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MGCSA EVENTS

SEPTEMBER 15
MTGF / UM FIELD DAY
TROE Center
Host: Brian Horgan, Ph.D.

OCTOBER 3
WEE ONE FUNDRAISER
North Oaks Golf Club
Host: Jack MacKenzie, CGCS

OCTOBER 17
MGCSA FALL SHOOT
Minnesota Horse & Hunt Club
Host: Bill Gullicks

DECEMBER 7
MGCSA AWARDS
& RECOGNITION BANQUET
Brackett's Crossing Country Club
Host: Tom Proshek

JANUARY 3, 2011
SUPER TUESDAY
Minneapolis Convention Center
Host: MTGF

REGISTRATION FORMS
AND MORE INFORMATION
CAN BE FOUND AT

www.mgcsa.org

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ABOUT THE COVER

No. 9 at Forest Hills GC, a drivable 300-yard, par 4. Forest Hills is the site of this year's MGCSA Stodola Research Scramble on Sept. 19. (See Page 5)



Highlights from the Northern Green Expo 2012 Seminar Schedule

Below is a selected list of topics geared toward golf course superintendents that will be highlighted at the Northern Green Expo in January 2012!

Management

- Keynote: Radical Engagement for Greater Results
- Golf: Managing your Manager, Committee and Boards
- Time Management Techniques for the Green Industry
 - Developing a Sustainable Golf Course Model
 - Pesticides, Perception and Society
 - Should Henry Be Out There?
 - Most Common Problems Encountered During Golf Course Site Visits

- Uncovering the Architectural History of Your Golf Course
- Golf Course Design, Renovation, and Maintenance & Local Case Studies
- Human Resource Management: In Focus

Turf

- Waitea Patch Management Strategies
- Turfgrass Research Update
- Identifying and Troubleshooting Turf After Cut Appearance Issues
- Biorational Control of Dollar Spot
- Turf Weed Control: New Products
- Calibration Calculations, Equipment and Applications
- Golf Course: Growing Great Turf in the Shade
- Pesticide Recertification (A & E)

Grounds

- Stormwater Management: Reclamation & Re-Use - Target Field Case Study
- Back to the Basics: Asphalt & Concrete
- Raingarden Maintenance
- Creation and Protection of Wetlands
- Small Engine Repair
- Maintaining Natives

Water

- Irrigation Basics – The Occasional Repair
- Wire Locating/Tracking
- Irrigation Troubleshooting: 2 Wire
- Weather Based Controls
- Water Conservation/Efficiency
- Aquatics Recertification (F)

A complete schedule-at-a-glance can be found online at www.NorthernGreenExpo.org.



PRESIDENT'S MESSAGE

Are We Having Fun Yet?

By Paul Diegnau, CGCS

I have been in this business for 27 years and this golf season has been a series of "firsts" for me. Granted, my memory isn't what it used to be and past extremes seem to fade and blur with time, but 2011 has been unique. Some of my firsts:

- I had never experienced a putting green exiting winter with 90% kill.
- I don't remember seeing so much rain in such a short period of time and having to close a golf course because it was impassable due to rivers, rapids and lakes.
- I could go on and on about the extended periods of heat and humidity but why? How do our colleagues to the south deal with these conditions on a regular basis? Dew points in the 70s and 80s are just plain physically draining on the human body and mind.
- I have never before seen such an explosion of turfgrass disease as I witnessed on July 18 of this summer. Within 24 hours I watched a Brown Patch epidemic spread from fence line to fence line on my golf course. I swear you could literally watch it spread before your eyes, but my sprayer never stopped moving so I can't confirm that.
- Crabgrass is living the good life. We have large, thick patches of this light green ugliness everywhere, even in areas where it has never been an issue before.
- We have been dealing with Japanese beetle for probably seven years now but this 2011 Japanese beetle population is on steroids! I have never seen so much surface disruption from egg-laying activities on our putting surfaces. We are constantly pelted by flying beetles as we move around the golf course. I had one beetle fly into the corner of my eye and proceed to bite me! Trees of many species have been hit hard by the voracious appetite of these beetles. I have even seen them feeding on spruce, pine, oak, hawthorn and serviceberry! Why can't ash and silver maple be their favorite food source? This year is most definitely a year to treat your golf course or face the possible destruction caused by hungry raccoons and skunks. Trust me...you don't want to deal with that damage.

2011 will definitely be a year to remember. We are all in the same boat. Keep your life preserver on and the stormy seas will eventually subside. Fall is just around the corner! If you find yourself in need of additional information for communicating with your members, players and the media, the GCSAA distributed a news release on July 25 regarding the issues and concerns associated with the weather extremes we have experienced so far this year. The article can be found on the GCSAA website.

In case you feel that these weird weather patterns are the result of man-made global warming, I would offer up the latest satellite data just released by NASA. It seems that satellite data from 2000 - 2011 indicates that the Earth's atmosphere is allowing far more heat to escape into space than climate computer models have been predicting. It also shows that increases in atmospheric CO2 trap far less heat than levels claimed by proponents of global warming. Bottom line: climate computer models and reality don't agree.

The U of MN Field Day is coming up September 15 and will have concurrent tracks for both Turf and Grounds as in past years. This year a joint session will be held to explore the issues surrounding the herbicide Imprelis. Officials from the Minnesota Department of Agriculture, weed scientists, pesticide chemists, woody plant specialists and turfgrass scientists will present and discuss how we got here, the extent of the damage and what actions are being taken. Please make plans to attend and learn about the latest research being conducted at YOUR Turfgrass Research, Outreach and Education Center (TROE) on the University of Minnesota St. Paul campus.

The 2nd Annual Wee One Tournament is fast approaching. The event will take place on October 3 at North Oaks Golf Club and all proceeds will be donated to the Wee One Foundation. The Wee One Foundation was founded to assist golf course management professionals (or their dependents) who incur overwhelming expenses due to medical hardship without comprehensive insurance or adequate financial resources. The format for 2011 has changed to a 4-man scramble in the hope of attracting even more participants and there will be a taco bar on the golf course, similar to the original venue program at Pine Hills Country Club in Wisconsin. This is a great cause and a great tournament. Dale Parske, tournament chair, and his committee, are working hard to make sure this year's event is bigger and better than last year.

The MGCSA Fall Mixer will once again be held on October 17 at the Minnesota Horse and Hunt Club in Prior Lake. If you need to practice up for fall bird hunting, this is a perfect opportunity to sharpen your skills and have a great time doing so. Sporting clays are a blast (*pun intended*)! The winner of the 2011 gun raffle will be drawn at this event. Good luck and I hope to see you at this event and the others mentioned above.

This is the 16th year that Steve Garske and Par Aide have offered two Garske Legacy Scholarship awards to sons and daughters of MGCSA members. Thank you Steve! The MGCSA also offered two legacy scholarships this year. Please see the story on Page 7 for more details.

Keep your head up - snowflakes are on the horizon!

- Until next time,
Paul Diegnau, CGCS

HOLE NOTES

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of the MGCSA

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Forest Hills Golf Club Set to Host Stodola Scramble on Sept. 19

Forest Hills Golf Club Superintendent Marlow Hansen began working at the course 32 years ago - the last 25 as Superintendent.

A small group of area businessmen and golfers designed the course. The original 9 holes were sketched on a Hamm's beer napkin which the club still has in its possession. The par 72 course was built in 1960, measures 6,514 yards and features rolling hills and tree-lined fairways. The greens are fairly small "push up" style greens.

Major Challenges

The golf course is built on two different types of soils – one half on heavy clay soil and the other half on very deep peat bog soil.

History

As mentioned earlier, the club was designed by members and also built by its members and volunteer work. The second nine holes were built in 1964.

In the early 1980s the installation of an extensive drainage system greatly improved the golf course.

In 1994 we completed a reconstruction project of our 15th hole which follows the contour of a lake. The project included installation of a retaining wall along the shore from tee to green, installation of a fabric barrier beneath the entire fairway, covering the entire fairway with up to three feet of soil, and complete replacement of tees and green.

A complete bunker renovation project in the fall of 2000 and most recently in 2004 -05 we installed a completely new irrigation system with that involved enlarging ponds and raising fairways. And most recently built a Practice Facility.

Superintendent Marlow Hansen

Hansen was born and raised in Forest Lake very near the golf course. I started working at the club as a dish washer in 1975, then graduated to grounds crew in 1977. I spent one full season working on a golf course in Florida after graduating from high school and quickly learned Florida was not the place for me. I returned to Forest Hills and had the fortunate opportunity to become



Forest Hills Golf Club's No. 4 -- a 350-yard, par 4.

Superintendent in 1985, I was 25 years old and it has been a "mostly enjoyable" learning experience ever since.

"A small group of area businessmen and golfers designed the course. The original 9 holes were sketched on a Hamm's Beer napkin which the club still has in its possession."

I have raised two great children – a daughter and a son 27 and 22 years old, who both live near by.

I have recently been re-married (two years) to a wonderful wife and two more great (step) children. And we just moved to a new home in Wyoming, Minn.

I enjoy golfing in the summer, hunting in the fall but my favorite thing to do is ice fishing - the best thing I have ever

bought myself is my 6 x 14 Ice Castle - fish house on wheels!

Assistant Superintendent Jeff Meredith

I live in Hugo with the most understanding, forgiving and amazing woman on this earth. We have been together for almost six years. We have two dogs, a damn bird, a farm cat, no children and a chunk of property. This year is my 15th season on the golf course. I started at Dellwood Hills Golf Club pushing a rotary around trees and I was hooked. After a couple seasons there I got a job at the White Bear Yacht Club where I spent eight years. During that time I completed a two-year degree from Anoka Technical College, and obtained an extensive amount of field experience from my mentor, John Steiner, CGCS. Marlow hired me as Assistant Superintendent at Forest Hills in the spring of 2008 and we have become a great team here. I like to play golf in the summer if it's not too hot, and I LOVE to ride snowmobiles in the winter. The colder and snowier the better.

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Wherever golf is played.



Clunis, Johnson, Meier and Norby Receive MGCSA and Garske Legacy Scholarships



KIRA CLUNIS



BEN JOHNSON



MEGAN MEIER



JESSICA NORBY

The legacy award named after the founder of Par Aide Products Company, Joseph S. Garske, located in Lino Lakes, Minnesota is committed to further the education of children and grandchildren of MGCSA members through financial contributions. This is the 16th consecutive year for these awards.

This year, the MGCSA is pleased to award \$1,000 MGCSA Legacy Scholarships to Meagan Meier and Jessica Norby, a \$1,500 Joseph S. Garske scholarship to Ben Johnson and a \$1,500 Garske scholarship renewal to Kira Clunis.

The late Mr. Garske, who died at the age of 76 in 1982, started Par Aide in 1954 with plans to make a "good" ball washer. A foundry man and avid golfer, he knew little about the golf business, tried to sell his ideas for design and tooling to two accessory companies, was turned down by both and so began Par Aide Products Company.

The Legacy Scholarship was started by Steve Garske, son of Joseph Garske, in 1996.

"I am pleased to have our company provide these scholarships since for many superintendents, providing a college education for their children requires true sacrifice. I am fortunate to have the opportunity and ability to help," Garske said.

"As a long-time member of the Scholarship Committee some years ago, it always bothered me that we had lots of scholarships available for turf students but nothing for the legacy of current members," Garske said. (Heeding the comments of a long-time Minnesota Superintendent that our committee was working to put him out of a job.) While Steve thought this was a bit of paranoid thinking, it did make him realize that sup-

ply and demand works in this industry as well, and if nothing else, an oversupply of eager new superintendents could definitely undermine salaries. However, it was the following that motivated Par Aide to initiate a legacy scholarship program:

"1) Many Superintendents are underpaid, in my opinion, and they truly work a labor of love. Sending a child to college is likely a real hardship. These same Superintendents who now have college age children were the very ones who had been so responsible for supporting our company through all the years and had helped us attain our success. We wanted to thank them.

"2) Our founder, Joe Garske, did not have any formal education and was always conscious of that fact. He had quietly supported at least one young man in gaining a degree.

"3) There were lots of turf student scholarships but few if any Legacy awards."

So it seemed obvious to Steve to initiate a legacy program and it was discussed at numerous scholarship meetings. The problem was how to administer such a program. Suppliers to our industry did not want to be in a position of judging one potential recipient/customer against another, and Superintendent members were not comfortable with reviewing personal information and making judgments on each other either. The idea laid dormant until we discovered the Citizens' Scholarship Foundation of America, now called Scholarship America, an organization that does nothing but review and award scholarships. It's completely impartial and considers all information confidential. The MGCSA quickly agreed to accept the cost of administration and the

Joseph S. Garske Legacy was born. The idea was to provide two two-year scholarships to deserving legacy of current MGCSA members. This program is thought to have been successful by all and has been in existence since 1996, helping numerous sons and daughters of Superintendents pursue their college education.

Par Aide has continued to prosper and as an expansion of its Minnesota program it now also offers a similar program nationwide through the GCSAA.

Kira Clunis, the daughter of Kevin and Nancy Clunis. Kevin is the Superintendent at Tanners Brook Golf Course in Forest Lake, Minn. Kira is a graduate of Mahtomedi High School and is now enrolled at St. Olaf College; her major is Sports Psychology.

Ben Johnson, the son of Troy and Jennifer Johnson. Troy is the Superintendent of Hudson Golf Club in Hudson. Ben is a graduate of Hudson High School and now attends the University of Minnesota, majoring in Accounting.

Winners of this year's MGCSA Legacy Scholarships are:

Meagan Meier, the daughter of Tom and Apryl Meier. Tom is the Superintendent at LeSueur Country Club. Meagan is a graduate of Worthington High School. Meagan attends the College of St Benedict where she majors in Biology.

Jessica Norby, the daughter of Kevin and Robin Norby. Kevin is a golf course Architect with Herfort Norby Golf Course Architects. Jessica, a graduate of Chaska High School, is attending Fort Lewis College in Colorado where she is a majoring in Environmental Geology.

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Compilation of Summaries of Short Winter Articles

Submitted by CHRIS HOFF
Precision Turf & Chemical, Inc.

Physiology, Plant Stress,
Winter Injury: Summaries

Survivability of Anoxia Under Ice
and Impermeable Covers (2008)

By Darryl Asher,
Todd Paquette and Jim Ross

Previous research conducted at the Prairie Turfgrass Research Centre (Olds, Alberta, Canada) showed that there was a rapid loss of relative hardiness of annual bluegrass plants between 45 and 60 days under continual ice cover (Tompkins, Ross and Moroz, 2004), while plants in non-iced conditions lost hardiness very slowly. The fact that air cannot be replenished under ice cover, or an impermeable covering of any sort, was thought to be a factor contributing to the injury. Research conducted in Quebec found that under an impermeable cover oxygen was depleted and carbon dioxide increased (Rochette et al, 2006). This increase was attributed to use by the plants and to low temperature microbes. When oxygen is completely depleted, the condition is known as anoxia.

In earlier research, Beard (1965) had similar results and found that injury to annual bluegrass occurred 75 days after continual ice cover. However, it seems that creeping bentgrass is affected much less and in our research was still alive after 120 days of continual ice cover. Other researchers found that differential sensitivity to conditions of anoxia was common amongst various plant species (Bertrand et al, 2001).

So what happens to annual bluegrass between 45 and 60 days when air cannot be replenished?

It seems that under conditions of anoxia a rapid depletion of stored foods occurs. We know that these stored foods act as an anti-freeze agent for plants so when they are completely depleted the plants have lost their ability to resist freezing. And, of course, once they freeze irreversible cell damage occurs and plants die.

At this point, we think that when oxygen is fully depleted rapid utilization of food reserves occurs, which in turn causes a rapid loss of hardiness (between 45 and 60 days). Once food reserves are depleted, the plant begins to utilize energy that is provided by a process called glycolysis. However, the energy produced is not suf-

ficient to sustain the plant. This deficit also leads to the induction of fermentation metabolism and to an increase in the production of potentially phytotoxic metabolites such as ethanol, lactic acid and carbon dioxide (Rochette et al, 2009).

So it appears that injury results from either a toxic build-up of these gases or from a complete depletion of food reserves. In the Quebec study, high levels of carbon dioxide did not produce mortality, so that may be an indication that the depletion of food reserves is the reason for the injury.

Mitigation of Anoxia Under Ice
and Impermeable Covers on Annual
Bluegrass Putting Greens (2008)

By Darrell Tompkins,
Philippe Rochette and Jim Ross

Winter damage to annual bluegrass putting greens caused by a lack of oxygen under ice or impermeable winter covers is an important problem in cold climates. The objective of this trial was to evaluate various covering systems that would increase oxygen levels and, in turn, prevent damage associated with anoxia (lack of oxygen). Impermeable winter covers, some with an insulating air layer, were compared against ice cover and snow cover only treatments. Additional treatments to examine air replenishment under the covers were also evaluated.

Oxygen content under the various treatments remained constant for the first 75 days of the trial. However by day 90, there was a significant reduction in oxygen levels for the ice only and the ice, impermeable cover, no air layer treatments. In addition, the ice only treatment was significantly lower than the ice, impermeable cover, no air layer treatment. Air replenishment did not appear to have an impact on oxygen concentration.

Carbon dioxide levels were lowest for the no ice, no cover treatment. On day 90, the highest levels were for the ice, snow cover only and ice, impermeable cover, no air layer treatments. There seemed to be some improvement in carbon dioxide levels with the Enkamat and bubble wrap treatments.

Ice, snow cover only treatments were dead in both years of the study.

As data for turf quality and relative hardiness levels were not yet completed

for this trial, it is preliminary in nature.

Strategies for Removing Ice from
Annual Bluegrass Golf Greens (2005)

By Darrell Tompkins,
Jim Ross and M. A. Anderson

Ice cover on annual bluegrass (*Poa annua* L.) putting greens often causes damage in the cold climates of North America during long winters. The objective of this study was to evaluate various ice removal strategies for use on annual bluegrass putting greens. In addition, the various products were evaluated for turf injury (damage caused by the product). An initial screening study was conducted in order to choose the best treatments for the field study. Selection of treatments was based on effectiveness and turf injury caused by the products.

Results of the five separate field tests showed that where there was ice removal turf was not improved with the use of covering materials. As far as the individual treatments were concerned, the Landscape and Alaskan ice melters had the greatest effect on reducing ice hardness, increasing ice melt and reducing the ice bond. The methanol was not as effective as either of the granular ice melters in the three tested parameters. The radiant heat producing materials, black sand and Milorganite, appeared to be more effective when light intensities were greater in the late winter study. It also appeared that full sun improved their performance.

This field trial was conducted over a three-year period to attempt to determine turf injury as a result of the various products. Turf injury was measured as percent area damage. There were no differences in turf injury when considering the covering materials. On one occasion Alaskan Ice Melter caused greater injury than any of the other treatments. Landscape Ice Melter also had significantly more injury than the other treatments. Methanol, Milorganite and black sand had injury that was similar to the untreated control.

Relative hardiness levels were measured in year three to determine whether the different ice melting strategies negatively impacted hardiness levels. The early winter test of year three showed that there

(Continued on Page 11)



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