



EDUCATION REVIEW

Charles Anfield, CGCS, *Heritage Bluffs Golf Course*



ITF Winter Workshop



Keith Krause (l) congratulates Erwin McKone on his presidency.

The Illinois Turfgrass Foundation launched its final educational "salvo" for the 2011 year with a very solid, two day education program at the Golf House in Lemont on December 14th and 15th. Keith Krause of Chicagoland Turf was elected as the new President for the ITF and he wasted no time moving the Association forward.

I started out the day with an education piece formatted after an ESPN television show and called it "Charles Anfield, CGCS is Highly Questionable." The education featured a very experienced panel consisting of John Gurke, CGCS from Aurora Country Club, Tim Anderson, CGCS, MG from Naperville Country Club, Jim Canning from White Eagle Golf Club and Scott Pavalko from Cog Hill Country Club. The format of the panel was to vote "si o no" on a specific question and provide a short explanation why they voted as they did. Some examples were:

- *Poa annua* is my friend.
- Most of our players think our greens are too slow.
- We core aerate our greens.
- We use Bio stimulants on our turf.
- I expect to have a robotic mower on our course within my career.
- I expect our budget to decrease in 2012.





Pitfalls: learn to crop and edit, adjust exposure on photos, careful with spelling and grammar, careful with address book, match Clubs personality, post often to maintain interest.

Text Messaging:

- Great communication for early morning Staff
- Be concise.
- Be clear.
- Be polite.



Chuck Barber offers his explanation and use of Facebook.

Chuck Barber from St. Charles Country Club presented on using Facebook.

Facebook:

- Facebook is great for bringing people together for good or ill.
- Choose your own level of involvement.
- Free advertising for Club.
- Find out what's going on with other users.
- Use caution, don't talk bad about people or vent frustrations of job.
- Very popular, very fast.

Erwin McKone from Briar Ridge Country Club presented on Twitter and Video.

Twitter:

- Another communication tool.
- Very simple, log in and it will take you step by step.
- You can forward other tweets.

Video:

- You can buy a hand held camera for \$120.
- Film video in short, 3 second bursts.
Connect lots of small clips.
- Use as instructional or educational presentations.
- Keep it short, less than 8 minutes.

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There were a few "cupcake" questions thrown in to break up the serious nature of the topics and it was also a way for the audience to get to know the panelists on a more personal level. The format was fast paced that covered a lot of current practices and turf related topics. We even had some fun along the way as well.

The next education session featured short, concise presentations on using current communication technologies. It was called, "Ten Minutes of the Best Communication Technology" Are you keeping up with current technology?

Dave Schlagger, CGCS of Indian Hill Club presented on Texts and Blogs.



Dave Schlagger offers his insight to his blogging and simple text messaging.

Blogs:

- Keep it simple.
- A picture with one or two sentences is plenty.
(The more text, the greater the opportunity for mistakes).
- Don't "over" communicate.
- Practice, send and advertise.
- Use for weather alerts, projects, unusual events.

Luke Cella presented on use of the "Smartphone."

Smartphone:

- Get converged: connect calendar, email, phone, photos, contacts, voice recorder.
- Use apps for Twitter, blogging and Facebook.
- Get weather, GPS, News, calculator, games.



Stephen Biehl explained how Naperville CC uses many different technologies to communicate with its' members.

Steven Biehl from Naperville Country Club presented on bringing all the media together on a customized website.

Website:

- Link up YouTube and videos.
- Link weather
- Link Blogs.
- Link Facebook and other links.

Most of the website work can be completed from available templates. You can customize to fit your Club needs.

Dr. Doug Soldat from the University of Wisconsin presented on "Facts on Fall Fertility."



Dr. Soldat taught his last class of the semester before driving down to Lemont to share with the ITF crowd.

Current prospective by turf professionals and academia is that fall fertilizing is the best time for nitrogen applications, to get into the plant roots, but the spring gain is questionable. Nitrogen gets into the plant via water uptake by the plant.

A growth chamber study was conducted by the U. of W. to study the effects of fall nitrogen applications on turf leaf and root growth.

Notes from Study:

- September is the best timing for top growth, no significant rooting occurs.
- November is the best time for root growth.
- The rate of nitrogen did not affect root growth.
- Plant use of nitrogen is temperature related. Net photosynthesis increases with declining temperatures not with nitrogen fertility.
- High rates of nitrogen in November are inefficient.
- Sand and soil will have different nitrogen retention rates.

Dr. Soldat wrapped up day one, with his presentation on "Management of Soil Water Content."

Dr. Soldat used a soil moisture sensor to map available water in the soil of a green profile. His tool of choice was the Spectrum TDR 300. He built a USGA green with a 1% grade for the study. He found that even with drainage, water still pooled at the low end of the green. His target irrigation uniformity was 80%. Soil variability can make a big difference in moisture readings. He was able to get very high quality turf with D.U's well below 80%. Over time, organic matter accumulation and topdressing can change soil variability. Different wetting agents and penetrants can make a difference.

Day two of the ITF Winter Workshops featured technical presentations by Dr. Bob Carrow from the University of Georgia. His first presentation of the day was "Turfgrass Irrigation Water Quality: Management Concerns."



Dr. Robert Carrow balanced out the Superintendent talks with fertility expertise.

Some notes from his lecture:

- Consider source of water as indicator of overall quality.
- Most important water quality issues concerns:

1. Nutrient Rich Reclaimed Water
 - a. excessive N
 - b. eutrophication in ponds
 - c. backflow devices and maintenance
 - d. excessive P and leaching potential
 - e. excessive SO₄
2. Saline Waters
 - a. many different salts (cat ions and anions) exist
 - b. some salts are more soluble than others
 - c. high salt issues can cause physiological drought
 - d. can cause soil structure deterioration
 - e. specific toxicities to specific salts
 - f. nutritional disorders can result
 - g. salts will accumulate in profile and flushing may be required periodically
 - h. acidification may be required for excessive levels

In general, in our area (Midwest) we are considered to have good to excellent irrigation water quality. Water quality can vary widely and the only sure method is to conduct water quality testing, specific to your irrigation water source.

Dr. Bruce Branham from the University of Illinois took the stage to make his presentation on “PGR’s: Should We Turn Them Off in a Summer Like 2011?”

Why do we use PGR’s?

- use for plant growth regulation when stress absent
- *poa annua* control
- enhanced turf quality
- improve turf quality
- increase stress tolerance
- increase green speed – not so much

PGR Basics

1. turf metabolism controls length of control.
2. application timing and conditions are large factors in plant uptake
 - a. Spray volume
 - b. Temperature
 - c. Relative humidity
 - d. Time of day

Do PGR’s enhance stress tolerance? Trinexapac- Ethyl (primo) does increase leaf area and reduce senescence. It also increases cytokinin levels in leaf. Flurprimidol (cutlass) and paclobutrazol (trimmit) have similar modes of action. There has been measured a slight increase in root growth. The overall answer appears to be yes, PGR’s do improve stress tolerance.

Target regulation should be 50-70% of normal growth. More than 70% can create turf thinning. Over regulation can be a problem to drought stressed turf. Poa control programs should not be over aggressive. Combinations with DMI’s (which have growth regulation properties) during the summer should be avoided. During difficult summers, don’t stop with regulation but understand all of the factors involved.

Seaweed extracts have demonstrated to be rich in cytokinins and help reduce leaf senescence and root mortality during stress. They also seem to help with turf density. Maybe a combination of seaweed extract and PGR’s is an effective program. Test for your own specific situation.

Dr. Soldat of U. of W. presented on **PGR Research** done this past year by one of his students for putting greens.

- Trinexpac- Ethyl (T.E.) at the label rate (.125 oz./m) reduced growth by 20% overall applied at 2 week intervals.
- T.E. actually grew more grass overall than untreated turf.
- Using growing day degree models, the data was very revealing
- Higher rates were not effective in extending intervals of regulation.
- Frequency matters more.
- Some decrease in poa populations was observed in T.E. applications.

Dr. Soldat continued his presentation with his research on “Potassium and Calcium for Turf” that provided some very revealing observations.

Calcium is a micronutrient that plays a very important role in signaling within the plant. The inside of a plant cells have very complex relationships. Calcium aids in immunity and disease resistance. Most irrigation water contains abundant amounts of calcium. He has found that supplemental applications are not needed. Too much calcium can lead to an imbalance that may lead to hard pan that will restrict air flow and water infiltration. Claims from calcium products are not always accurate for specific sites.

In most cases in our area (Midwest), managing for calcium is a non- issue.

Potassium is a major nutrient for turf. It is also the second most abundant mineral nutrient. It plays no structural role in the soil. It is important for turgor, water relations and stress tolerance in the plant.

Below is a list of “supposed” benefits or “sound bites” of potassium and then U.W. Research conclusions.

1. Improves rooting mass.
 - a. There was no observed rooting response from plot applications.
2. Improves wear tolerance.
 - a. No effect on wear tolerance and recovery
3. Improves drought tolerance.
 - a. Delays wilting -yes
 - b. Faster recovery – yes
4. Cold tolerance benefits.
 - a. Very little evidence of this on cool season turf species
 - b. Yes- for warm season grasses

Dr. Soldat commented on Dr. Frank Rossi’s work with Potassium Research at Cornell.

- No difference in color quality, ball roll over a two year period.
- Actually had more snow mold on high potassium plots.

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Drs. Soldat (l), Carrow and Branham led an open discussion on the second day of the Winter Education.

Some final observations:

- We probably need less potassium than we thought.
- Applications can improve drought stress.
- Too much potassium can lead to potential snow mold problems.
- We probably need about a ¼ lb. K per month.
- Focus on N:K ratios. 1.5 to 1 recommendation.
- Keep it simple.

Dr. Carrow from the U. of G. came back for a presentation "Potassium and Silica: Are These Important?"

Potassium is nicknamed the "stress" ion. Its major functions are for stomatal control. It provides transpirational cooling, water use and CO₂ uptake. It is critical for the plant to maintain electro-neutrality. Potassium deficiency is most likely on:

1. High sand root zones
2. Predominantly acidic soils
3. High rainfall or heavily irrigated sand soils
4. Recreational turf sites prone to close mowing and high stress

There is a lot of conflicting reports about potassium use on turf that are creating confusion. Some low deficiency data problems include: favors spring dead spot, leaf blotch, take all patch, crown and root rot, dollar spot and red thread. Some high K problems favor: brown patch and pink snow mold. "But...while several diseases have been reported to be influenced by K nutrition, the responses have not been consistent or strong. Certainly, no presently known diseases can be controlled or even greatly reduced by K alone."

Dr. Carrow has specific recommendations for N:K Ratio guidelines for sand soils subject to leaching conditions. He has several books on the subject.

He continued his presentation with information on Silicon. Silicon is the second most abundant mineral element after oxygen. Low silicon solution levels are associated with highly weathered, leached, low CEC, low acid, high content sand soils. Normal levels are 3-17 mg. Si/l.

Some potential silicon benefits include:

1. Enhanced cell membrane stability, leaf and/or stem tissue strength for reduced lodging and wear tolerance.
2. Greater leaf erectness that reduces adjacent leaf shading and increases radiation absorbance.

3. Enhanced cell membrane stability which may assist in greater hardiness to chill, drought, salinity stresses; and allow continued metabolic activity for osmolites to be synthesized.
4. Reduced incidences of root and leaf pathogens.

It is interesting to note that the above responses have been observed but are not considered strong responses. Bottom line, you need to conduct your own trials to see if silicon applications are beneficial enough and quantifiable for your applications to be cost prohibitive.

At the conclusion of the day two, the Turf grass PH.D.'s gathered on the stage for one last Q and A session.

Some closing comments:

- Carrow: "Focus on the real issues with your turf, target products on specific situations."
- Carrow: "Don't make unnecessary applications, move toward sustainability."
- Branham: "More turf is killed with kindness, if it's green and actively growing, let it ride."
- Soldat: "Keep it simple, use common sense".
- Branham: "The turf grass system is a pretty good system, don't over manage it".
- Branham: "The turf grass soil microbial population is the least important part of turf system. It is one of the best in all of agriculture."

Much of the two day ITF Winter workshops were of a highly technical nature, jam packed with the latest research and data. The ITF was looking to provide you with tools you can use for real world turf growing situations. At the networking and social hour after day one I had a few people comment to me that they will probably save their Clubs money that they would have spent if they had not attended the event.

You really needed to be there to get the full story.

Practical solutions to common problems, way to go ITF!

-OC



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Each month the Midwest will highlight a core company in *On Course*. This month, we are honored to highlight Syngenta and MAGCS Member, Brian Winkel.



What goods and/or services does your company specialize in? Syngenta is one of the world's leading companies with more than 26,000 employees in over 90 countries dedicated to our purpose: Bringing plant potential to life. Through world-class science, global reach and commitment to our customers we help to increase crop productivity, protect the environment and improve health and quality of life. For more information about us please go to www.syngenta.com.

What makes your company stand out from the competition? Our commitment to customers goes deeper than our products – we also offer world-class technical support, innovative programs and overall value. Syngenta is dedicated to delivering products with a level of service and support, which is unparalleled in the plant protection industry. From extensive, ongoing research and development, to a nationwide team of qualified and talented field representatives and technical support staff, Syngenta continually strives to be best-in-class.

How would you describe your relationship with your customers? I consider myself a trusted adviser who serves as a key source of industry information and sound agronomic recommendations. As a territory manager for Syngenta, I believe in developing long-term relationships by helping customers achieve their goals, solve their problems and reduce their risk.

How long has your company been in business? Syngenta has been in business since November 13, 2000.

Who owns your company? Syngenta Crop Protection LLC is a wholly owned subsidiary of Syngenta Seeds, Inc.

Will your company be expanding or bring any new products/services to the market in the near future? With new products such as Daconil Action™ fungicide and a portfolio of several new products anticipated for introduction in 2012 and 2013, this is a very exciting time for Syngenta in the areas of innovation and product development.

Where is your company located and what are the hours of operation? Syngenta is the world's largest stand-alone agribusiness company, employing more than 26,000 employees in 90 countries. Our global headquarters is located in Basle, Switzerland. Our U.S. headquarters is based out of Greensboro, North Carolina.

Company website: Our corporate website is www.syngenta.com. Our website for turf and landscape customers, including golf course superintendents, is www.greencastonline.com.

Childhood Home? I was born in Pontiac, Illinois, and raised on a small farm near Toluca, Illinois, with a population of 1,500. We're "famous" for our two Italian restaurants – "Mona's" & "Capponi's".

First experience in the industry? I served as the golf course superintendent at Tall Oaks Country Club from 1977 to 1982.

Alma Mater? I earned a Bachelor of Science degree in Ornamental Horticulture/Turf Management from the University of Illinois, and graduated in 1985.

Family? Wife: Jeune; Two boys: Joshua – 7, Joseph – 5; and Bogey, our Australian Cattle Dog

Hobbies? Golf (of course), woodworking and always trying to make everyone happy, ESPECIALLY my wife and my customers.

