

on 06/2014

THE MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS

# COURSE

THE JOYS OF WINTER

THE UNDERGROUND CONNECTION

EDUCATION WRAP UP

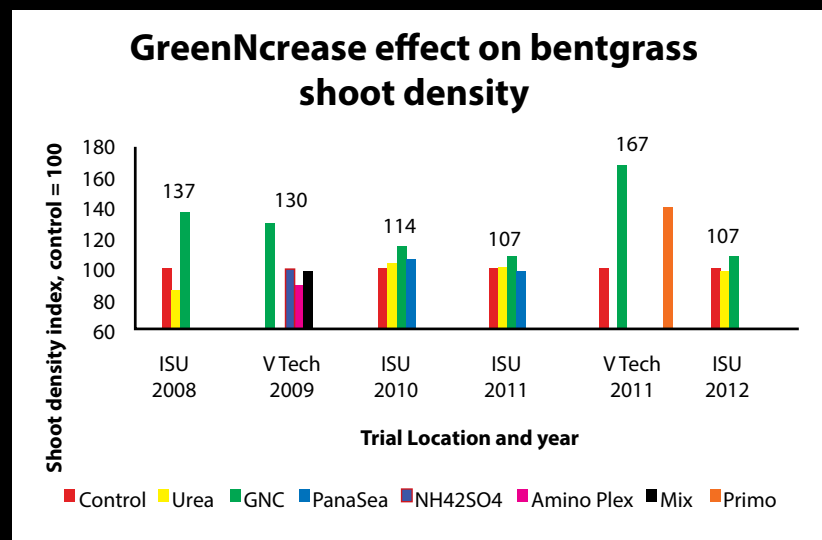
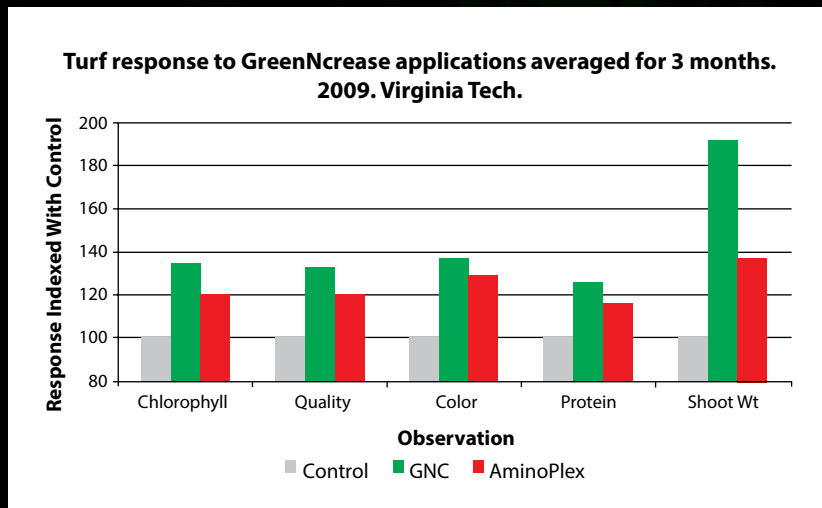
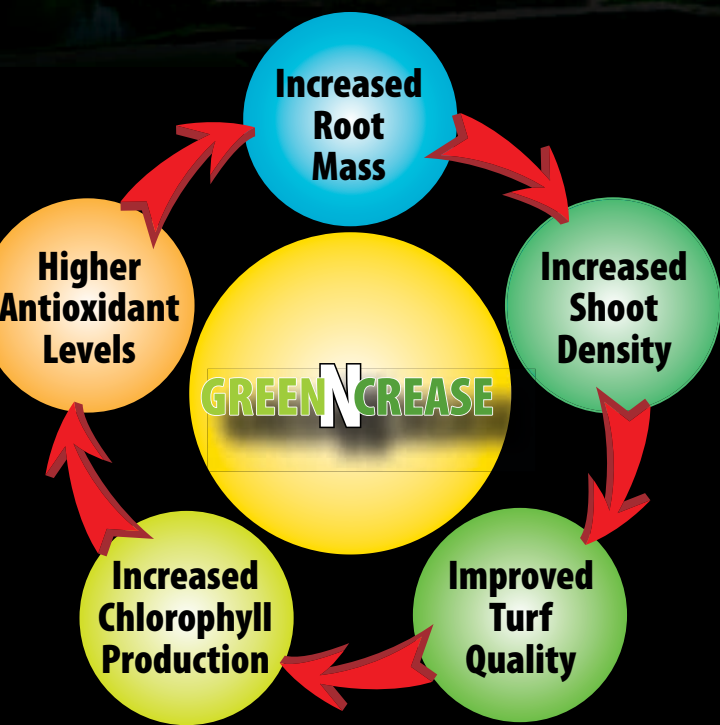


John Gurke, CGCS

## Aurora Country Club

# GREENNCREASE

Say Hello to GreenNcrease  
and Goodbye to Stressed Out Turf!



- Provides Heat and Drought Tolerance
- University Tested and Proven

- Rich in Amino Acid Content
- Distributor Openings Available



# toc

TABLE OF CONTENTS

## front cover

The 13<sup>th</sup> hole at Aurora Country Club looking from the green back across the pond to the fairway. A well placed tee shot will give access to this elevated and well protected green.

PHOTO: Luke Cella

**4** FEATURE  
 The Joys of Winter  
 and the Heartbreak  
 of Summer  
 Ed Nangle

**14** FEATURE II  
 The Underground  
 Connection  
 Darrick Robbins



This view of the 13<sup>th</sup> at Aurora shows the elevation and bunkering surrounding this relatively small and sloping green.

**DEPARTMENTS**

**03** Director's Column  
 Matt Harstad

**09** The Bull Sheet  
 John Gurke

**18** Super-n-Site  
 Bill Meyer

**22** Education Recap  
 Chuck Anfield

**DATES**

**2014 MIDWEST EVENTS**

06/16 Midwest June Meeting, Aurora Country Club

7/10 Midwest Nine Hole Event - Woodstock CC

8/26 Midwest Golf Championship, Harborside International

10/06 Midwest October Meeting, Briarwood CC

## 2014 Board of Directors

**PRESIDENT**  
 Dave Kohley, Silver Lake Country Club

**VICE PRESIDENT**  
 Chuck Barber, St. Charles Country Club

**SECRETARY / TREASURER**  
 Matt Kregel, The Club at Strawberry Creek

**EXECUTIVE DIRECTOR**  
 Luke Cella, CGCS

**BOARD OF DIRECTORS**  
 Matt Harstad, Calumet Country Club  
 Jeff Hoste, Village Greens of Woodridge  
 Kris Kvelland, Ridge Country Club  
 Jim Pedersen, Hughes Creek Golf Course  
 Justin VanLanduit, Briarwood Country Club

**PRESIDENT EMERITUS**  
 Dave Groelle, CGCS, Royal Melbourne C.C.

**COMMERCIAL REPRESENTATIVE**  
 Jake Vollbeer, Burris Equipment Company

**CLASS 'C' REPRESENTATIVE**  
 Brian Placzkowski, Royal Melbourne C.C.

**TURFGRASS ADVISOR**  
 Dr. Ed Nangle, CDGA

**EDITORIAL CHAIRMAN**  
 Matt Harstad

**ASSOCIATE EDITORS**  
 John Gurke, CGCS  
 Chuck Anfield, CGCS  
 Chuck Barber



Midwest Association of Golf Course Superintendents (MAGCS) exists to promote professionalism and integrity, to provide networking, education and career enhancement opportunities to all members who facilitate the growth and enjoyment of golf.

*On Course* is published monthly with original member content. For advertising opportunities please call 630-243-7900.

© 2014 by Midwest Association of Golf Course Superintendents. All rights reserved. Reproduction without permission is prohibited.

Reuse permissions: admin@magcs.org

# WE'LL DRAIN YOUR GREENS

(NOT YOUR POCKETS)

**PC DRAINAGE**



630-675-5000 • [JEFF@HOLLEMBEAK.COM](mailto:JEFF@HOLLEMBEAK.COM)  
BIG ROCK, IL • [HOLLEMBEAK.COM](http://HOLLEMBEAK.COM)

*From Reservoir to Rotor...*



***Rain Bird has you covered.***

To learn more, contact your local sales representative today!

Kevin West  
Outside Sales  
(708) 341-1687  
[kwest@rainbird.com](mailto:kwest@rainbird.com)

Dustin Peterson  
Outside Sales  
(309) 314-1937  
[dpeterson@rainbird.com](mailto:dpeterson@rainbird.com)

Jason  
Westmoreland  
Inside Support  
(888) 907-5535

Or visit: <https://golfstore.rainbird.com>

[rbiservices@rainbird.com](mailto:rbiservices@rainbird.com)  
[rd.com](http://rd.com)

**RAIN BIRD**

  
Growing Solutions, Inc.  
Our solutions are your solution

Introducing, the world's

**MOST ADVANCED**

Environmental Center available.



1.800.816.4041

Phone: 815.462.1300

Fax: 815.462.4036



**[www.YourGrowingSolutions.com](http://www.YourGrowingSolutions.com)**

21719 S. Center Avenue. Unit D, New Lenox, IL 60451



# I Took a Picture



*Matt Harstad, On Course  
Editorial Chairman*

When I became chairman of the editorial committee, I always said to myself I wasn't going to write the repetitive or standard "we need articles" column because it seemed like that was the typical issue of the editorial committee, and so far I've been able to avoid it.

The fact remains, we do need articles. In order to continue to avoid saying "we need articles," I'm going to say that we just need ideas for articles.

We have members of the association that are great writers, but don't always have something to write about. G.K. Chesterton has a great quote that I often think about when trying to come up with a topic for them, "The blank page is God's way of letting you know how hard it is to be God."

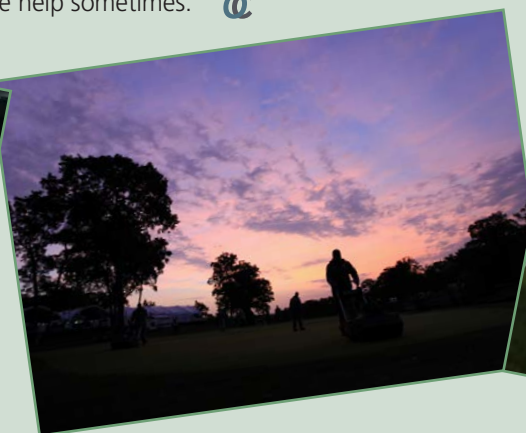
If you have anything that you think would make for an interesting article in On Course, please give Jim Pedersen or me a call/email and we'll add it to the list of ideas that we are assembling. If you are doing a project on your course, or if there is a topic that you would like to learn about, let us

THE BLANK PAGE IS GOD'S  
WAY OF LETTING YOU  
KNOW HOW HARD IT IS TO  
BE GOD. - G.K. CHESTERTON

know and we will do our best to get it written. The topic doesn't even have to be golf course related, maybe you or another member that you know has a unique hobby, or you read an interesting book, etc. It could be great content for the magazine.

Helping to add content to the magazine will also soon have a potential prize to go with it. We are going to begin a photo of the month feature. I know that we all take some beautiful pictures of golf courses, and some very humorous ones too, so send us your best. One photo will be selected each month to appear in the magazine, and from those, a yearly winner of a \$100 gift card will be chosen at the Annual Meeting in November. If you have a photo you would like to enter send it to [luke@magcs.org](mailto:luke@magcs.org) and the Editorial Committee will choose a winner each month. Next time you grab a great shot, share it with the membership and allow others to enjoy it.

The goal of On Course has always been to publish a magazine that is solely made up of member created content. At times it can be tough because we are so busy with our "day" jobs, but we will continue to do our best to find and create content that is informative and enjoyable, we just might need a little help sometimes. @





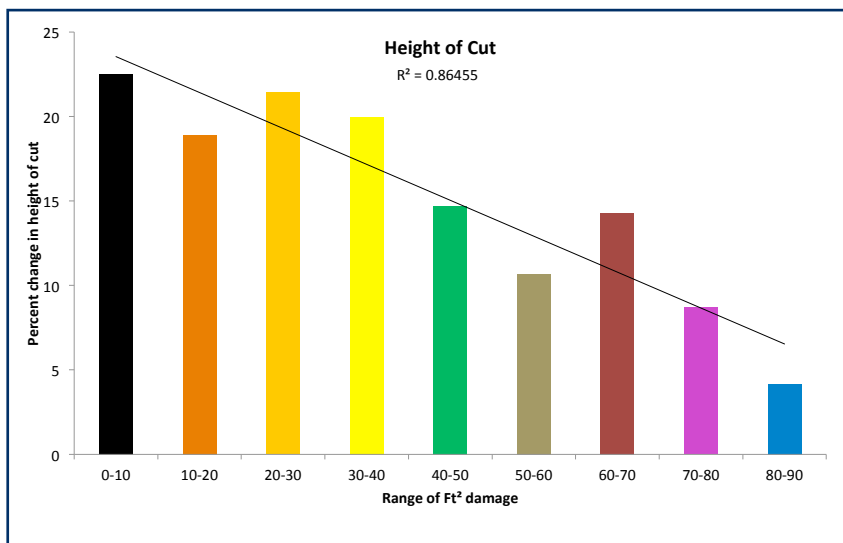
# The Joys of Winter and the Heartbreak of Summer

Dr. Ed Nangle, Chicago District Golf Association

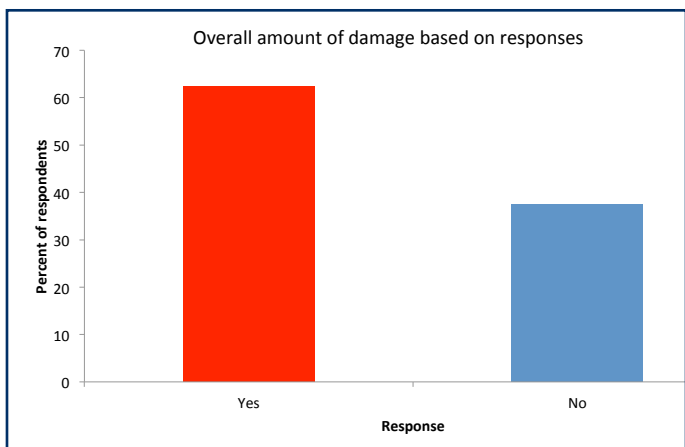
The CDGA and the Midwest conducted a survey of the membership this spring. Dr. Nangle took the time to present the findings at the April Meeting at Silver Lake Country Club (see Education Wrap Up). He also took the time to delve deeper into the data and presents correlations here. He shares his findings here.

As time has passed and still many of us are somewhat frustrated as to how things could so dramatically wrong over the winter, the survey which you participated in has produced some interesting results. I for one would like to thank you for your inputs and hopefully we can further place useable information in your hands. In regards to overall responses, a majority of almost 2:1 respondents indicated that you suffered some damage to your putting greens (Overall response figure). If we add in tees and fairways I would expect that the percentage of courses that saw damage would get close to 80%. Reports of older cultivars of ryegrass also suffering badly from the winter have surfaced which only added to the total amount of courses impacted. For the most part of the courses who didn't suffer damage were lucky enough to have relatively pure stands of creeping bentgrass.

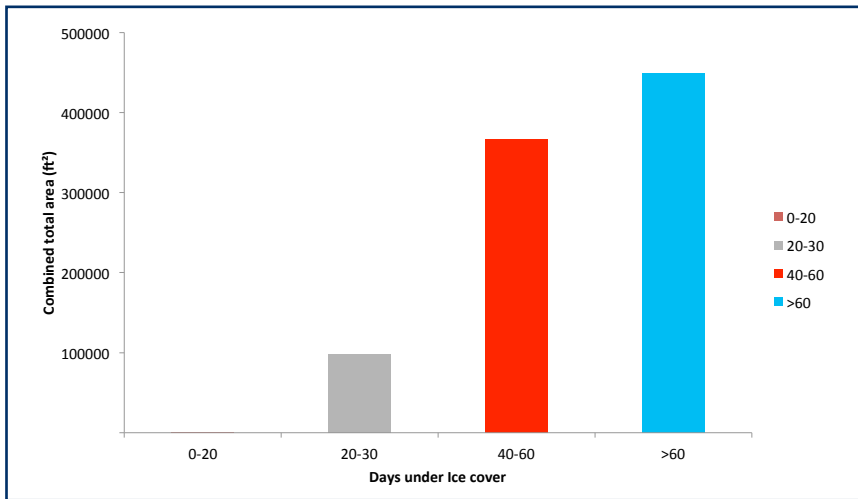
As I went through the data one point that rose its head related



to mowing heights. Based on the data received and transformed to indicate the percent change in mowing height (Increase) the smaller the amount of total area damaged. The relationship is far from perfect; however the idea that carbohydrate reserves are extremely important would be strengthened in the fall when you have greater leaf surface to aid in light capture going into winter. The R2 value which can point to a POSSIBLE relationship was relatively strong – especially for a biological situation which was subject to such extreme conditions (Height of cut figure).



Without doubt the longer the period we were under ice, the greater the damage was. While 60 days is traditionally considered the maximum timescale for sustaining *Poa annua* under ice, there was still damage found even under shorter time periods. The variability in *poa* biotypes may lead to some of the differences, while microclimate effects undoubtedly both hindered and helped *poa*. Despite the graph indicating timescale damage, not all courses suffered from the problem and one course with high



concentrations of poa who did nothing whatsoever, suffered almost no damage (Days under ice).

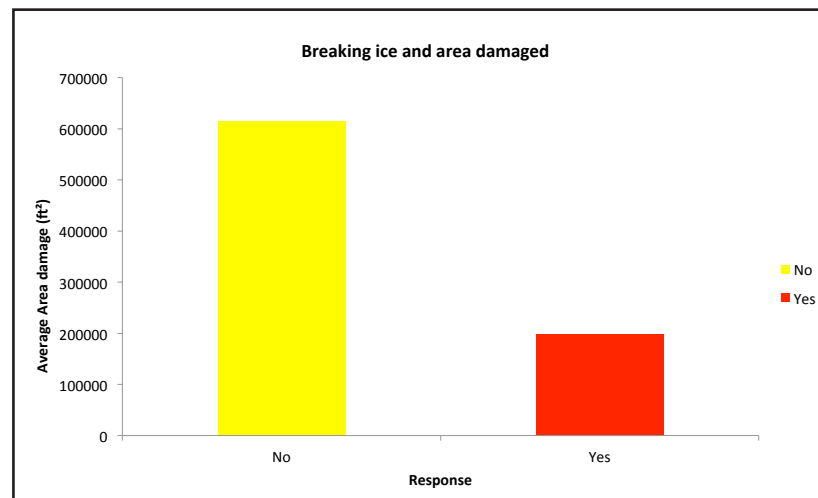
There was some concern that breaking the ice early created a problem and this does not seem to be the overall case. A vast majority of the damage by area as we can see according to survey responses was found at courses that did not break ice. Yet again however there are incidences of breaking ice early either did not help or even early efforts were fruitless as superintendents found that greens were already in bad shape despite the aggressive approach (Breaking ice).

Of the controversial sentiments there are of course two that will raise their head. I could not clearly see a relationship between fertility and the problems that arose. There were some refinements that would need to be put to the quiz and more specific answers based on the data we received. It does seem that applications of urea as a dormant feed may not be ideal – but it is also easy to say that a majority of responses were also from managers who used urea and so the probability of damage occurring was greater – the joys of statistics! The question needs to be revisited, I will add one caveat however, if a quick release source of N is available and poa is regaining activity within 24 hours of exiting freezing conditions then uptake and activity will certainly be pushed to a greater extent by the availability of a quick release portion of a fertilizer – remember despite being coated there is still some quick release of N (Fertility).

Finally the other question that always leads to debate is related to covers. It's a very difficult topic to deal with as there is so many

pros and cons for both. Its undeniable that covers will help recovery in the spring but how consistent they are over winter is unfortunately debatable, from a financial and labor standpoint it may not be feasible, while cover type and how to handle mid winter thaw's is also another concern. Further north, covers are a regular feature and so some credence must be given to their use – consistency is the key however. Our survey indicated that covers reduced damage by as much as 30% - now I know there are situations who will tell me I am wrong and that the covers made things worse – don't shoot the messenger – reasons for cover failure may be penetration of water underneath during the thaw period, too much warming under the covers in the thaw period leading to really actively growing Poa annua. They do protect from wind damage of course and may help in certain situations – but as I say – someone for sure is going to tell me I'm wrong on that (Covers)

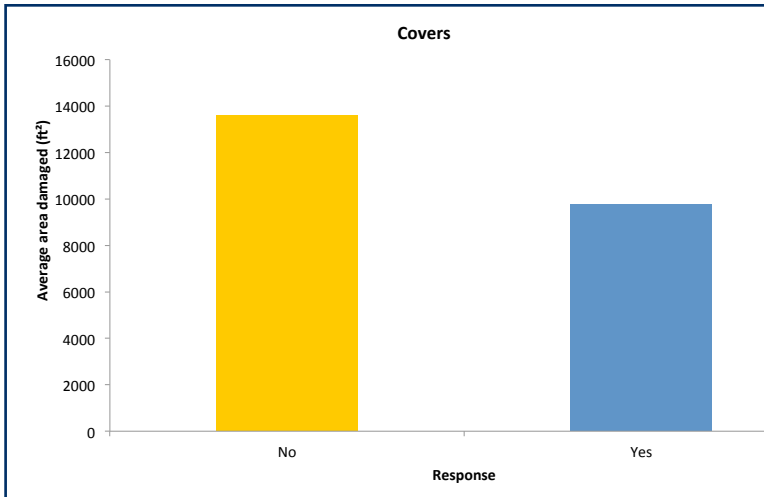
Overall, the winter was a record one – the NOAA indicated that it broke all time average cold temperature from December



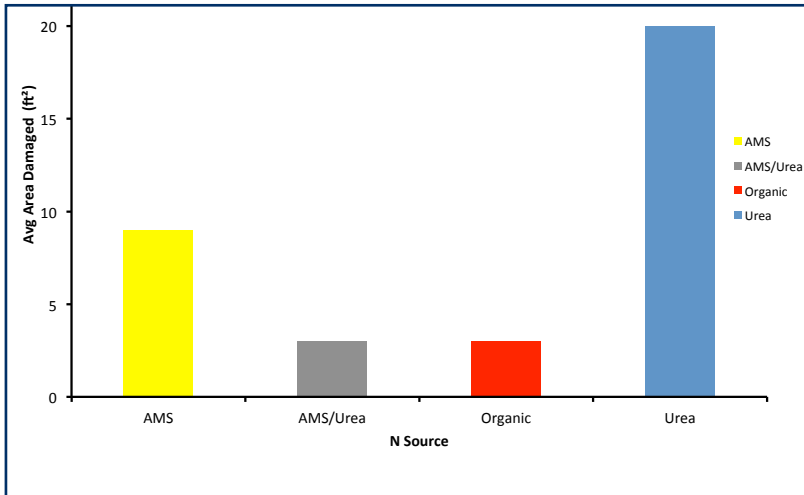
to March. Snowfall was top three in total and the swath of damage ran from Chicago through Detroit and all the way over to Massachusetts – similar to a line that storms would follow with the westerly winds. For the most part the timeline of problems seems to begin in January with ice formation events. This ice was further thickened with melt occurring on two or three sets of warming dates and the damage was then done under the heavy







snow pack. Empathy is starting to give way to frustration but unless courses are willing to go to bentgrass there is no surefire response to this occurring again. It's nice to call it a 100-year winter – let's hope next year isn't a 1000-year winter. ☹



## A Blast from the Past

I searched *The Bull Sheet* from 1978-79 (the second coldest most snowiest winter on record) to see how it effected the turf at area courses. Snow mold was the most devastating factor (other than several collapsed roofs of maintenance facilities). "Some buildings were a total loss; others the roofs collapsed and had to be replaced. Some equipment stored in these buildings was ruined and had to be replaced or repaired at a high cost. It appeared that the golf carts stored in these buildings suffered the most damage." – Ray Greber

Malcom Shurtleff and John Street from U of I wrote an extensive article that appeared in the June edition of the Bull Sheet that year and then was reprinted in October.

Even then, superintendents couldn't sit still and wait. Bob Breen, Sr. in February of that year explained, "Today I took a shovel, scooped three feet of snow off a green and removed a couple of plugs and brought them inside to look at. The first impression was that it looked as if it been removed in later April as it had good color, green seed heads of *Poa* had formed, and it was very much in the need of a mowing." He went on to say, "There were several lesions of leaf spots and *Typhula* and Gray snow mold was evident in both plugs. I would seem to indicate rather severe snow mold problems."

I did notice the CDGA Green Seminar had a section added to the agenda dealing with winter damage that year. In speaking with one of those present at that meeting – snow mold was the culprit that spring. There was no ice damage or desiccation with all that snow cover. Frost never formed in the ground that year, unlike 2013-14 - and if you were mowing below ¼" going into winter, you were asking for trouble. – L. Cella

# UPSCALE, MAINTENANCE-FREE TEE LINES & MATS:


## ISN'T IT TIME TO PUSH THE EASY BUTTON?

- PRACTICE FACILITIES
- TEE-LINE TURF
- RANGE MATS
- PUTTING GREENS
- TARGET GREENS

## SYNTHETIC TURF TEE LINES

- **HOLDS A REAL TEE!**
- Provides divot feel with no club bounce
- Used by top rated facilities
- Fat shots with **NO SKIP INTO BALL**
- Allows play and practice year round
- Saves your grass and your money
- Available in mats and full tee lines

**855.SYN.TURF**  
[www.teelineturf.com](http://www.teelineturf.com)



YEAH, YOU COULD SAY THIS IS A  
HOSTILE WORK ENVIRONMENT.

FOR THE TURF, THAT IS.

Day in, day out—your turf has it tough. It must endure daily mowing, UV rays, golfers and extreme weather conditions, not to mention the constant threat of disease. Daconil Action™ fungicide combines the power of Daconil® fungicide with a revolutionary Turf Protein Booster that helps turf activate its own natural production of PR proteins. Use on a regular application interval for stronger and healthier turf that is better able to defend itself against disease while offering greater drought tolerance. So whether it's disease or cleats, it's not a problem. To learn how to rotate Daconil Action with Secure™ fungicide, visit [GreenCastOnline.com/programs](http://GreenCastOnline.com/programs)



To hear what superintendents are saying,  
visit [GreenCastOnline.com/DaconilAction](http://GreenCastOnline.com/DaconilAction)

For more information on Daconil Action, contact:

Brian S. Winkel  
(630) 391-2170

[brian.winkel@syngenta.com](mailto:brian.winkel@syngenta.com)





# Budgets Can't Have Pinpoint Accuracy Unless Your Equipment Does



Exclusive Six-Diaphragm Pump satisfies the highest spray rates.



Quick Find Console® provides enhanced operator interface with sprayer controls.

You need to do jobs correctly, accurately and efficiently. The new **Toro Multi Pro® 1750** sprayer helps on all fronts. Its 175 gallon tank is engineered to virtually eliminate wasted chemicals while ensuring the proper application rate every time. Its oversized pump satisfies the highest spray rates. Plus, with its Quick Find Console®, operators can find boom and actuator switches without looking. The Multi Pro® 1750 - Money saved on spraying is money you can use elsewhere on your course.

- Powerful Kohler air cooled 725 cc gas engine
- Bi-directional break-away boom system
- Hydraulic boom lift cylinders
- 4 wheel disk brakes with hill-assist
- 175 gallon tank with three jet agitation nozzles



*Reinders*

Solutions & Supplies for the Green Industry

COMMERCIAL EQUIPMENT SALES

John Jensen, Sales Manager (414) 313-5130

Whitey Anderson (630) 251-4832 • Steve Stewart (630) 284-8496

Joe Etten (630) 284-8492 • Grant Rundblade (815) 988-6303

3816 Carnation St., Franklin Park, IL (888) 838-5778

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



[www.toro.com/multipro](http://www.toro.com/multipro)



# #BullSheet



**JUNE 2014**

## Dates to Remember

**June 16** – MAGCS monthly meeting at Aurora Country Club, John Gurke and Aaron Reinhart hosts.

**June 23** – 2014 U.S. Senior Open Qualifier at Village Links of Glen Ellen, IL, Christian Pekarek host.

**June 29** – Deadline for applications for the Green Start Academy presented by Bayer and John Deere Golf.

**July 1** – Deadline for the Call for Nominations for candidates for the 2015 GCSAA Board of Directors.

**July 10** – MAGCS 9 Holer at Woodstock Country Club, Bob Kronn Sr., host.

**July 10** – Toro Company's 100th birthday.

**July 11** – The Mark Olson Benefit Golf Outing at Old Oak Country Club in Homer Glen, IL, Chad Walk and Peter Lieponis hosts.

**July 15** – Purdue Turf and Landscape Field Day at the W. H. Daniel Turf Center in West LaFayette, IN.

**July 21** – the 14th Annual John Buck Golf Outing at the Highlands of Elgin, IL, Brad Legnaioli, CGCS host.

Welcome to our newest MAGCS Members:

**Adam Wiles**, Conway Farms Golf Club, Class C  
**Matt Whitsitt**, Lincolnshire Fields Country Club, Class C

Congratulations to John Ekstrom and his family on their newest arrival. Claire Ann Ekstrom was born on May 6th, weighing in at 8 lbs., 7 ozs., and 20 " long. Happy days!



There has been some movement in the ranks recently. **Rusty Willard**, formerly at the Golf Club at Harbor Shores is the superintendent at the Glen Club in Glenview, IL. **Nicklaus Yackle** is a new assistant at Medinah Country Club. **Aaron Hearn**, former assistant at Stonebridge Country Club is the new superintendent at Salt Creek Golf Course. And last but certainly not least, **Fred Behnke**, CGCS, retired superintendent at Mount Prospect Golf Club is now a Customer Service Representative for Growing Solutions. Congratulations to all of these gentlemen!

This seems to be the year of important milestones throughout our area. CDGA turns 100 this year, as do several clubs including Aurora, Oak Park, and Indian Hill Club (apologies for those I've omitted). Perhaps an even bigger milestone is that which is being celebrated by **Modesto "Moe" Sanchez**, who on May 15th began his 50th year of employment at Briarwood Country Club. When you think about it, it is truly an incredible accomplishment, especially in our industry where transience among our members (see the previous item for an example of this) is considered the rule and not the exception. Moe is that exception, and he is really an exceptional gentleman. He worked side by side with **Paul Voykin** throughout his illustrious and long career at Briarwood, and when Paul retired, Moe decided to stick around and help the new kid on the block. Congratulations, Moe Sanchez on this amazing career accomplishment!

Speaking of Paul Voykin, he recently spent a 3-week stint in the hospital to recover from a pinched nerve in his



back. Let's all wish him a full recovery so he can get back to his old self again.

If you want (or need) a little refresher in on-course etiquette for modern times, the TPC Network—comprised of 32 properties designed to host PGA TOUR events—has released etiquette tips culled from the head golf pros in its network. These aren't your traditional "rules" that you were brought up on, but tips for the 21st century golfer on such subjects as cell phone use and playing from the tees you'll have the best chance of success. A few simple clicks gets you to all 10—just go to [www.clubandresortbusiness.com/2014/04/17/tpc-network-releases-top-10-etiquette-tips/](http://www.clubandresortbusiness.com/2014/04/17/tpc-network-releases-top-10-etiquette-tips/).

John Deere Golf and Bayer CropScience are now accepting applications for the 2014 Green Start Academy. They are inviting 50 assistant superintendents to attend an all-expense-paid, two-and-a-half-day education and networking event October 15-17, 2014 at the Bayer and John Deere facilities in North Carolina. The deadline to apply is June 29<sup>th</sup>, so hurry. Go to [www.BackedbyBayer.com/Green-Start-Academy](http://www.BackedbyBayer.com/Green-Start-Academy) for the application form.

Mark July 11<sup>th</sup> down on your calendar—the Mark Olson Benefit Golf Outing will take place at Old Oak Country Club in Homer Glen, IL with Pete Lieponis and Chad Walk hosting. For those of you who don't know Mark, he works for Prime Turf, Inc. as a sales and service associate, servicing the Midwest for the past 14 years, and just as nice a guy as you can know. Mark has been diagnosed with stage 4 lung cancer. His treatment will be extensive and his family will be in need of assistance with current and future medical expenses. The outing will raise funds to help defray some of those expenses. It is a four-person scramble teeing off at 1:00 PM, with lunch and complimentary beverage cart on the course and dinner afterward. There will be games throughout the round, and a 50/50 Split-the-Pot raffle and auction items to boot. Please put a foursome together for this cause and come have a fun day on a fun golf course. Cost is \$125 per person, or just \$500 per foursome. Go to [www.weeone.org](http://www.weeone.org) to register.



Mark Olson and Family will benefit from a golf outing on July 11 at Old Oak Country Club.

Hey, in case you were thinking of getting nominated for induction in the World Golf Hall of Fame, you should know

that the procedures have changed. Starting in 2015, there will no longer be an annual ceremony; instead, enshrinement will occur every two years. So you have two whole years to become Hall-worthy.

Among its many "Best of" lists, Golfweek magazine has a Best Municipal Courses list. Go figure. Anyhow, six of them in the top 50 are KemperSports properties, and two of them are in our neighborhood. Harborside International Starboard Course was ranked 13<sup>th</sup>, while the Port Course received a 47 ranking. Congrats to the guys from Harborside!

Have you noticed that in a year when seed is something we need more than just about anything, there isn't a whole lot out there? One of the reasons is the stuff you put on your kids' dessert—Nutella, the hazelnut/chocolate spread that has gotten so popular. Turns out hazelnuts come from filbert trees. Also turns out there aren't a whole lot of filbert trees in the world, so farmers are looking to plant them wherever they can spare the acreage. Also turns out turf seed acreage is a major go-to guy for filbert tree planting. Since the trees are a multi-year commitment, turf loses out—to the tune of 30 to 50 years for each field converted from seed production to hazelnut production. Who'da thunk?

Bob Rigney is that guy that you see occasionally at a MAGCS meeting and you go, "I KNOW that guy, but what the hell is his name??" Nick Offerman is that guy that you see occasionally in a movie and you go, "I KNOW that guy, but what the hell is his name??" Is this similarity alone enough to wonder whether they are one and the same?

## MIDWEST Doppelgänger



Bob Rigney - Nick Offerman, you be the judge?

Koch Agronomic Services, LLC has agreed to acquire the turf and ornamental assets, brands, and product technologies of Agrium Advanced Technologies. No lie.

Q: What is Dave Schlagetter's favorite classic cop drama show?

A: Indian Hill Street Blues





# Nels J. Johnson Tree Experts, Inc.

## A Proud Tradition Since 1930



Phone: 847-475-1877 • Fax: 847-475-0037  
[www.nelsjohnsontree.com](http://www.nelsjohnsontree.com)





A beautiful April 29th found us on the grounds of the Silver Lake Country Club in Orland Park with Dave Kohley and his celebrity dog Bosco hosting. Dr. Ed Nangle from CDGA gave a really interesting and informative presentation about winterkill and the prospects of recovery from it. The golf event was the spring scramble, allowing for us bad golfers to rely on better golfers in our group to make the great shots. Many thanks to Dave and the staff at Silver Lake for a great day on a beautiful golf course, and to the day's generous sponsors who were: Arthur Clesen, Inc., Burris Equipment Company, Lemont Paving Company, Nels J. Johnson Tree Experts, Reinders and Syngenta.





Just a week later, MAGCS and ITF took their act south to Peoria Heights, IL where the Spring Golf Day was held on host **Andy Morris** and Asst. Alex Palos' beautiful golf course. The drive to P-town was WELL worth the effort—that golf course was spectacular! The topography, the perfect conditions, the ridiculously friendly staff, the excellent food, even the music emanating from the pro shop made for a glorious day. Thanks to The fine folks at the Country Club of Peoria and to our sponsors: Premier Level—**Burris Equipment Company**; Awards Reception Sponsor—**Bayer Environmental Science**; Education/Lunch Sponsor—**Civitas**; and Hole Sponsors—**BASF, Blu Petroleum, D&K Products, Dow AgroSciences, Knox Fertilizer** and **Lebanon Turf**. 





# The Underground Connection

Darrick Robbins, Reinders, Inc.

There is a beast under your golf course. You try to keep it captive, but sometimes it escapes despite your best efforts. It's water of course. As a golf course superintendent you are tasked with keeping water captive, and you do that by creating a closed system.

Anyone who has seen photos of a tsunami, or watched the end of a hose get loose under pressure knows that keeping water captive is easier said than done. So how is this accomplished? We create systems that only allow water to escape when and where we want it to. We glue, tighten, lube, restrain, and use all manner of tactic to get things to stay together. Then, just to make it interesting, we apply pressure, and lots of it.

So how do we accomplish this? It is simply really--we take a bunch of components, and we connect them all together to create a closed system. What are the components? What are the connections? What working knowledge do I need to have to maintain my system? Hopefully after you have read this article you will have a decent answer those questions.

The parts of the system include sprinklers, swing joints, swing joints, pipe fittings, quick couplers, repair fittings, hose fittings, and service tees--all of this in addition to the pipe itself. The vast majority of the connections in an irrigation system can be broken into one of a four categories: flanged connections, threaded connections, glued joints, and gasket connections. (HDPE fittings can be different in a variety of ways and won't be discussed here.) In general the larger components of a system, and change of direction fittings are ductile iron. These fittings are usually more durable than PVC and can withstand the rigors of impact more easily.

If you run across a term that you aren't familiar with take a look at the end of the article where you can find a short glossary. Hopefully you can expand your knowledge base as well as have a useful reference for future use.

## System Components

### Golf Sprinklers

**Sizes:** Inlets available in 1", 1 1/4" and 1 1/2" sizes in both ACME and NPT depending upon manufacturer.

**Materials:** Injection molded plastic

**Joining Method:** Sprinkler inlets are attached to swing joints by a threaded connection, either NPT or ACME.

**Ordering Information:** Size and thread type of your swing joint outlet (ACME or NPT), how far you need it to throw, and full circle or part circle.



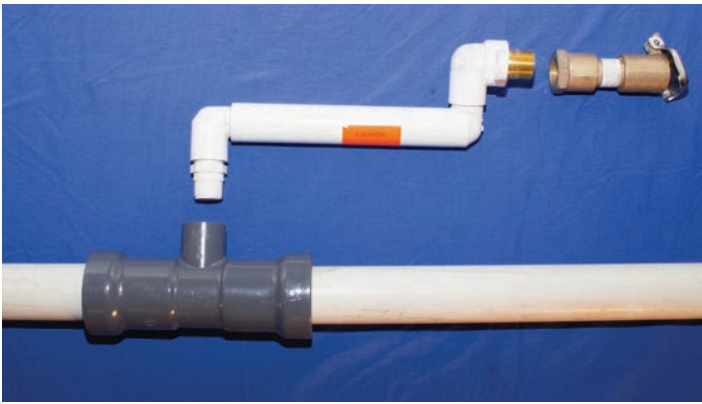
### Swing Joints

**Function:** A swing joint makes a connection between the service tee, and a sprinkler or quick coupler. It allows for movement and adjustment of sprinkler height.

**Sizes:** Available in sizes from 1/2" up to 3" with different inlet and outlet styles and sizes. Lengths are 10", 12", or 18" based upon manufacturer.







*Image of a specialized swing joint with a brass insert for connection to a quick coupler valve.*

**Inlet:** MIPT, ACME, Socket, Spigot, Saddle

**Outlet:** ACME, MIPT, Brass Insert (for quick coupler valve)

**Materials:** PVC, Ductile Iron

**Joining Method:** Swing joints are joined internally (between the two ends) by threads. These connections vary by manufacturer but include NPT threads, buttress threads, and acme threads. This is why inlet and outlet fittings often do not fit with the internal threaded fittings found in a swing joint.

Brass NPT inserts are available as outlet threads which connect to quick coupler valves. These specialized swing joints include holes which allow stakes to restrain the top of the swing joint from the torque created when a quick coupler key is inserted. Brass inserts are available in 1" and 1 1/2" sizes.

**Other:** Swing joints for golf course systems are almost always 1", 1.25" or 1.5" body size. Each is capable of supplying a certain amount of water to a sprinkler. In other words the size of swing joint a sprinkler utilizes is determined not by the size of the inlet at the bottom of the sprinkler but by the amount of water it uses. Swing joints can have different fittings on the inlet and outlet sides as well (see information on service fittings about commonly used inlet sizes).

When ACME threads were first introduced NPT threads were used at the service tee with ACME threads at the head. It is now common to have ACME threads at both the inlet and the outlet.

**Ordering Information:** When ordering a swing joint specify brand, length, body size, inlet fitting, and outlet fitting. In this market most swing joints can be identified by color. Most are Lasco (white) or Spears (gray or blue).

### Service Fittings

**Function:** A service fitting is used to create a threaded outlet in the middle, or at the end of a main line for the attachment of a sprinkler or a quick coupler valve.

**Inlet/Outlet/Threads:** Attachment to main line by gasket or glued fitting. Outlet can be either NPT, or ACME.

**Sizes:** Most commonly used for 2" mains, but also available up to 8" with a 1.5" ACME outlet, and up to 14" with a 1.5" NPT outlet. Outlets are commonly 1.5" but are available in 1", and 1.25" as well

**Materials:** PVC and Ductile Iron

**Joining Method:** Service tees can be joined to the main line by a glue on fitting, or a push-on gasket fitting. It is now common to use gasket fittings. This provides the added benefit of allowing some pipe movement. Over the course of a very long straight run of PVC pipe, movement can be substantial. Gasket fittings allow this movement without compromising the integrity of the piping.

**Other:** Generally systems installed before 2002 utilize ACME outlet fittings. Looped irrigation systems have taps that are attached to the main line (whatever its size), and a loop of 2" pipe is created for the area being watered



*A service fitting creates a threaded outlet along a run of pipe for sprinkler or quick coupler connections.*

(green, tee, fairway, etc). This type of design allows the use of service tees that are all 2" x 2" x 1.5" acme. Even systems utilizing sprinklers with smaller inlets will often use a standard 1.5" ACME service tee and the swing joint will have a 1.5" acme inlet to accommodate this. Many irrigation consultants use this standard size service tee even for sprinklers and quick couplers using 1" swing joints. **Ordering Information:** Specify material, size of main line pipe, and size of outlet, either 1" or 1 1/2". Specify threads, NPT or ACME outlet.

### PVC Pipe Fittings

**Function:** Pipe fittings allow for changes in size, gender, or from a threaded fitting to a glue fitting.

**Sizes:** 1/2, 3/4", 1", 1 1/4", 1 1/2". 2", 2.5", 3", 6", 8", etc.

**Inlet:** spigot, socket, MIPT, FIPT, FAT (limited to service sizes), MAT (limited to service sizes)

**Outlet:** Same as inlet

**Materials:** Most commonly PVC with ductile iron, and other materials in limited sizes.

**Joining Method:** Fittings are glued, gasketed, or

*continued on pg. 18*

# Multi-site mode of action that controls the toughest turf diseases before they begin

Secure® fungicide is a multi-site contact, in a unique chemical class that is the ideal rotation partner with Daconil Action™ for season long contact protection. Now, systemic fungicides no longer replace your contact applications, but rather compliment for inside out protection. Your rotation, your way.

"Made two fairway applications this summer; both under significant dollar spot pressure. Completely clean after two weeks with first application; fairway sprayed with alternative fungicide had some breakthrough at 12 days. We had the same great results for three complete weeks on the second application. We will make Secure a larger part of our disease management program in 2014"

Brian A. Bossert CGCS  
Bryn Mawr Country Club  
Lincolnwood, IL

#### For more information contact:

Brian Winkel  
630.391.2170  
brian.winkel@syngenta.com



© 2014 Syngenta. **Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your state or local extension service to ensure registration status.** Daconil Action, the Purpose icon and the Syngenta logo are trademarks of a Syngenta Group Company. Secure® is a registered trademark of Ishihara Sangyo Kaisha, LTD. MW 1LGG3050

*You are cordially invited  
to join the club.*

### **Did You Know?**

Your membership with MAGCS  
includes a handicap with the  
CDGA.

In fact, if you are planning  
to compete in the  
MAGCS Championship at Harborside on  
August 26, you'll need one.

RSVP: Luke Cella  
luke@magcs.org

Sand.

It's so simple, that you're tempted  
to take it for granted.

It's so complex, that you can't.

ONLY use sands that are specifically  
manufactured, tested, and guaranteed  
to perform on your golf course.



Waupaca Sand & Solutions  
715-258-8566  
www.WaupacaSand.com





Lincolnshire 847.537.2177  
Mokena 708.444.2177

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

ARTHUR  
CLESEN INC

Over 50 years of helping you sustain plant health with local knowledge, expertise, and innovative solutions.

Anderson, John • 630-669-0519 • [j.anderson@arthurclesen.com](mailto:j.anderson@arthurclesen.com)  
Bartosh, Scott • 262-221-5524 • [s.bartosh@arthurclesen.com](mailto:s.bartosh@arthurclesen.com)  
Lamkin, John • 708-259-4354 • [j.lamkin@arthurclesen.com](mailto:j.lamkin@arthurclesen.com)  
Spier, Scot • 847-561-313 • [s.spier@arthurclesen.com](mailto:s.spier@arthurclesen.com)



# THE LITTLE GIANT RTV500

**Starts quicker.  
Runs quieter.  
Stops smoother.**

The new Kubota RTV500 compact utility vehicle has all the comfort, technology and refinements of a larger utility vehicle. Available in Kubota orange and Realtree® camouflage, the four wheel drive RTV500 is ready for work or play. Visit your local Kubota dealer to test drive the only utility vehicle of its kind.



**Martin Implement, Inc.**  
18405 115th Avenue  
Orland Park, IL 60467  
(708) 349-8430

**Kubota**

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

\*Realtree is a registered trademark of Jordan Outdoor Enterprises, Ltd.  
© Kubota Tractor Corporation, 2008



## Have you hugged your greens today?

Get closer with the best mowers for undulating greens ever.  
The new 180 and 220 E-Cut™ Hybrid Walk Greens Mowers.

Give your greens a good hug with John Deere E-Cut Hybrid Walk Greens Mowers. Available in both 18- and 22-inch width-of-cut, these walkers offer an unparalleled ability to follow contours and undulations as well as steer around the clean-up pass. Call your John Deere Golf Distributor for a demo today.



**JW TURF**

**J. W. TURF, INC.**  
14 N 937 US HWY 20  
HAMPSHIRE, IL 60140  
(847) 683-4653  
[www.jwturfinc.com](http://www.jwturfinc.com)





threaded. Fittings that allow for a change in size and insert into an existing fitting are called bushings.

**Other:** Nipples are specified lengths of pipe with either a single threaded end (TOE-Threaded One End) or with both ends threaded (TBE-Threaded Both Ends).



*PVC pipe fittings come in many sizes, threads and schedules. Schedules are used to describe the thickness of the walls. Schedule 80 is thicker than 40 and can withstand higher pressures.*

**Ordering Information:** Specify Schedule 40 or Schedule 80, size, and type of fitting (tee, elbow, etc.), gender, and threaded or glue fitting.

### Repair Fittings

**Function:** To join two pieces of straight pipe after a repair has been made to a nearby fitting or to the pipe.

**Sizes:** Same as pipe sizes, except at the larger sizes only knock-on couplers are available. 1", 1.5", 2", 3", 4", 6", 8", 10", 12", 14", etc.

**Inlet/Outlet:**  
Gasket, or Glue

**Materials:**  
PVC, Ductile Iron

**Types:**  
Compression, Knock-on, Telescoping

**Joining Method:**  
Compression fittings are slid on and then tightened with a special wrench. They



*Common repair fittings top: knock on, middle: telescoping, bottom: compression.*

rely on a gasketed fitting that compresses the gaskets and creates a tighter seal as the ends are tightened.

Knock-on repair couplings require the pipe to be tapered, and application of pipe lube. The pipe ends must be closer together than the length of the coupling. The ends are chamfered, and then the fitting is hammered on to one of the pipe ends until it is almost completely on to one side. It is then pushed across the gap onto the other side. Telescoping repair couplings are glued onto one side via a glue on coupler, extended and then glued onto the other side.

**Ordering Information:** Specify size and type. Telescoping repair fixes require a slip by slip coupler as well. Pipe lube is needed for knock-on couplers.

### Quick Coupler Key, Quick Coupler Valve, and Hose Swivel

**Function:** A quick coupler valve and key allow a temporary attachment to the irrigation system.



**Sizes:** Quick coupler valves are commonly 1", but also available in 3/4", 1", and 1 1/2". Hose swivels are available with 3/4", and 1" NPT inlets and 3/4" and 1" hose thread outlets.

**Inlets:** All quick coupler valve inlets are NPT.

**Outlets:** Quick coupler valve outlets are single lug, double lug, or ACME threaded in 3/4", 1", and 1 1/2" sizes. Quick coupler key inlets are available in the same formats.

**Materials:** Brass

**Joining Method:** Keys are inserted into valves and twisted down to start the flow of water. ACME

threaded keys have become the norm as they are able to regulate flow more easily.

**Other:** Quick coupler valves are generally restrained in some way. Methods vary from attaching a length of rebar to the valve to commercially available quick coupler anchors that keep the valve from spinning off the swing joint. Brass insert swing joints are also made (see swing joint page). These have a clamping mechanism that restrains the valve and allows stakes to be driven into the soil to limit movement.



Quick coupler keys have NPT threads on the outlet side that allow attachment to a hose swivel. The tops of some keys are threaded on the inside and the outside to accommodate a variety of hose swivel sizes.

**Ordering Information:** Order quick coupler valves by model number if possible. These numbers are often printed on the cap of the valve, or on an as-built. Hose swivel outlets should be specified as either 3/4" or 1" based upon the size of hose used at your course.

### Hose Fittings

**Function:** To connect hoses, roller bases, and hose swivels together.

**Sizes:** 1/2", 3/4", or 1"  
**Inlet:** Hose barb, Threaded fittings of each size, both male and female

**Outlet:** Hose thread, 1/2", 3/4", or 1"

**Materials:** Plastic, Brass

**Joining Method:** Hose threads are a coarse thread used to attach hoses to an array of other items to help distribute water. Some of these items are spigots, hose swivels, roller bases, sprinklers, and a host of other watering devices.



**Other:** Hose fittings are common in some sizes. Generally homeowners use 1/2", or 3/4" hoses so these sizes have a wide variety of commonly available fittings in a number of different

materials. 1" hose fittings are also available but can be harder to find. The types of fittings that can be found in 1" is limited as well.

**Ordering Information:** The size and type of the fitting needs to be specified.

## System Connections

### Flanged Connections

Flanged connections are generally used at the pump station, the drop pipe, and on occasion at transition points of large pipe sizes. Flanged joints require bolts, and a gasket and are very stable. Longer bolts allow flanged joints to attach through valves (Fig 1).



Figure 1. A bolt through flanged valve.

### Hose Thread

Hose thread is used on roller bases, spigots, sprinklers, and hose swivels. Hose thread is coarse in comparison to most threads we see on the golf course. Because of its coarse nature it is almost always used with a gasket to insure that there is no leakage. Homeowners often use plastic or PVC hose fittings while golf course systems generally require brass fittings for durability. These threads are often abbreviated as MHT (male hose thread) or FHT (female hose thread).

Martin Design has made some changes. It's a bit more than a fresh coat of paint; it's a change in our company brand.

Don't worry, we haven't changed our Mission .....

Only focused it.



**MARTIN design**  
*Golf Course Architecture*

335 N. River Ln. Suite 201, Batavia, Illinois 60510 630-482-2532 www.mdpltd.com





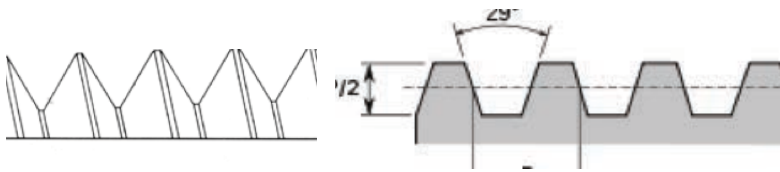


Figure 2. The left thread drawing are national pipe thread, the right drawing is an acme thread

### National Pipe Thread (NPT)

National Pipe Thread is a triangular tapered thread that is standard in the United States (Fig 2). Because the thread is tapered it will create a nearly leak proof joint if tightened sufficiently. Even so, pipe thread compound or Teflon tape is often needed to make these joints completely water tight. As these threads tighten to one another they create a seal. The seal is improved by tightening and is directly relate to how tight the connection is. NPT threads are still used in galvanized pipe, and quick coupler valves as well as other metal piping in addition to many PVC fittings. Many irrigation systems installed prior to 2005 utilized NPT threads at the base of each sprinkler and at the service tee. Pipe thread is a versatile choice because of the large range of fittings made with these type of threads.

### Acme Thread

Acme thread is common in newer systems (those installed in the past 10 years). Acme threads are a form of trapezoidal thread. In other words, a cross section of the threads themselves show the form of a trapezoid, as opposed to the original square thread (Fig 2). The acme thread is considered superior to national pipe thread (NPT) in a couple of ways. First, the threads themselves are wider, so they are more durable. Secondly, the acme thread configuration includes an o’ring (Fig 3). Acme threads do not need to be tight in order to prevent leakage. The threads themselves hold the pieces together while the water tight function is provided by the o’ring. As long as the o’ring is fully engaged the joint should be water tight. This feature helps keep damage from over tightening to a minimum. Occasionally this advantage can degrade over time as the o’ring hardens and deforms. When moving older swing joints it is always advisable to replace the o’rings that are disturbed.

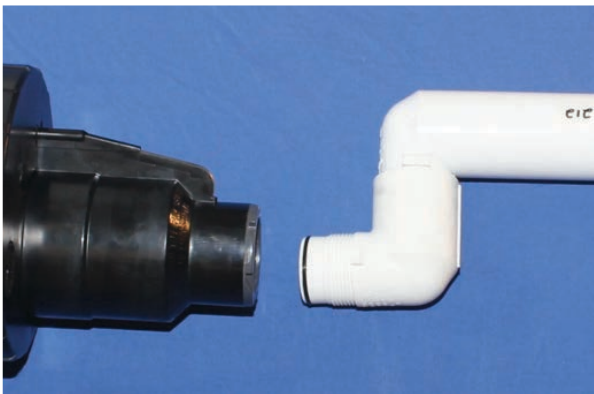


Figure 3. ACME outlet on swing joint (note o ring that identifies the male threads as ACME)

There are not a wide variety of Acme threaded fittings. They are limited to use mostly as service fittings. Newer systems utilize Acme threads at the service tee, and at the base of the head. Some manufacturers use acme threads for the interior joints on a swing joint (Lasco) as well. Acme threads have also been used more recently on the male threads of quick coupler keys. These threads make it much easier to turn on a quick coupling valve incrementally.

### Lateral Valve Swivel Connections

Lateral valves are outlets created on a main line to feed smaller loops or laterals. These can be up to 6” in size. These valve outlets exit the top of the main line and turn 90 degrees to feed an area. They are attached to the main line fitting in such a way that they can be turned 360 degrees. The valve is shown here (Fig 5). This type of fitting allows a valve to be at the change of direction without using a fitting to change direction, and an additional valve to stop flow if needed. These types of fittings are becoming more common in the Chicago area. They lend themselves well to new installations where mainline is at a significant depth, and herringbone systems where many valves are needed. The inlet is a threaded fitting that can be installed in a saddle, or a tee with the proper swivel outlet.



Figure 5. Harco swivel valve

### Single/Double Lug Connections

Quick coupling valves (sometimes called snap valves) can be attached by means of lug connections. In these connections a slot is cast in the side of each valve. A corresponding lug on the quick coupler key fits into the slot and gradually pulls the key into the valve. Keys come with either single or double lug fittings (Fig 6).



Figure 6: Single lug quick coupler key with 1” NPT outlet

### Gasket Fittings

Gasket fittings rely on the tight fit of the gasket around a pipe or fitting as well as water pressure from inside the fitting creating a tighter seal. Gasket fittings allow some pipe movement where other fittings do not. The spigot fitting must be tapered and lubed in order to fit into the gasket smoothly. Because of their tendency to move, these fittings

are often restrained when used on change of direction fittings, or valves.

### Glossary of Terms and Abbreviations

There are a number of designations and acronyms used for thread types. A short glossary is shown below:

- BSP = British Standard Pipe Thread (international)
- MPT (also seen as MIPT) = Male (Iron) Pipe Thread
- FPT (or FIPT) = Female (Iron) Pipe Thread
- MAT = Male Acme Thread
- FAT = Female Acme Thread
- MHT = Male Hose Thread
- FHT = Female Hose Thread
- MBT = Male Buttress Thread
- FBT = Female Buttress Thread
- TPI = Threads Per Inch



*Are you calling me FAT?*

**Female Gasket Fitting** = A bell end that includes a gasket at the end. A tapered piece of pipe is lubricated and forced through the gasket. Water pressure pushing against the back side of the gasket helps create a seal.

**Coarse Thread** - A coarse thread is larger, there are fewer threads per inch.

**Fine Thread** - A fine thread is smaller, more threads per inch.

**Service Tee** - A service tee is a fitting that creates an outlet in a main line to bring it to a 1 1/2" swing joint size

**Service Elbow** - A fitting that converts the end of a main line to 1 1/2" swing joint size.

**Spigot** - A male pipe sized fitting that can be glued into a socket, or fitted into a gasket fitting. The outside of the fitting shown below

**Socket** - A female end of a glue fitting.

**Inlet** - The first portion of a fitting, sprinkler, or pipe that water contacts as it flows through the system to daylight. For example, the inlet on a sprinkler is the bottom fitting.

**Outlet** - The portion of a fitting, sprinkler, or pipe that is last contacted by water as it flows to daylight. The outlet of a sprinkler would be the nozzles.

**Bell End** - The expanded end of a pipe that creates a socket for the next portion of pipe to be glued into.



*The bell end of a piece of pipe is expanded during manufacturing to make a socket for the next piece to be glued into.*

**Schedule 40** - Fitting class commonly used for 2 1/2" and smaller fittings in golf irrigation systems. Fittings are white in color.

**Schedule 80** - A more robust fitting class commonly used for larger size fittings, change of direction fittings, and service fittings in golf course irrigation systems.

**SDR 21 Class 200** - The most commonly used PVC pipe class for golf course irrigation systems. It is rated for 200 psi. @



*A problem solved with a little ingenuity and a trip to the local hardware store.*



# SUPER-N-site

## John Gurke, CGCS and Aurora Country Club

Bill Meyer, Park Ridge Country Club

PHOTOS: LUKE CELLA

2014 is quite an important year for Aurora Country Club, as it is the club's 100th anniversary. The original course was designed by William Boice Langford and Thomas Bendelow on what was the Minard Farm. The course has been through a few renovations since then, the most recent in 2007.

All the tees were reworked and a few new ones added on this century old course. Bunkers were also renovated adding drainage and slightly repositioned throughout. The 150-acre rolling property sports tree lined fairways and small greens, making accurate golf shots important. The greens can be very tricky at times, they have the same contours as the originals even though they were changed to USGA specs in the 1980's.

On to the man of the hour: John Gurke, CGCS. I



*John (did the horizontal stripes make me look fat?) and Aaron are looking forward to hosting the Midwest members this June.*

would assume most of you reading this are familiar with John's name at least, as he is an associate editor of this great publica-



*Aurora Country Club celebrates its centennial this year.*

tion and the author of the ever amusing Bull Sheet. John is a native of Wheaton and got the golf bug when he started helping out his brother at Butler National during the Western Open, at the ripe age of 14. He continued to work at Butler National throughout high school, working for Ed Fischer and then Oscar Miles. After high school, John attended the University of Illinois, not initially going for turf but changing majors once he had a semester or two under his belt. During his summers throughout college, John would come back and work at the Oak Brook Public Course for Rick Wilson. After graduation, John hooked up Ed Fischer again and became Ed's assistant at Old Elm Club in Highland Park. After a few years at Old Elm, John became the Superintendent at Bartlett Hills Golf Course taking over for Joel Purpur. Three years later





he moved to Aurora Country Club and that was 24 years ago.

John tells me of the things that makes Aurora such an enjoyable place to work is the people. The management team is very willing to do what needs to be done, whether that's John and his assistant, Aaron Reinhart, carving the ham at the Easter brunch or the GM and golf pros helping clean up major storm damage. John also can't say enough about his own crew. Most of his seasonal staff has been around just as long

In John's personal time he is an avid reader. In the last seven years John has also gotten into snowmobiling. He has a regular spot in the Upper Peninsula where he snowmobiles all winter and he is accompanied by some other MAGCS members on these trips, such as: Dave Groelle, Todd Schmitz, Dan Murray, Dave Fisher, and Dave Biery. His favorite trip this year was a four day backpacking trip covering about 800 miles.



*The bunkering at Aurora Country Club fits well with the design and flow of the course popping in and out of the mature tree lined fairways.*

as he has, and his two most important guys are Aaron, and Nick Pavlovich, his long-time equipment technician. Last but not least are the four-legged members of his crew, Millie and Rooby, a pair of blue heelers who do a great job of driving off any winged rats (sorry geese) that might think to make the course home, and Tilty, the stray cat that showed up a few years ago and hasn't left.

The biggest project that John says he's going to be dealing with this year is the removal of Ash trees due to EAB. They have also started a project to plant new trees in the major gaps left after the removals.

To finish it up, I asked John a couple of random questions:

**Q:** What keeps you coming back every day? **A:** The uncertainty and the nervous excitement of what the day will bring.

**Q:** Favorite Book? **A:** *Don't Stop the Carnival* by Herman Wouk

**Q:** Favorite Food? **A:** John said he could eat pizza every night. The best, he says, is Al's Pizza in Warrenville, with sausage and pepperoni and an extra spin in the oven. That last part is a special request, but John says it makes the cheese perfect.





Also he says you MUST wait 20 minutes before you eat it so that it gets the right consistency.

**Q:** Where would you go on vacation, no cost to you? **A:** John would be in the British Virgin Islands on a catamaran with a captain taking care of the sailing part. Sailing from island to island with no real plan, just relaxing and enjoying the sun and some drinks.

**Q:** Favorite movie trilogy? **A:** This was a hard one, but John decided that his favorite trilogy was The Bourne movies, although we thought there might be four of them now. Some of his other favorites are: It's a Wonderful Life, Shawshank Redemption, and Some Like It Hot.

**Q:** What are you looking forward to this year/New Year's Resolution? **A:** The biggest thing that John is looking forward to is becoming a Grandfather. One resolution he had for this year is to get a little more involved in social media, primarily Twitter.

The last time John hosted an event was June 1994. From what he tells me, it was a 96 degree day and the power went out in the clubhouse. He says back in those days, after golfing, everyone took showers and had a formal dinner complete with coat and tie, so you can imagine it was a disaster. Just about everyone left. As fate would have it, the power came back on right as everyone had almost left. So, fingers crossed we will have better luck come this year at Aurora. John, Aaron, Nick, Millie, Rooby and Tilty all are looking forward to hosting us on June 16<sup>th</sup> when MAGCS pays a visit to the 100-year old Aurora Country Club. @

*Aurora Country Club in its 100th year. The course will provide a test for our June contests: the Dom Grotti and the Class C Championship. Top: The 9th hole ends with the clubhouse as a backdrop - don't go long on your approach as it is almost impossible to keep your chip back onto this front sloping green. All of the tees were rebuilt and or added in the last renovation and don't be surprised at the size of a couple of the greens, especially the 11th - it's only 1,961 square feet with OB down the left side!*





Results. Expect it.

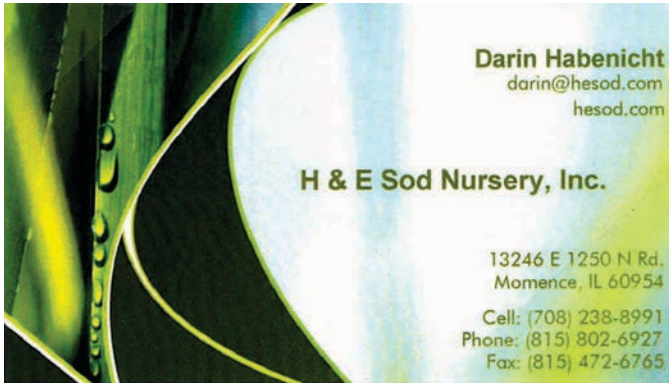


Scan to your contacts.  
Download free app  
at gettag.mobi

**CHIP HOUMES**

District Sales Manager  
(217) 260-6943 Mobile  
choumes@precisionlab.com

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



**Darin Habenicht**  
darin@hesod.com  
hesod.com

**H & E Sod Nursery, Inc.**

13246 E 1250 N Rd.  
Mokenca, IL 60954  
Cell: (708) 238-8991  
Phone: (815) 802-6927  
Fax: (815) 472-6765



**DARRELL KOELPER**  
PRESIDENT

GOLF COURSE  
CONSTRUCTION & REMODELING

MARENGO, IL

**KOELPER  
GOLF COURSE  
CONSTRUCTION  
COMPANY**

OFFICE: 815-568-8382  
FAX: 815-568-1048  
HOME: 815-568-6603

**RIVERWALLS LTD.**

P.O. Box 562, Barrington, Illinois 60011

**GOLF COURSE ENHANCEMENT**

Shoreline Stabilization, Creek Crossings  
Stream and Spillway Re-Construction  
Arched Stone Bridges

DARRYL SCOTT BURKETT  
C.E.O.

1-888-254-4155  
OFFICE: 847-382-9696  
MOBILE: 847-366-5400  
E-mail: [riverwalls@hotmail.com](mailto:riverwalls@hotmail.com)

Since 1968 Division of STL Corp. BUY EXPERIENCE

# PROGRO solutions

ABSOLUTE CONFIDENCE

## Servicing the professional golf, lawn care, landscape and sports turf markets

Proudly representing the  
following Brands...

- |                           |                               |
|---------------------------|-------------------------------|
| Armor Tech Products       | Holganix Bio                  |
| Arysta                    | Hydro Pak Soil<br>Surfactants |
| Barenbrug Seeds           | JRM                           |
| BASF                      | KNOX Fertilizers              |
| Calcium Products          | Miltona                       |
| EC Grow Fertilizers       | Olsen Brand Fertilizers       |
| EnP Specialty Liquids     | Par Aide                      |
| Foliar Pak                | SePro                         |
| Greenleaf<br>Technologies | Standard                      |
| Greens Groomer            | Valent                        |

**Aaron Goy**  
Vice President  
Managing Partner  
859.991.0828

**Brett Ziegler**  
Regional Agronomist  
Chicago/Wisconsin  
847.302.9673

**Craig Shepherd**  
Regional Agronomist  
Chicago  
563.213.1632

**Mike Werth**  
Regional Agronomist  
Wisconsin/Illinois  
608.214.7011

**Rusty Stachlewitz**  
Regional Agronomist  
Chicago  
630.779.0791

**Business & Distribution Center**  
**21969 N. Pepper Rd.**  
**Barrington, IL 60010**  
**847.381.9333**







*Dr. Ed Nangle addresses the group at Silver Lake Country Club at the April Meeting.*

Chuck Anfield, CGCS Heritage Bluffs Golf Course

The MAGCS Members met for the April Meeting at Silver Lake Country Club in Orland Park for a day of education and golf. MAGCS President, Dave Kohley, his Staff and the Coghills were the hosts for the day.

Dr. Ed Nangle, CDGA Director of Turfgrass Programs (who has been super busy making calls to courses) made a presentation entitled "A Winter of Epic Proportions, December 2013 to March 2014". "Based on historical weather data, this is probably the worst winter you will ever see. The next nearest winter like this was in 1903! This winter there were no geographic areas of damage, it doesn't make sense. It's not your fault. It was just one of those winters."

The winter got off to an early start in November. It was 5 degrees below average. The golf season didn't finish with a warm trend. That being said, it provided a good hardening off period for the turf before the deep freeze set in. Everyone had time to get their snow mold applications down. Everyone had to time to blow out their irrigation systems. So far, so good.

In December, the snow fall was not heavy, at first. Then January and February rolled in with a fury. The snowfall was 33" at the Golf House. This is 22" over the normal amount! The



temperature for the same time period was on average 10 degrees below normal.

The big oh-oh, or trigger moment came in mid-January when weather conditions warmed and the snow melted. Soil temperatures climbed to 45 degrees. The *Poa annua* re-hydrated and then it re-froze. Another melt and re-freeze occurred in mid-February that further thickened the ice and sealed the turf in and created lethal, anaerobic conditions. Further damage was related to ice damming occurring on green fronts and in low lying fairway and tee areas. Some turf was documented at being under the ice cover for 85 days. Some turfgrass death can occur in as little as 45 days under ice cover. The ice thickness showed variability, depending on sun exposure. Sites in the shade had thicker ice cover and were more likely to sustain turf loss.

The maximum low was -23 degrees at the Golf House. Temperature stayed below freezing from January 26 to February 18. For the record, *Poa annua* is susceptible to death or damage at 24.8 degrees. Bentgrass is tolerant to -20 degrees.

### What Happened.

The turf demonstrated a predictable physiological response. The response is change in cell wall composition and a change in intracellular chemistry.

So how do we prepare? Do we back off on fall core aeration? Do we top-dress less or do we completely cover crown with sand? Do we increase our mowing heights prior to dormancy? Do we use protective covers on all of our greens? Do we shovel snow off the greens every time it snows?

Based on early survey data, 65% of the CDGA courses suffered some kind of damage to greens. "Some of the fairways and greens in March looked like zebras going to a safari."



There were patterns of survival. Ice removal seemed to benefit certain greens. The disease pressure was unexpectedly very low, even in untreated areas. Most plant protectant programs worked well.

### Recovery Steps

Permeable covers are effective in maintaining higher soil temperatures in newly seeded areas. The light heats the cover and can increase soil temperatures by 3-5 degrees. It doesn't sound like much, but every little bit helps. They also offer a greater consistency of temperature range within the soil profile. They will need to be put on and taken off daily. Ensure protective measures are taken for disease control. Air and water movement are also very important on newly seeded areas.

Right now we need warmth, sufficient soil moisture in the top two inches and fertility for the newly seeded areas. Try to use more tolerant bentgrass varieties when seeding. Make sure you get good soil to seed contact. Remove sand dam lips in front of greens that form from repeated topdressing. Tree lines that shade turf and predispose turf to be weak should be evaluated for removal or pruning options. Keep covers on as long as possible. Pigments have shown to be effective at raising canopy temperatures.

### Communication Moving Forward

A letter was sent to all of the Member Clubs describing climate and impacts. Monthly scouting reports are being sent out. Dr. Nangle is available for site visits.

All that being said, it was a record winter. Ice was the biggest issue. Use this opportunity to re-grass with bentgrass. "Nothing worked consistently, don't beat yourself up. Survival results were very mixed but the take away message is if you had bentgrass, you had a better chance of survival than if you had Poa annua."

Results from the survey that MAGCS members participated in and was the basis for this Dr. Nangle's talk can be found on page 4. @



**LAYNE-WESTERN**

When in need of professional services for well drilling, well rehabilitation, pump installation and repair, please contact fellow M.A.G.C.S. members at:

**Aurora, IL:** **TOM HEALY** 630-897-6941 office  
708-514-2233 cell  
thealy@laynechristensen.com

**Beecher, IL:** **JOE EISHA** 708-946-2244 office  
708-514-0631 cell  
jeisha@laynechristensen.com





[www.li-inc.com](http://www.li-inc.com)

**Leibold Irrigation, Inc.**  
18950 County Hwy 5W East Dubuque, IL 61025  
Ph (815) 747-6024

**Construction Division**  
Kevin Stieneke (563) 564-9333

**Service Division**  
Mike Skopik (563) 564-6908

**Irrigation Division**  
Jim Boyer (815) 747-6024



Advertising Index

Arthur Clesen, Inc. ....	17
BASF .....	25
Bayer Environmental Science.....	28
Burriss Equipment Company.....	BC
Civitas .....	25
CS Turf .....	25
Great Lakes Turf.....	28
Growing Solutions .....	2
Green N Crease .....	IC
Halloran and Yauch .....	25
Harris Golf Car Sales.....	25
Healthy Gro.....	25
H & E Sod Nursires .....	6
Hollemeak Construction .....	2
JW Turf, Inc .....	17
Koelper Golf Course Construction .....	25
Layne Western .....	27
Leibold Irrigation, Inc.....	27
Lemont Paving .....	28
Lemont Paving .....	28
Martin Design Partnership.....	19
Martin Implement Sales.....	17
Nadler Golf.....	28
Nels Johnson Tree Experts .....	11
Precision Laboratories, Inc.....	25
ProGro Solutions.....	25
Rain Bird.....	2
Reinders Inc .....	8
Redexim Turf Products.....	25
Riverwalls .....	25
SAS Management LLC.....	25
Synthetic Turf of Illinois.....	6
Syngenta .....	7, 16
Spectrum Technologies .....	28
Water Well Solutions Illinos Division.....	28
Waupaca Sand & Solutions.....	16



**ERIC NADLER**  
President

2700 North Farnsworth Avenue  
Aurora Illinois 60502  
630.898.1616  
630.898.1638 Fax  
eric@nadlergolf.com  
www.nadlergolf.com

Golf Cars • Utility Vehicles  
Sales • Service • Leasing

# Lemont Paving Co.

**MURPHY'S • EST. 1957**



**Tracy Murphy**  
11550 Archer Ave.  
Lemont, IL 60439  
630-257-6701 phone  
630-257-5194 fax  
[www.lemontpaving.com](http://www.lemontpaving.com)

**Asphalt Paving and Sealing** [www.lemontpaving.com](http://www.lemontpaving.com)

**COMMERCIAL • INDUSTRIAL • RESIDENTIAL • CART PATHS**

# GREAT LAKES TURF LLC



*Rooted in Science*

**Jeff Mazur - 630.936.3179 Ed Fischer - 847.337.1091**  
**Jim Johnson - 616.292.0260**

# Spectrum Technologies, Inc.

*"To Measure Is To Know"*



**FieldScout TDR 300 Soil Moisture Meter**

Weather Stations  
Data Loggers  
Frost Alert Systems  
Pest Management Tools  
Irrigation Management Tools  
Soil Moisture and Compaction Meters  
pH, EC, and Nitrogen Meters  
Light and Chlorophyll Meters

**Shane Conroy**  
Sales Consultant - Turf

3600 Thayer Court  
Aurora, IL 60504

toll free: 800.248.8873  
main: 815.436.4440  
fax: 815.436.4460  
direct: 331.212.6714

sconroy@specmeters.com  
www.specmeters.com

**Bayer CropScience**



**John "JT" Turner**  
Area Sales Manager IV  
Bayer CropScience LP  
Environmental Science / Golf and Lawn  
40 W 665 Campton Woods Drive  
Elburn, IL 60119  
Tel: 630-443-7807  
Mobile: 630-215-6110  
Fax: 630-443-7839  
john.turner@bayer.com  
www.bayer.com



**Water Well Solutions**

Please contact us 24/7 for all of your water well pump service, well rehabilitation and irrigation pump repair needs.

**M.A.G.C.S Core Sponsor**

**Todd Kerry**  
Office: (888)769-9009  
Cell: (630)201-0749  
E-mail: todd@wwssg.com

**Tim Kelly**  
Office: (888)769-9009  
Cell: (262) 269-6289  
E-mail: tkelly@wwssg.com

Elburn, IL 60119

Lake Villa, IL 60046

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

# SAS Management LLC

Bruce & Carol Schweiger  
sasmanagement@gmail.com  
Tel (608) 359-5399

Golf Course Secret Shopper  
Safety Consulting  
Soil and Water Testing  
Turfgrass Consulting



**HALLORAN &  
YAUCH, INC.**  
IRRIGATION  
SYSTEMS

28322 Ballard Road  
Lake Forest, IL 60045

Telephone: 847-281-9400  
Fax: 847-281-9780

healthy  
grow  
PROFESSIONAL

A Pearl Valley Organix Brand  
healthygrowpro.com



Jeff Leuzinger (815) 291-9627 jleuzinger@healthygrowpro.com



The Chemical Company

Randy H. Lusher

Sr. Sales Specialist II  
BASF Turf & Ornamental

5430 Washington Street  
Downers Grove, IL 60515

Telephone (630) 810-1832  
Voice Mail (800) 843-1611 Box # 6649  
Cell (630) 235-0104  
Fax (630) 810-9579  
E-Mail: randy.lusher@basf.com

Midwest's Largest Golf Car Distributor



**HARRIS  
GOLF CARS**

SALES & SERVICE

—HOURS—

Mon.-Fri. 8-5 • Sat. 9-1

CHECK US OUT...

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

**ILLINOIS LOCATION:**  
549 Heartland Drive, Suite A  
Sugar Grove, IL 60554  
(630) 466-5239

**IOWA LOCATION:**  
9875 Kapp Court  
Peosta, IA 52068  
(563) 582-7390

**WISCONSIN LOCATION:**  
13900 Leetsbir Road  
Sturtevant, WI 53177  
(262) 886-2816

**CS TURF**

Common Sense Turf Management

Renny Jacobson

815 791-7404

Renny@CS turf.net

FRANKFORT, IL

Why Go Shallow,  
When You Can  
Go Deep?

**DEEP TINE  
AERIFICATION**



Breaking barriers to better turf.

**BILL SMITH**  
Account Manager -  
Central and  
Northern Illinois  
Cell: 217-971-6695

**REDEXIM TURF PRODUCTS:**  
A Division of Redexim North America  
29 CASSENS COURT  
FENTON, MO 63026  
TEL: 636-326-1009  
FAX: 636-326-4884  
EMAIL: Bill@RedeximTurfProducts.com  
WEBSITE: www.RedeximTurfProducts.com



**Erik Spong**

BUSINESS DEVELOPMENT MANAGER

Cell: 309-258-1017

Email: espong@suncor.com

Learn more about our  
CIVITAS Money-back Guarantee Trial  
[www.civitasturf.com/moneybacktrial](http://www.civitasturf.com/moneybacktrial)

Sign up for our CIVITAS Rewards Program  
[www.civitasturf.com/rewards](http://www.civitasturf.com/rewards)

™ Trademark of Suncor Energy Inc. Used under license.





# TRUESET™

## JACOBSSEN'S LEGENDARY QUALITY-OF-CUT NOW COMES FASTER AND EASIER.

*First designed by Oscar Jacobsen in 1921, our cutting unit has changed very little over ninety years. The unit's superior geometry, design, and construction has stood the test of time and created a legacy of unparalleled quality-of-cut.*

*Today, we continue our storied history of quality and performance with the TrueSet™ cutting unit, the latest innovation from Jacobsen. We've made the industry's best cutting unit even better by making it faster and easier to adjust with industry leading holding power.*



**THE LATEST INNOVATION FROM JACOBSSEN**



ECLIPSE®2



ECLIPSE®322



SLF-1880™

TrueSet™ cutting unit available on 5 in. reel products:  
ECLIPSE®2 walking greens mowers (floating head),  
Greens King® IV, GP400, ECLIPSE® 322 riding greens mower,  
SLF-1880™ and LF550™ fairway mowers.



Three full service locations  
Waukegan, Joliet, & Ingleside.

(847) 336-1205 Phone

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



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