sulfate | 0.5 lb N/1000ft2<br>6 oz/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 2.0de | 11.8cd | 93.0d |
| 11 | Urea<br>Iron Sulfate | 0.2 lb N/1000ft2<br>6 oz/1000ft2 | 14 day | CEGIKMOQSU | 2.5de | 14.5bcd | 145.5c |
| 12 | Urea<br>Iron Sulfate<br>Xzemplar | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>14 day<br>28 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CGKOS | 10.0bcd | 0.3d | 0.0e |
| 13 | Urea<br>Iron Sulfate<br>Xzemplar | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>14 day<br>42 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CIOU | 0.3e | 1.8d | 0.0e |
| 14 | Xzemplar | 0.26 fl oz/1000ft2 | 28 day | CGKOS | 2.8de | 0.0d | 0.0e |
| 15 | Xzemplar | 0.26 fl oz/1000ft2 | 42 day | CIOU | 1.0de | 3.3d | 1.5e |
| | | | | LSD P=0.05 | 9.62 | 20.57 | 42.16 |

[a]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).

[b]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, S=Sep 17, T=Sep 24, U=Oct 1

**Table 4. Mean turfgrass quality per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2019.**

| | Treatment | Rate | Application Interval | Application Code[b] | Turfgrass Quality[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jul 24 | Aug 6 | Sep 4 |
| 1 | Non-treated control | | | | 6.8a | 6.9b-e | 4.8f |
| 2 | Urea | 0.1 lb N/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 6.5a | 6.5e | 4.9ef |
| 3 | Urea | 0.2 lb N/1000ft2 | 14 day | CEGIKMOQSU | 6.9a | 6.8cde | 4.8f |
| 4 | Urea<br>Xzemplar | 0.2 lb N/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 7.0a | 6.8cde | 6.6abc |
| 5 | Urea<br>Xzemplar | 0.2 lb N/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 6.6a | 7.0a-d | 6.6abc |
| 6 | Iron Sulfate | 6 oz/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 6.9a | 7.4a | 6.4bcd |
| 7 | Iron Sulfate | 6 oz/1000ft2 | 14 day | CEGIKMOQSU | 7.0a | 6.6de | 5.0ef |
| 8 | Iron Sulfate<br>Xzemplar | 6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>28 day | CEGIKMOQSU<br>CGKOS | 7.1a | 7.1abc | 7.3a |
| 9 | Iron Sulfate<br>Xzemplar | 6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>42 day | CEGIKMOQSU<br>CIOU | 7.1a | 7.4a | 7.0ab |
| 10 | Urea<br>Iron Sulfate | 0.6 lb N/1000ft2<br>6 oz/1000ft2 | 7 day | CDEFGHIJKLMNOPQRTU | 7.3a | 7.1abc | 5.9cd |
| 11 | Urea<br>Iron Sulfate | 0.2 lb N/1000ft2<br>6 oz/1000ft2 | 14 day | CEGIKMOQSU | 7.3a | 7.3ab | 5.6de |
| 12 | Urea<br>Iron Sulfate<br>Xzemplar | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>14 day<br>28 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CGKOS | 6.9a | 7.0a-d | 7.1ab |
| 13 | Urea<br>Iron Sulfate<br>Xzemplar | 0.2 lb N/1000ft2<br>6 oz/1000ft2<br>0.26 fl oz/1000ft2 | 14 day<br>14 day<br>42 day | CEGIKMOQSU<br>CEGIKMOQSU<br>CIOU | 7.0a | 7.4a | 7.1ab |
| 14 | Xzemplar | 0.26 fl oz/1000ft2 | 28 day | CGKOS | 7.1a | 7.1abc | 7.1ab |
| 15 | Xzemplar | 0.26 fl oz/1000ft2 | 42 day | CIOU | 6.9a | 7.1abc | 6.6abc |
| | | | | LSD P=0.05 | 0.497 | 0.47 | 0.774 |

[a]Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).
[b]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, S=Sep 17, T=Sep 24, U=Oct 1

ing a 7-day reapplication interval. Greater treatment differences were observed on the Aug 14 rating date. Within the 7-day reapplication interval there appeared a clear dose response where higher rates of iron sulfate resulted in less dollar spot. No strong influence of water volume on dollar spot severity was observed. Dollar spot control was significantly lower for treatments in the 14-day reapplication interval. Turfgrass quality generally reflected disease severity but severe localized dry spot was observed on much of the treatment area and impacted turfgrass quality (Table 6). Anecdotal evidence suggested localized dry spot was more severe on iron sulfate-treated plots, but no statistical analysis was done to test this.

Minnesota 2019: Dollar spot was

# PUT WATER IN ITS PLACE WITH THE



**Aquiflo™ Plus**
a.k.a. **"the penetrator"**

Punches water through soil with ease so it doesn't pool and reaches the roots faster


**Aquicare™**
a.k.a. **"the retainer"**

Saves turf from embarrassing dry spots and soft playing surfaces


**Aquisync™**
a.k.a. **"the dual force"**

Infiltrates and hydrates to reduce water requirements and chemicals needed in spray tanks.

@winfieldpro

Winfieldunitedpro.com/WettingAgents

## Take control of the water on your turf

— put WinField® United's A-Team to work today.

WINFIELD® UNITED
Professional

**Table 5. Mean number of dollar spots per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2018.**

| | Treatment | Rate | Application Interval | Water Volume | Dollar Spot Severity[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 20 | Jul 18 | Aug 14 |
| 1 | Non-treated control | | | | 93.8a | 214.3abc | 111.8a |
| 2 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 46.8def | 177.0a-f | 19.5d-g |
| 3 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 34.3efg | 128.8d-g | 15.5efg |
| 4 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 58.5b-e | 182.5a-e | 20.0d-g |
| 5 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 22.5fg | 165.8b-f | 3.5fg |
| 6 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 25.3fg | 159.5b-f | 4.8fg |
| 7 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 42.8def | 148.3c-g | 8.8fg |
| 8 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 8.5g | 111.0efg | 1.0g |
| 9 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 9.0g | 80.3g | 0.3g |
| 10 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 19.8fg | 107.3fg | 0.3g |
| 11 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 49.0def | 212.0abc | 58.8bc |
| 12 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 68.8a-d | 202.8abc | 58.0bc |
| 13 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 80.3abc | 197.5a-d | 68.8b |
| 14 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 58.8b-e | 213.5abc | 37.5cde |
| 15 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 55.5cde | 245.3a | 44.5bcd |
| 16 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 86.0ab | 211.0abc | 27.8def |
| 17 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 40.3def | 223.3ab | 25.0d-g |
| 18 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 40.0def | 184.8a-d | 13.3efg |
| 19 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 49.3def | 203.5abc | 25.0d-g |
| | | | | LSD P=0.05 | 29.81 | 73.28 | 25.2 |

[a]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).

very slow to develop in Minnesota in 2019 (Table 7). All iron sulfate treatments reduced dollar spot severity when compared to the non-treated control, and there was a clear dose-response relationship between increasing iron sulfate rate and decreasing dollar spot severity. Consistent with other years and sites, the 7-day spray interval resulted in better control of dollar spot when compared to the 14-day interval, regardless of rate or spray volume. No clear trend in water volume of iron sulfate was observed with regard to disease control. Turf quality largely mirrored disease severity, and only iron sulfate at the highest rate and the 7-day interval provided acceptable turf quality under the heavy disease pressure observed in August (Table 8).

# TAKE **ACTION** FOR FIRST-CLASS PROTECTION

Action™ brand fungicides, including Heritage® Action, Daconil® Action and Secure® Action, work deep inside the plant to stimulate plant proteins and:

**ENHANCE DISEASE CONTROL**
by building up defense against disease **before a pathogen is present** and **extending the length of control**

**IMPROVE DROUGHT TOLERANCE**
by **maximizing water retention** to protect against drought stress

**INCREASE HEAT TOLERANCE**
by **improving photosynthesis** and **energy production** to maintain **turf vigor** and **color** in extreme heat

**QUICKEN RECOVERY AND ENHANCE TURF QUALITY**
by activating enzymes for **increased energy production** and **photosynthesis** for quicker recovery from stress

Daconil® Action™ Fungicide | Heritage® Action™ Fungicide | Secure® Action™ Fungicide

To **#ExperiencetheAction** and see more, visit **ConditionPerformRecover.com/Action** or contact:

John Spaulding | john.spaulding@syngenta.com | 816-674-7053

@SyngentaTurf

syngenta®

All photos are either the property of Syngenta or are used with permission.

©2020 Syngenta. **Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties and/or may have state-specific use requirements. Please check with your local extension service to ensure registration and proper use.** Action™, Daconil®, Heritage®, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. Secure® is a registered trademark of Ishihara Sangyo Kaisha, LTD. All other trademarks are the property of their respective third party owners.
GS 5355_1_29

**Table 6. Mean turfgrass quality per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2018.**

| | Treatment | Rate | Application Interval | Water Volume | Turfgrass Quality[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 20 | Jul 18 | Aug 14 |
| 1 | Non-treated control | | | | 7.1a | 6.1a | 5.4a |
| 2 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.6a | 5.3bcd | 4.1b-e |
| 3 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.6a | 5.1bcd | 4.0b-e |
| 4 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.9a | 5.8ab | 4.1b-e |
| 5 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.5a | 5.0bcd | 3.5de |
| 6 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.6a | 4.9cd | 3.8cde |
| 7 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.8a | 5.1bcd | 4.0b-e |
| 8 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.9a | 5.5abc | 3.5de |
| 9 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.3a | 4.6d | 3.3e |
| 10 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.6a | 4.5d | 3.8cde |
| 11 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 6.8a | 5.5abc | 4.6abc |
| 12 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 7.0a | 5.6abc | 4.4a-d |
| 13 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.8a | 5.8ab | 4.9ab |
| 14 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 7.0a | 5.5abc | 4.6abc |
| 15 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 7.0a | 5.8ab | 4.8abc |
| 16 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.6a | 5.0bcd | 4.3b-e |
| 17 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 7.3a | 5.5abc | 4.6abc |
| 18 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 6.9a | 5.1bcd | 4.5a-d |
| 19 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.9a | 5.3bcd | 4.4a-d |
| | | | | LSD P=0.05 | 0.586 | 0.831 | 1.107 |

[a]Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

## CONCLUSIONS AND FUTURE STUDY

This study clearly indicated that iron sulfate provides significant, and many cases commercially acceptable, control of dollar spot in low and moderate dollar spot pressure. 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 ef-

**Table 7. Mean number of dollar spots per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2019.**

| | Treatment | Rate | Application Interval | Water Volume | Dollar Spot Severity[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 27 | Jul 24 | Aug 21 |
| 1 | Non-treated control | | | | 3.3a | 62.3ab | 547.0a |
| 2 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 3.0a | 23.8c | 258.5ef |
| 3 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 2.3a | 37.5bc | 346.3b-e |
| 4 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 1.0a | 17.3c | 288.5c-f |
| 5 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 2.5a | 12.0c | 198.8fgh |
| 6 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 1.0a | 15.3c | 279.5def |
| 7 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 8.8a | 27.8bc | 214.5fg |
| 8 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 0.8a | 5.3c | 65.3i |
| 9 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 1.0a | 5.5c | 94.3hi |
| 10 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 3.3a | 4.8c | 113.3ghi |
| 11 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 2.3a | 30.0bc | 385.5bc |
| 12 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 14.3a | 78.5a | 295.5c-f |
| 13 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 2.5a | 24.8c | 388.0bc |
| 14 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 0.0a | 21.8c | 364.5bcd |
| 15 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 0.3a | 16.5c | 325.5b-e |
| 16 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 0.5a | 19.5c | 323.5b-e |
| 17 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 2.0a | 8.8c | 276.8def |
| 18 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 4.0a | 6.3c | 13.3efg |
| 19 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 1.5a | 16.0c | 25.0d-g |
| | | | | LSD P=0.05 | 9.72 | 36.85 | 104.77 |

[a]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).

fect of water volume on dollar spot suppression was observed. Future studies should focus on timing iron sulfate more appropriately with actively growing dollar spot to improve dollar spot for acceptable control.

***Iron sulfate significantly reduced dollar spot relative to non-treated areas under severe dollar spot conditions, but failed to provide acceptable control.***

**Table 8. Mean turfgrass quality per treatment at fairway height at Minnesota Valley CC in Bloomington, MN during 2019.**

| | Treatment | Rate | Application Interval | Water Volume | Turfgrass Quality[a] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Jun 27 | Jul 24 | Aug 21 |
| 1 | Non-treated control | | | | 6.25a | 6.5cde | 3.88e |
| 2 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.25a | 6.5cde | 5.38bcd |
| 3 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.5a | 7.25a | 5bcd |
| 4 | Iron Sulfate | 3 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.63a | 7.13ab | 5.25bcd |
| 5 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.25a | 6.75a-d | 5.38bcd |
| 6 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.5a | 6.88abc | 5.63ab |
| 7 | Iron Sulfate | 6 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.25a | 6.75a-d | 5.38bcd |
| 8 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 0.75 gal/1000 ft2 | 6.13a | 6e | 5.5bc |
| 9 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 1.5 gal/1000 ft2 | 6.13a | 6e | 5.88ab |
| 10 | Iron Sulfate | 12 oz/1000 ft2 | 7 day | 3.0 gal/ 1000 ft2 | 6.25a | 6.25de | 6.5a |
| 11 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 6.38a | 6.88abc | 5.13bcd |
| 12 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 6.25a | 6.63bcd | 4.5de |
| 13 | Iron Sulfate | 3 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.25a | 6.88abc | 4.63cde |
| 14 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 6.63a | 7.13ab | 5.38bcd |
| 15 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 6.25a | 6.88abc | 5.25bcd |
| 16 | Iron Sulfate | 6 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.63a | 7abc | 5bcd |
| 17 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 0.75 gal/1000 ft2 | 6.38a | 7.25a | 5.63ab |
| 18 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 1.5 gal/1000 ft2 | 6.38a | 6.75a-d | 5.63ab |
| 19 | Iron Sulfate | 12 oz/1000 ft2 | 14 day | 3.0 gal/ 1000 ft2 | 6.5a | 7abc | 5.25bcd |
| | | | | LSD P=0.05 | 0.516 | 0.563 | 0.972 |

[a]Turfgrass quality was rated visually on a 1 – 9 scale with 6 being acceptable. Means followed by the same letter do not significantly differ (P=.05, Fisher's LSD).

***This collaborative effort between the MGCSA, WGCSA and GCSAA was made possible through member contributions. The MGCSA wishes to thank our neighbors to the east for their support of this initiative. We look forward to many more partnership opportunities in the future.***


IN FRONT
ON ANY COURSE!

JOHN DEERE | FRONTIER AG & TURF

Hastings 651-437-7747
FrontierAgTurf.com

DEPARTMENT OF AGRICULTURE

## Inspection Authority, Overview, and Future Topics
## 2020

The Minnesota Department of Agriculture (MDA) Pesticide and Fertilizer Management Division (PFMD), working with the Minnesota Golf Course Superintendents' Association (MGCSA), is providing an updated series of outreach bulletins published through the MGCSA's publication *Holes Notes*. The information will introduce the MDA's authority for inspection, an inspection overview, and future topics.

### Authority for Inspection:

Inspections and investigations are conducted by the MDA to document compliance under the authority of:

- Minnesota Statutes chapter 18B; Pesticide Control
- Minnesota Statutes chapter 18C; Minnesota Fertilizer, Soil Amendment, and Plant Amendment
- Minnesota Statutes chapter 18D; Agricultural Chemical Liability

Authority for entry, inspection, and sampling is found in:

- Minnesota Statutes, section 18D.201

Minnesota Statutes and Rules can be found on the Minnesota Office of the Revisor of Statutes website.

### Inspection Overview:

During an inspection, an Agricultural Chemical Investigator (ACI) observes business practices to document compliance with statutes and rules. The following are primary items an ACI will check:

| | |
|---|---|
| Pesticide Applicator License & Category | Pesticide Container Disposal |
| Application Records | Pesticide & Fertilizer Mixing and Loading Area(s) |
| Pesticide Labels | Backflow Prevention Device(s) on Water Supply |
| Incident Response Plan | Pesticide Rinsate Use |
| Well Location(s) | |

### Future Topics:

There are rules and regulations specific to golf courses. I will highlight one topic in each of the next five bulletins. The following topics were chosen based on compliance concerns documented by the MDA during inspections at golf courses.

1. Applicator License and Application Use Categories
2. Pesticide and Fertilizer Backflow Prevention
3. Pesticide and Fertilizer Storage


WE WENT BACK
AND FORTH
AND BACK
AND FORTH
PERFECTING
THE DESIGN.
ACCUFORM ACE II
PAR AIDE
At Par Aide, we continually obsess over the form and function of every product we sell. That way, you never have to go back and forth on which brand you buy.
Learn more at ParAide.com

4. Personal Protective Equipment (PPE)
5. Incident Response Plan

To read about the MDA Pesticide and Fertilizer Management Division's events, programs, policies, and regulations, see PFMD's newsletter at PFMD Update.

I am interested to hear your opinions, ideas, and questions about your golf course as it relates to pesticide and fertilizer requirements in Minnesota Statutes and/or Rules. Please contact me at the number or email address below.

Thank You,

Corinne du Preez, Agricultural Advisor/ACI
Minnesota Department of Agriculture
Pesticide and Fertilizer Management Division
2118 Campus Drive SE, Suite 300
Rochester, MN 55904
Office (507) 206-2883
Corinne.duPreez@state.mn.us


MTI IS PROUD TO HAVE BEEN WITH THE MGCSA SINCE ITS START AND WE LOOK FORWARD TO BEING HERE IN THE FUTURE. FOR OVER 70 YEARS, THE MTI TEAM HAS BEEN A TRUSTED PARTNER IN YOUR BUSINESS AND WE THANK YOU FOR YOUR CONTINUED SUPPORT. NO MATTER WHAT UNCERTAINTIES ARE AHEAD, WE WILL CONTINUE TO NOT ONLY WORK TOGETHER, BUT STRENGTHEN OUR PARTNERSHIP ALONG THE WAY.

mti DISTRIBUTING

SALES - 888-537-2484
SERVICE - 888-537-2486
PARTS - 888-537-2485
MAIN - 800-362-3665
WWW.MTIDISTRIBUTING.COM
WWW.MTIPREOWNED.COM

TORO®

# "In the Hole!!!!!"

**by Lisa Cavanaugh,**
**Spouse of an Assistant Golf Course Superintendent**

## *Unintended Side Effects of the Golf Course Maintenance Career*

Matt and I have will be married for 18 years this summer and together for 22 years. His other partner during this time has been the golf course. Matt has been working at a golf course since our first date on December 23, 1997 to see Titanic. So, consider this a little thought piece from a significant grass other, a glimpse into what those important people in your life may be experiencing but have never said out loud.

I'll break this down into the golf seasons, so it's not a full guilt-inducing deluge, and keep it to a manageable trickle. As you are working through the seasons, here's what we, your families, might be experiencing:

**PRE-SEASON**

The hot topic here is resources. Will "we" get our seasonal help this year? Will "we" have a good crew or will it be a bunch of new kids? When you stress, I stress. It's a helpless feeling, as I know the outcome of this question could make or break the tone of our family's summer. Full, experienced crew = less stressful summer. Thin, inexperienced crew = stressful summer. Our kids are still young enough to have a 50/50 chance of spilling their milk at dinner, so unfortunately, I cannot contribute my resources to your plight, yet.

# *Thank you and you and you!!!*

## Platinum Podium and Event Sponsor

syngenta

## Gold Tee Prize and Event Sponsors

mti DISTRIBUTING

PAR AIDE®

Plaisted Companies INCORPORATED

CLESENS

WINFIELD® UNITED

## *Silver Tee Sign Event Sponsors*

VERSATILE VEHICLES

ECO WORKS SUPPLY

TWIN CITY SEED COMPANY.

Frost Inc.
Spray Technology Products

SiteOne Golf

Superior Turf Services, Inc

Gertens WHOLESALE & PROFESSIONAL TURF SUPPLY

pbi/GORDON CORPORATION
*An Employee-Owned Company*

Reinders

Club Car

FRONTIER AG & TURF

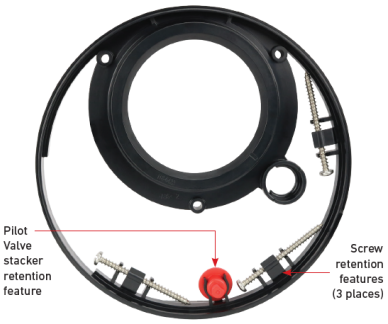
# INFINITY® Razor Kits

Extend the frequency of digging up and leveling sprinklers with the Toro INFINITY Razor kits.

Over time, the application of topdressing and settling can result in the sprinkler being in a depression below grade level. This can interfere in the natural roll of the ball, create trip hazards and take away from the natural beauty of the course. The Razor kits are designed to raise the top of the sprinkler in ½" increments up to 1½" (3 stages) without digging!

## Benefits

- Eliminates sprinkler interference
- Eliminates trip hazards
- Enhances course appearance
- Huge labor savings – no digging required!




# MTI PreOwned Equipement

MTI Certified Gold Level: highest quality equipment, low hours, serviced and detailed, 12 months of TPP coverage

MTI Certified Silver Level: serviced, detailed, 6 months of TPP coverage

Bronze Level: no service work performed, sold "as is"

**Go to www.mtipreowned.com to see what's available today!**

Phone: (763)592-5600
4830 Azelia Ave. N Suite 100.
Brooklyn Center, MN 55429
www.mtidistributing.com

**HIGH SEASON**

While you in the industry have many stresses and worries during peak golf season, for me it all boils down to one thing: fatigue. When the season kicks off and the course looks great, you're tired, but spirits are generally high. As the day goes on, those early mornings compound like interest in our savings account. You may "get used to it" but it builds up, like the clippings on the outside of a mower. The every-other-weekend-I-get-to-sleep-in doesn't reverse the build-up.

Here are the side-effects of fatigue that we see in our house:

- Dwindling social life. As the summer goes on, the weekends become more precious for rest and that means socializing is off the table. Hosting a BBQ is too much work, going out for dinner gets too late, talking just takes too much effort. Maybe I need to get more comfortable at inviting myself to other people's houses. Or perhaps I should just plan those BBQs and not tell him until he asks, "Honey, you're cleaning the floor – are we having people over"?
- Lack of patience. We have young kids and they are constantly talking or moving, most often at the same time. Patience is hard to begin with, and we know it's harder when parents are tired. Patience grows very thin and it impacts your interactions and relationships. When I point it out, please don't mean-mug me. And perhaps just stay away from the neighbors so we don't get egged.
- Inattentiveness. One nice thing about the golf course maintenance industry are the hours. Out the door at 4:00 means you're home at 3:00 to get kids from day care. Awesome…we get to spend our whole evening with a zombie. You are awake and you are with us, but especially by the


Page 27

end of the summer you aren't always 'there.' It's understandable, getting up that early is difficult. And when I suggest an earlier bedtime, it's not because we don't want you with us, it's because when you are with us, we want you there. (I'm not sure I've ever said it that succinctly to my husband.)

**LOW SEASON**

Here in MN, low season is very low, in terms of maintenance of a golf course. I am still not sure how we grew up here and have not yet managed to force ourselves into a winter sport. All-in-all, I cannot complain too much about the low season. At least for the first couple months of restorative, restful recuperation. But for the rest of this season, the least you could do is finish the five projects you started during the last season.

We love you golf course maintenance people, we really do. In fact, it is very likely you have even rubbed off on the people around you. How is this?

- Rain events – they can be good, and they can be bad, but they are eventful.
- Don't cut your home lawn too short. Keep it longer because the roots become more established.
- Plant fine fescue or tall fescue for shady spots, but watch out fellow Northerners, tall fescue is not as tolerant of ice.
- Grass doesn't need as many 'inputs' as homeowners think.
- Homeowners know nothing about their lawn…and manufacturers and lawn services know that.
- You can't get rid of moles by treating for grubs.

Page 28

- Poa annua, dollar spot, fairy ring. Yeah, they exist. (Though I think one of those things is not like the other?)
- How to get rid of dog spots? Get rid of the dog.
- Mechanics don't like sand.

We love that you're (hopefully) doing something that you enjoy, even when it's difficult. All we ask is to remember that this stressful, early morning job can impact those around you. In the meantime, I think I may start a consulting career based on what I have learned over the past 22 years.


Page 29

# Storage!

**by Chris Michaelson, Superintendent at Oneka Ridge Golf Club**

Space, there is never enough space. Storage space for equipment can be a commodity on a golf course. Older courses generally fall short in the area of storage space because, back when they were built, they didn't have nearly the equipment inventory that most courses have today. This turns into a problem when you want to keep your equipment in good condition, but have no place to put it to keep it out of the weather.

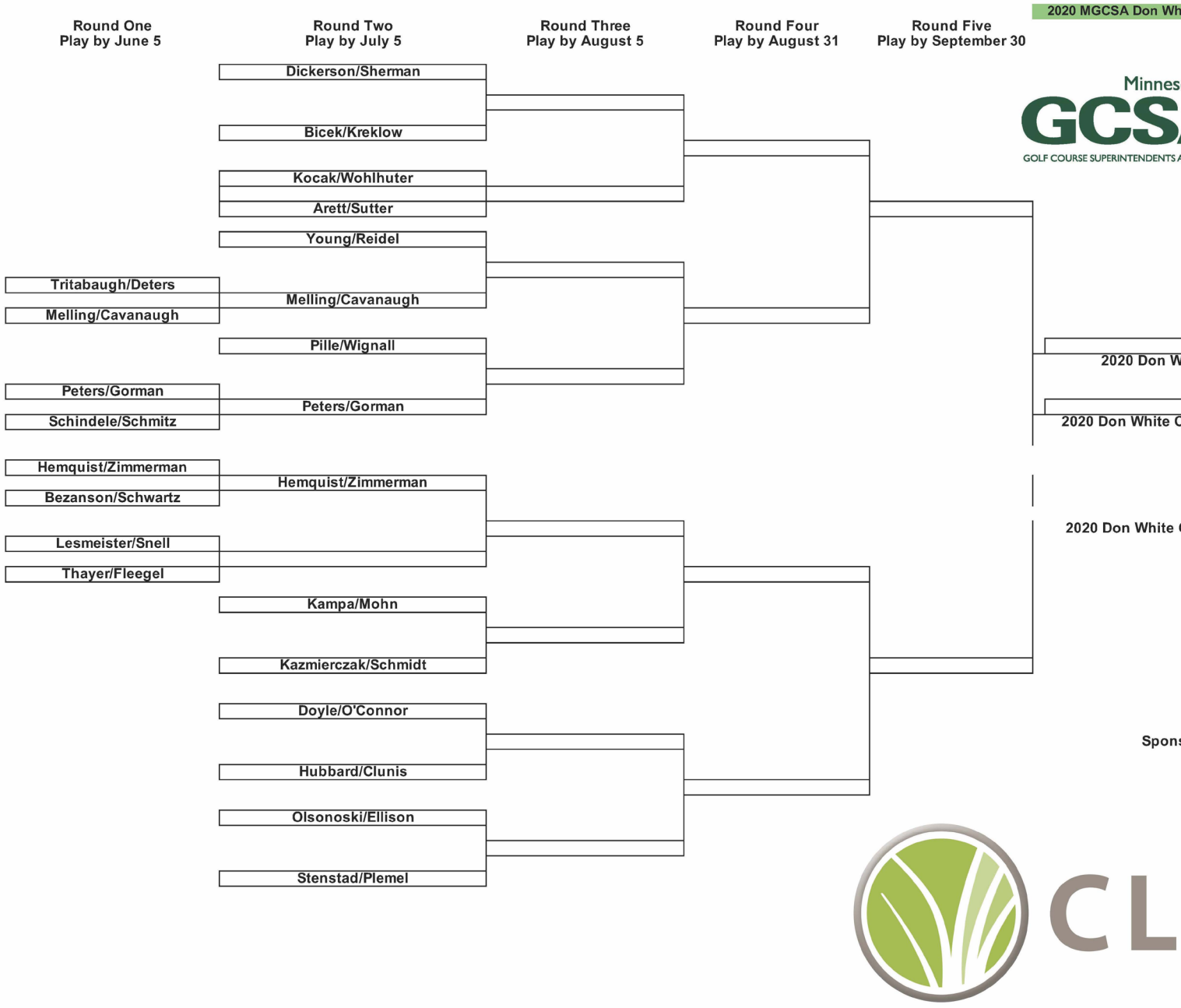
About 6 years ago, there was a thought to buy a couple storage containers to store the attachments for the tractors and the tractors themselves in order to get them out of the elements and extend the life of the equipment. Two forty-foot storage containers were purchased for $5,604. This idea worked out well and the way they were arranged originally, it created a screen from the neighboring eighth hole to hide the shop a little more from view.

Last year a great idea was suggested by the green staff to place the two containers adjacent to one another and add a covered

space between them. The containers were dragged parallel with each other and a twelve-foot space was constructed in between them. This ended up giving us 480 square feet of additional covered storage with access from each end of the structure.

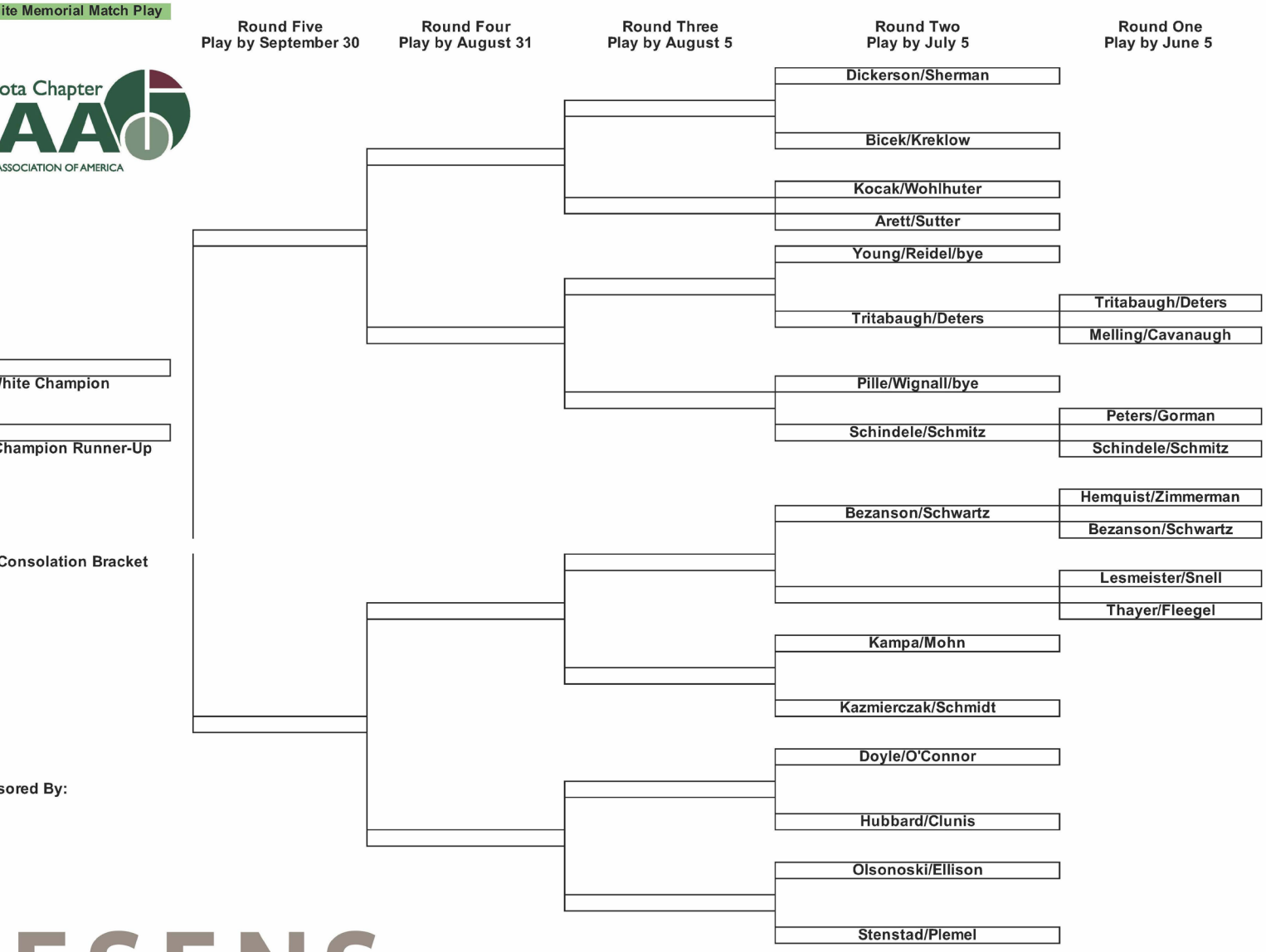
Another benefit to the idea of building a roof between storage containers is, it is not a permanent structure. Thus, no permit was necessary and they have the ability to be moved by just unbolting the roof from the containers and lowering the roof to the ground and then relocating the whole structure. The roof was built with the assistance of the owners who had construction experience and the total cost of materials and labor to increase our covered storage space was around $5,000.

Oh, and I need to mention, it looks terrific!


2020 MGCSA Don Wh
Round One
Play by June 5
Round Two
Play by July 5
Round Three
Play by August 5
Round Four
Play by August 31
Round Five
Play by September 30
Dickerson/Sherman
Bicek/Kreklow
Kocak/Wohlhuter
Arett/Sutter
Young/Reidel
Tritabaugh/Deters
Melling/Cavanaugh
Melling/Cavanaugh
Pille/Wignall
Peters/Gorman
Peters/Gorman
Schindele/Schmitz
Hemquist/Zimmerman
Hemquist/Zimmerman
Bezanson/Schwartz
Lesmeister/Snell
Thayer/Fleegel
Kampa/Mohn
Kazmierczak/Schmidt
Doyle/O'Connor
Hubbard/Clunis
Olsonoski/Ellison
Stenstad/Plemel
Minnes
GCS
GOLF COURSE SUPERINTENDENTS A
2020 Don W
2020 Don White C
2020 Don White
Spons
CL

ite Memorial Match Play

ota Chapter
AA
ASSOCIATION OF AMERICA




/hite Champion

Champion Runner-Up

Consolation Bracket

sored By:

ESENS

# 2019 In Review: Turfgrass Diagnostic Lab University of Wisconsin

**By Kurt Hockemeyer, Research/Teaching Staff UW Madison**

2019 is behind us. One of the things that I look forward to at the flip of the calendar is looking back at the previous year and analyzing what samples came into the TDL. I find it very interesting, because there are always a couple of cool tidbits that can be gleaned from looking back like this. Even if it is only something that I use internally in managing the diagnostic lab. So here I will share with you parts of my analysis generated from looking back to last season.

In 2019, I received 331 sample submissions from all over the Midwest and across the country as well (Figure 1). Samples came from as far east


DON'T SPRAY BLIND!

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


TDL TURFGRASS DIAGNOSTIC LAB

THE UNIVERSITY of WISCONSIN MADISON

tdl.wisc.edu/contract-membership

608-845-2535



# CONSISTENT QUALITY
# RESPONSIVE DELIVERY

**PROUD TO BE A MINNESOTA FAMILY BUSINESS**

## WHO WE ARE

Plaisted Horticultural mixes contain highly sought after ingredients such as composted pine bark, peat and organic black soil. Providing Growers Mix, Greenhouse Mix, Total Garden Blend, Hemp Mix, Premium Garden Mix and custom blending available.

## SATISFIED CUSTOMERS

- Bachman's
- Baker Lake Nursery
- Cross Nursery
- Tangletown Gardens
- Twin Orchard Nursery
- Varty's Greenhouse

## SOIL EXPERTS

We custom blend using a computerized Accublender™, controlling quality & consistency.

## DELIVERY

Experienced drivers operate a fleet of more than 45 trucks. Our GPS locator helps us set the standard for the most responsive delivery in the 5-state area.

## CONTACT US

Phone : 763.441.1100
Email : info@plaistedccompanies.com
Web : plaistedcompanies.com
Fax : 763.441.7782

Plaisted Companies
INCORPORATED

P.O. BOX 332 • 11555 205th Avenue NW • Elk River, MN 55330
**Tel** 763.441.1100 • **Fax** 763.441.7782

**WE ARE SOIL EXPERTS**

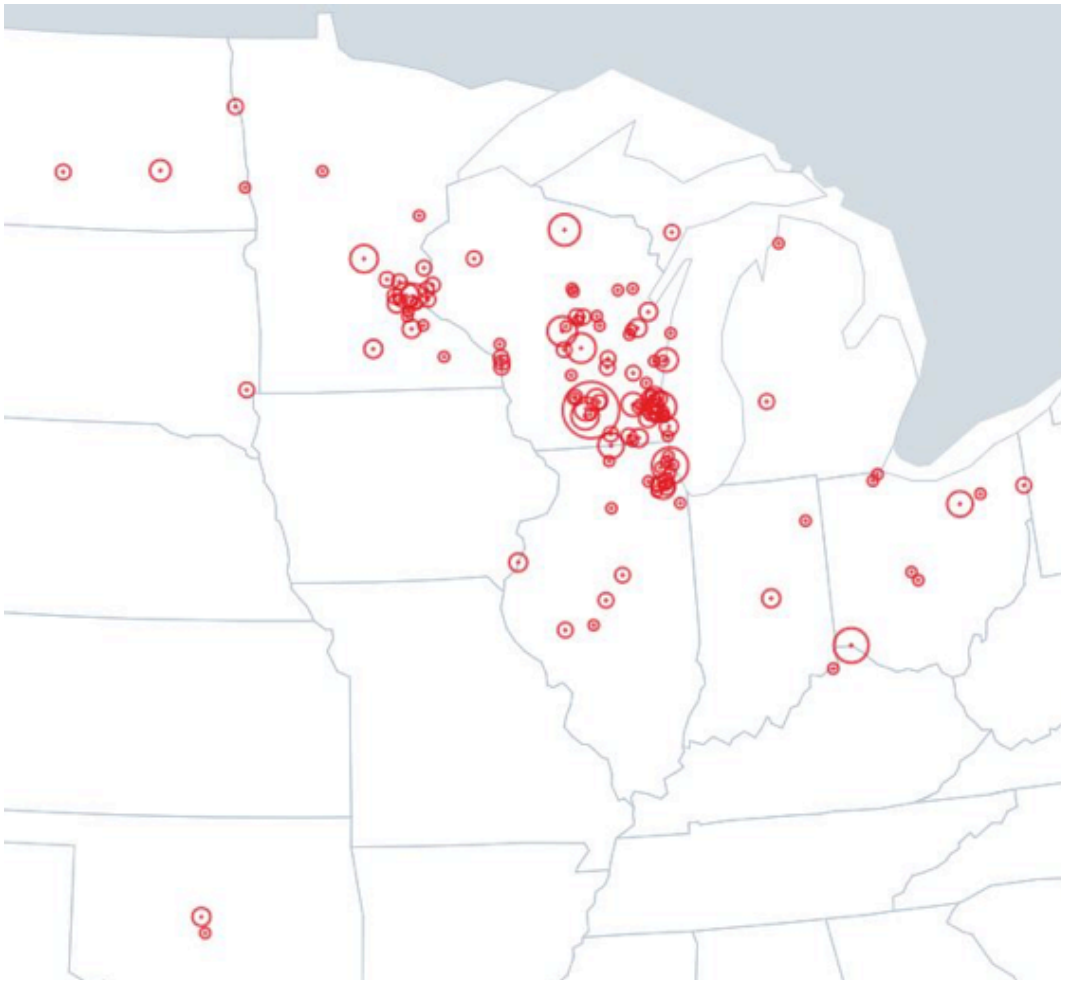


**Figure 1. A graphical representation of where in the US each of the TDL samples came from. Larger circles mean more samples came from that area.**

as eastern Ohio, and as far west as North Dakota. I always enjoy getting a sample from outside the Midwest because it can be very interesting. A few samples this past year came from Oklahoma, which is not normally part of our 'territory'. Most samples came from Wisconsin (55%), followed by Minnesota (15%), Illinois (13%), and Ohio (7%).

Nearly 180 of the sample submissions came from golf courses, which was over 50% of all samples. One of the interesting trends typically seen in the lab is that when the weather is wet, golf courses tend to send in more samples. And when the weather is dry, homeowners tend to send in more samples. Just like 2018, last year was very wet.

The wettest year on record for Wisconsin as a whole, and the 5th wettest in Madison. In addition to plenty of rainfall, I recorded one of the coolest springs in recent memory. I keep track of growing degree day accumulations to time some of our fungicide research sprays. I have data all the way back to 2011, and this spring was the slowest accu-

mulation of GDDs since before 2011.

But once we got past the cool spring, sample submissions were fairly straightforward. I did try to do something different this past year. Previously, if I could not find a disease in a sample, my official diagnosis would be "abiotic", meaning some type of abiotic factor (non-living, such as excessive shade, soil compaction, etc) was the main cause of decline. I added a second diagnosis when no disease could be found, and that diagnosis was unsurprisingly, "no disease found". I wanted this diagnosis to be used when I really had no idea why the turf was declining, because sometimes that happens. I am fairly confident that no disease is affecting the turf, but other than that I cannot pinpoint a specific reason for decline. And then on samples where I am almost positive that there is no disease, but I know that a giant shade tree is growing 10 ft south of this particular sward of turfgrass, I can be

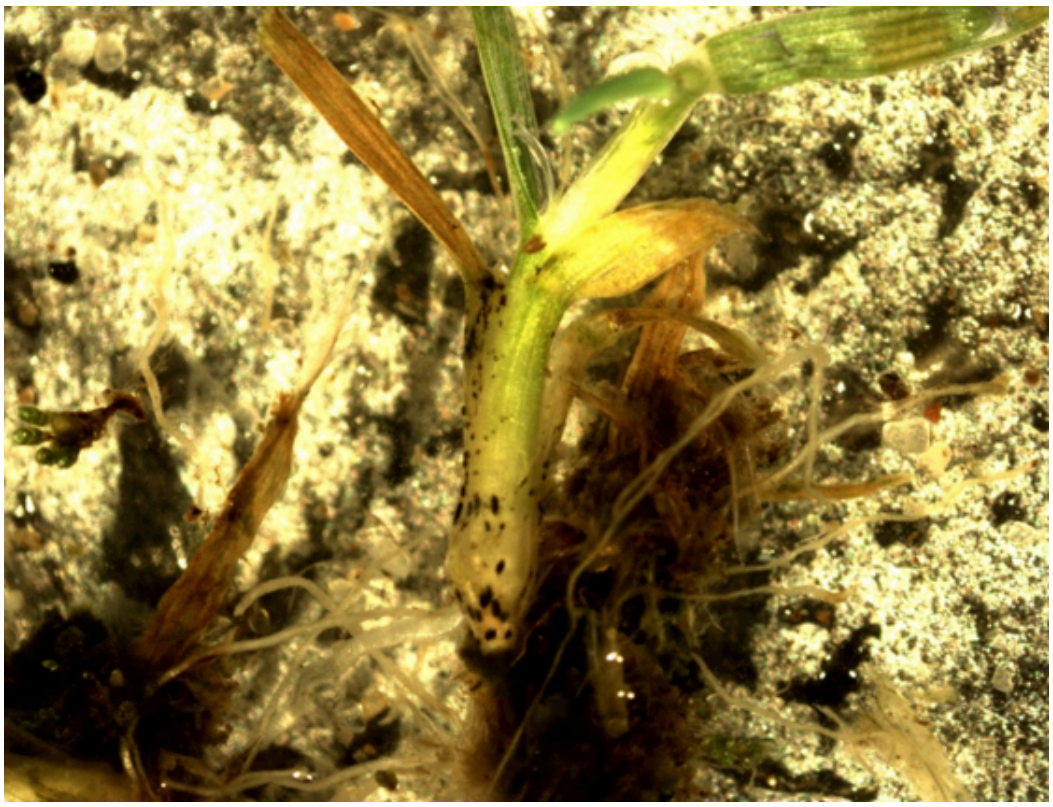


**Figure 2. Black fungal structures around the crown of a bentgrass plant indicates basal rot anthracnose infection.**

pretty certain that excessive shade might be a significant factor. Therefore, that sample would get an "abiotic" diagnosis. It is a subtle difference, but one I wanted to try out this year, emphasizing and to communicating subtle differences between samples.

Basal rot anthracnose was the #1 diagnosed disease by me in 2019. This does not mean that basal rot anthracnose is the most common disease, it was just the one that was sent to me the most. 99% of diseases are diagnosed on the spot and then a plan for treatment is made without any involvement from me. Only the samples that folks are not sure about are sent to me. Basal rot anthracnose is one of those diseases that you really need to dig down into the canopy and have some kind of magnification to confirm (Figure 2).

Gray leaf spot is a disease that was diagnosed by me in Wisconsin for the first time ever. That's a pretty big deal. We have to wait and see if it becomes a consistent, or even an inconsistent problem in the state. But with 2019 behind us, and now also wrapped up, I think all we can do is look forward.

To be able to look back at your mistakes, your successes, your experiences, and then be able to learn from them is an extremely valuable tool for personal and professional growth. So here's to your growth and cheers to 2020.

Kurt Hockemeyer
Turfgrass Diagnostic Lab Manager
608-845-2535
hockemeyer@wisc.edu
tdl.wisc.edu

***This article was first published in the January 2020 edition of the WGCSA magazine The Grassroots and reprinted with permission from the author. The MGCSA acknowledges the support received from our sister GCSAA Chapter and also the University of Wisconsin.***

*Thank you Affiliate Sponsors!!!*

# *Affiliate Spotlight:*
# Healthy Ponds by Bioverse


**Ponds** – a real asset to any property. When a pond comes into play on a golf course, it adds to the challenge.

However, if your pond is covered in algae, aquatic weeds, and it starts to smell, this asset becomes a headache. Fortunately, there are treatments available to solve any issue. The key to success is action. If there is a history of issues with a pond, you can be sure that when spring comes, so will the issues. Setting up a seasonal treatment plan and implementing the right approach will help keep the pond under control all year.

**Algae control** – If a pond has a history of algae issues, the best approach to control the algae is to complete a preventative algaecide application in the spring as the algae is emerging. Early control will reap

benefits as the season progresses. This application would be effective for all types of algae; Filamentous algae, Planktonic algae, and Chara. This writer would recommend using either CutrinePlus or Captain algaecide.

These products are chelated and provide excellent results. CutrinePlus is available in a granular application, which sometimes can be easier to apply vs. spraying. Apply algicide directly to the literal zone around the pond. (Literal Zone – shallow area 4 -6 feet around area of pond). This preventative application will thwart the beginning stages of the algae life cycle. To control the problem, it may require multiple applications based on the history of the algae issues. Also, additional applications will be necessary.

Planning a treatment schedule throughout the pond season will give best results.

**Aquatic weed control** - Like algae, if a pond has a history of aquatic weed issues, a preventative treatment application in the spring, when the weed is emerging, is the best practice. Aquatic weeds come in many forms, but there are generally three types of aquatic weeds: submerged, floating, and immersed. Each type of weed requires a different aquatic herbicide to control its growth.

Treatment starts first by determining what type of weed is in the pond, choosing the right product

or products to treat the issue, and applying the herbicide directly to the aquatic weed. There are many aquatic herbicides available. Click on the attached website for more info. https://srac.tamu.edu/fact-sheets/serve/161

**Biological maintenance treatment benefits**

Algae grows in a pond as the result of excess nutrients entering the pond from runoff. When you treat your pond with an algaecide, the algae dies and sinks to the bottom of the pond. Over time a sludge layer forms on the bottom. As the sludge layer expands a garden is created for algae to grow. Introducing a beneficial bacteria product, like the AquaSpherePro to the pond, will disrupt this life cycle. The bacteria consume the organic matter in the sludge layer, which reduces the excess nutrients. It is the excess nutrients that feed the algae. Healthy Ponds by Bioverse provides a variety of all-natural beneficial bacteria, biological products that have a history of proven results.

Healthy Ponds by Bioverse is proud to announce a partnership with SiteOne Landscape Supply. Many of the SiteOne store locations in the Twin Cities area have Healthy Ponds products available. SiteOne also has access to most of the aquatic herbicides recommend for any aquatic weed issues. For further assistance from SiteOne contact Brandon Young at (612) 749-3172 or call your local SiteOne store.

You can also contact Healthy Ponds support for professional help for any of your pond management needs. HP customer support (877) 948-0303 Hours: 8 a.m. to 4:45 pm (CST) M-F

Submitted by Mark Koepsell – Healthy Ponds by Bioverse

BIOVERSE®
NATURAL SOLUTIONS

# Meet the MGCSA

## JEFF JOHNSON

## THE MINIKAHDA CLUB

Interview by Joe Berggren

Public or Private: Private
Number of Holes: 18
Fulltime employees: 8
Seasonal employees: 24
Number of employees of entire facility at peak season: 200+
Types of grass: 007 bentgrass on Greens, Putter on Tees, Dominant Extreme 7 on Fairways
Total course acreage: 155
Greens acreage: 3 acres
Tee acreage: 1.9 acres
Fairway acreage: 31 acres
Rough acreage: 40 acres
Driving range acreage: 4 acres
Range tee acreage: 1 acre

***Personal Facts with Jeff***

*How many years have you been in your current position?* **I'm starting my 24th year at Minikahda and 19th as Superintendent.**

*How many years have you been in the turf industry?* **My first summer on a golf course was 1990 at St. Cloud Country Club working for Kerry Glader. It was also my internship. I had never worked on a golf course be-**

**fore, but decided this is what I wanted to do. It's crazy to think about. I took a leap of faith and 30 years later I'm still doing it.**

*Where else have you worked?* **After St. Cloud I spent four years at Midland Hills Country Club working for Scott Austin and I slipped away one summer to work at Crooked Stick Golf Club in Carmel, Indiana and worked for Chris Hague in 1993.**

*Turf School Attended (if any)?* **University of Minnesota, Waseca (too bad they closed the school), University of Minnesota, St. Paul Campus.**

***Industry Thoughts***

*What is one "master plan" thing you would like to change at your golf course?* **I helped the club complete a course restoration in '02-'03 and a re-grass project in '18 and now we are working on an updated Master Plan from Kyle Franz. About the only thing I would like to see during my time here is an updated maintenance facility, otherwise I feel we've almost done it all.**

*What concerns do you have the turf business and the future of golf?* **Currently I just hope many of the small courses can stay afloat. I hope they can keep going this year and, in the years to come.**

*What is needed to bring more young professionals into the industry?* **We need to introduce them to the business and show them what a great industry this really is. Yes, it can be a lot of work and the hours can be long, but it's also very rewarding and full of great people.**

*What piece of equipment do you want? Not a need, a want.* **I think a planetair would be cool to have or a new Toro hydroject. Anything that's about minimal disturbance I'm all for it.**

*In terms of industry costs (equipment, pesticides, labor, etc.) are they too*

*low, too high or just right?* **No comment.**

***FUN FACTS with Jeff***

*Have you ever met a celebrity? Who?* **No.**

*What is your favorite vacation spot?* **Siesta Key, Florida, or with any friends who have lake cabins.**

*What is your favorite memory of starting your turf career?* **The first day I was scheduled to start it was raining. There were only two of us that showed up and hung out in the shop until someone called and told us to go home. I guess everyone else knew we wouldn't be working. That wouldn't work now, there aren't many rain days, we've got too much work that needs to be done.**

*What is your favorite job on the golf course?* **Cutting cups or walk mowing greens.**

*What is your least favorite job on the golf course?* **Any job riding on a mower. I can't sit on a piece of equipment for too long when I know there are other jobs I could be doing. I feel trapped and get a little too anxious. I'll let the guys who enjoy those jobs do them.**

*Have you played any famous golf courses? Which ones?* **I've been very fortunate to play a number of great golf courses. Maybe too many to list.**

*Who is your dream foursome?* **That's easy, with some of my best friends, Chris Tritabaugh, Mike Manthey and Jake Schmitz. It's guaranteed good time.**


***Above: Triple Down!!! Four decade Class A MGCSA Member Marlow Hanson, Superintendent at Forest Hills Golf Club retires: 44 years at one club, on his own terms and having the entrance road to the Turf Management Center named after him. OUTSTANDING! Congratulations Marlow, best wishes on an exceptional retirement.***

# Beavers


**Although beavers provide many positive environmental values, they can also cause property damage.** Presently, beavers are abundant in Minnesota. To help landowners and others manage beaver damage, the Minnesota DNR offers the following information and advice.

## Methods for Exclusion and Damage Prevention

- In some situations, water levels in the beaver pond may be controlled by special devices such as the Clemson beaver pond leveler PDF. For information and technical assistance, contact your local DNR area wildlife office PDF. The levelers are no longer available from Minncor, but can be built using a few basic tools and information in the brochure.
- Protect individual trees in your yard by placing hardware cloth cylinders at least 30" tall around the base of the tree. Energized fencing can protect larger areas.
- Plant native evergreens such as common juniper (*Juniperus communis*) that beaver do not like or other shrubs that regrow after some beaver damage (i.e. red osier dogwood, pussy or prairie willow).
- Create a buffer strip of native vegetation suited to your location. Visit the Lakescaping Web page for additional help with your shoreland management.


## Removal Methods

In many cases, beaver damage cannot be effectively managed unless the offending beavers are removed (killed). Removing a dam without removing the resident beavers generally results in the dam being immediately rebuilt. To remove a beaver dam that is causing flooding, a permit is not needed if:

- Removal of the dam does not constitute work in Public Waters (contact your local DNR area hydrologist PDF for a determination).
- The dam is located on land owned or managed by the individual experiencing the flooding.
- If the dam is NOT on land owned or managed by the individual experiencing flooding and permission has been granted by the land owner or manager.
- Authorized by state statute (i.e. road authorities, drainage authorities).

**The DNR encourages property owners to work with local trappers to take beaver causing damage during the open trapping season.** No permit is needed for a licensed trapper during the

regular beaver season. Your local Conservation Officer or Area Wildlife Office may have names of local experienced trappers who may be willing to assist in trapping beaver for you. Fees, if any, will vary with seasons and individuals.

**No Permit is Required Minnesota Statute 97B.655** which allows a landowner or legal occupant (e.g., authorized renter), or their authorized agent, to shoot or trap beaver that are causing damage. No license or permit is required if all four of these conditions are met:

1. The landowner/occupant must have beaver damage to their property.
2. The landowner/occupant must authorize the removal.
3. The animal must be on that landowner's/occupant's property, where it is causing damage, at the time it is shot or trapped.
4. The person taking the beaver must notify the DNR within 24 hours, by following the Reporting Requirements listed below.

**The reporting requirements for a person who takes beaver causing damage, without a permit,** is they must contact the local DNR Conservation Officer or Area Wildlife staff within 24 hours of killing the beaver. It is sufficient to leave a message or e-mail the Information Center (link sends email) 1-888-MINNDNR stating your name, address, telephone number, the total number of beaver shot or trapped, along with a brief explanation of the damage and location the beaver was shot or trapped.

**A permit is required if the above conditions are not met.** This permit is issued by the local conservation officer or regional wildlife manager, is free, and authorizes beaver to be taken out of season and without a license. All federal, state, or local regulations apply. This permit does not allow trespassing, using poison, using artificial lights or the discharge of firearms or use of traps where prohibited. Live relocation of beavers is not allowed.

**Federal, state, county, township or local governmental employees**, while on duty as a representative of that government, do not need a permit while doing beaver removal on land under their jurisdiction.

- **Statute 97B.667 Removal of beaver dams and lodges by road authorities.** When a drainage watercourse is impaired by a beaver dam and the water damages, or threatens to damage a public road, the road authority, as defined in section 160.02, subdivision 25, may remove the impairment and any associated beaver lodge within 300 feet of the road.

DEPARTMENT OF NATURAL RESOURCES

# In Bounds

by Jack MacKenzie, CGCS

Three from the left, three from the top, chat room participant number eleven, we will call her Nordic, as the flowing, shiny blonde hair made me think of Sweden, caught a stray wisp of fine strands and, with well a practiced flare, placed the bounty behind her left ear. This obvious "Breck Girl" would, at the very least, provide a distraction during what was becoming the new protocol, The Business Virtual Meeting.

Four horizontal and four vertical, rectangular boxes made up "my queue set" for the next sixty minutes. Thirteen were occupied with live streaming video and three others were simple handset icons representing the shy, "call-in" participants. Perhaps they were on the road or multi-tasking, but it isn't beyond belief that they had just strolled from their bathrooms draped only in a towel. Thankfully practicing an additional layer of social distancing. On my screen, I was sequestered to a small postage stamp in the upper right-hand corner, barely visible to myself, but likely very apparent on the Brady Bunch board of Hollywood Squares.

Bed Head, the face in box number 14, either didn't give a darn or was very comfortably slipping into the "new normal". With locks a bit disheveled, it appeared that this thirty-something gal had just been called from the rugby scrum. Or perhaps some other physical activity. My meeting no longer had the potential of boring as I began to write down the very interesting and personal idiosyncrasies group-shared by my cohorts. This was going to be fun!


Page 48

Super Dad, Safe at Home parent, located in position 1/1, was quickly joined multiple times by children one and two of three. Each sharing forlorn interjections of, "are there more Cheerios, where is the milk, she spilt the milk, did not,…. DADDY!!!!". The group had its first official 'drop", likely caused by too much social interaction between one and two. At this point the viewing board shuffled but I will keep the identifiers the same to limit confusion in this discourse.

Dental Dan, named as such for the lime green dental pick he had begun using to extricate a bit of bone-in, take-out pork chop from the previous evening ten minutes into the meeting, had sequestered himself in a clean space with no paintings, windows corners, trim, openings or even a desk. Just an unusual head and shoulder shot accented with an infrequent sucking noise as some particular morsel was dislodged and consumed. Rather yuck.

Equally scary, Nordic has now been renamed as Nordic Sorcerer as a transient waif shuts off the back lighting behind her and her face now bobs in ambient light captured by the lens of her computer. The Breck Girl, now leaning far in, has become a semi-fluorescent glow in sepia reddish-brown color, is ghostly and rather ghoulish. In my mind's eye, she would appear right at home with a scepter in hand.

Mr. Coffee, I can't believe how many drinks he took from his mug, may shortly be departing for a bit to use the rest room. Or perhaps he utilized the business meeting Uribag or was capable of something I can no longer do with comfort… hold it for a very long period of time. His contribution to the gathering was a creative power point shared on cut out Amazon Prime boxes. Professional!

Please, please don't misunderstand my meandering, I really did get a bit of information from the meeting.


Page 49

Our facilitator, place holder sixteen, lead with updates and future considerations. He was professional in appearance and demeanor. His technology, a well-practiced screen switch to actual Power Point, including video, was well actuated and relevant to the discussion and everyone was focused and assuredly impressed.

Except for our two Generation Z's who were obviously having a sidebar text conversation about Tighty Whitey, a very robust and mature male sporting a brilliant white T-shirt, and I fearfully suspect, not much more in the swimsuit area. Could this be the beginning of a new and perverse prurient fetish!???


***Above: Obviously NOT the latest meeting I attended! However all participants seem to be attending the meeting and not distracted.***


Page 50

Are there no rules? Whoops, Bed Head has now been joined by her jet-black labradoodle. A giant of an animal, he has taken up a rather bulky position in Bed Head's lap and forced her to rearrange herself. I ask again, are there no rules to this suddenly common means of distanced conversations?

Please consider the following recommendations for the sake of your viewers:

1) Chinese finger cuffs to limit nose picking and inappropriate touching.
2) No foreign objects in your mouth, this includes dental floss, gum and food, especially powdered sugar donuts.
3) Sequester your children and pets which may be one and the same.
4) If your image is not on the screen, consider using your smart phone and share a continuous mirror image of yourself so you consciously know what your subconscious is doing.
5) Check your lighting to enhance your handsome mug.
6) Use exciting backgrounds so people don't think you are a bore.
7) Stay focused on the meeting, it will be over soon, but your impression may be lasting upon the other participants.
8) Remember that you are "in their faces" and everything is open for speculation, everything.
9) The advent of recorded meetings mandates that you stay awake.
10) No adjustments on screen, simply mute and or shut of your video momentarily to make any personal corrections.
11) Use the "call-in" option if you must. Mute please, as often times, call-in participants feel very comfortable with their anonymity, perhaps too comfortable!

Wait, wait, Dental Dan just pulled out the box of Q-tips…. "Oh the humanity!"


Page 51