



Hole Notes

The official publication of the MGCSA

Vol. 49, No. 2 March 2015

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MTGF Pruning Your
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At Midland Hills Country Club
Host Mike Manthy

April 22, 2015
Metro "In-Reach"
Educational Event
and Target Field Tour
At Gluecks followed by the Tour
Host Larry DiVito
Target Field Groundskeeper

April 30, 2015
MGA Spring Turgrass Forum
At Midland Hills Country Club
Host Mike Manthy

May 11, 2015
Affiliate Appreciation Day
TBD



EDITOR

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You should
have been there.



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Start Picture Spreads**

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Presidential Perspective

by Jake Schmitz, Superintendent at Olympic Hills Golf Club

“How long a minute is, depends upon which side of

the bathroom door you are on.”

- Zall’s Second Law

We are at that point of the year where golf industry professionals often find that there is not enough time in the day to accomplish their tasks. Despite longer day lengths and increasing staff levels, the work list oftentimes seems insurmountable.

Yet, it is also at this point in the calendar where the competitive juices start flowing, and the plans that were laid in the ‘off’ season can be attacked with a voracious appetite for completion. Putting together a maintenance plan for attacking

the 2015 golf season usually results in being on the right side of the bathroom door – a good plan can have the benefit of providing relief when minutes get stretched!

As my involvement with the MGCSA continues to grow and mature, it sometimes feels like minutes get stretched when it comes to working with state agencies on establishing Best Management guidelines for responsible resource management.

The MGCSA continues to forge ahead in establishing relationships with the MNDNR, the MDA and numerous other state agencies. These agencies are beginning to learn the real story on golf: our ability to manage water in a responsible

manner, our capabilities of applying nutrients and plant protectants within a targeted zone and our ability to provide habitat for many different types of wildlife. Despite the fact that progress is being made, things can never happen quickly enough. Fortunately, our partnership with the University of Minnesota puts us on a platform for recognition by these various groups.

Academia has a way of solidifying both our statements and actions when it comes to environmental stewardship, and the University of Minnesota has been an excellent ally for turf professionals throughout the state. Proper planning and forward thinking have put the MGCSA on the right side of the bathroom door; being a leader on environmental issues will only have a positive future impact

versus scrambling about when things go awry.

Time is of the essence as golf courses are preparing for an opening date. Without a doubt we have a tremendous responsibility to our owners and members to have things up and running as quickly as possible. However, it is very important to keep the big picture in mind, much like the MGCSA is doing with our environmental initiatives: steady effort with proper planning is producing results.

The same principles can be applied to our golf courses, which often results in additional time! May the 2015 golf season treat Minnesota well, and I wish you all the best in your preparations.



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University of Minnesota Turf Extension Specialist
- **Mr. Robert Vavrek,**
USGA Senior Agronomist, Central Region
- **Mr. Tyler Riffin**
USGA Regional Affairs Director – Great Lakes

- **Topics will include:**

**THE LATEST ISSUES FACING GOLF COURSE
TURFGRASS
WINTER WEATHER IMPACTS
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- **Thursday, April 30 at Midland Hills Country Club**
8:00 a.m.....Registration (*coffee & rolls*)
8:30 a.m.–12:00 p.m.Presentations & Discussion

This meeting is for: Course Owners, General Managers, Golf Professionals, Golf Course Superintendents, Club Presidents, Greens Chairs and any other MGA Members.

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- **For Reservations:**

Joel Comstock, Regional Affairs Director of the MGA
952-345-3968 or joel@mngolf.org
Please provide your name and golf course affiliation.

- **REGISTER BY FRIDAY, APRIL 24**



In Bounds

by Jack MacKenzie, CGCS

In Bounds
Column
March 2015

two years of agency pursuit, we have yet to gain any tangible relief regarding our water allocation and I'm not happy about it.

Almost a decade ago, I stood in front of the membership at North Oaks Golf Club and announced during a town hall meeting, "I'm not going to sugar coat things, 16 of our 19 greens have been hammered by crown hydration and are anywhere from 50 to 80 percent of each of those putting surfaces are dead."

The silence was deafening. However, when it was all said and done, following an extensive overseeding and grow in campaign, all greens were open for play by May 11th, and in very good condition I might add.

What I have to share with you may not be as breath catching as announcing the death of your clientele's greens, but I am not going to "sugar coat" anything. Following

It isn't that we haven't gained an audience; for I can assure you that our presence has not gone unnoticed at agency, legislative and private organization meetings. Nor is it a lack of a clear and concise message, for the goal has always been access to water in exchange for enhanced public return in the form of environmental stewardship above and beyond practices mandated by agency regulations.

In my mind I believe that the limited traction is two fold; one, the Department of Agriculture has finally sold us on why we don't need MDA sanctioned BMP's, and two, the Department of Natural Resources is swamped with legislative requests, internal reviews and the creation of the groundwater management strategy.

Recently, after several prompting emails with the MDA going back to late last fall, Sam Bauer and I had a visit with our new liaison, Jeff Berg, regarding golf course BMPs and an industry assessment. We finally “got it”. Until now, nobody in golf could figure out why the MDA wouldn’t endorse an industry initiated BMP. Please follow along closely as it is easy to miss the reasoning.

The MDA does not create standard BMPs unless there is evidence of a real or potential serious problem in any specific industry sector. Evidence can only be found through recurring industry related issues that impact the public or via a state approved assessment process, which may or may not indicate a need for BMPs. Thus; no problems or no fatiguing assessment equals no MDA approved BMPs.

We can however create UMN and other state agency Best Management Guidelines to our hearts content... they just won’t be sanctioned and signed off on by the MDA Commissioner. Sort of a “Catch 22”.

The Department of Natural Resources, on the other hand, has their hands full, and getting together with them in productive discourse has been difficult as we are not their priority. Not only are we bidding for their water management time, so is the newly created Legislative Water Commission, challenges in north central Minnesota regarding high volume wells and potato farming, three strategic planning committees crafting groundwater management, the dissemination of information gleaned from those meetings and the White Bear Lake Litigation issue. While not a primary target at top state management levels, enforcement of current statutes has fallen upon local DNR managers and hydrologists.

An example of this enforcement will be felt at Worthington CC where local politics over the community lake level has caused a cascade of effects reducing the golf course’s access to surface water from 34 million gallons annually, to 12. Although permitted since the early 1960s, and again in 1992, for

legitimate access to the local lake, a complete DNR evaluation of the water system and state statutes in 2014, has mandated a reduction of allotment due to limited riparian rights, or the amount of property adjacent to the resource. The local DNR representative admitted that through the years mistakes had been made and that current statutes force them to cut the water allotment by greater than half.

The process has brought several key issues to the forefront:

- 1) The DNR is ramping up their inspections of permit holders to insure they are following the law, beginning with agricultural destinations and on to golf courses. Be sure you are up to date with your irrigation monitor equipment and records.
- 2) Surface water users must find an alternative resource as written in their appropriation paperwork. If you do not have an alternative resource, your permit can and will be suspended as is clearly stated in your permit based upon DNR criteria. An

alternative resource could include multiple low volume wells to supplement your system during times of drought. According to the DNR, if drawing less than 10,000 per day and less than 1 MGA a permit does not need to be pulled for any individual well.

- 3) As the DNR continues to develop strategies to monitor and manage the ground water, all golf courses should practice water conservation and have in place drought management water reduction programs. Your owners and constituents need to understand the plans.

- 4) Golf destinations that pursue storm water management projects, alternative water sources and other tangible water reduction measures will likely receive credits from the DNR, however those credits are yet to be determined.

- 5) Golf must continue to forge ahead with relationship strengthening and building exercises to maintain its place as a renowned water steward.

There is also a sticky point in statute that describes the amount of water to be allotted per nine holes to 15

million gallons annually taken between April 15th and October 15th. Discussion is being held to clarify these mandates. However, be aware of the potential of strict enforcement should an issue arise at your facility. The squeaky wheel will grab attention. This statute will be a focal point in our future meetings with the DNR among other issues.

Although seemingly at a dead end, our partnership with the MDA is in good standing. By following their regulations golf shouldn't have any issues. Our relationship with the DNR is also solid. Golf continues to pursue a certification opportunity modeled after the Michigan Turf Environmental Stewardship Certification Program in exchange for agency assurances. Today and into the future the MGCSA will have a seat at the table when discussing water appropriations and the challenges ahead.

Bureaucracy, politics, statutes and local climate conditions will always play a part in water allocation. Golf isn't recognized as a business, but

rather a recreational use of water. This completely disregards our 2.3 billion dollar and 35,000 job opportunity contributions to our states economy. I don't think it is a matter of obstinacy, but rather a lack of knowledge. Remember, the statutes were created when water was deemed an infinite resource. Our agencies, even with good intentions, must follow state law.

It will be up to industry to find the inadequate statutes, educate both agency representatives and legislatures and then work in a partnership to change law and protect our access to water. There will come a time, hopefully in the not too distant future, where the 'game of golf' will rely upon golf course managers, from the clubhouse to the turf management department and players too, to rally and contact their representatives in an effort to change current policy.

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WATER USE, REUSE, RECHARGE

BY JAMIE BEZANSON, SUPERINTENDENT ONEKA RIDGE GOLF COURSE

During the fall of 2010, the late Jan Arcand handed me an article out of a local publication. The article talked about a project that Stillwater Country Club had done to improve drainage and the quality of the water leaving the property. Stillwater Country Club teamed up with the local watershed district and received approval through the recently passed Clean Water, Land and Legacy Amendment grant program. Mrs. Arcand thought that maybe this is something I needed to investigate to see if Oneka Ridge Golf Course would qualify for this government funded grant.

After investigating the possibilities of grants, I quickly realized we needed someone from the government to help us get the ball rolling. After speaking with our club manager, Mr. John Hatcher, he mentioned that one of our members (Harley Ogata) was a board member of the

local Rice Creek Watershed District. Mr. Ogata and I first met about the possibilities of finding funding in July of 2011.

For a few months, ideas were exchanged and the possibility of getting a major water reuse water project grant took off. Interest in the project gained traction and the City of Hugo, Rice Creek Watershed and Oneka Ridge Golf Course all agreed to provide in-kind support and additional funding. In September of 2011, a grant proposal was submitted by the Rice Creek Watershed Board and in December 2011 the grant was approved for \$497,100 by the Board of Water and Soil Resources (BWSR).

During 2012 the project went through a design metamorphoses before we all agreed on the final plan that is very similar to the final result. The Bald Eagle Lake Watershed

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RGE AND RENEW



Above is a picture from the 18th red tee of the finished product after the pond was grassed and the pond was full. You can also notice Dan Bieganeck, D Bieg beginning to shape the new bunkers on the right side of the hole.



Above, a picture from the 18th red tee before the project began in September of 2013.

Stormwater Re-use and Phosphorus Reduction system includes the following elements:

- A large pond was constructed that is used to store and pre-treat stormwater runoff generated from a 1000 acre watershed upstream of this basin. 24,000 cubic yards of material was excavated and reused on the golf course for tees, bunkers and mounding. During rain events, water is collected and used to irrigate 116 acres of turf on the golf course.
- A Watertronics Lift station with two 30 hp VFD pumps with

600 gallon per minute capacity, self cleaning filter, suction line, controls, and force main that will supply filtered stormwater runoff to the Oneka Ridge Golf Course Irrigation and Infiltration System when sufficient storm water is available for these uses.

- Infiltration trenches, installed around the perimeter of an existing pond, designed to infiltrate water that will be pumped to the pond from the lift station. This system will reduce the downstream runoff volume directed to Bald Eagle Lake and promote groundwater recharge in the area. Estimates suggest that



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Above, the Pond on the 18th hole after it was dug out in January 2014.

up to 30 million gallons of storm water runoff may be captured and treated through the reuse irrigation and underground infiltration systems annually. By reusing and treating stormwater, we are keeping approximately 75 pounds of phosphorous out of Bald Eagle Lake each year. Seventy-five pounds of phosphorus can grow between 12 and 18 tons of algae, a common problem for Bald Eagle Lake.

- To provide soil stabilization and wildlife habitat, a 6' buffer strip of unmaintained grass varieties were seeded around the new pond on 18th hole and along the outgoing

ditch next to the 18th tee complex. In conjunction with the project, the soil that was removed from the pond was used to shape a new tee complex on hole 18, and add bunkering along the right side of hole 18. The remainder of the fill was hauled up and dumped between holes five and 16. The material between five and 16 was left to dry and was re-graded into unique mounding.

The 18 tee complex was seeded with a Kentucky bluegrass, Perennial Ryegrass mixture and the areas around the tee complex were seeded with a mixture of fescues.

The back side of the new bunkers on 18 and the mounding between 5 and 16 were also seeded with a mixture of fescues. These 3 areas will become native areas and will also provide additional wildlife habitat. The pond on 18 has also provided habitat for ducks, geese, muskrats, fish, turtles, deer and coyote. In addition to providing habitat at Oneka Ridge golf course, this project has helped supply cleaner water and a better environment for wildlife that

live in the Bald Eagle Lake and the Rice Creek Watershed.

The project went out for bid in late summer 2012 with no bids coming in under the grant funding. Rachel contracting was the low bidder and through redesign and compromise they agreed to work with us to complete the project.

Construction of the project finally got under way in November



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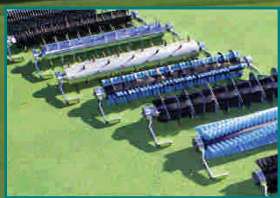
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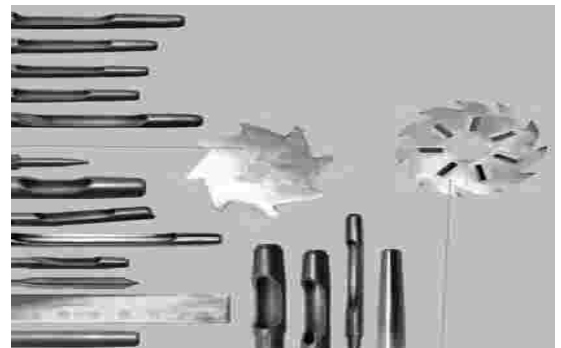
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of 2013. The infiltration drainage around the pond on the 7th hole and irrigation changes were completed by the end of 2013. The pond construction began on November 22nd, 2013 and finished up January 10th, 2014. The final grading, seeding and new lift station installation had to wait until spring.

Before Rachel contracting was able to finish grade the project, the ownership of Oneka Ridge Golf Course and the Management team communicated our disappointment with the final grading standards to the Rice Creek Watershed District

(RCWD). Through this communication RCWD agreed to compensate Oneka Ridge Golf Course \$15,000 that would go towards final grading of the areas that were disturbed by the project.

Professional golf course shaper Dan Bieganek was then hired to final grade the tee area on the 18th hole, the fill pile on the right side of the 18th hole and the mound behind holes 5 and 16. The wet spring caused the project to linger which challenged my staff and I to keep the golf course playable. Around the new pond, seed was dropped and

Below, a picture of the pond after the new lift station was installed.



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the erosion control fabric was laid on April 23rd. All the remaining disturbed areas were hydro-mulched with seed on June 7th. The fairway areas that were disturbed from the project received sod on June 12th.

The new lift station was primed and pressurized on May 22nd, which came with many setbacks. Broken pipe and incorrect Z-pipe sizing delayed our ability to operate the new lift station to full capacity until late summer. By the middle of October, all the bugs were worked out and the old irrigation

system was set up to operate cohesively with new lift station. The last two weeks of October gave us the chance to run the two systems together and they operated flawlessly. With all the issues with the new lift station, we were still able to use 3.8 million gallons (40 %) of our total 9.9 million gallons from the new pond on the 18th hole.

Education and outreach for this project was provided in many different avenues. News articles were printed in both local and state newspapers. A white paper describ-



Above, an aerial view of the project including holding pond, pump station, main line augmentation and the groundwater recharge infiltration system.

ing the project was printed and distributed to who ever wanted information about the project. A larger poster was printed, framed and hung in the clubhouse for our patrons to read at their leisure. A large sign similar to the one in the clubhouse was posted on the eighteenth tee for golfers to read while they are waiting to tee off. There were two project tours that were conducted to provide information to the media,

local business owners and local and state government. The two tours were conducted on August 8th and August 27th. The first tour had approximately 50 members from the media, and local government and local businesses. The second tour involved 60 people who included the Board of Water and Soil Resource (BWSR), DNR representatives, and MGSA representatives who were all very supportive of the project.

Next steps include water quality monitoring for a minimum of five years to determine the system's effectiveness at removing phosphorus from stormwater runoff. The lift station's controls also record the total volume of water pumped to the system allowing us to determine precisely how much water is being used to irrigate the golf course versus soaking back into the ground.

This information will be used to continue to refine and adapt the system to maximize its effectiveness.

With water being a hot topic locally, there are many eyes on Oneka Ridge Golf Course to see how well this system works. By being able to partner with the Rice Creek Watershed District and the City of Hugo this project has brought a lot of attention to Oneka Ridge Golf Course. It is my hope that this project can show that golf courses are much more than social places to exercise and can be a solution to many environmental issues facing society today.

Being awarded the Environ-

mental Leadership Award is a great honor for Oneka Ridge Golf Course, and everyone that has been involved in making this project successful.

Those who have made this endeavour a success includes:

- Pete Willembing and his WSB Engineering Team
- RCWD, Kyle Axtell, Phil Belfiori, Jessica Bromelkamp, Harley Ogata
- Rachel Contracting, Dave Lyste, Pete Kamish and Jeremy Rose
- Peterson Companies, Ryan Potvin
- Board of Water and Soil Resources (BWSR)
- City of Hugo, Steve Duff and Bryan Bear
- Oneka Ridge golf course Ownership, Staff and Management
- Dan Bieganek for his shaping and final grading.

The Professionalism shown by all involved in this project is a great example of how private businesses, government agencies and local municipalities can work together to make a positive change that will affect the community for many years. All parties involved had a similar

vision and were able to overcome any obstacle through compromise, diligence and determination. I am proud to have been part of this unique accomplishment and would like to think this project will be a guide for future land developments and will show the importance that a golf course can bring to society.

If there are any questions you may have, please don't hesitate to contact me.

Jamie Bezanson
Oneka Ridge Golf Course Superintendent
5610 120th St. N.
White Bear Lake, MN 55110
Phone: 651-426-6889
Cell: 715-699-0178
Email: jamiebezanson@onek-aridgegc.com



Recipients of the 2015 Environmental Leadership Award (left to right), presenter Kyle Axtell Rice County Water Shed District, Scott Arcand owner of Oneka Ridge Golf Course and Superintendent Jamie Bezanson. Congratulations on a job well done.

Member Driven Research to be Presented!!



Join Your Turf Management Peers for the: *Spring "In-Reach" Education and Target Field Tour*

Host Head Groundskeeper Larry DiVito
Educational Meeting and Lunch held at Glueks

Wednesday, April 22nd

- 8:00 - 8:30 Registration
- 8:30 - 9:30 Environmental Advocacy and MGCSA Update Jack MacKenzie
- 9:30 - 10:30 Member Initiated Research Update, Sam Bauer UMN
- 10:45 - 11:45 Emerald Ash Borer Update, Jeff Palmer Arborjet
- 11:45 - 12:30 Incredible Lunch
- 12:30 - 2:00 Target Field Tour, Larry DiVito, Twin's Head Groundskeeper

Cost is \$35 per person includes donuts, coffee, lunch and tour

RSVP Requested by April 15

MGCSA and Non-MGCSA members are welcome



Register at: 2015 InReach

Or Contact:

Jack MacKenzie, Executive Director, MGCSA
jack@mgcsa.org or 651/324-8873

2015 Distinguished Service Award Presented

by Greg Hubbard CGCS

The Distinguished Service Award of the Minnesota Golf Course Superintendents Association has had many proud and deserving recipients since its inception In 1987. Whether a superintendent, affiliate, university researcher, or manufacturer, these distinguished members have excelled in their field beyond the usual requirements of their career and earned a special place in our hearts. They are recognized leaders in our field, achieving heights above the normal demands of their chosen career.

My nominee today has been a long-time golf course superintendent. Beginning at Stillwater Country Club, he has specialized in grow-in projects at both St Croix National and Tanners Brook golf courses. He currently serves as superintendent at Luck Golf Course in Wisconsin. There he is increasing his responsibilities in the operation and management of the facility.

He began his service to MGCSA as a Board Member in 1988, became Treasurer in 1991, Vice President in 1993, and served as our President from 1994-1995. His first challenge was to preside over the Greater Minnesota Turf & Grounds Conference which fortunately became a roaring success. The push for a golf course environmental impact statement, extolling the virtues of golf and the environment was also begun.

Since then, he has served MGCSA at the national level by serving on various GCSAA committees. He has also served as our voting delegate at the GCSAA Conference and Show and is now our Chapter Liaison Representative. He has also served as a regional GCSAA Certification Attester for many years, approving many as Certified Golf Course Superintendents in the State of Minnesota.

Our nominee is of good moral character, relishes his family life, and exhibits the professional attributes and qualities his profession demands. His only downfall is a never-ending interest in hockey as evidenced by his participation on the St Cloud University Hockey Team and his monthly Presidential columns in "Hole Notes".

For his long and continuing service to MGCSA and GCSAA, I present Kevin Clunis, CGCS, for the 2015 MGCSA Distinguished Service Award.

Kevin Clunis, CGCS – 2015 MGCSA Distinguished Serve Award

MGCSA Engagement

- **1988 – 1991 Director**
- **Committee Chairs of Arrangements, Environmental, Conference and Bylaws**
- **1992- 1993 -Treasurer**
- **1994 - Vice President**
- **1995 - President**
- **1996 - Ex Officio**
- **2012 – 2015 Environmental Stewardship Committee**
- **2001 – 2014 (except 2004) MGCSA Chapter Delegate**

GCSAA Engagement

- **1995 & 1996 – Government Relations Committee**
- **1997, 1998 & 1996 – Certification Committee**
- **2000 & 2001 – Career Development Committee**
- **2001-2003 Chapter Delegate**
- **2002 – Scholarship Committee**
- **2003 – Conference & Show Resource Group**
- **2004 & 2005 – Golf Course Construction Advisory Panel**
- **2006 – Election Committee**
- **2007 Online Education Task Group**
- **2005 – 2014 Chapter Delegate**
- **2010 – Compensation & Benefits Task Group**
- **2011 – Strategic Communication Committee**
- **2013 – Research Proposal Review Committee**
- **2014 – Environmental Profile Survey Beta Test Group**

Certified Golf Course Superintendent – 1994

Recertified 1999, 2004, 2009, 2014

Served as CGCS Arrestor in 2009 & 2014

32-year member of GCSAA

Potential Emerging Turf Pests in Minnesota

Leatherjackets and Mole Crickets

Vera Krischik

Department of Entomology, University of Minnesota
612.625.7044, krisc001@umn.edu

European crane fly (leatherjackets)

Distribution

Both the European crane fly (*Tipula paludosa*) and the common crane fly (*Tipula oleracea*) spread since 1967 from Washington State around the country. In 2000 these two species were established in the northwestern U.S., as well as British Columbia and the Maritime Provinces of Canada. They were found since 2007 in Grand Rapids and Detroit Michigan and New York. Some sporadic reports have surfaced in Minnesota.



European crane fly damage to a recreational lawn in Grand Rapids, Mich.

Photo credit: Kevin Timmer, Tender Lawn Care



mgcsa.org

The adult stage of both of these pests looks like a giant mosquito with a wing span of more than an inch. There are many native species, so only contemplate chemical management if you recognize the damage to the turf and see the leatherjackets. The two species are almost identical in appearance and both are considered a serious pest of turf. However, the common crane fly *T. oleracea* can complete two generations per year in spring and fall, while the European crane fly has one in fall. Both species emerge as adults in fall and can be seen on moist, usually irrigated turf, in residential lawns and golf courses.



European crane fly adult, left and larvae, right. Photo credits: Dave Shetlar, OSU

Damage and description

Larvae of crane flies are called “leatherjackets” because of their tough, leathery exoskeleton. Larvae look like a brown caterpillar with no head or legs and grow to around one inch long and feed on turf grass roots. The larvae become a problem in early fall, when they can consume enough turf roots, stems and leaves to cause visible injury to lawns. Damage begins to appear as a general thinning of infested turf, but may progress to large dead patches. The thin turf and digging activity by skunks and raccoons





Left, Crane fly larval damage to roots
<http://www.entomology.umn.edu/cues/mnla/april2006.htm>

looks like grub damage, but can be easily distinguished by the presence of gray to tan-colored leatherjackets

To detect the presence of invasive crane flies, the pupal cases can be monitored on tees and greens where they protrude from the low-mown turf. At peak emergence times, adults may become very abundant and noticeable as they flit about low in the grass. They may also congregate during the day on the sides of buildings, sliding doors, window screens and fences. Because adults lay eggs so soon after emergence, sites with abundant adults, larvae or pupal cases should be monitored as an indication of sites where eggs of the next generation are likely to be laid.

Monitoring and management

Leatherjackets can be a nuisance on golf courses if large numbers of Leatherjackets appear on tees, greens and fairways. Leatherjackets can be brought to the surface by drenching turf with a soapy water solution (1 ounce dish wash soap in 2 gallons of water). Leatherjackets also tend to



come to the surface when an insecticide is applied.. Control tactics should be directed against the larvae because adults are hard to target and short-lived. Suggested thresholds range from 15 to 50 larvae per sq.ft., depending on overall turf health. In Ontario, Canada, lawns have been reported with as many as 75-125 larvae/sq.ft.

Insecticide	Correct timing for European crane fly
Sevin (carbaryl)	In April, May or fall when turf damage is discovered.
Acelepryn (Chlorantraniliprole)	<i>preventative</i> : April or May for crane flies and white grubs.
Arena (clothianidin)	<i>preventative</i> : Apply in July or August for crane flies and white grubs.
Aloft (clothianidin + bifenthrin)	
Meridian (thiamethoxam)	

Turf treated for grubs in the spring are not protected from crane fly damage in fall. However, if grub treatments were made in July or August, they should also protect against crane fly damage. Infested lawns can be treated in fall with carbaryl. In order to avoid this problem next year, insecticides used for grubs can be applied in July or August to also protect against crane flies.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by the University of Minnesota Extension. A pesticide label is a legal document. Remember, the label is the law.

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The Northern mole cricket



*Northern mole cricket and damage,
Dan Potter, UKentucky*

*Northern mole cricket,
V. Jedlicka, UNL*



The Northern mole cricket (*Neocurtilla hexadactyla*) is widespread from southern Canada to Florida and west to Nebraska. The tawny, southern, and short-winged mole crickets are important pests of turfgrasses in the southern US. In 2007, Northern mole crickets were found damaging a golf course in Butler County, Nebraska. Mole crickets have extended forelegs that are used to dig in the soil. Mole crickets feed on the roots, stems, and leaves of turf grasses, but their extensive tunneling is often the most damaging to the turf.

The best time to treat for mole crickets is early summer. At this time, nymphs are still small and spend more time near the surface, making them easier to kill. Most insecticides labelled for turf grasses will be effective. Bait formulations, however, may be effective against larger nymphs in late summer. Because mole crickets are active at night, insecticides should be applied late in the day. Advion Insect Granule is registered in Minnesota for mole cricket control (containing A.i. indoxacarb).

Mole crickets are active at night and occasionally wander into houses and other buildings by accident. The only necessary action is to pick or sweep up the occasional invader and return them to outdoors. In case of persistent invasion, caulk cracks, gaps and other openings that serve as passageways into the house.

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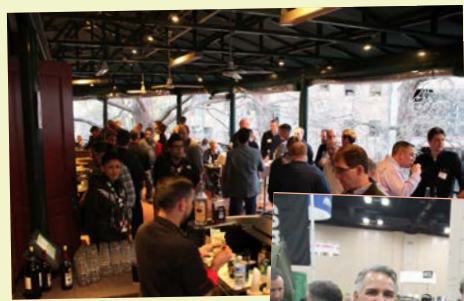


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University of Minnesota Turf Research Program

Where Does the Money Go?

By Erin McManus, Research Committee Co-Chair with supporting material from Dr. Brian Horgan, Sam Bauer, Dr. Angela Orshinsky and Dr. Eric Watkins

Twelve years ago the MGCSA, both class and affiliate members, decided it was a wise investment to encourage our recently hired Turf Education Professor, Dr. Brian Horgan, in his bid to sell the UMN “powers” on the creation of an industry supported turf testing and evaluation destination to be housed upon the St. Paul campus. With considerable cash, in kind donations, sweat equity and many, many hours of foresight and planning, the Turfgrass Research, Outreach and Education Center came to fruition.

Early on in the process, the University and industry recognized

the value of a partnership with the TROE Center. Oh, and golf was still in it’s hey day and students populated the turf management classrooms. The partnership has not wavered but it has been tested and challenged beginning in 2008 when the economy hit the skids. In addition, entrance requirements for the University of Minnesota have changed the undergraduate student population away from applied disciplines like turfgrass science. Professors were required to pursue grant money to support their programs and industry was asked to supplement the TROE Center budget.



Working hard, the UMN turf team did create funding streams from state agencies, private businesses and industry associations; prospering from the research completed at the TROE Center. The program continues today as a nationally known institution of turf-grass science and research. Off the chopping block, due primarily to industry sponsorship, the research facility should maintain its preeminence in turf studies for many years to come.

Each year the Minnesota Golf Course Superintendents Association does their part by contributing \$60,000 to support the research being conducted at the TROE. This is 20 percent of the total annual MGCSA budget and the membership needs to be aware of where your support dollars are going.

The 30,000-foot view

From up high, the dollars are used primarily to support a rather large labor force. Although Drs. Horgan, Watkins, Orshinsky and Sam Bauer's salary and benefits come directly from the UMN, the

other key staff must be funded by outside resources such as grants, contracts, technology and commercialization and industry investments.



All in, these funds support scientists, Andrew Hollman and Matt Cavanaugh, and a field manager Craig Krueger, requiring roughly \$250,000 in support for their major roles in maintaining the TROE and implementing research projects. Moreover, the team is comprised of six-graduate students, which cost \$250,000 and several of undergrad-

uates, which cost \$50,000.

Materials necessary for the research projects cost an additional \$100,000 from grant and industry support.

That is a total of roughly \$650,000. How does our \$60,000 grow by 10 times in activity at the UMN? By way of matching contributions. Watkins, Bauer, Orshinsky and Horgan have proven to be masterful at multiplying industry contributions into huge dollars through complete and articulate pursuit of grant support. Because of the MGCSA's historical support in the creation of the TROE Center and in annual contributions, the UMN has become renowned as the preeminent Midwest destination for turf studies. The TROE Center, along with the professional turf researchers, is acclaimed regionally, nationally and internationally for the research supported in part, by the MGCSA.

MGCSA support is currently matching grants from the USDA-SCRI, USGA and MnDOT. These grants total more than \$2.5M over 5 years and support 6 graduate stu-

dents and 1 research scientist.

The 5,000-foot view:

\$20,000 Member Driven Research

Two years ago the MGCSA voted unanimously to assess themselves to the tune of \$30 per membership annually to invest in quick turn around studies to be conducted by Dr. Horgan and his turf team. Three critical areas of study were to be scrutinized each year, as voted on by the A, SM, C and Affiliate classes. The monies included start up expenses, labor (both technicians and research scientists), materials, reports and presentation through articles provided in the Hole Notes magazine and at Regional Outreach and other events. This ongoing, and very successful project, is beginning its third year of studies.

\$10,000 Dr. Eric Watkins Turf Breeding Studies

The turfgrass breeding program at the University of Minnesota continues to work on the development of low-input grasses for use in cold climates. Dr. Eric Watkins

*Lakes Area Outreach
Grand View Lodge
Host Mike Bohnenstingl*



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leads a multi-institutional effort focusing on the fine fescue species because research has shown that these fine fescues have great potential on golf course fairways and roughs, but there are a number of deficiencies that must be improved upon. The UMN is collaborating with Paul Koch at UW-Madison to identify fine fescues that show improved tolerance to snow mold diseases; additionally, they have fairway trials at three golf courses in Minnesota where multiple mixtures of fine fescues are being tested for snow mold tolerance. The UMN is also collaborating with Jim Murphy at Rutgers University on a project evaluating

the fine fescues for traffic tolerance. This project is developing methodology that will aid breeders in selecting fine fescue germplasm with increased traffic tolerance. Both of these projects will result in new knowledge and ultimately new turfgrass varieties that will be of great benefit to golf course superintendents considering the use of fine fescues.

The MGCSA dollars enable the breeding program to be successful in applying for all of the grants received. For example, the MGCSA funding of the TROE Center and supporting a research scientist's sal-

ary this year enabled the research program to secure a \$170,000 grant with MnDOT to carry out work related to salt tolerant grass establishment. The UMN program recently received additional funding from several associations, including the United States Golf Association and National Turfgrass Evaluation, to carry out golf course specific work. This would never happen if there was no TROE Center destination.

\$10,000 Dr. Angela Orshinsky Turf Pathology

Hired as a general horticultural plant pathologist, Dr. Orshinsky, with endorsement from the MGC-SA and MTGF, has focused much of her research into turf diseases. Upon her hiring at the UMN, the two leading turf associations combined matching funds to the tune of \$20,00 annually for three years to solidify Dr. Orshinsky's research in turf science as a key element of her program. Although the funds were granted with "no strings attached", our newest pathologist focused the dollars into turf pathology and even multiplied the amount through the

pursuit of grants. She has also hired a research fellow, Kurt Hockemeyer to support her turfgrass pathology research and field evaluations.



Together they are pursuing a variety of experiments on snow molds - particularly snow scald. Of primary interest is testing to determine the host range of *Myriosclerotinia borealis*, the snow scald pathogen, as this fungus is reported to cause disease on over 17 plant

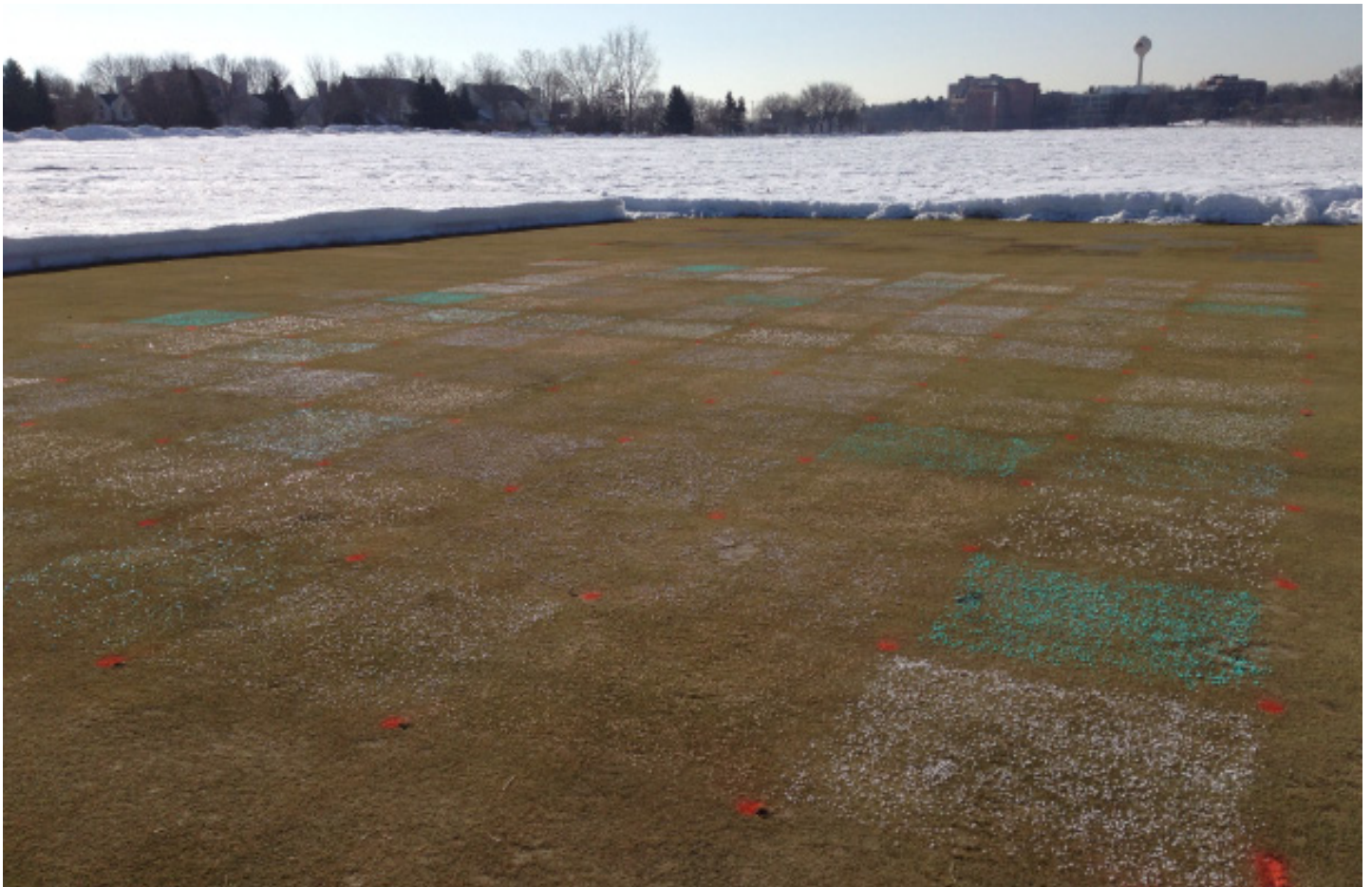
genera including dicots. They are also running in vitro fungicide sensitivity tests of *M. borealis* along with the *Typhula* snow molds and the pink snow mold pathogen. This study will help determine if there are differences in the effectiveness of individual active ingredients between the more routinely studied gray and pink snow mold diseases and snow scald disease.

Other research will continue on defense activators and plant health products in the summer of 2015. The defense activator trial is sponsored by the MTGF. Finally, the horticultural plant pathology program is going to be reaching

out to at least 15 golf courses this year to determine the distribution of various diseases such as the snow molds, snow scald, and *Waitea* patch. The pathology team will make a total of 4 to 5 visits to each course throughout the year. This survey is partially funded by an interdisciplinary UMN grant with Kristina Walker and Madeleine Smith at the University of Minnesota - Crookston to determine the distribution of diseases caused by various *Rhizoctonia* and *Waitea* species on turf in MN and ND.

\$10,000 Horticulture Fellow Grant Match/BMP Initiative





Five years ago the MGCSA made a bold decision to help support a turfgrass graduate student fellowship in the Department of Horticultural Science. The MGCSA, MTGF, MPSTMA and MTA all contributed. In total, \$240,000 was committed. This endowment receives a 1:1 match. Added investment income gets deposited into the endowment. So if the foundation saw a 12% return on its investments last year, 8% would get reinvested into the endowment and the 4% would be paid for use. The turf program PI's decide on its use. Madeline Leslie was the first student to

use the fellowship (matched with a federal grant). Maggie Reiter will receive it next year (matched with a USGA grant).

Our support mission complete, the \$10,000 Horticultural Fellow Grant dollars will now be changed to a \$10,000 annual contribution into the Environmental Stewardship BMP Certification program, an endeavor we have been working hard upon for the last three years. These dollars will be matched with funding from the MGA, CMAA and MPGA. We also received an \$8,750 grant from the GCSAA to



supplement the initiative. The work to be done on this program must be accomplished through the UMN as they are our non-biased resource accepted by state agencies to implement and attest any programs pursued. The total commitment for the next three years equates to roughly \$90,000 from all associations.

\$10,000 Dr. Brian Horgan Support Dollars

These funds go directly to sponsor Craig Krueger, nine-year veteran manager at the TROE Center. He is responsible for managing the 16-acre property and, under direction of the team, creates many of the re-

search destinations on the site. His tasks also include mowing, rolling, topdressing, irrigation and maintenance of the equipment used to complete the tasks required.

Who conducts research at the TROE Center?

Sam Bauer, Extension Educator
 Dr. Brian Horgan, Professor
 Dr. Eric Watkins, Associate Professor
 Dr. Angela Orshinsky, Assistant Professor
 Dr. Nancy Ehlke, Professor and Department Head
 Dr. Mary Meyer, Professor
 Dr. Carl Rosen, Professor

Dr. Marla Spivak, Professor
Andrew Hollman, Senior Scientist
Matt Cavanaugh, Research Scientist
Kurt Hockemeyer, Research Scientist

Donn Vellekson, Scientist
Craig Krueger, Field Manager
Maggie Reiter, Graduate Research Assistant

Garett Heineck, Graduate Research Assistant

Long Ma, Graduate Research Assistant

Madeline Leslie, Graduate Research Assistant

Ian Lane, Graduate Research Assistant

Clemon Dabney, Graduate Research Assistant

Dr. Pam Rice, USDA

Dr. JoAnne Lamb, USDA

Who else is “using” the TROE Center?

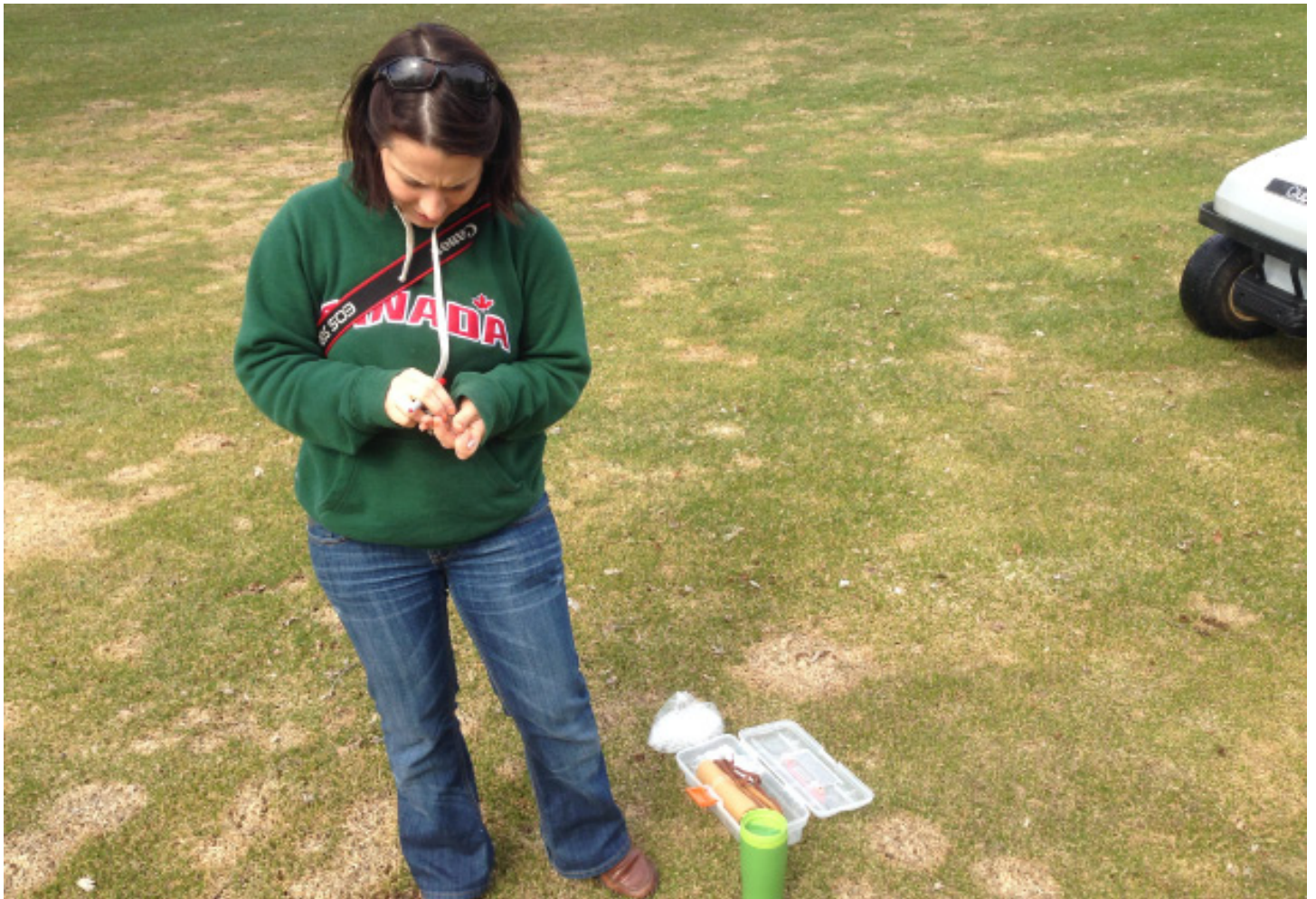
American Phytopathological Society Annual Meeting, St. Paul, MN (APS)

National Association of Plant Breeders, St. Paul, MN (NAPB)

North Central Turfgrass Association, Fargo, ND (NCTGA)

Local Road and Research Board
Crop Science Society of America





Annual Meetings, Long Beach, CA
(CSSA)

Grass Seed Institute, Roseau, MN

Perennial Ryegrass Growers Meeting
Roseau, MN

13th International Water Association
Specialist Conference on Watershed
and River Basin Management, San
Francisco, CA

Annual Meeting of the American
Society of Plant Biologists, Portland,
OR

Minnesota Park and Sport Turf
Managers Association

Minnesota Crop Improvement Association

Minnesota Turf Association
Minnesota Turf and Grounds Foundation

Where is the information presented?

Beyond on-site visits:

Examples of demonstrations and
lectures by TROE Center Staff in
2014:

Northern Green Expo, Minneapolis,
MN (MNLA and MTGF)

Minnesota Educational Facilities

Management Professionals Association Annual Conference, St. Cloud, MN (MASMS)

Minnesota Turf and Ground Foundation Field Day, St. Paul, MN (MTGF)

John Deere Landscapes University, Prior Lake, MN (John Deere)

3M Environmental Club, Lake Elmo, MN (3M)

North Central Extension Research Activities Conference, West Lafayette, IN (NCERA)

Professional Grounds Management Society Annual Conference, Chaska, MN (PGMS)

Midwest Facility Masters Annual Conference, Wisconsin Dells, WI
Minnesota Golf Course Superintendents Association Regional Outreach Programs and Meetings (Mcgregor, MN; Eau Claire, WI; Prior Lake, MN; Morton, MN; North Oaks, MN; Lake City, MN)

South China Turfgrass Managers Association Meeting, Hong Kong (SCTMA)

Golf Course Superintendents Association of Malaysia Meeting, Nilai Springs, Malaysia (GCSAM)

Research Presentations by Dr. Horgan alone:

International

British International Golf Greenskeepers Association. Fertilizer workshop, water conservation, Doc and the Sup, and soil test interpretation. January 2015. Harrogate, England.

Norwegian Turfgrass Foundation. Winter injury and preparation. November 2014. Oslo, Norway.

Turfgrass Science Live. Interseeding with nonselective herbicides to change species composition. June 2014. St. Andrews, Scotland

National

Peaks and Prairies. Winter injury preparation, water conservation, N fate. November 2014. Bozeman, MT.

Turfgrass Producers International. Science, policy and turfgrass research. February 2014. Orlando, FL.

Golf Information Show. Cool-season fertility, winter injury, sustainable turfgrass systems. February 2014. Orlando, FL.

Iowa Turfgrass Conference. Water



- 1 – Bent/Fine Fescue Fairway Runoff
- 2 – Rainfall Plot 1: MNDOT Mixtures
- 3 – Rainfall Plot 2: MNDOT Mixtures
- 4 – Rainfall Plot 3: Species/Cultivar

- drought trial
- 5 – Rainfall Plot 4: Fine Fescue Fairway
- 6 – NTEP Kentucky Bluegrass 2011
- 7 – Tall Fescue Turf Trial 2011

- 8 – Kentucky bluegrass runoff plots
- 9 – Minnesota Hard Fescue Nursery
- 10 – Koeleria Nursery 2013
- 11 – Kentucky bluegrass mutant nursery 2013
- 12 – Beaver Island nursery 2012 (half sibs from original clones in K13)
- 13 – Sheep fescue 67135 nursery 2011
- 14 – Consumer mixtures 2014
- 15 – Salt phyto area 2015
- 16 – Bioactivators USGA 2014
- 17 – MGCSA study 2015
- 18 – NTEP bentgrass green 2014
- 19 – Pathology study area 2015
- 20 – MGCSA Wetting agent study 2015
- 21 – New Grow-in A1/A4 Creeping bentgrass
- 22 – Pathology area 007/Penncross (grow-in for 2015)
- 23 – Salt phyto area 2015
- 24 – Bioactivators Native 2014
- 25 – Fine Fescue Fairway SCRI 2012
- 26 – Fertilizer Efficiency on Fairway 2014
- 27 – V8 putting green 2011
- 28 – Fine Fescue Sand Cap Greens 2014
- 29 – Soil 2014
- 30 – Fine Fescue Fairway SCRI 2013
- 31 – Fine Fescue Fairway USGA
- 32 – Hard Fescue Mowed Space planting 2013
- 33 - Perennial ryegrass turf trial breeding material 2010
- 34 – NTEP Perennial ryegrass 2010
- 35 – Fine Fescue Cooperative Breeder Turf Trial 2011
- 36 – Perennial Ryegrass Cooperative Breeder Turf Trial 2013
- 37 – Species Demo Trial 2013
- 38 – Kentucky blugrass mutant turf trial (2013)
- 39 – Perennial ryegrass for Rutgers Fine Fescue plugs (2014)
- 40 – NTEP Bentgrass Fairway (2008)
- 41 – NTEP Fine Fescue Fairway (2008)
- 42 – PMAP (2009)
- 43 – Consumer Comparison Trial (2013)
- 44 – Fine Fescue & Kentucky bluegrass turf trial (2010) OPEN
- 45 – Ian Kura Clover/Turf Mixture (2013)
- 46 – Fine Fescue/Kentucky bluegrass Legume Mixtures (2008)
- 47 – Perennial ryegrass turf trial (2012)
- 48 – Tall Fescue turf trial (2012)
- 49 – Bee Lawn Study (2013)
- 50 – Bee Lawn flowering plant study (2014)



conservation, Turfgrass Sustainability, N fate. January 2014. Des Moines, IA.

Professional Lawn Care Association. Turfgrass and the Environment.. January 2014. Nashville, TN.

Minnesota

Science of the Green Awareness events. 20 golf courses. Summer 2014.

Minnesota Golf Association. Heat Stress. April 2014. St. Paul, MN.

Northern Green Expo. Research Update and GCSAA survey responses. January 2014. Minneapolis, MN.

So where does your research

investment go? As you can see, your investment goes very far. Yesterday you created a destination for turf studies; today your investment is paying off with current results you can use upon your course. Who knows what tomorrow will bring, however if it has anything to do with turfgrass research and enhancing your abilities as a turf manager, you can bet much of the work behind the scenes will be conducted at the University of Minnesota upon your Turfgrass Research, Outreach and Education Center.

You should be proud of your foresight and endorsement of an internationally recognized turfgrass research facility.



LEGACY SCHOLARSHIP ANNOUNCEMENT

The Program: The Minnesota Golf Course Superintendents' Association offers a scholarship program designed to assist children and grandchildren of Class AA, A, SM, C, D, Associate and Affiliate members. The MGCSA provides scholarships to students attending college or vocational programs at any accredited post-secondary institution. The program is independently managed by Scholarship America, a national non-profit student aid service organization. Awards will be granted without regard to race, color, creed, religion, sex, disability, national origin or financial need.

Selection of Recipients: Scholarship recipients are selected on the basis of academic record, potential to succeed, leadership and participation in school and community activities, honors, work experience, a statement of education and career goals and an outside appraisal. Selection of recipients is made by Scholarship Management Services. In no instance does any member of the MGCSA play a part in the selection. Applicants will be notified by the end of July whether they have been awarded or denied a scholarship.

Eligibility: Applicants for the MGCSA Legacy Scholarships must be: children/grandchildren of Class AA, A, SM, C, D, Associate or Affiliate members who have been members of the MGCSA at least five years; High school seniors or graduates who plan to enroll or students who are already enrolled in a full-time undergraduate course of study at an accredited two- or four-year college, university or vocational-technical school, and under 23 years of age.

Awards: Three awards will be given to children and grandchildren of Class AA, A, SM and C members. One award of \$1,500 in the name of Joseph S. Garske will be given to the highest evaluated applicant. That award will be renewable for one year contingent upon full- time enrollment and satisfactory academic performance. One other \$1,000 award will be given to other qualified applicants from this group. One \$1,000 award will be available to children and grandchildren of Class D, Associate and Affiliate members. These awards are not renewable. However, students may reapply to the program each year they meet eligibility requirements. Awards are for undergraduate study only.

Obligations: Recipients have no obligation to the MGCSA or its members. They are, however, required to supply Scholarship Management Services with current transcripts and to notify Scholarship Management Services of any changes of address, school enrollment or other relevant information. Except as described in this brochure, no obligation is assumed by the MGCSA.

Application Deadline: June 1, 2015.

More info at: www.mgcsa.org



Within the Leather

by David Kazmierczak, CGCS

If you read Jack Mackenzie's column in last month's issue you realize that Friday, March 6th

2015 was a pretty significant date in his life. Twenty years of sobriety for an alcoholic is very significant. When Jack emailed me his column to edit, I sent back a response that that date was significant for me as well as it was my parent's 50th wedding anniversary. Little did I know that date would take on additional meaning for me, and not in a good way.

When we moved to Minnesota from Kansas City in the summer of 1998, we were very fortunate to wind up buying a house in the Sunrise Meadows neighborhood in Woodbury. Not because the house was anything special, it was a typical two-story Mchouse in suburbia, but because of the people living around the house we bought.

Almost everybody in "the hood" knew each other, socialized with each other and genuinely cared for each other and still do. Two-thirds of these folks were in the 25-45 age range

with young kids. Not only did these people become your best friends, but their kids wound up growing up with your kids. When we decided we had to move from our home because of its functionality, we couldn't believe our luck in finding what we needed two blocks away- basically staying in "the hood." Even when others moved to bigger houses or downsized because they were empty nesters, they still stay in contact and participate in activities. It is wonderful thing to be a part of, which makes what happened March 6th all the harder to take.

Late in the evening, Dustin Kadlec, who lived four doors down from us, hit the back of a semi-truck stalled on the right side of the road on I-94 in Hudson and lost his life.

Dustin was 22 years old. He was finishing up his degree at college. In the eyes of the world he was a man, but to me he was still a kid. I swear anytime I hear a tragic story like this the same things are said like he was such a good kid, and why does this always happen to the good kids. Well I'm here to tell you, Dustin was just that. He always had a smile on his face, was very personable and just a ray of positivity, at least whenever I was around him.

I am done trying to rationalize

these kinds of things. You can't. There is no explanation for such things, other than there has to be a plan for everybody, even though we have no idea what it is or why. To think otherwise will drive you insane. The sad truth is, this kind of thing happens every day, whether by accident like Dustin, disease, suicide, military service, you name it. Young lives are lost and people close to them, especially the parents, are left to pick up the pieces of their suddenly shattered lives and try to somehow carry on. I can only hope to God this never happens to me or anybody reading this column.

The reason I share this with you is the same reason I touch on seemingly every third column or so. With the temperatures soaring this March and what little snow there is melting away quickly, the season is going to start very early for all of us, and we will again be putting in long hours on the course and imposing self-pressures to bring the golf courses up to high standards as fast as possible.

I implore all of you during the heat of the battle, at least the ones with wives and children, to take a deep breath every once and again, and remember what is really important in life. The people who care and love you are the most important thing there is, and they need your

time and love. That doesn't mean you don't do your job, or lose your passion for growing turfgrass and keeping a solid course. But ask yourself if that extra meaningless trip around the course just to "make sure" isn't costing you valuable time at home. I ask that you give your kids an extra hug, or hold on a bit longer. I ask that you plan an extra outing with your family. Happily take your kid to 6:00 am practice instead of thinking of it as a chore. Rejoice in a family gathering with the in-laws instead of dreading it. You get what I mean?

Clearly, none of us are promised tomorrow. I don't know about you, but I am very good at constantly looking forward to tomorrow and just trying to get through today. I need to embrace today and plan for tomorrow more often. It is sad that it takes a tragedy to remind you of these things sometimes. I haven't spoken to Leonard or Linda, Dustin's parents, but will soon. I don't know what I am going to say to them, what can you say? Knowing them, though, I am sure they would tell anybody just what I said earlier in this column: enjoy and embrace your family now, for you never know when fate can change it forever.