

## INSIDE THIS ISSUE

35th Conference and Trade Show  
Page 3-11

2019 Scholarship Application  
Page 12

MGCSA Outreach at Crookston  
Page 13

Golf Tournament Recap  
Page 14

Chemical De-icer Safety on  
Putting Greens  
Page 15-16

Pesticide Recertification  
Page 18



**NCTGA**  
NORTH CENTRAL TURF GRASS ASSOCIATION

# TALKING TURF

## NORTH CENTRAL TURF GRASS ASSOCIATION

Fall 2019

## President's Message

By Victor Heitkamp

Greetings! I hope this message finds you doing well as we begin another transition from the end of one season into the beginning of a new one. I know for many our facilities have been closed for a while now and the struggles of getting things done have been challenging on levels many of us have never faced before. We are a resilient group of people and we continue grinding through making sure we get all the things done that need to be done before winter is here to stay.

I have some highlights and updates I would like to mention. Bemidji Town and Country Club was host to this year's Annual Scholarship and Education Golf Outing. Thank you to Tom Johanns and the entire crew at the club for making our day so spectacular. The golf course was in fabulous condition and a definite must play if you have never had a chance to play. A special thank you to our great vendors who continue to sponsor this event and the organization; MTI, lunch sponsor; Bayer, dinner sponsor; The Tessman Company, bus sponsor; and all those who sponsored a golf hole. Thank you to the vendors who brought out equipment for the group to demo and take out on the course for a little test spin again this year. We continue to look for things that add to the value of this event and the equipment demo has been well received. The board is always looking for ideas that are meaningful for you so

please let us know if there is something you would like to see. The board and golf committee have already started planning the 2020 golf outing so stay tuned for more details to come.

A quick update on North Dakota's BMP's; the committee met in Fargo on October 8 with Stacey from Kingsbury Consulting and we spent the day going over the first draft providing comments and feedback. Stacey took this information back with her and just this past week sent the committee the revisions she made from the first draft. Things are coming together fast and we are still hopeful to meet our target to complete this project by the 2020 conference. There will be a point during the final draft where we will need your help. Garrett Schultz, Committee Chair, will be in touch with the details and the timeline, so keep an eye out for an email coming from him, this will be your opportunity to provide feedback and make sure we aren't missing anything in this critical document.

The 2020 Conference and Trade Show is right around the corner. I don't want to spend a lot of time writing about the upcoming conference, there is a lot of information already provided in this issue, but I do want to spark a little excitement about this year's conference...

Continued on page 2...

## President's Message

Continued from page 1...

and trade show. We have a great line up of speakers and the board, committee and Sam have been working extremely hard to make this a great educational opportunity for all the members. I think they hit this one out of the ballpark. Make sure to mark your calendars and I look forward to seeing you at the show.

The Holiday Season is right around the corner and on behalf of the Board of Directors I would like to wish you a festive holiday season with family and friends; Happy Thanksgiving, Merry Christmas and Best Wishes to the New Year!

- Victor

REGISTER NOW



35th Annual Conference and  
Trade Show

Holiday Inn

Fargo, North Dakota

February 25th-27th, 2019



2018

3150 27TH AVE. N  
GRAND FORKS, ND 58203

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

Turf Seed • Lawn Seed • Native Grass Seed •  
Hydro Mulch • T&O Fertilizer & Chemical • Ice Melter



TOLL FREE: 800-731-5765

Mike Kaul: 218-779-2543 [mike@rivards.com](mailto:mike@rivards.com)

Outside Sales

Larry Rivard: 218-779-1214 [larry@rivards.com](mailto:larry@rivards.com)

Turf Seed

Ross Rivard: 701-330-3699 [ross@rivards.com](mailto:ross@rivards.com)

Native/Forage/Specialty Seed

# 35th Annual Conference and Trade Show

Join us for the 35th Annual NCTGA Conference and Trade Show from  
February 25th-27th, 2020 at the Holiday Inn in Fargo, ND

Register at: [nctga.net/conference](http://nctga.net/conference)

## Schedule at a Glance

### Tuesday, February 25th

11:00am - 12:00pm: Registration and Networking

12:00pm - 12:30pm: Opening Remarks

12:30pm - 1:00pm: North Dakota BMP Initiative  
(Garrett Schultz, Steve Randall)

1:00pm - 2:00pm: A Decade at Target Field  
(Larry Divito, MN Twins)

2:00pm - 3:00pm: Purchasing New Products and  
Technologies (Dr. Aaron Patton, Purdue)

3:00pm - 4:00pm: Bully Pulpit Restoration and Ren-  
ovation Project (Kyle Fick)

4:00pm - 8:00pm: Trade Show/Social

### Wednesday, February 26th

7:00am - 7:30am: Registration and Networking

7:30am - 9:00am: Golf Course Renovation Panel  
(moderator: Matt Cavanaugh, Rush Creek)

7:30am - 9:00am: Why Your Crabgrass Control Pro-  
gram Isn't Working (Dr. Aaron Patton, Purdue)

9:00am - 11:30am: Trade Show

11:30am - 12:15pm: NCTGA Annual Meeting

12:15pm - 1:00pm: Lunch

### Wednesday, February 26th cont'd

1:00pm - 3:00pm: Tee it Forward and 36 Years of  
Turf Tips (Larry Gilhuly, retired USGA)

1:00pm - 3:00pm: Turfgrass Breeding and Variety  
Selection for Lawns/Sports (Dr. Eric Watkins, UMN)

3:00pm - 5:00pm: Golf Course Operational Organi-  
zation and Staffing (Roger Stewart, retired TPC)

3:00pm - 4:00pm: Tree Selection, Planting, and  
Maintenance (Sam DeMarais, Fargo Parks)

4:00pm - 5:00pm: Soil and Fertility Management  
for Lawns (Dr. Kristina Walker, UMN-Crookston)

5:00pm - 7:00pm: Social/Silent Auction/Raffle

### Thursday, February 27th

7:00am - 7:30am: Registration and Networking

7:30am - 9:00am: Vendor Seminars- New Product  
Updates

9:00am - 11:30am: The Five Levels of Leadership  
(Steve Keating, Lead Today)

12:00pm - 3:00pm: NCTGA Board Meeting

*\*Conference pricing remains unchanged from last  
year and includes your 2020 NCTGA membership  
dues*

Register at: [nctga.net/conference](http://nctga.net/conference)





**A family-owned company  
serving the green industry since 1950.**

- Aquatics
- Fungicides
- Herbicides
- Landscape Supplies
- Insecticides
- Fertilizers
- Grass Seed
- Golf Accessories

**The Tessman Company has the products,  
knowledge and service for all  
your turf supply needs.**

**St. Paul, MN**

1300 Sylvan St.  
St. Paul, MN 55117  
Phone: (651) 487-3850  
Fax: (651) 487-3115

**Fargo, ND**

610 39th St. N  
Fargo, ND 58102  
Phone: (701) 232-7238  
Fax: (701) 232-7278

**Tea, SD**

46954 Mindy St.  
Tea, SD 57064  
Phone: (605) 368-2586  
Fax: (605) 368-2809



## 35th Annual Conference and Trade Show

### Speaker Spotlight: Tuesday, February 25th

#### **Garrett Schultz**

##### **Golf Course Superintendent Mandan Park District**

Garrett Schultz is the Golf Superintendent for the Mandan Park District, where he oversees operations at Prairie West Golf Club and Mandan Municipal Golf Course. Schultz, a native of New Salem, North Dakota, is a 2011 graduate from North Dakota State University with a degree in Sports and Urban Turfgrass Management. Garrett has served on the Board of Directors for the North Central Turfgrass Association since 2017. For the past year, Schultz has taken on the role of Chairperson for the development of a Best Management Practices guideline for the state of North Dakota Golf Courses. The BMP Committee is thrilled to present the finished product, and hopes this guideline can be utilized to improve course conditions and environmental stewardship at golf facilities throughout the state.



#### **Steve Randall**

##### **Director of Chapter Outreach Golf Course Superintendent's Association of America**

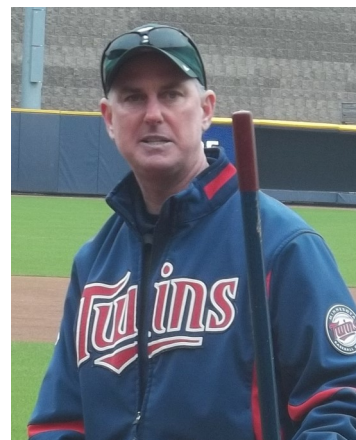
Randall, a native of Wahpeton, ND, received his bachelor's degree in business/communications from St. John's University in Minnesota and a masters degree in mass communications from the University of South Dakota. Randall has worked in golf administration since 1993 when he was asked to coach the South Dakota State University men's and women's golf teams while working in the sports information department. Randall also worked for four years at the Minnesota Golf Association in junior golf, media relations and regional affairs and was the executive director of the Sun Country Amateur Golf Association (the regional golf association for New Mexico and West Texas) prior to joining GCSAA.



#### **Larry Divito**

##### **Head Groundskeeper Minnesota Twins Baseball Club**

As Head Groundskeeper for the Minnesota Twins Baseball Club, Larry DiVito begins his twenty-sixth season in professional baseball in 2020. Beginning as Head Groundskeeper for the AAA Pawtucket Red Sox in 1995, Larry spent seven seasons with that minor league club. In 2002, he moved to Dodger Stadium as Assistant Groundskeeper. After four seasons with the Dodgers, Larry was named Head Groundskeeper for the Washington Nationals in 2006. In his three seasons there, he was involved with the building of Nationals Park, which opened in 2008. Larry moved to Minnesota in 2009 to be a contributor to the construction of Target Field. He helped open Target Field for the Twins in 2010. As a member of the Sports Turf Managers Association, Larry spent three years on the Board of Directors from 2008-10, representing Facilities Used by Professional Athletes.





## 35th Annual Conference and Trade Show

### Speaker Spotlight: Tuesday, February 25th continued

#### **Dr. Aaron Patton**

#### **Professor of Horticulture Purdue University**

Dr. Patton's primary responsibility is to develop and deliver educational programs to the turfgrass industry of Indiana and the Midwest. Therefore, he is also actively involved in applied research and helps to maintain a high quality undergraduate program. As part of the Purdue Turf Team, Dr. Patton fills a role as a leader of the applied research and Extension/outreach efforts. Dr. Patton is also Executive Director of the [Midwest Regional Turf Foundation \(MRTF\)](#), which was created in 1945 with the mission of supporting turfgrass research, Extension programming, and education at Purdue University. Dr. Cale Bigelow serves as the Associate Director for the MRTF. Together, Drs. Patton and Bigelow are responsible for all operations of the MRTF, including day-to-day management, educational programming, membership recruitment, budgeting, and fundraising.



#### **Kyle Fick**

#### **Golf Course Superintendent Bully Pulpit Golf Course**

A native of Ashby MN and a graduate from the University of Minnesota-Twin Cities in 2003 with a BS in Environmental Horticulture where Kyle emphasized my curriculum to Landscape Design and Implementation as well as Turf Management. Kyle's first role in golf was at Superior National at Lutsen following graduation as I was figuring out if Golf or Landscaping was my career path of choice. I found a career in golf would offer me the path more suitable to my personality. I proceeded to move to a re-build project at Stalker Lake Golf Course in Dalton MN for some construction experience. Following 2 years of construction and grow in, I moved to Medora ND to work at a fairly new property, Bully Pulpit GC, where I've lived and played in the Badlands since 2006.



## HERFORD NORBY GOLF COURSE ARCHITECTS

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

## 35th Annual Conference and Trade Show

Speaker Spotlight: Wednesday, February 26th

# Panel Discussion: Golf Course Renovation

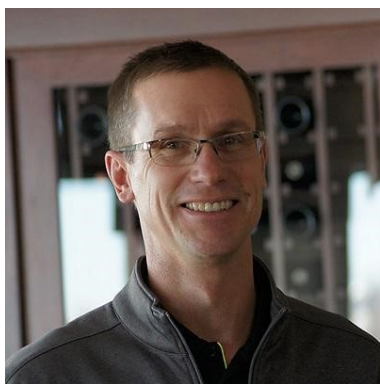
## 7:30am to 9:00am



Moderator: Matt Cavanaugh  
Rush Creek GC

Considering a new project and need ideas? What kind of projects should you consider completing in-house? When is it important to consult a golf course architect or turfgrass consultant?

Join moderator Matt Cavanaugh as he asks these questions and many others to our expert panel members who have intimate experience with golf course renovations. Bring your own questions for the panel to answer. This session is sure to be a hit!



David Wood  
Oxbow CC



Kevin Norby  
Herfort Norby Architects



Mark Michalski  
TPC Twin Cities



Kyle Fick Bully  
Pulpit GC



Roger Stewart  
Stewart Consulting





Using real-time diagnostics to  
prevent real-big problems.  
That's intelligent.



## Defend your turf with Ferguson Waterworks and Rain Bird

With an intelligent control module built into every rotor, the Rain Bird® IC System™ provides real-time diagnostics and single-head control. From running instant pass/fail tests and voltage checks to quickly controlling individual rotors from anywhere, you have the power to defend your turf with Rain Bird.

**FERGUSON®**  
WATERWORKS



Craig Vigen – CGCS  
Sales Representative  
(701) 205-8456

Bismarck, ND

Blaine, MN

Fargo, ND

Superior, WI



## 35th Annual Conference and Trade Show

### Speaker Spotlight: Wednesday, February 26th

#### **Larry Gilhuly**

##### **Agronomist**

##### **Gilhuly Golf Consulting**

Gilhuly has been associated with the game of golf since 1958 as a player, caddie and golf course maintenance worker. After receiving a Chick Evans Scholarship for Caddies in 1970, he earned a Bachelor of Science degree in agronomy and turf science from Washington State University. After college, he worked as the assistant superintendent at Seattle Golf Club from 1975-1983. He joined the USGA Green Section in 1983 and retired in 2019 after visiting thousands of golf courses in the western U.S. and Canada, Gilhuly currently provides agronomic advice to golf courses with a primary interest in educating all on the correct construction and location of forward tees.



#### **Dr. Eric Watkins**

##### **Professor**

##### **University of Minnesota- Twin Cities**

Eric Watkins's research focuses on the development of low-input, winter-hardy turfgrass cultivars for use in cold climates. Research activities involve germplasm improvement of several cool-season turfgrass species including perennial ryegrass, Kentucky bluegrass, tall fescue, hard fescue, sheep fescue, and the native grass *Koeleria macrantha*. He also evaluates grasses for use on roadsides in the northern United States. Watkins received his Ph.D. in plant biology from Rutgers University in 2004 and received a B.Sc. in agriculture from the University of Minnesota in 1998. Watkins has been on the faculty of the Department of Horticultural Science since 2004, where he teaches a number of undergraduate courses.



#### **Roger Stewart**

##### **Golf Course Consultant**

##### **Stewart Golf Consulting**

Roger has a B.S. Degree in Agronomy from the University of Nebraska and retired after 42 years as a Golf Course Superintendent. He was a Golf Course Superintendent for 21 years with the TPC Network. He is the Past President of four GCSAA Affiliated Chapters. He is a past recipient of the Presidents Award for Environmental Stewardship from GCSAA. Roger has been an instructor for GCSAA since 1983 and has taught turfgrass management courses at the junior college level. Roger has hosted 17 PGA TOUR Champions events and has received the award for the "Highest PGA TOUR Champions Player Rating for Course Conditioning" 5 times. Roger currently resides in Naperville, IL where he has a small golf course consulting business and occasionally does contract work for various companies in the golf course management and turfgrass management business.



## 35th Annual Conference and Trade Show

### Speaker Spotlight: Wednesday, February 26th

#### **Sam DeMarais**

#### **Park Forester**

#### **Fargo Park District**

Sam DeMarais, Park Forester for the Fargo Park District. I have been working in Forestry since 2007. I went to NDSU and have a degree in Urban Forestry. In 2018 obtained a Board Certified Master Arborist certification through International Society of Arboriculture. In my spare time I enjoy archery, hunting and spending time with my family at the lake in MN.



#### **Dr. Kristina Walker**

#### **Associate Professor of Agronomy**

#### **University of Minnesota- Crookston**

Dr. Kristie S. Walker is an Associate Professor of Agronomy in the Agriculture and Natural Resources Department at the University of Minnesota Crookston. She is the program lead for the Golf and Turf Management Program at U of M Crookston and teaches all courses related to turfgrass management and soil science. In addition, Dr. Walker is the advisor for the Turf Bowl Team, Turf Club, and the Soils Judging Team. Dr. Walker received her Ph.D. and M.S. from Purdue University in Agronomy specializing in turfgrass management and soil fertility. Her current research interests include: carbon footprint determination of golf courses, irrigation regimes that conserve water, nitrogen fertilization effects on above ground responses and soil nitrogen losses, and cultural management practices that reduce turfgrass wear and soil compaction.



## ***Superior Tech Products***

**Leading Edge Turfgrass Solutions**  
**Golf Courses | Sport Fields | Parks**

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

Nick 605-391-2435

Steve 320-760-0215



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





## 35th Annual Conference and Trade Show

Speaker Spotlight: Thursday, February 27th

**Steve Keating**

### **"The Five Levels of Leadership"**

**9:00am to 11:30am**



#### About Steve Keating

Recognized as a thought leader and authority on leadership he is an acclaimed and in demand presenter. He speaks dozens of times a year around the world on topics relating to leadership, sales, customer service, and business management. A 1977 Graduate of University of Minnesota, Steve is certified by Sales & Marketing Executives International as a Certified Professional Salesperson, Certified Sales Executive and Certified Marketing Executive.

“Authentic Servant Leaders grow more leaders and those leaders grow the business. They make the people around them better. They help ordinary people achieve extraordinary results. They know that their own success is completely dependent upon the success of their people”

# NCTGA & NDGA

## 2019 SCHOLARSHIP APPLICATION

DEADLINE: DECEMBER 31<sup>ST</sup>, 2019

The North Central Turfgrass Association and North Dakota Golf Association are offering scholarships to qualified applicants in golf course/turf management studies. This award will be administered and voted upon by the NCTGA Board of Directors Scholarship committee, and the recipient(s) of this Scholarship will be given his/her award at the NCTGA Annual Conference and Trade Show, February 25<sup>th</sup>-27<sup>th</sup>, 2020 at the Holiday Inn in Fargo, ND. Hotel accommodations will be provided if necessary. Individual award amount to be determined by the number of qualified applicants.

Applications and references must be postmarked by December 31<sup>st</sup>, 2019. Electronic submissions can be emailed to: Sam Bauer, NCTGA Executive Director: [info.nctga@gmail.com](mailto:info.nctga@gmail.com)

Please include the following with your application:

- Resume
- Statement of Professional Future Goals (ex: where do you see yourself five to ten years from now?)
- One letter of recommendation:
  - Professional
  - Scholastic
  - Or one of your choice

Please complete the following and return this application to:

North Central Turfgrass Association  
P.O. Box 10823  
Fargo, ND 58106  
Phone: 904-271-0250  
Email: [info.nctga@gmail.com](mailto:info.nctga@gmail.com)

Name: \_\_\_\_\_

Advisor: \_\_\_\_\_

School address and phone: \_\_\_\_\_

Year in school: \_\_\_\_\_

\_\_\_\_\_

Major: \_\_\_\_\_

Home address and phone: \_\_\_\_\_

Anticipated graduation date: \_\_\_\_\_

\_\_\_\_\_

G.P.A: \_\_\_\_\_

Email: \_\_\_\_\_



North Dakota Golf Association



## December 13th: MGCSA Outreach at Crookston



Join Your Peers for the:  
***2019 MGCSA Great North  
Winter Outreach and Forum***  
University of MN, Crookston, MN  
Hosted by Dr. Kristina Walker

**Friday, December 13, 2019**

- 8:00 - 8:30 Registration with coffee and donuts
- 8:30 - 8:35 Welcome, Jack MacKenzie MGCSA
- 8:35 - 9:45 Member Driven Research, Ryan Schwab, UMN
- 9:45 - 11:15 Drainage, getting water OFF, Judd Duininck, Duininck Golf
- 11:15 - 12:00 Glyphosate and Advocacy, Jack MacKenzie, MGCSA
- 12:00 - 12:45 Gourmet Lunch
- 12:45 - 2:30 ? Open Turf Forum: Horror/Success Stories



**WINFIELD<sup>®</sup>  
UNITED**

**Cost is \$25 per person includes meals, education and forum**  
**RSVP Requested by December 6th please**  
**All area members and non-members are welcome**

To Participate register on-line or Contact:  
Jack MacKenzie, Executive Director, MGCSA [jack@mgcsa.org](mailto:jack@mgcsa.org)

## 2019 Scholarship Golf Tournament Recap



The 2019 NCTGA Scholarship Golf Tournament and Field Day was a great success! Over 40 NCTGA members played golf and participated in the events throughout the day at the Bemidji Town and Country Club in Bemidji, MN. Golf Course Superintendent Tom Johanns and his staff had the course in superb conditions for the event. A special thanks goes out to Tom and all of the staff at Bemidji Town and Country Club for making our day such and enjoyable experience. Thank you to all the sponsors for this event, including: charter sponsors, lunch and dinner sponsors, hole sponsors, and registration sponsors; without you this event could not happen! THANK YOU!!!



1124 Main Ave W  
West Fargo, ND 58078

Phone: (701) 281-9418

Fax: (701) 281-1217

info@ktirrigation.com

**James Wolsky**

Sales /Service Cell: (701) 793-3872

Irrigation Pumping Solutions



**First Flight Winners:** Brad Klein (Northern Turf Services) and Justin Giles (Fargo CC)

**Second Flight Winners:** Victor Heitkamp (Fargo Parks), Matt Schmid (Superior Turf Services)

**Longest Drive:** Kyle Theil (Valley Golf Association)

**Longest Putt:** Victor Heitkamp (Fargo Parks)

**Closest to the Pin:** John Westereng (Mandan GC)





# Chemical de-icer safety on putting greens

## By Andrew Hollman, University of Minnesota

Minnesota experiences winter weather that can vary dramatically from year to year. The 2018 to 2019 winter started early and offered us ice, extremely cold temperatures, and record snowfall for the month of February. The impact that this has on turfgrass won't be evident until the snow melts and the grass begins to grow. The melt of the snow and regrowth of our research putting greens in the spring of 2011 presented us with grim view. In the fall of 2010, the Twin Cities had warm temperatures and over an inch of rain in late October. An unseasonable warm November had high temperatures in the mid-60s only days before over 8 inches of snow fell. With soil temperatures over 40F in the top 2 inches of soil and warmer temperatures below that, it quickly melted to only a couple inches, but never disappeared completely. Added rain and snow created depths that were up to 24 inches at times and covered the ground until the beginning of April. After 139 days of cover over an unfrozen soil, large sections of our bentgrass putting green appeared to have been severely damaged (Figure 1).

The damage that was experienced wasn't unique to our research site. Superintendents reported similar damage on uncovered and covered greens. On some greens with impermeable covers, circles of surviving grass surrounded the metal spikes used to secure the covers. We suspected that the spikes created channels for gas exchange, allowing the grass in the vicinity to survive.

Predicting whether ice will cause damage on a putting green is difficult because the conditions under which ice forms, duration of ice cover, species and cultivars all play a part in the potential for ice to be deleterious. Superintendents may choose to remove ice. If ice removal is deemed necessary, mechanical removal is time and labor intensive, and conditions might make certain areas inaccessible. Care also must be taken to ensure the surface below the ice is not damaged. If temperatures and solar radiation are sufficient, another option is to spread dark material on the ice surface to passively melt the ice. If the first two options aren't feasible, could a third option be to use chemical de-icers?

If you have lived in or driven through a state that uses de-icing chemicals, you have probably seen the damage that salt (sodium chloride) can do to surrounding surfaces or plants. There are a number of different types of de-icers out there that provide different chemicals to deal with ice depending on factors such as temperature, ice thickness, and safety to surfaces, pets, or the environment. Some of them even have names which allude to their safety.



Ice melt products applied to research green in the late-winter at the University of Minnesota

We wondered whether any of these products could safely be used to melt ice on a putting green or create holes and allow gas exchange. From the marketing information, claims were made on pet safety because they lacked salts which can cause irritation on contact or harm with ingestion. Some of the products also claimed they were gentle on the environment and could even promote growth and vigor for most landscape plants. With closer examination of the active ingredients, we found that many of the products aimed at pet owners were urea based. A larger surprise was that over 12 pounds of nitrogen per 1000ft<sup>2</sup> is applied with a single application at the recommend rate. Since this is well over the recommended application rate for water soluble fertilizers, we had some concerns with the potential damage that it could cause.

Continued on page 16...

## Chemical de-icer safety on putting greens

Continued from page 15...

We conducted preliminary trials with 2-inch-thick man-made blocks of ice placed over ice-free putting green surface in March of 2014. All of the chemical products were able to create holes through the ice. When the temperatures warmed up and the grass began to grow, there wasn't any damage to the turf, but there were large patches of lush green grass we attributed to the nitrogen in the urea-based products which was diluted with melt water enough to prevent damage. Although these preliminary results were promising, we needed more information to determine whether these products might cause injury if the conditions were different.

We set up two more trials to examine the effect these chemical de-icers have on an ice-free native (silt loam soil) and USGA (sand based) L-93 creeping bentgrass putting green. We chose an ice-free surface to account for potential damage these products could have if application of products encountered ice-free areas because of topography, variation in ice depth or inadvertent application. The trials were carried out in March 2014 and March 2015 and plots were rated for damage through June of the trial year.

In 2014 and 2015 on the native and USGA green, phytotoxicity ratings for the urea-based products were significantly worse from the control (no de-icer) and the damage that was seen persisted well into the growing season. The phytotoxicity ratings for the non-urea-based de-icers were not significantly different than the untreated control in 2014 on either green. In 2015, differences were seen between the non-urea-based de-

icers and the untreated control on both greens (Figure 3). On the native green, differences from the control were seen right away in April. The only products at the labeled rate which were no longer significantly worse than the control for the June phytotoxicity ratings were potassium chloride and ammonium sulfate. On the USGA green, differences from the control were seen for all treatments in April but by June, only the labeled rate of magnesium chloride phytotoxicity ratings remained significantly worse than the untreated control.

The increased damage seen in 2015 over 2014 could have been caused by a week of temperatures above freezing prior to trial application, which may have led to actively growing plants encountering the de-icers. Differences between the two putting greens might have been because of differences in the ability of water to infiltrate and percolate through them. Water infiltration was likely quicker into the sandy soil of the USGA green leading to less exposure to de-icers before they could be flushed through. Although the preliminary results on ice blocks looked promising for non-urea based de-icers, the variability of performance between soil types and years along with potential for lasting damage, suggests caution in their use over ice-covered turf. Although urea based de-icers are marketed as "safer", the large amount of nitrogen applied for a single application means there is potential for these nutrients to move offsite and pollute waterways or cause excessive growth, and the lasting damage when applied to ice free turf make them a poor choice to melt ice over turf or on impervious surfaces.



Putting green damage into June from chemical de-icers applied in the late-winter.



## Do Your Best By Steve Keating (@leadtoday)

“Do your best.” I’ve received that advice so many times and for so long that I can’t remember when I first heard it or who I heard it from.

It’s not bad advice as far as it goes, it just doesn’t go far enough. If I were to advise you to “do your best” I would also advise you to have someone in your life to tell you if you’ve really done your best.

That’s because most people, myself included, often tell themselves they have put forth their best effort when they haven’t. They make compromises, they make excuses, they even flat-out lie to themselves.

If anyone is going to consistently do their best then they need someone in their life to hold them accountable. They need someone in their life to warn them away from compromises, excuses and telling themselves they did their best when they really could have done more. That person is most likely a mentor. It could be a close friend, a family member, a co-worker or maybe even someone you pay, like a certified coach

perhaps. Whoever it is you must trust that this person has your best interests in mind. They must be confident enough to be truthful with you and you must be confident enough to listen to them.

Sometimes your best effort won’t be good enough to accomplish what you want. Do your best anyway and do it again next time and the time after that too.

You deserve your best effort and you must be honest with yourself to get it. It also helps if you have someone close by to verify your honesty. When you do your best you may not always win but you will always be a winner.

You may find this hard to believe but in my experience the ultimate outcome matters less over time. The sting of defeat lessens over time but the disappointment in yourself for giving less than your best effort can actually grow with time. Don’t do that to yourself, always do your best and if that’s not good enough for someone else then that’s their problem, not yours.



We've Got You Covered

 **Exteris<sup>®</sup> Stressgard<sup>®</sup>**

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS

Bayer Environmental Science, a Division of Bayer CropScience LP, 5000 CentreGreen Way, Suite 400, Cary, NC 27513. For additional product information, call toll-free 1-800-331-2867. [environmentalscience.bayer.us](http://environmentalscience.bayer.us). Not all products are registered in all states. Bayer, the Bayer Cross, Exteris and Stressgard are registered trademarks of Bayer. ©2019 Bayer CropScience ES-0519-EXT-0046-A-1

# 2020 Pesticide Recertification Opportunities

**2019-2020 Pesticide Training Schedule**  
**Ground & Aerial/Ground Core**  
**Ornamental & Turf and Greenhouse Categories**  
**Register at: <https://tinyurl.com/ndsupesticide>**

Training Date	Location	Time	Pre-Reg Deadline
Oct. 31, 2019	<u>Bismarck</u> , Bismarck Career Academy/Bis Pub Sch 1221 College Dr./BSC Campus	Registration 8:00 am Training 8:30 am - 4:00 pm	10/22/2019
	<u>Minot</u> , North Central Research Extension Center 5400 Highway 83 S	Registration 8:00 am Training 8:30 am - 4:00 pm	
	<u>Devils Lake</u> , Ramsey County Extension 524 4th Ave NE #5	Registration 8:00 am Training 8:30 am - 4:00 pm	
	<u>Horace</u> , Horace Community Center 214 Thue Court	Registration 8:00 am Training 8:30 am - 4:00 pm	
Jan. 29, 2020	<u>Fargo</u> , NDSU Skills & Tech Training Center 1305 19th Ave N	Registration 8:00 am Training 8:30 am - 4:00 pm	1/26/2020
Feb. 28, 2020	<u>Fargo</u> , NDSU Skills & Tech Training Center 1305 19th Ave N	Registration 8:00 am Training 8:30 am - 4:00 pm	2/25/2020
Mar. 24, 2020	<u>Mandan</u> , Morton County Extension 210 2nd Ave NW	Registration 8:30 am Training 9:00 am - 4:30 pm	3/12/2020
	<u>Grand Forks</u> , Grand Forks County Extension 151 S 4th St. Suite 302	Registration 8:30 am Training 9:00 am - 4:30 pm	
	<u>Manning</u> , Dunn County Extension 205 Owens St.	Registration 7:30 am (MT) Training 8:00 am - 3:30 pm	
	<u>Minot</u> , North Central Research Extension Center 5400 Highway 83 S	Registration 8:30 am Training 9:00 am - 4:30 pm	
	<u>Fargo</u> , NDSU/AES Research Greenhouse Complex, 1440 18th St N	Registration 8:30 am Training 9:00 am - 4:30 pm	
	<u>Williston</u> , Broadway Commons Building 205 E Broadway	Registration 8:30 am Training 9:00 am - 4:30 pm	

**Preregistration is required**

**\*\*Telephone registrations not accepted\*\***

**If you need accommodations for hearing impairment,  
 please contact us at least 45 days before the training date  
 to allow us to obtain services.**



## NCTGA Board of Directors

**Victor Heitkamp**

President

Fargo Park District

**Cammi Campbell**

Vice President

Minot Park District

**Kevin Gruber**

Secretary/Treasurer

Little Crow Country Club

**Melissa Grafenauer**

Director

University of North Dakota

**Garrett Schultz**

Director

Prairie West Golf Course

**Alex Orr**

Director

Grand Forks Park District

**Kyle Fick**

Director

Bully Pulpit Golf Course

**Tim Fleegel**

Director

MTI Distributing, Inc

**Matt Schmid**

Director

Superior Turf Services

**Sam Bauer**

Executive Director

Info.nctga@gmail.com

904-271-0250



**The industry's first and  
only fairway mower  
with a true hybrid drive  
system.**

**MTI Distributing**

4830 Azelia Ave. N Brooklyn Center, MN 55429

Toll Free 1(800)362-3665

Direct Line (763)592-5600

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

**TORO**

**REELMASTER 5010-H**