as he received a Noer Foundation Grant to fund his masters work.

His first statement may have been the most important when he said for fungicide programs to have a chance to work soil and turf fertility and foundational management programs must be in place.

Bentgrass requires 3-4 pounds of nitrogen per year. Turf managers have a lot of choices for their fungicide programs and are often overwhelmed. Brandon recommends a good fungicide plan starts with no budget limit. If money was not an issue what product applications would you make? From there pare down your program until you reach your budget number.

With fungicide performance effected by rate, interval, timing, water volume and product degradation it is important to make an accurate application of the products you choose to use. Getting the product to the pathogen through uniform coverage is key to success.

Due to the cost of applications it is important to get an accurate diagnosis and often there is no disease pathogen present. At that point managers must look at nutrient analysis from soil and tissue, drainage, layering and black layer because soil problems are a common cause of turf decline.

Brandon recommended superintendents understand the mode of action of their turf fungicides and whether the product is a contact, localized penetrant, systemic penetrant or a combination of products with different modes of action. Dr. Horvath gave two take home messages. First it is difficult to get recovery so early or preventative programs are important for success. He added when turf gets damaged during the stress of summer it can get better but never good until fall.

The second take home message is the name of the product is not important, but the mode of action is very important. The first two applications are also important so use good products.

Our very own Dr. Doug Soldat of the University of Wisconsin Madison took the floor with a talk titled "Wetting Agents and Water Chemistry".

2012 offered a unique year for moisture management and the opportunity for widespread dry spot problems. Doug offered that often moisture problems develop while the grass is still green and by the time dry spots show it may be too late for the turf to recover. Moisture probes are the best way to track moisture content.

**Dr. Doug Soldat,**
**University of Wisconsin - Madison**

In golf turf, greens are the key playing surface and are often built with a high percentage of sand to provide smooth conditions. Sand has little surface area so it is easy to coat with hydrophobic particles to reduce water penetration.

Sufactants are used to reduce the surface tension of the water. For example a drop of water on a piece of was paper will just sit there but add a wetting agent to the water drop and it spreads out. Products differ by chemistry, application rate, soil mobility and decomposition.

Doug recommended an article in the July 20, 2012 *Green Section Record* by Dr. Stanley Kostka and the late Stanley Zontek titled "Understanding The Different Wetting Agent Chemistries" as a guide to the different types of products and how they work.

Along with soil moisture probes water drop tests can be used at different depths in the soil profile to see how long it takes for water in infiltrate the soil. For most turf soil moisture uniformity is the goal more than dry or wet turf. Surfactants reduce moisture more effectively on soils with a lower organic content.

Surfactant users need to follow the label for how much water to apply when watering the product in and how to tank mix wetting agents with other turf protectant products.

Dr. Soldat discussed algae and crusts on dead turf that can be difficult to control. Blue green algae occur naturally from the soil and prefer high pH and sunlight. Control can be increased by reducing the surface pH below 6 and frequent topdressings. Ammonium sulfate and ammonium thiosulfate reduce surface pH but may consume oxygen and cause black layer so using a sulphur burner or acid injection system may be a better route.

Finishing off the first day we welcomed Dr. Shawn Askew from Virginia Tech with a discussion titled "30 Herbicides". He started with cultural weed control is the best method and for long term control healthy turf kills more weeds than herbicides.

Dr. Askew covered many of the different organic and synthesized products available for varied weed control. Even though new products are available there are still weeds that cannot be controlled effectively without using a non-selective product. As plants adapt to new weather conditions and weather patterns change Wisconsin will begin to see more hard to control weeds on a regular basis.

Besides the typical grassy weeds and broadleaves Shawn has a hate relationship with poa annua.


**Dr. Shawn Askew has a hateful relationship with poa annua!**

In the March 1921 Green Section Record Dr. Piper and Dr. Oakly had an article on Poa Annua and the fight to keep it out of putting greens. It was a problem then and according to Shawn it is just a "bad grass".

New to the battle to fight poa annua the experimental product Poa Cure or Methiozolin developed at the Moghu Research Center in Daejeon Korea is showing promise.

Shawn has had good luck using Trimmit and Cutless with proper nitrogen treatments and regular use. The problem is if you stop using those products the poa will return fast. Poa Cure has shown to be a longer lasting product.

A guesstimate on pricing when it becomes available in the United States is $2,500 per acre per year on greens. It has shown to be safe on turf except during heat or with water saturated soils. Although it may be a little pricey when compared to the full cost of other poa control products and reduced turf quality it may well be worth it to members and owners. Shawn is starting research on ball roll; not necessarily ball speed but uniformity of roll as a selling point for pure bentgrass greens.

After a great breakfast Wednesday started with a return of Dr. Brandon Horvath and his talk titled 'Fungicides First: What Are The Secondary Effects?"

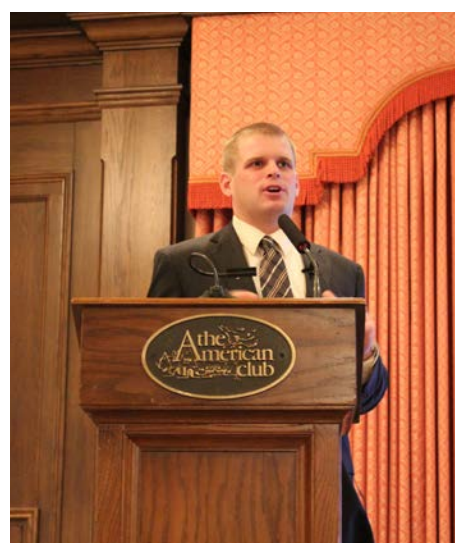
Strobilurin fungicides are a naturally product derived from strobilurus tenacellus mushrooms. Over 70,000 molecules were tested and 556 patents have been developed from the fungi which has shown to keep other fungi out.

In turf there are a lot of "strobi" choices with Heritage, Insignia, Compass and Disarm to name a few and it is a low rate, broad spectrum, reduced risk fungicide with extended residual efficacy. What else can this product do for turf as far as plant health benefits?

In corn and wheat it has shown to green the plants and produce a better yield. In turf it is believed to enhance stress tolerance, increase root length, heat tolerance and enhanced recovery from stress.

So the question is does a slight increase in plant health result in greater visual quality in turf? In 2009 research in absence of disease the turfgrass treatments showed no greater visual quality.

DMI research showed the treated plots had a darker green color and the slight turf regulation reduced scalping but no great increase in quality ratings alone. They are great products when mixed with Daconil Ultrex to control anthracnose and dollar spot but caution should be used when mixing with growth regulators.




**Mr. Bill Kreuser, PhD Candidate, Cornell University**

Wisconsin raised Bill Kreuser took over with his talk on "Plant Health Products". A recent explosion of products and claims of success from vendors and users have left turf managers wondering which product works and why.

Stress on turf from temperature, water, nutrient levels, UV and high light along with biotic stress from people, traffic and mowing lead to oxidative stress and damage from free radical oxygens. Oxidative stress triggers stress hormones in the plant.

Cytokins from sea weed extracts help reduce oxidative stress and promote bud formation, delay senescence, increase Co2 exchange and provide higher chlorophyll levels.

With the diverse number of products with many modes of action it is hard to tell what really works. If the goal is to reduce or prevent oxidative stress how is that done? Turf managers must ask "What is in that jug?"

Civitas was a product used to lubricate food processing equipment and has shown good and bad results. It has shown to induce systemic disease resistance in plants and increases fungicide efficacy. It primes the plant defense pathway and research on Civitas with low rates of Emerald showed great dollar spot control through a synergistic effect.

That is the good but the bad is Civitas alone can show phytotoxicity, chlorosis and reduced density and chlorophyll. In trials the pigment added to Civitas not just colors the turf but truly eliminates the side effects.

Kreuser discussed how the harmonizer absorbs different light frequencies to reduce high light stress. There is more research to be done to understand how the products work together to enhance plant health.

It was clear Bill knows his products and research and I look forward to him finding his answers on these different products.

Dr. Askew returned to discuss 'Spray Technology and New Regulations." Shawn jumped right in with good news on a EPA "pet project" to define spray drift. Proposed changes includes vague language open to different interpretation such as "could harm".. which could be any negative effect to humans, beneficial insects, fish, birds and other wildlife.

New product labels are including language on increased nozzle requirements and droplet size. Some of the droplet size requirements could reduce product coverage and efficacy. Air induction (AI) and drift guard air induction (DGAI) may be a solution. to proposed regulations. Sprayer technology is changing rapidly in agriculture and coming soon to golf with GPS driven sprayers and spreaders.

**Dr. Shawn Akew,**
**Virginia Tech**

Fungicide failure can be traced to a large droplet size reducing coverage but AI nozzles produce a large droplet with less drift but rather than bounce off the turf leaves it explodes on contact and spreads because the droplet is infused with air bubbles.

For contact fungicides water rates are 1 gal per thousand square feet while for systemic fungicides water rates of 2 gallons per thousand are needed while root fungicide products need 2 -5 gallons per thousand.

Herbicides are taken up differently than fungicides so lowe water rates of .5 gallons per thousand square feet for systemic products and 1 gallon for contact and root products.

Nozzle material can make a big difference with brass nozzles only lasting 15 to 30 hours spray time while stainless steel up to 200 hours. Ceramic nozzles cost the most but can last several years. It is important to regularly test each nozzle not just one or two.

Adjuvants can help with application quality with spreaders that reduce surface tension and allow water to stay on plant and stickers that reduce evaporation of droplets before the product can enter the plant.

For poa control in relatively clean turf stands Dr. Askew recommends hand dabbing with poa cure or velocity rather than just round up. Round up will kill surrounding turf for sure while the other products may only set it back.

Finishing the morning session was Dr. Chris Williamson with his talk "Factors That Affect Insecticide Performance". Insects are affected by biotic and abiotic factors along with chemical controls we may apply for them.

For good control of any insect it is important to understand the biology of the pest. Life cycle and the vulnerable life stage guide product application times. It is also important to know the behavior and habits of the target pest.

Once you know when to apply and where to apply you need to examine other factors. Water quality tops the list for insecticide products as it effects mix uniformity because of suspended solids and debris in the water. Water pH and hardness should be tested as each water source is unique and may even change during the season.

**The Afternoon Panel Discussion Included Steven Schmidt, Butte des Morts CC, Colin Seaberg, Ozaukee CC and Scott Verdun, Kenosha Country Club**

Water pH should be 6-8 for most insecticide applications or rapid degrading of the product can occur.

Cold water has less effect than high temperatures which could cause hydrolysis.

Product incompatibility may or may not be listed on the label and due to temperatures, pH, hardness and fertilizer that mixes easily one day or tank may have problems the next.

Dr. Williamson offered that product age can reduce efficacy and products should be used in the same year when possible or at least use all open products the same year.

After a great lunch the panel of Steven Schmidt, Butte des Morts CC, Colin Seaberg, Ozaukee CC and Scott Verdun, Kenosha Country Club. The group started with their general ideas on programs. Steve looks back over a three year period and what has worked for him given the weather. Scott is making plans for improved plant health on fairways and dollar spot control. Colin shared a copy of his program and prefers to start early with low rates. Staff communication on what is going on is key to his success. Other topics discussed were brand name versus post patent, moss control, check plots, spray volume, GPS, crabgrass control and what they are doing to promote plant health for greens.

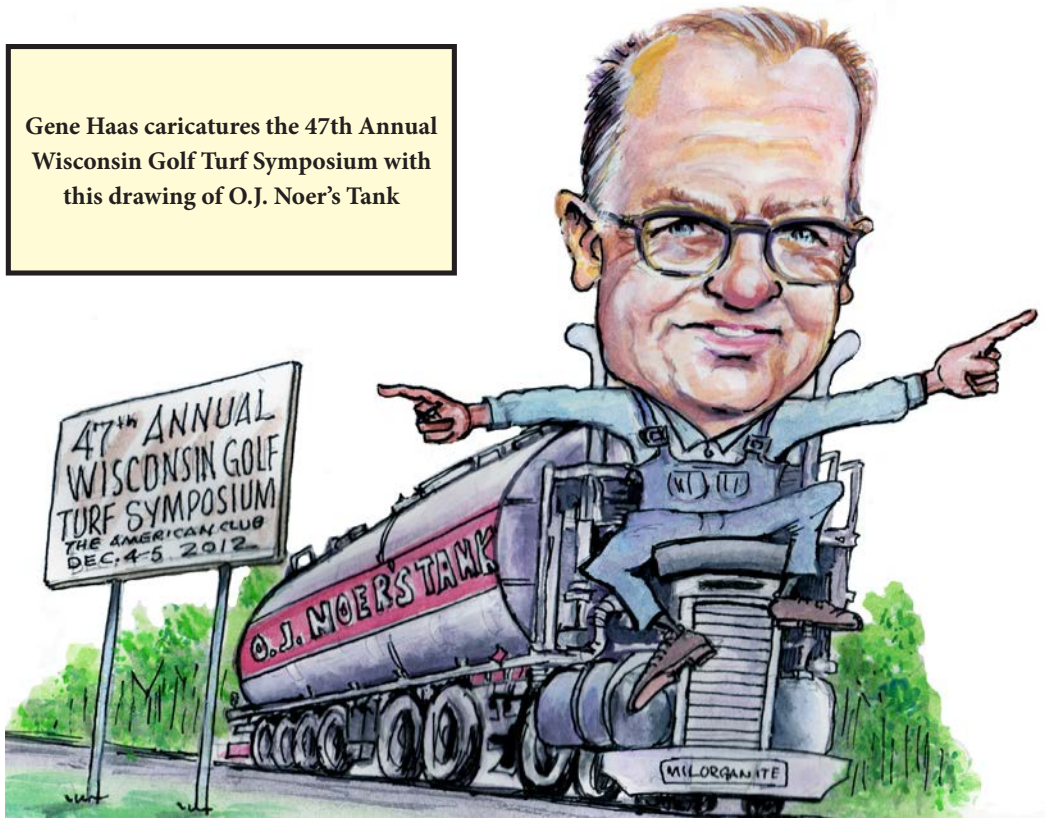
They provided some great information for the group before USGA Agronomist Bob Vavrek followed tradition with the 'Roundup" discussion on all the speakers and their take home messages.

The 47th Annual Wisconsin Golf Turf Symposium was a huge success with education second to none for the attendees. Thank you to Milorganite our "silent sponsor" without whom this would not be possible. Next years session will be Dec. 10 and 11 at The American Club. We hope to see you there to take advantage of this benefit.

**Dr. Chris Williamson, University of Wisconsin Madison**


**USGA Agronomist Bob Vavrek closes the Wisconsin Golf Turf Symposium with Roundup.**

Gene Haas caricatures the 47th Annual Wisconsin Golf Turf Symposium with this drawing of O.J. Noer's Tank




# NGLCGCSA EDUCATION CONFERENCE

## TUESDAY MARCH 4, 2013 8:30 - 4:00

### Agenda

- **Stress Guard Formulation Technology & Plant Health Benefits**: Dr. Robert Golembiewski, Green Solutions Specialist, Bayer Environmental Sciences
- **Understanding the Types of Winterkill and Potential Preventative Solutions:** Dr. Kevin Frank, Michigan State University
- **Reestablishment Pracices Following the Kill**: Dr. Kevin Frank, Michigan State University
- **Trends in Fertility**: Dr. Doug Soldat, University of Wisconsin Madison
- **The Impact of Winter Covers on Turf Health and Disease Development:** Dr. Paul Koch, University of Wisconsin Madison.

**Monday Night:**
4:30 Annual Meeting and Election
6:30 - 10:00 Hospitality Room
Best Western Midway Hotel
2901 Hummingbird Lane
Wausau, WI 54401

Advanced registration - Members $55,
Non-Members $65

Register By February 20, 2013 at
NGLTURF.ORG

Northern Great Lakes Chapter GCSAA

# The Fun Factor

## Understanding what makes golf fun will be good for your bottom line.

**By Chris Hartwiger,** Senior Agronomist, Southwest Region, USGA Green Section

*Editors Note: "This article is reprinted from the January 25, 2013 Volume 51 (2) of the USGA Green Section Record. Copyright United States Golf Association. All rights reserved."*

Whether it is a junior-high girl sinking a putt to make her first par or a professional making a clutch putt on the 72nd hole to win the U.S. Open, the game of golf has an appeal and enjoyment that keep people interested for life. I call this the "fun factor." However, golf is difficult, and what should be an engaging challenge can become unduly difficult given certain course conditions.

Golf course superintendents, professionals, course officials, and owners all play a pivotal role in the enjoyment of the game and therefore have a vested interest in keeping the game fun. Doing so will positively impact the bottom line for the golf facility.

So, is golf fun at your course? This depends on how the next three key questions are answered.

1. Who is your best customer?
2. What makes golf fun at your facility?
3. What makes golf difficult at your facility?

Once these questions have been examined, suggestions for evaluating your facility and improving the fun factor will be offered.

**NOW ON THE FIRST TEE — YOUR BEST CUSTOMERS**

After a couple of practice swings, your best customer addresses the ball and proceeds to hit a left-to-right shot that comes to rest in the rough 200 yards from the tee. He has three other best customers with him. One outdrives him and the other two come up short. Why are this foursome and many of the other foursomes that play the course on this day considered to be your best customers? They are your best customers because there are more of them . . . many more. In fact, the majority of golfers fall into this category.

Below are additional information about your best customers and resources for further research.

Male golfers:

- Have an index between 7 and 16
- (Men's USGA Handicap Statistics).
- The median handicap index is 14.5.
- Male golfers with a Course Handicap of approximately 20, or the typical male "bogey golfer," hit the ball an average of 200 yards off the tee, including carry and roll. The longest par-4 hole these golfers are able to reach in two is 370 yards (see Bogey Golfer).

Female golfers:

- 51% have handicap indexes between 16 and 31 (Women's USGA Handicap Statistics).
- The median handicap index is 27.
- Female golfers with a Course Handicap of approximately 24, considered a typical female "bogey golfer," hit the ball an average of 150 yards, including carry and roll. The longest par-4 hole they can reach consistently in two is 280 yards (see Bogey Golfer).

A brief review of the statistics above reveals that your best customers are not great golfers and don't hit the ball Herculean distances. Is your golf course set up and managed in a way to make the game fun for this group? To answer this question, we must first affirm what makes the game fun for them and what makes it difficult as well.

**WHAT MAKES GOLF FUN?**

In simple terms, the game of golf challenges a player to hit the golf ball from point A to point B in as few strokes as possible. But what makes this challenge enjoyable? A survey published by Golf 20/20 in 2005 was designed to identify what makes the game enjoyable. The results are presented in Figure 1. Underlined are factors influenced by those working at a golf course. When these factors are added together, it can be stated that 60 percent of the elements that make the game enjoyable are influenced by those working in the golf industry.

**Getting to know your best customers and how they play golf is the first step toward increasing their enjoyment.**

A quote from a Golf 20/20 paper published in 2005 is worth considering as well: "When asked to choose between playing golf on a very challenging, but sub-optimally maintained golf course or a less challenging, but immaculate facility, nine out of ten golfers would prefer playing on the less challenging courses in 'top-notch condition' . . . ." In this question that linked conditioning and difficulty together, golfers overwhelmingly favor top-notch conditions on less difficult golf courses. When linked together with the survey results in Figure 1, an interesting conclusion is drawn. If changes to your course are desired and you would like to positively influence the outcome, make sure they favor improving conditioning and not making the course more difficult foryour best customers, who we identified earlier.

**WHAT MAKES GOLF DIFFICULT?**

The elements of the game that make golf difficult are the final piece of the puzzle before recommendations can be made to improve the enjoyment of the game for your best customers. USGA Course Rating Resources provides excellent information that helps assess relative difficulty of certain elements of the golf course. Difficulty can be broken down into two primary categories: effective playing length and obstacles.

**Effective Playing Length** — This is a catch-all phrase that encompasses numerous factors (listed below) related to how long a given golf hole will play. The effective playing length is more than just the distance listed on a scorecard. Take the time to review these factors and how long each hole on your course plays.

- Slope
- Landing zone
- Roll
- Elevation change
- Dogleg / forced layup
- Prevailing wind
- Altitude

**Obstacles** — This is the second category that impacts the relative level of difficulty of a golf hole. As we learned, a 350-yard golf hole may effectively play longer or shorter, but the presence or absence of obstacles also impacts difficulty. Below are the obstacles that impact the difficulty of a golf hole.

- Topography — tilted lies
- Fairway width
- Green target
- Recoverability from rough
- Bunkers
- Out of bounds / deep rough
- Water hazards
- Trees
- Green surface slopes
- Psychological factors

**ENHANCING THE FUN FACTOR AND IMPROVING YOUR BOTTOM LINE**

After identifying who golf's best customers are and understanding why they enjoy the game and what makes the game difficult for them, those involved in the operation of a golf facility are equipped to reexamine their own golf course and implement changes to improve the "fun factor." When golfer enjoyment is maximized more golf will be played and financial results will be more favorable.


**The effective playing length of a hole is often more than the yardage posted.**

The information presented thus far provides numerous opportunities to make your golf course more enjoyable for those who play it. To get this creative process started, three ideas are presented.

**Grow Healthy Turf** — This may seem like an obvious place to begin, but as shown earlier, golfers appreciate a well-conditioned golf course. In order to produce quality golfing conditions, healthy turfgrass is a must. As a result, every golf course should be in a program of continuing to improve on thebuilding blocks for maintaining healthy turf. This begins with choosing the right grass for the location and extends to making sure all the basics are covered – sunlight, air movement, irrigation, drainage, nutrition, pest control, and cultural programs.

**Figure 1**

The results of a Golf 20/20 survey in 2005 on what makes the game enjoyable for golfers. Underlined are factors influenced by those working at a golf course. When added together, they account for 60 percent of golfer enjoyment.

**What makes golf enjoyable?**

- Course conditioning 19%
- People they play with 19%
- Course design 17%
- Ball striking 12%
- Score 8%
- Weather 7%
- Amenities 6%
- Course aesthetics 6%
- Excercise 4%
- Competition 3%

**Moving up a set of tees, or TEEING IT FORWARD, is an inexpensive way to enhance the enjoyment of the game for almost every golfer.**

**TEE IT FORWARD** — This joint initiative between the PGA of America and the USGA encourages golfers to move up one or more sets of tees on golf courses they play. Guidelines for selecting tees based upon how far golfers hit the ball with a driver were developed and are presented in Figure 2.
Golfer response to the program in 2011 has been positive:

- 70% had more fun
- 47% played faster
- 91% will TEE IT FORWARD again in
- the future
- 52% are likely to play golf more often

**Make Adjustments to Course Maintenance** — Decision makers at a golf facility should review each of the factors related to course difficulty. This is an ideal way to identify areas that can be enhanced to increase enjoyment for your best customers. On USGA Turfgrass Advisory Service visits, I routinely observe areas that make the course unduly difficult for your best customers. These are listed below with a brief comment.

- Reasonable rough – The era of maintaining championship rough on a daily basis is over.
- Fair fairways – In parts of the country where bermudagrass is used, there is great flexibility in adjusting fairway widths. If your best customer is on the tee of a long par-4 and his average drive (200 yards with carry and roll) finds a landing area narrower than the average on shorter par-4 holes, adjust the fairway width or relocate the tee.
- Proportional difficulty – Designing and setting up a golf hole to be difficult is not hard to do. The art of design and course setup consists of creating a golf hole that will appropriately challenge low-handicap players yet allow the less-skilled golfer to navigate around the trouble and post a reasonable score. Evaluate each hole and determine if difficulty is proportional. Are there too many bunkers? Too many hazards? Is there a safe side of the fairway or the putting green for an average golfer to bail out? If not, see if changes can be implemented with tee placement, course setup, or even the removal of bunkers.
- Best green speed for your course and players – Identify the green speed that satisfies most of your customers most of the time and is agronomically achievable.
- Keep things dry – Dry fairways produce more ball roll and allow carts off the path more frequently.

**Figure 2**
**Guidelines for selecting tees based on average driver distance.**

| Driver Distance | Recomended 18 Hole Yardage |
|---|---|
| 275 | 6,700 - 6,900 |
| 250 | 6,200 - 6,400 |
| 225 | 5,800 - 6,000 |
| 200 | 5,200 - 5,400 |
| 175 | 4,400 - 4,600 |
| 150 | 3,500 - 3,700 |
| 125 | 2,800 - 3,000 |
| 100 | 2,100 - 2,300 |

**CONCLUSION**
The "fun factor" should be applicable not only to your best customers, but to those who manage the course and make decisions affecting the course. Take some time to identify and understand your best customers. Reconsider your course in light of those who play it most often. Make appropriate changes. The more your customers enjoy the game, the more golf they will play and the more likely they are to bring a
family member or friend out to the course, too. Most important, your bottom line will improve. Now that's fun!

**The era of maintaining championship rough for daily play is over. Reasonable rough improves pace of play and enhances the "fun factor"!**

# Coming Events!

**Wed February 6th, Wisconsin Hospitality Room at GIS 6-9 PM, Bootlegger, 804 Market St, San Diego, CA**

**Mon February 25th, Spring Business Meeting, Ramada Inn, Fond du Lac**

**Tue March 4th, Northern Great Lakes GCSA Spring Education Conference, Wausau**

**Wed/Thur March 13-14, Reinders Green Industry Conference**

**Tue April 23rd, April Golf Meeting, The Club at Strawberry Creek, Kenosha, Host - Matt Kregel**

**Mon May 6th, May Golf Meeting, North Hills CC, Mequon, Host - Randal Dupont**

**Wed May 29th, Super/Pro, Fox Valley Golf Club, Kaukauna, Host - Scott Bushman**

**Mon June 17th, WGCSA Tournament Meeting, South Hills CC, Fond du Lac, Host - Jim Van Herwynen**

**Tue July 30th, UW - Summer Field Day, OJ Noer Facility, Verona, Host - Tom Schwab**

**Tue August 20th, Joint meeting w/NGL, Stevens Point CC, St. Point, Host - John Femal**

**Mon September 16th, Wee One, Pine Hills CC, Sheboygan, Host - Rod Johnson**

**Mon September 23rd, WTA Golf Fundraiser, Maple Bluff CC, Host - Josh Lepine CGCS**

**Sat October 5th, Couples Outing/Party, Wild Rock GC, WI Dells, Host Michael Blazich**

**Tues and Wed Dec 10th-11th, Wisconsin Golf Turf Symposium, American Club, Kohler**

# Harrington Takes The Presidents Gavel

**By David Brandenburg,** Golf Course Manager, Rolling Meadows Golf Course

Chad Harrington, Golf Course Superintendent and General Manager at Autumn Ridge Golf Club was elected to serve as the 42 president of the Wisconsin Golf Course Superintendents Association on December 4th at the fall business meeting. Harrington has prepared for the job with 7 years of board and committee service. Chad has served as chair for the Education, Symposium, Scholarship and Research committees.

Harrington entered the turf business early when he started a lawn maintenance business at age 11 in his hometown of Plainfield with a old pull golf cart as a trailer.

He entered the golf business in 1988 working at Waushara Country Club in Wautoma under Golf Course Superintendent Jack Drew in 1988 as a senior in high school. The course had 18 holes at the time and half the sand based course was still watered with quick couplers. Chad's first job was at night moving sprinklers and doing some light equipment maintenance to stay busy between rounds on the golf course.

He continued at Waushara through his time at Ripon College and was offered a full time job after graduation in 1992.

Harrington started as the Golf Course Superintendent at the new Autumn Ridge Golf Course in Valders in February 1996. He was there to open the front 9 in September of 1996 and the second 9 in July of 1998. Overseeing the construction and grow in of a hilly rolling terrain provided some great experiences for Chad.

The course changed hands in 2000 and that can be a stressful time for staff members but it worked out and in fall of 2002 Chad was asked to serve as the interim General Manager and eleven years later he still serves as Golf Course Manager and Superintendent.

Wearing two hats can stretch his time and Chad is quick to recognise Assistant Superintendent Julian (JJ) Mejia as a key component of the Autumn Ridge team. Communication with Julian and the rest of the staff is key to success facility wide.

Wearing two hats can lead to some long days and variety in the job. A morning might involve work on the golf course, the afternoon book work in his office and the evening helping with a wedding or party.

Agronomically the course offers some challenges with rolling terrain and many areas of micro climates and stagnant air. The soils are primarily red clay making water management a key to healthy turf. The greens are Pennlinks, tees Penncross and the 17 acres of fairways are Penneagle. The course was carved long ago by glaciers and is located on the northern tip of the Kettle Moraine.

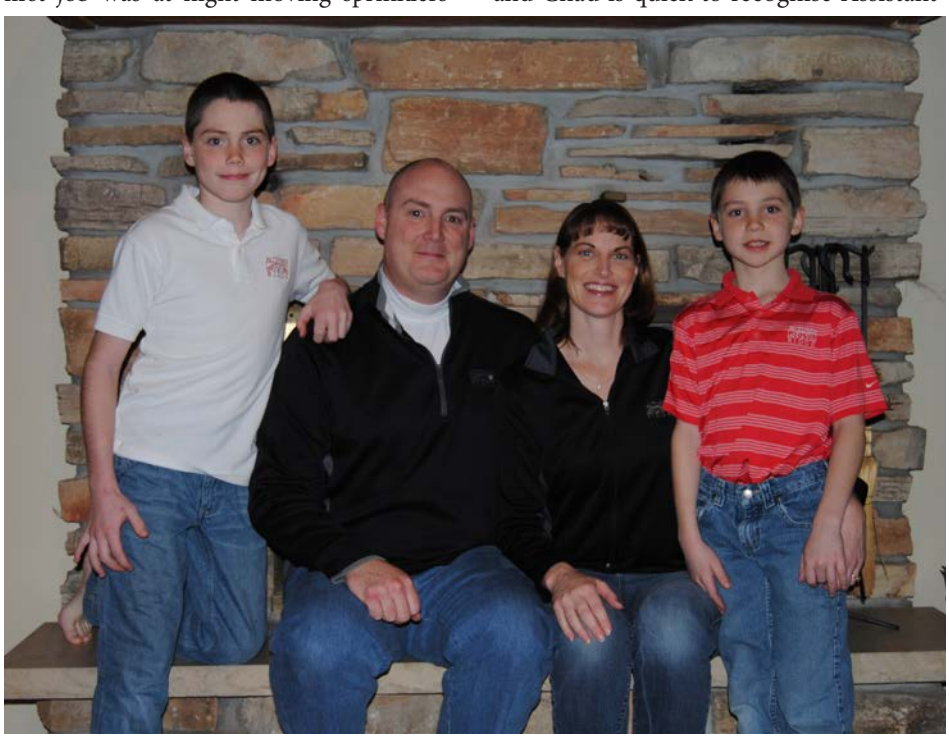
One change Chad has made is to primarily mow fairways in the afternoon to eliminate clipping problems and provide a cleaner surface. This frees the staff up in the morning to concentrate on other tasks and most days they are able to find a lull in the tee sheet to get fairways mowed without too much interruption from play.

Autumn Ridge hosts over 100 events each season and have had some very unique outings. The course hosts a benefit for the visually impaired each year in memory of owner Tom O'Connor's father but the course actually hosted a regional Vision Impaired Golf Championship.

Chad has been married to his wife Jackie for 15 years and she works as a nurse in Manitowoc for Dermatology Associates of Wisconsin and helps out at the golf course in whatever capacity needed.

Chad and Jackie have two sons, Colton 11 and Thane 8. The boys enjoy downhill and water skiing, snowboarding, wrestling, football and of course golf. They also enjoy coming out to the golf course and helping where they can.

With many years in business and experience on the board of directors Chad Harrington is in perfect position to lead our association for the next two years.



**Colton, Chad, Jackie and Thane Harrington.**