Figure 5.
The Kentucky bluegrass trial is one of 4 new variety trials on Sunshine Course.

Diagnostics and Communications

9) One of the main focuses of the CDGA Turfgrass Program is disease diagnostics. In the early 1980's bacterial wilt killed many greens of 'Toronto' bentgrass and prompted the hiring of two plant pathologists in Illinois. Dr. Hank Wilkinson started first by establishing a nationally recognized research program in Illinois at the University of Illinois in Champaign/Urbana. Hank later hired Dr. Randy Kane with the support of Illinois golf course superintendents and the Chicago District Golf Association's Board of Directors. Dr. Randy Kane was based in Chicago (Oak Brook) and turfgrass diagnostic services, communications, and research became available to CDGA member clubs.

Diagnosing diseases is critical to finding the solution that will provide the best results and avoid useless applications. To have the best control, different fungicides or classes of fungicides may be recommended for each disease issue. In other cases diseases are not the problem, but diagnostics are needed to rule out the possibility of disease. If this is the case, fungicide applications can be avoided and money can be spent on other ways to control the problem.

Figure 6.
The turfgrass laboratory and greenhouse are used to solve problems throughout the season.

10) The CDGA Turfgrass Program also provides information through electronic communication and the internet. Each week during the season, the turfgrass team collects their observations and research results to compose the Turfgrass eScouting Report. About ten pages of pictures, diagrams, and graphs summarize the week's activities. We record every pest outbreak and collectively place them on the next year's calendar date in the Pest Activity Calendar. This tool can be used to see what happened last year and what pest outbreaks could occur. Scouting within your golf course is important, and an unbiased communication of the observations from a whole region takes scouting to a whole new level. Superintendents are better able to predict what is ahead and prepare for the challenges year to year.

Website communications are also important in this day and age. Our www.cdgaturf.com website is our tool to archive all Turfgrass eScouting Reports and Pest Activity Calendars. Current and past research can be accessed to look up the results from previous field days or published reports. By the printing of this article, more updates as well as information on diseases and fungicides, search capabilities, and the latest research will be added to the website. In years past, the web based tools in Interactive Turf have provided disease forecasting models for member clubs. As of 2009, we teamed up with Purdue and Michigan State University to add Illinois and Indiana to a website called GDD Tracker, www.gddtracker.net. Currently, models of Proxy/Primo application timing for Poa seedhead suppression, crabgrass pre-emergant application, Japanese beetle, and billbug models are available. In the future we believe this website will grow to include more states, more weather stations, and more models including disease forecasting.

The CDGA Turfgrass Program offers useful research, diagnostics, and communication to golf course superintendents. The ideas, tools, and information provided have become an asset to turf managers in Illinois and the upper Midwest Region. For more information on any of these ten topics or other CDGA Turfgrass activities please email me at krincker@cdga.org. **-OC**

Acknowledgements

I would like to thank Amanda Lorton and Dr. Derek Settle for helping me with this article.

Literature Cited

- McDonald, S., D. Settle, L. Stowell, C. Chen, and F. Wong. Chemical control of brown ring patch: Results from three trial locations show that some fungicides on the market provide control of brown ring patch disease. Aug, 2009. Golf Course Management. 77(8): p. 74-80.
- Settle, D., and M. Fidanza. 2007. Ask the Expert: Fairy Ring Research. MAGCS On Course. May 60(12): p. 11-15.
- Settle, D., and P. Dernoeden. 2009. Evaluation of cytokinian plant extract biostimulants, iron , and nitrogen products for their effects on creeping bentgrass summer quality. USGA Turfgrass and Environmental Research Online. Jan 1. 8(1): p. 1-15.
- Settle, D., R. Kane, and G. Miller. 2007. Evaluation of Newer Products for Selective Control of Moss on a Creeping Bentgrass Greens. USGA Turfgrass and Environmental Research Online. Mar 1. 6(5): p. 1-7.

FEATURE II

Fred Behnke, CGCS, *Mt. Prospect Golf Club*

Ten Years After

I have an On Course *article to write, and I'm spooling through my saved files looking for inspiration. My holy grail would be discovering something I had already written that hadn't been published yet, so I could send it in and go have a beer.*

No such luck.

But I did find something that was published in *On Course* over a decade ago that got me thinking …

Thoughts from the Pasture

I am not a turf manager; I am a golf course superintendent. My professional efforts are not designed to grow grass, in fact, a lot of what I do conflicts directly with best management practices of turfgrass culture.

My job is to provide golfers with a place to play their game, and a well maintained putting surface is a far cry from the ideal turfgrass environment. I have heard it said that we golf course superintendents are the only agronomists that grow their crop to its detriment. We aren't looking for high yields, and our harvest isn't measured in bushels. We subject our fragile crop to stresses that keep us awake at night all for the good of the game.

We mow our crop daily at heights measured in hundredths of an inch.

We often mow when it's wet because it's the only time we can do our job.

We roll surfaces that are already compacted from foot traffic that is funneled to one 4.25 inch spot.

We don't irrigate the crop when its needs it, we often have to wait until it is on the verge of wilt.

We do these things not because its good for the turf we do them for the good of the game.

These surfaces are regularly subjected to footwear studded with spikes that are longer than the height of the turf (thankfully this practice is rapidly losing favor among gentlemen and ladies).

Remember metal spikes?

I got to thinking about some of the other changes we've seen over the past ten years so I fired off an e-mail (another change) to the usual suspects asking for some opinions.

I'm doing an article for "On Course" about big changes in GC Mgmt. since the turn of the century. I'm not including anything to do with information technology (i.e,. cell phones, digital cameras, pdas, computers, etc.). Looking for "bricks and mortar" type stuff. Any input would be very much appreciated.

It was a rainy day in October and I got a pretty good response. Thanks again to everybody who chimed in. I purposely eliminated information technology and communication from the list because it's everywhere in our lives and I wanted to focus on golf maintenance.

So here's the result of a totally unscientific survey ranked by the number of times each item was mentioned by the respondents. You may disagree with the categories and priorities, but hey, that's the whole point of rankings isn't it?

THE TOP TEN CHANGES IN GOLF COURSE MANAGEMENT SINCE 1999:

10. Better, Less Toxic Plant Protectants

DMI fungicides were mentioned as well as insecticide innovations. One category of plant protectant earned its own place on this list – see below.

9. Labor Costs and Personnel Management Issues

I was a little surprised that this wasn't higher on the list because so much of what we do is directly affected by the quality (and quantity) of our maintenance personnel. One person actually wrote that superintendents becoming more visible has made the job harder because before "they" didn't know we existed and we could do whatever we wanted with our crews. He was kidding – I think.

8. "Spoon-Feeding" With Foliar Fertilizers

The variety of nutritional supplements available to the superintendent rivals a Major League Baseball locker room. You can be organic, holistic, biological or hard-core Vegan if you want. Soil, tissue, and water analyses allow you to concoct a fertility program designed for your specific needs.

7. Water Issues

Water restrictions affect management decisions. The need to practice competent husbandry of resources has become a necessity. Exploring options to squeeze every bit from a drop of

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water has driven the growth of wetting agent use, growth regulators and soil and water treatment apparatus. Irrigation technology has its own place on this list.

6. Hard and Fast Conditions

Players are more sophisticated and they have high expectations. Light frequent topdressing, rolling greens being commonplace (the pendulum really swung on that one), hand watering, and other cultural practices aimed at supplying the demand for hard and fast conditions (several people mentioned that using kiln dried sand for topdressing greens pays for itself, because the sand brushes in so well, you can do a light topdressing between groups of golfers, without them even noticing).

5. "Green" Initiatives

Hybrid and electric equipment is becoming more commonplace. The Audubon Cooperative Sanctuary System has been around for a while. It and other ecological / environmental programs seem to have more support from golfers (as long as they are "affordable"). The notion that golf courses are "artificial" is becoming discredited. The golf course superintendent is perceived as a knowledgeable environmental manager.

4. "New" bentgrass cultivars for putting greens

A number of cultivars that have been introduced recently were mentioned for drought and disease resistance and their ability to tolerate low mowing heights.

3. Sophisticated Irrigation Technology

This is a very broad category including moisture sensors, variable frequency drive pumps, separate bunker irrigation systems, drip irrigation, radio control, and nutrient and soil amendment injectors. This probably deserves its own top ten list – somebody else can do that.

2. Growth Regulators

Direct quote from a respondent – "What was kind of a Frankenstein experiment has become a regular part of mine and I think a large population of golf course maintenance programs."

And the number one biggest change affecting golf course maintenance since 1999 is…

1. Spike-less Golf Shoes.

A business miracle – the "customers" adapted voluntarily (pretty much) to suit the "provider" rather than the other way around.

A good thing to remember the next time you're crabbing about unrepaired ball marks or footprints in the bunkers.

-OC

(continued from page 5)

first time. The process began by spraying an application of Glyphosate on the fairways. Next, they were scalped two or three times, followed by verticutting in two directions. Basamid was then applied at ten pounds per 1,000 square feet and watered in heavily for three consecutive days. Curtis decided to seed greens at this time, so that any overlap from irrigation would hit both areas at the same time. After the Basamid had enough dry time, the fairways were verticut once more, blown clean, and ready for seed. The seed selected was SR 007 (60%), SR 1119 (30%), and SR 7150 (10%). The seed was blended together and applied at two pounds per 1,000 square feet. A chicken-based compost from Pearl Valley was added to the seed at 10 pounds per 1,000 square feet. Finally, the fairways were rolled for good seed to soil contact. Because of ideal weather conditions, establishment went well, and the fairways received their first mowing fourteen days after dropping seed. An additional step on approaches was to cultivate sand into the soil and add Aero San Mats (Futera) to keep seed in tacked on slopes when adding additional water to greens.

On the fifteenth hole, the length was reduced to create an enjoyable short par four. The hole now measures 345 yards from the back tees. Additionally, where frequent flooding once occurred on this hole, mounds were built and two new ponds were installed. Behind the tee box, where the old tees once were, facilities will be built to accommodate the 2012 Ryder Cup.

At the same time that all of this renovation was happening, the maintenance facility was torn down. Construction on a new one will begin soon. For the time being, Curtis and his staff have made great use of tents, the parking lot, and other buildings on the property for equipment storage and offices. The staff has been so busy, not only with renovation, but also with maintaining two other courses for daily play that they don't seem to mind not having a maintenance shop. Well, I'm sure they do mind, but it certainly hasn't stopped them from getting the work done. Great job to all, and the hard work will not go unnoticed. **-OC**

MIDWEST BREEZES

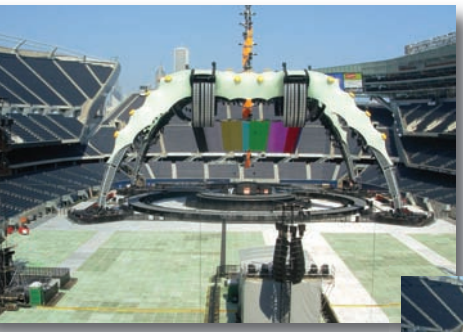
Charles Anfield, CGCS, *Heritage Bluffs Golf Course*

Shake, Rattle, Hum and Sod

What does a U2 concert, the Chicago Park District and the Chicago Bears have in common? If you guessed playing at Soldier Field, you would be right. You probably all saw the TV coverage concerning the turf situation at Soldier Field. Here's the inside story.

I play golf with Paul Carlson on Wednesday nights out at Blackberry Oaks Golf Club in the Fox Valley Golf League. He has been the Sales Director for Central Sod, in Naperville since 1977. He told me, "Chuck, you've got to check this out. We're re-sodding Soldier Field right after the U2 concert on Sunday night. We've got to have it ready for play on the next Sunday!" This, I had to see.

The U2-360 "kick off" for their World Tour ended on Sunday night (I heard it was a good show). The stage removal began immediately after. The massive stage extended out to the 50 yard line. It took four cranes to remove the corners of the 360 stage. A ¼" thick aluminum plate was put down on top of the existing turf to support the stage. The work to remove the stage was around the clock. Even with a frantic pace, it took until Tuesday afternoon before it was finally removed. Now you have to remember, this stage was sitting on top of the existing turf for ten days. In addition, it had been pretty warm. Central Sod moved in Monday to remove the sod on the non stage end of the field. Tuesday night they began removing the sod where the stage sat. They were under the gun to remove and replace all of the turf on the field prior to the Sunday Bear game. Paul described removing the dead decaying sod under the stage as, "50 yards of ass". It did not hold together well during the removal and as you can imagine was quite odiferous.



Mon.

Wed.

Sun.

Tue.

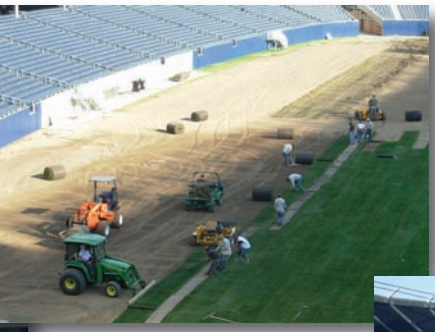
I met Paul down on the field Friday morning. They were putting the final big rolls into place and hand cutting some of the edges. It's a process Central Sod likes to call "instant Replay". The sod is cut and laid the same morning, all within an hour and a half. Paul called it "ultra fresh". The benefit of the big roll sod is that each piece is 42" wide by 1.75" soil thickness and 30 feet long. After each roll is butted and tucked into the next and each piece is pushed firmly together, they don't move. Paul says it doesn't matter that it was laid only a few days before the game. The sod is never intended to root into the existing 8 inch sand base. The sand base also has an internal network of tubes with an antifreeze solution to keep the sod warm and actively growing when temperatures drop. All of the removed sod is recycled back into the Central fields. The Chicago Park District applies and receives LEED (Leader in Energy and Economic Development) credit as an energy efficient process. The trucks that haul the new sod in are the same trucks that haul the "junk" out. The process is 97% efficient. Everything had to come and go out of one tunnel. The sod is cut from Central's Marengo field. It is a two year old, five variety, Jacklyn blend of 100% Kentucky bluegrass. The soil base is 60% sand 40% soil. It has been grown specifically for the Bears.

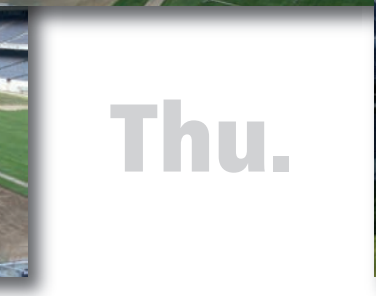
The sod was being "lightly" watered. Paul was concerned that it needed more water as he didn't want it to bake out and expose the seams. I met Ken Mrock, Head Groundskeeper for the Bears and he was concerned that it may rain on Sunday and he wanted the turf to be more firm than soft, to be able to accept any potential rain on game day. There was a discussion, but no blows were exchanged.

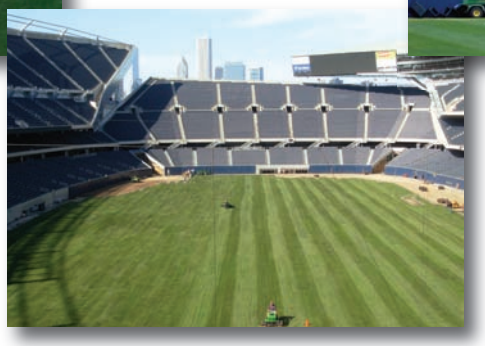
I did my own turf "demo" and ran a few down and out routes on the field. It was firm and stable under foot. I imagined myself receiving a Jay Cutler pass and the crowd cheering as I made a first down. Ken will topdress with USGA specified sand and broom it in. He will then roll and mow to get the seams to blend in a little better. Paint is applied for the field numbers and the Bears logo. The plan is to aerify the sod after the game. Ken will also over-seed the field with ryegrass. Ever see all those pigeons flying around Soldier Field? Now you know why. Paul indicated the reason for the topdressing is to allow the players feet to kick out and disperse the energy of the impact. Despite what people may say or think, the Bears are very concerned about the safety of the athletes. This explains why the field does not have carpeting instead of real grass. A recent NFL Survey indicated that 97% of the athletes prefer grass to carpet. There is just a lot less shock to the knees and ankles. If the turf pulls up a little, it's supposed to. Ever warm up on an artificial mat and hit one fat? Ouch. There's no give like there is when taking a divot on real grass. Even the new varieties of the thick, "good" carpet can't compare with real grass. Soldier Field will always be a multi use field and they prefer real grass as a playing surface. They are willing to sod the field as needed to provide a top quality playing surface. Although I am not an athlete, I am an athletic supporter and I may be biased, but there is nothing better than real grass. Go Bears.

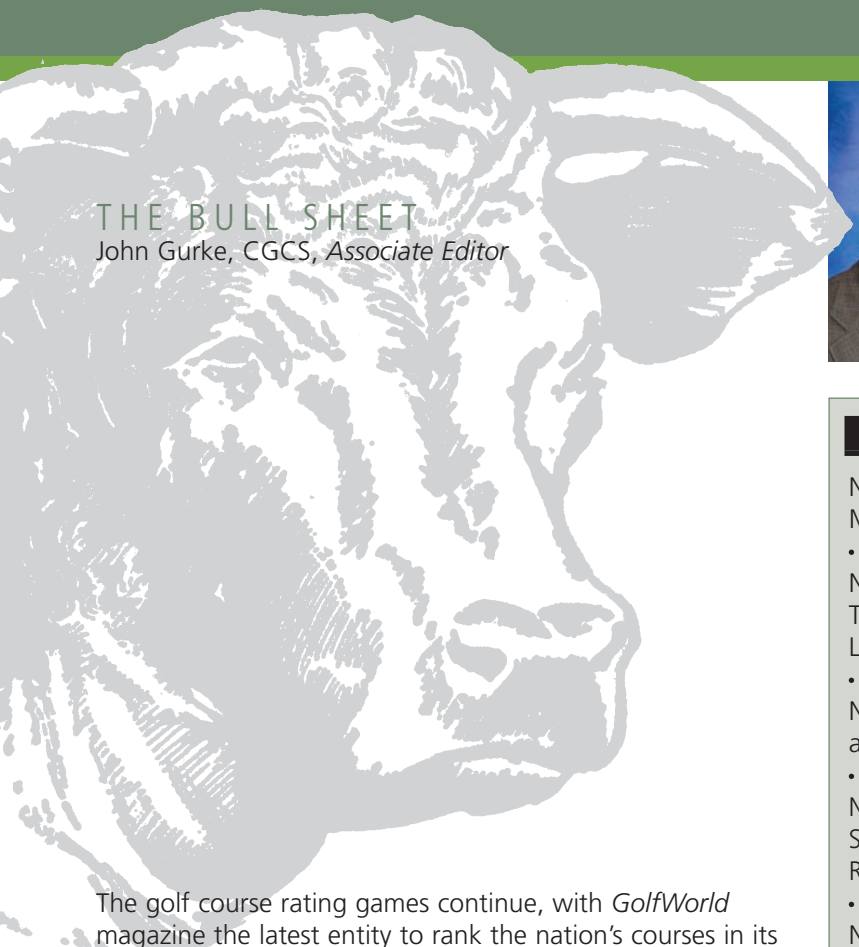
I watched the next Bears game on TV and there was very little spoken about the grass. The Bears put a beat down on the Lions and Jay Cutler didn't blow his knee out, another victory for real grass. Paul says they may have to re-sod in November in between the hash marks if the field has excessive wear from some high school football games. Thanks Central Sod you get credit for the extra point.

Go Bears. **-OC**









THE BULL SHEET

John Gurke, CGCS, *Associate Editor*

November 2009

The golf course rating games continue, with *GolfWorld* magazine the latest entity to rank the nation's courses in its Readers' Choice Awards. Included are ratings for the top 50 public, private, and resort courses, and several MAGCS member clubs were recognized. In the Public arena, Bolingbrook Golf Club (**Jeff Gerdes**) grabbed the 28th spot, while in the Private category Oakland Hills Country Club South course (**Steve Cook, CGCS, MG**) placed 27th, Medinah Country Club's #3 course and **Curtis Tyrrell, CGCS** was 35th, and The Glen Club (**Steve Daurer**) snuck in at 50th. In the Resort Course slot, The Wilderness at Fortune Bay in Tower, MN with MAGCS member (he remains a member just to receive this magazine and keep in touch with civilization) **Vince Dodge, CGCS** overseeing its care took the 23rd position in the rankings. *Golf* magazine's 2009 rankings include these local gems: Chicago Golf Club (**Jon Jennings, CGCS**) at 15th, Oakland Hills South 18th, Medinah #3 at 36th, Shoreacres and **Tim Davis** #43, Olympia Fields North course (**Sam MacKenzie, CGCS**) at #86, newcomer Cog Hill #4 (**Ken Lapp**) at the 87th spot, and Butler National Golf Club (**Mike Sauls**) at #93. Finally, *Golf Digest* magazine's Top 100 for 2009 featured Chicago GC at 12th, Medinah #3 at 20th, Oakland Hills South was #23, Butler National 37th, Canyata (designed and built by **Bob Lohmann** and **Mike Benkusky**) was #42, Olympia Fields North 43rd, Rich Harvest Farms (**Jeff VerCautren**) 46th, and Shoreacres at the 74th ranking. Congratulations to these MAGCS members.

On September 24th, 24 members of MAGCS' finest Class C members held their annual golf outing at Aurora Country Club (**Virgil Range** host). It was a glorious autumn day for golf (as evidenced by the number of guys in shorts), and the

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DATES TO REMEMBER

November 4 – 57th Annual Midwest Turf Clinic at Medinah Country Club, **Curtis Tyrrell, CGCS** host.

November 9-10 – Midwest Regional Turf Foundation's Turf & Ornamental Seminar at the Daniel Center in West LaFayette, IN. Go to www.mrtf.org for information.

November 10-12 – Penn State Golf Turf Conference at the Nitany Lion Inn in University Park, PA.

November 11 – Chicagoland Association of Golf Course Superintendents Annual Meeting and Budget Exchange at Rich Harvest Farms in Sugar Grove, IL, **Jeff VerCautren** host.

November 16-17 — Burris Equipment's Fall Service Schools at their Waukegan (16th) and Frankfort (17th) locations. Call your representative for details.

December 2 – Annual South Side Superintendents Holiday Party at the Bier Stube in Frankfort, IL.

December 3 – Iowa GCSA December Seminar at Willow Creek Golf Course in West DesMoines, IA.

December 7-10 – Ohio Turfgrass Conference & Show at the Greater Columbus Convention Center in Columbus, OH.

December 14, 15, 16 **MAGCS/ITF Education Seminar at Midwest Golf House**, Dr. Frank Rossi, Mr. Len Conley, and many more will speak. GCSAA credits available.

December 18 – Deadline to receive conference hotel rates for the GCSAA Education Conference and Golf Industry Show.

January 6-March 19 – Rutgers Professional Golf Turf Management School's Two-Year Certificate Program Winter Session at Rutgers' New Jersey Agricultural Experiment Station in New Brunswick, NJ.

February 5-7 – GCSAA National Championship and Golf Classic in Palm Springs, CA.

February 10 – Midwest Hospitality Reception – San Diego, CA – Exact locale TBD.

food, drink, and fellowship throughout the entire event were thoroughly enjoyed. Many thanks to everyone who participated, with a special nod to **Jan Jarvis** (Master of the Links) for his important contribution of adult beverages. Also thanks to Virgil and Aurora CC for hosting this always fun event.