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09.14

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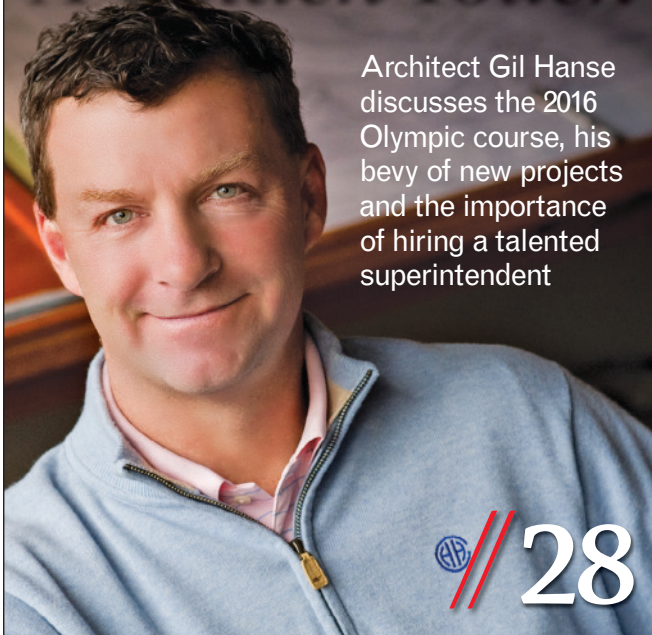
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 // 28



5 Super Apps

Superintendents tell us which apps they can't live without, and how they utilize them on the course

// 36

COLUMNS

- // 6 **Keeping up with The Jones**—Seth Jones
- // 14 **From the Back Tees**—Joel Jackson
- // 16 **Assistant Living**—Matt Neff
- // 42 **The Turf Doc**—Karl Danneberger
- // 44 **Clark Talks Turf**—Clark Throssell

DEPARTMENTS

- // 8 **Starter**
- // 12 **Golfdom Gallery**
- // 18 **The Golfdom Files**
- // 46 **Professional Grade**
- // 52 **The 19th Hole**

NEW
this
issue!



SUPER SCIENCE

- // 39 **Turf colorants may affect shade tolerance**
- // 40 **Improvement of prairie junegrass as a low-input turfgrass**

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“Where else can superintendents put their entire career on display — educational background, career path, professional designations, honors and awards?”

SETH JONES, *Editor-in-Chief*

All-in on LinkedIn

I have got my Dear Abby hat on because this month I’m writing an advice column: Dear reader, if you’re not already, get on LinkedIn. ¶ If you are on there, make sure your profile is up-to-date, professional and polished. ¶ (And just to be honest, it’s a Kansas City Monarchs hat I’m wearing, because you know the Royals are first in the Central, on target for their first playoffs appearance in 29 years!)

Ahem. LinkedIn (**LinkedIn.com**) “connects the world’s professionals to make them more productive and successful.” Consider it Facebook for professionals. Instead of high school classmates and back-to-school photos, it’s the professional profile of the general manager you met at the Golf Industry Show, it’s a group who all studied under the same legendary turf professor as you and it’s hundreds of your fellow turf professionals showing off their credentials.

There is always a debate on the value of social media. Personally, I’m a fan of LinkedIn and Twitter (you can follow us @Golfdom or me @SethAJones). I also think a quality maintenance blog can do won-

ders for a superintendent at a private club.

To me, LinkedIn is a no-brainer. Where else can superintendents put their entire career on display — educational background, career path, professional designations, honors and awards?



I know why I love it, but here’s why I think you should embrace it: Imagine a member is irked at you. He’s already on LinkedIn. He wants to know your qualifications. He searches for you... and you’re not there.

That’s a strike against you. OK, a different scenario.

Imagine the same agitated member. He searches for you to see who you are and how you got your job. At this point,

he’s steamed about something, and he thinks you must be the owner’s brother-in-law.

But you are on LinkedIn. He pulls up your profile (which you are in complete control of) and sees the degree you’ve earned, your career path, your year served as the local chapter president, plus the endorsements you’ve gained from fans of your handiwork.

Suddenly he has a different impression of you. Maybe you know what you’re doing after all, he thinks. Perhaps he should reach out and actually talk to you about his beef, instead of sniping you behind your back in the clubhouse. Heck, maybe he’ll send you a connection request.

Me, I’m zeroing in on 1,000

connections on LinkedIn. I want all of *Golfdom’s* readers to be there because I really believe in its value. It also makes my life easier. Business cards are great, but I’m lousy at entering them into my Outlook contacts. LinkedIn, meanwhile, is easy to track and keeps me connected.

I invite all of our readers to reach out and connect with me, if we haven’t already. I’m an easy guy to connect with, just search for my name plus *Golfdom*.

If you’re not already on there, trust me, your absence will be noticed.

- Big news! We debut a new department in the magazine this issue. This one at the request of readers, I’m happy to say. The *Golfdom* Files, which you can find on page 18, is a look back at what the top-of-mind topics were in *Golfdom* years ago.

The magazine has a proud history that dates back to 1927. Thanks to our friends at Michigan State University, the entire archive is available online (check it out by visiting **Golfdom.com**).

In this first installment we go back 86 years (86 years!) to see that some things never change... you’ll see what I mean when you check it out.

Expect this department to appear in the magazine on a somewhat regular basis. And let me know what you think of this new addition. Better than “Second Office”? Worse than “19th Hole”?

You can message me on LinkedIn to let me know.

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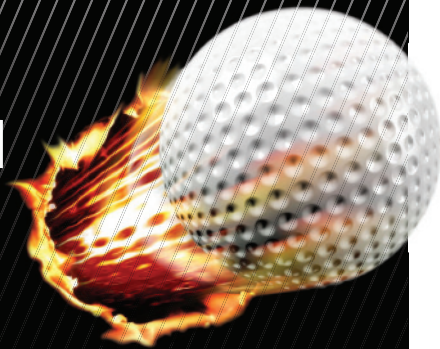
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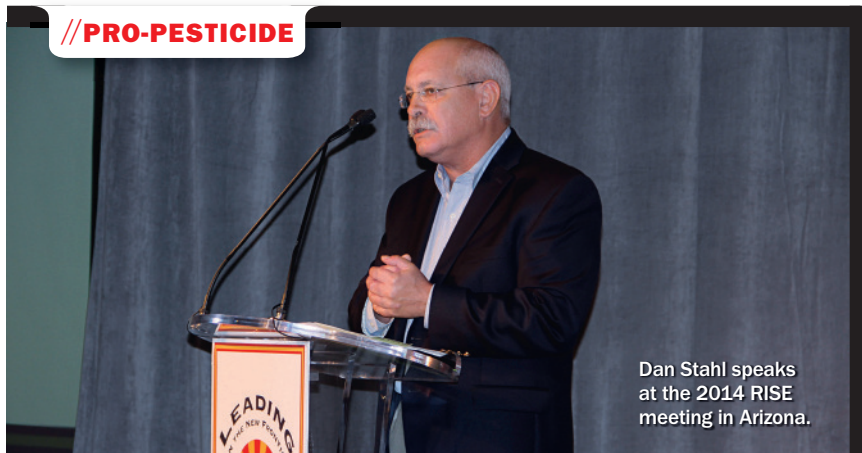
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NEWS, NOTES AND QUOTES



// PRO-PESTICIDE



Dan Stahl speaks at the 2014 RISE meeting in Arizona.

// PRODUCT PARTNERSHIP

FMC CORP., ARYSTA LIFESCIENCE ENTER AGREEMENT

FMC Corporation and Arysta LifeScience North America, LLC recently announced the signing of an exclusive licensing agreement in which FMC will develop and market two key turf and ornamental products, Disarm Fungicide (fluoastrobilin) and Xonerate Herbicide (amicarbazono), in the U.S. and Canada, from Arysta LifeScience. The agreement became effective last month.

"This exclusive agreement unites two complementary product lines, expanding FMC Professional Solutions turf and ornamental portfolio and further demonstrating our commitment to grow beyond agriculture to invest in the professional services markets," said Mark Douglas, president, FMC Agricultural Solutions. "Additionally, this relationship opens exciting new development opportunities for the FMC Professional Solutions turf and ornamental business."

With this agreement, FMC continues its commitment to broaden its range of turf management solutions, including fungicides, insecticides and herbicides.

"FMC has always been known for its passion for customers, whether providing new products, new formulations, better delivery systems, or more environmentally responsible packaging," said Pramod Thota, director of FMC Professional Solutions. "Adding these key products dovetails seamlessly with our philosophy of giving our customers what they need to solve turf management problems both now and in the future."


// BACK TO SCHOOL

BAYER CROPSCIENCE ACCEPTING SCHOLARSHIP APPLICATIONS

For the second year, Bayer CropScience will be awarding scholarships of \$2,500 to two superintendents. Bayer will be accepting applications for the Plant Health Scholarship until Oct. 10th via backedbybayer.com/healthy-turf. Applicants must be employed as a superintendent, a Class A or SM member of GCSAA and enrolled in the My Bayer Rewards customer loyalty program.

RISE GETS SOCIAL



 TUCSON, Ariz. — At the 24th annual Responsible Industry for a Sound Environment (RISE) meeting, the message was about the message itself.

Dan Stahl, vice president of marketing at OHP Inc., and incoming board chairman, said that RISE has a culture of staying relevant, and that means adapting the way the organization spreads its message. RISE, a national trade association that represents manufacturers, formulators, distributors and other industry leaders involved with pesticides, has embraced social media to spread the benefits pesticides provide consumers.

"We're communicating with a different generation... a different set of society," Stahl said. "We've become comfortable using Twitter and Facebook. A lot of key issues are taking place on Twitter."

Karen Reardon, RISE's vice president of public affairs, said that in the past 12 months, coverage of pollinators related to pesticides generated 206,000 mentions on Twitter.

"Everyone can do grassroots right

now (on social media)," Reardon said. "Our opponents are using it to great effect."

Reardon also said that RISE has had some great success in the New England area. For example, of the 14 pesticide bans proposed in Connecticut, nothing passed.

"Generally, we're very successful on the bills we see. We've come to a point where we're very mature in our approach," Reardon said. "We had a lot of activities where bills did not come to a vote, where bad news stories weren't written. We are well positioned with whatever comes on the radar screen."

Finally, Aaron Hobbs, RISE president, told the group that a new strategic plan had been created. It mapped out the organization's path from 2015 to 2020.

"Our vision is an industry free to create inspiring and healthy places where we live, work and play. The only thing you have to worry about is out-competing each other," Hobbs said. "If we can do that, then I'm putting myself out of business and I'm fine with that."

McGraw to Penn State

BY CLARK THROSSELL, PH.D. // Research Editor

➔ Benjamin McGraw, Ph.D., joined the Penn State Turfgrass Science program in mid-August as the new turfgrass entomologist. McGraw's responsibilities at Penn State will be to conduct entomological research and to teach classes in support of the Turf program's two- and four-year programs. Previously, McGraw was an associate professor in the Golf & Plant Sciences department at State University of New York (SUNY) — Delhi.

McGraw has been trained by two of the top turfgrass entomologists in the country. After working several years as a research entomologist for biotechnology and agrichemical companies, he returned to school and obtained an M.S. in Entomology from

the University of Massachusetts — Amherst working in Dr. Pat Vittum's lab, followed by a Ph.D. in Entomology from Rutgers University, under the guidance of Dr. Albrecht Koppenhöfer.



McGraw's main focus in his research has been ABW ecology and biology.

A main focus of his research has been the annual bluegrass weevil (ABW), a severe pest of golf course turf in the eastern United States and Canada. His work on ABW ecology and biology has led to a greater understanding of the insect's behavior and population development, and has improved cultural and chemical management.

At Penn State, McGraw's research will investigate pest biology, ecology and behavior to develop sustainable pest management practices for a broad range of turf insect pests.

// NEW ADDITIONS

DOW AGROSCIENCES ADDS TWO

Tyler Patton has accepted a role in Maryland after joining Dow



Tyler Patton

AgroSciences last June. Patton will assist customers in Delaware, Maryland, Virginia and West Virginia. He received a bachelor's degree in turfgrass science from Penn State University. Patton replaces Lucinda

Smetana, who accepted a role in Indianapolis supporting the North America regional commercial unit and global business units.

The business also welcomes Elyssa Trejo, who will cover the Pacific Northwest. Trejo graduated from



Elyssa Trejo

Oregon State University with a degree in toxicology. She will live in Portland, Oregon, and assist customers in Alaska, Idaho, Montana, Oregon, Utah, Washington and western Wyoming. She replaces Greg Webster, who relocated to Indianapolis as a training manager.

THEY SAID IT

PHIL MICKELSON

Speaking about the decision to hire Gil Hanse and his team at Hanse Golf Course Design as the designers of the 2014 Olympic golf course:



“I give the Olympic Committee a lot of credit, because it would have been easier to go with a big name. Instead, they went with the best.”



Q&A: The Turf Stig

Here at *Golfdom* HQ, we're constantly checking Twitter (follow us @Golfdom.) We're not sure what to make of the mysterious turf professional tweeting as The Turf Stig, but we know we find him hilarious. Recently, we tracked down the anonymous grass grower and lobbed him (or her) a few questions, turf-related and not.

Golfdom: Where did the idea come from?

The Turf Stig: I'm a big fan of the TV show *Top Gear* and I was thinking how well *The Stig* concept would play in our industry. The first photos came out well and we just continued from there.

Golfdom: Is it hard keeping a secret identity?

TTS: We've really gone out of our way to keep it under wraps. I've been in situations where I have to just nod yes and no (because *The Turf Stig* cannot talk) to people I know very well

but have no idea who I am. The whole time they are trying to look through the visor. That's very creepy.

Golfdom: You've dropped a few hints about your identity. You said I may have met you before. Have I?

TTS: Yes, we have met several times, Seth. Of course, I wasn't wearing the helmet at the time. Some say it could have been Orlando, Las Vegas or San Diego. Or was it all three?

Golfdom: Attend any chapter meetings lately? How's your chapter's activity?

TTS: I see what you're doing. We have a strong chapter here in this great town, city and county.

Golfdom: If you could brag about one tool in your shop, which one, and why?

TTS: How about three? I work fast, so the Neary grinder works great for us. The Toro ProCore is an obvious choice for aerating. And the Jacobsen Eclipse triplex has performed unbelievably on our greens.

Golfdom: Where will we see you next?

TTS: Some say I may make an appearance in San Antonio. Not sure how the bolo tie will look on the racing suit.

Follow the Turf Stig on Twitter @TurfStig. And if you have a guess of his identity, tweet it to us with the hashtag #whoistheturfstig.

PHOTO COURTESY: THE TURF STIG

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Golfdom Gallery



WE CAME.
WE SAW.
WE TOOK PICTURES.



1 Another day in the office
Golfdom publisher Pat Roberts (right) was nowhere to be found last Friday. Where was he? Visiting Brent Palich, director of golf course operations at Mayfield Sand Ridge in Chardon, Ohio. *Naturally.*



2 Volunteers welcome Conway, S.C.-based Horry Georgetown Technical College was representing at the PGA Championship! With Valhalla assistant superintendent Chris Habich (in white) were Ashley Wilkinson (far left), Jeff England (second from left) and Charles Granger (far right).



3 Lucky No. 13 Golfdom editor-in-chief Seth Jones and Valhalla GC superintendent Roger Meier take time for a photo above the picturesque No. 13 green during last month's PGA Championship. Seth didn't make many friends that day, and we can see why—wearing a Kansas golf shirt to a tournament in Kentucky? Not smart.



4 Ramped up and ready
The Valhalla grounds crew gets lined up and ready to attack their afternoon maintenance duties. The crew was still able to muster a smile, probably because we snapped this photo before all the rain came, and all the squeegees were handed out.

5 Candid camera Jim Murphy, Ph.D., Rutgers University, Roger Stewart, CGCS, director of GCM operations at TPC Twin Cities and Clark Throssell, Ph.D., Golfdom research editor enjoy a lighter moment at the University of Minnesota field day.



6 Give me five Eric Watkins, Ph.D., University of Minnesota, counts the many ways he likes fine fescues for fairways.

PHOTOS BY: SETH JONES (2,4); CLARK THROSSELL (6)



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“Mother Nature doesn’t use a calendar, nor does she rain consistent amounts across a golf course.”

JOEL JACKSON, *Senior Contributing Editor*

Observing California’s drought

I was recently in California and was able to take a firsthand look at the drought forcing golf courses to come under tough restrictions on water use. I’ve been following the articles and postings online and I’m always encouraged when I see comments about superintendents working with the local water authorities to draft practical conservation programs.

My wife and I have been traveling west in the summertime since 1997, when our daughter moved to Los Angeles. On this visit, we noticed the native hillsides looked browner and the vegetation seemed thinner compared with previous trips.

When I learned that there are 456 water-regulating authorities in California, it boggled my mind. I also read that in most cases the state did not regulate ground water pumping, because the major concern is about surface water management.

More unbelievable is that some states have no standard drought condition measures to implement if the situa-

tion arises. I’m sure that will change after the increased awareness of the effects of this long-term drought cycle we’re in and all the hoopla surrounding so-called man-made global warming.

The good news is that several superintendent groups are convincing water authorities to implement percentage-of-use reductions, which give superintendents a chance to cut back on overall run times on irrigation stations while maintaining enough moisture to keep the turf alive.

This is more scientifically sound than the bureaucratic day-of-the-week watering schedule. Mother Nature doesn’t use a calendar, nor

does she rain consistent amounts across a golf course.

During our travels in California, I saw some golf courses in and around the Sherman Oaks area, where my daughter lives, that looked pretty normal and not under much stress. After a little research, I found I was looking at courses that were most likely city or county owned and noted as having reclaimed water sources. Reclaimed water is not generally a restricted water source, according to the most recent articles I’ve read.

But once we hopped on Amtrak’s Pacific Surfliner and headed up the coast past the Santa Barbara area and

points north, the courses I could see from the train were showing green circles down the fairway centers as well as yellow and some brown roughs and scalloped fairway edges. Maybe access to reclaimed water was not in the infrastructure or the amounts were not sufficient to provide a reliable source at these courses.

During the two weeks we were in L.A. and north to Cambria, we saw rain clouds a few times and even witnessed a few sprinkles. One night it was really threatening to come down. We were all rooting for some rain for everyone, but alas, not much fell in the valley. However, the next morning there was an article about flash flooding in the San Bernardino Mountains north and east of our location. I suspect the mountains snag a fair number of those low rain clouds.

Reading about the growing momentum of California superintendents working to help devise practical conservation measures like percentage cutbacks based on drought conditions reminded me of our own struggles in Florida. The best thing to do during these times of drought is to get ahead of the curve, get organized and reach out to your local water authority with a plan that works to conserve water resources and keeps your course alive.

And to our colleagues in California, I hope the drought breaks soon.

Joel Jackson, CGCS-Ret., is senior contributing editor for *Golfdom*. Email him at flrjn@aol.com.



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“In fantasy football you’re in trouble if your stud tight end gets a concussion, in Fantasy Greenkeeping you’re in equal peril when your mechanic takes a job at the local Mercedes dealer.”

MATT NEFF, assistant superintendent,
Wedgewood G&CC, Powell, Ohio

Are you ready for some Fantasy Greenkeeping?

In my opinion, the massive popularity NFL football currently enjoys has virtually nothing to do with the game itself, but everything to do with fantasy football and gambling.

I think we can all agree, given the similarities between golf maintenance crews and professional football franchises, that it’s only a matter of time before a fantasy game based on golf turf sweeps the nation. Good news: *Golfdom* is at the leading edge of this wave. Welcome to Fantasy Greenkeeping.

GCSAA has been working tirelessly for years to educate the golfing public about what we do and our importance to the game. Inexplicably, they have completely missed the obvious solution that Fantasy Greenkeeping provides. Look what it’s done for football!

Scoring varies from league to league, but the typical Fantasy Greenkeeping team consists of two superintendents, three assistants, two mechanics and two crews.

SUPERINTENDENTS Your fantasy football equivalent is the quarterback. You must draft a backup superintendent in case your starting superintendents’ club decides to “go in a different direction” or whatever other euphemism they use for cutting costs. The super is your leading point scorer, so you can’t expect to win without one and we all know how worthless the waiver wire can be. The Latshaws, Shaffers and Tritabaughs of the world are going to fly off the board early so you better have a Plan B, C and D.

ASSISTANTS Each team plays three assistants. Since there seems to be a steady stream of assistants leaving the business, you never know when one of your guys will call it quits. Having to draft

three admittedly creates a bit of a problem since no one knows anything about us assistants except our immediate family and friends. Fortunately, *Golfdom* will be releasing their inaugural Fantasy Greenkeeping draft guide soon and even more fortunately (for yours truly) they are going to pay me crazy money to serve as the Fantasy Greenkeeping draft expert. So soon, you’ll have volumes of data on literally every assistant in the country — and I’m not talking about height, weight or 40-time. I’m talking significant stats, like ‘number of sick days taken last season.’

MECHANICS Again, two are necessary so you’re not left short-handed in the event that one of them finally goes off the deep end when they see the topdresser pulling

out of the shop one morning. In fantasy football you’re in trouble if your stud tight end gets a concussion, in Fantasy Greenkeeping you’re in equal peril when your mechanic takes a job at the local Mercedes dealer. Your mechanic isn’t going to be your leading scorer, but he’ll be a consistent source of points that will help you stay in the mix during a bad week.

CREW Drafting a crew will be the same as drafting a team defense in fantasy football. In other words, you’ll draft an entire course’s crew, not individual crew members. Coming off an unprecedented double major season, the crew at Pinehurst No. 2 is ranked number one, so expect them to go early. You’ll need to draft two crews because, like the bye week in fantasy football, you have to be prepared for that week when a couple of the guys turn 21, or when one of the guys’ parents goes out of town for the week, inspiring the majority of the crew to get hammered at that guy’s house every night.

So let the trash talking and vulgar team naming begin. This is our ticket to the mainstream media bonanza that will vault our profession into the national consciousness. Once this takes off, maybe we can help our colleagues in the pro shop start their own league.

I’m thinking Golf Pro Cage Fighting.

Matt Neff (mneff4@yahoo.com) is assistant superintendent at Wedgewood G&CC in Powell, Ohio.

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The Golfdom



FROM THE ARCHIVE

Some things never change, no matter how many decades pass. ¶ In this new department, we look back to our archives to read what concerned superintendents 60, 70, 80 years ago. For this first installment we came across this story from the September, 1928 issue of *Golfdom*. “Fire him? No!” was written by Lawrence S. Dickinson from Massachusetts Agricultural College (now known as the University of Massachusetts Amherst) about the woes superintendents face. ¶ To see the original four-page story visit golfdom.com/category/online-exclusive.

Fire him? No!

Better appraise the kicks on the greenkeeper's work

BY LAWRENCE S. DICKINSON // Massachusetts Agricultural College

I had just finished a good round of golf. It was a fine foursome, evenly matched, jolly, all “broke a hundred,” a good score for us. No one had lost any money, none had been bet, and only a reasonable number of balls were lost.

While resting a while on the veranda of the club house, a number of players went by me. During the 20 minutes I sat there I heard the phrase, “Get a new greenkeeper,” 12 times.

The greenkeeper seemed to me to be an able, honest, very hard working man of the type that makes greenkeeping a profession. The phrase, “Get a new greenkeeper,” worried me, for I knew he was a whole lot better than anyone we could get, even if we paid a much larger salary.

As the “crabs” came (by) I wrote their names on a pad. With the list of “crabs,” my knowledge of the club affairs, the greenkeeper and turf, as basic data I began to make a study of the situation.

ANALYZES THE KICKS

The first name on the list was John A. Lawyer — big, husky chap, college foot-

ball hero, past chairman of the Green Committee. John's particular complaint that day was of the fairways. Grass was too long. Now I know that John drives a low ball, depending upon the roll for distance. John lost the match and thoughtlessly charged it to the greenkeeper because of the tall grass. The greenkeeper has only one tractor, that's badly worn; five cutting units, two of them as reserve units. “Get a new Greenkeeper?” NO! Another tractor.

UNFAIR COMPARISON

(Also) on the list was Thomas Playabout. Always comparing our course with Blank course. Tom lost his match because his driving had been off. “It's the tees. I can't get a good stance. At Blank course they have wonderful tees, their greenkeeper knows how to take care of them. Drove a lot better up there yesterday.”

The tees at the Blank course are all elevated and large.

Our tees are the new style. Flat. Fire the greenkeeper on the strength of Tom's argument? NO! There ought to be a \$25 fine imposed upon all golfers who criticize one course when comparing it with another.

THE SILENT, SATISFIED MAJORITY

Nothing has been said about the 60 or 65 percent of the members who joined the club for its recreational and social advantages. If they lose a ball, a stroke or even a match game, it is “all in the game” and they lose no sleep, temper, or money over it. To these members the greenkeeper is most satisfactory. Unfortunately they remain silent.

The greenkeeper has to suffer for the lost bets, the bad days at the office, the present trend to make and maintain golf courses for a few low scorers. Such is “all in the game” for the greenkeeper.





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GOLF



Get the control and the results that you've always dreamed of.

Introducing the new John Deere A Model Fairway, Rough, and Trim and Surrounds mowers.

Now your presence can be felt on every part of your course. That's the control you get with the new A Model mowers from John Deere. Thanks to our TechControl display, no matter who is operating the mower, you can easily program these mowers to mow and turn at exact speeds, to transport at preset speeds, and to lock in fuel savings. You can also plug in service reminders and get diagnostic feedback quickly and accurately. And all of your operators can now perform in a more consistent fashion.

But that's only part of the A Model story. There's the proven technology you get with our E-Cut™ Hybrid Fairway mowers. The increased traction drive on our Trim and Surrounds mowers. The superior contouring deck system on our Rough mowers. The improved after-cut appearance and operator stations. And so much more.



Automotive-style operation

The AutoPedal™ system features ergonomic twin pedals that control both forward and reverse direction, as well as engine RPMs, eliminating the need for a separate throttle. Similar to a car, the further the pedal is pressed, the engine speed and travel speed of the unit increases.



Reliable and durable

The front internal wet disc brakes on our new A Models have no brake linkages or need adjustments, reducing the need for routine maintenance. And throughout the machines there are enhanced corrosion resistance features.



Set up to 50% reduction in turn speed



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Getting on and off these machines is now a breeze thanks to the conveniently placed fore and aft steps (4-wheel units only). And nothing could be more comfortable than getting in the seat. There's more leg room, a wider front platform, tilt steering, and a deluxe seat.

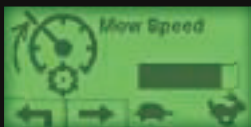


Efficient maintenance = increased uptime

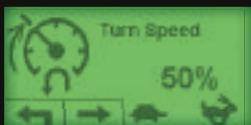
With our Quick Adjust cutting units, adjustments take mere minutes. And when you consider all the diagnostic features of our TechControl display, your technician can better manage service timelines and keep your fleet up and running.

The power to control your course is now in your hands.

The passcode protected TechControl display lets you precisely set mow, turn, and transport speeds. You also have the ability to instantly see any operational alerts and set service timers. Simply set the mow speed precisely for your conditions, have the mower slow down during turns while cross cutting to protect against turf scuffing and preset the top transport speed. Plus, the TechControl display is an on-board visual diagnostic tool allowing quick and easy machine diagnostics, maximizing up time.



With the Mow Speed screen, you can set the mowing speed simply and quickly. Unlike a speed limiting system using a bolt, once the speed is locked in, it stays locked in. Similar to the Mow Speed screen, the Transport Speed is set electronically. You determine the speed at which your operators mow and transport just by pressing a button.

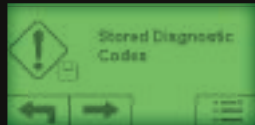


This is something superintendents will really love: the Turn Speed screen lets you slow down a mower to a percentage of the mowing speed as the cutting units are lifted after a pass, greatly reducing scuffing. The mower then resumes its normal speed after the reels are lowered back down for the next pass.

To see the TechControl simulator, go to JohnDeere.com/Golf



The Mow Engine speed screen allows the superintendent to reduce the throttle settings for when the PTO is engaged. With our E-Cut Hybrid mowers, you can bring the engine speed down to 2300 RPMs, significantly reducing engine noise while also increasing fuel economy.



The TechControl display is unparalleled in its ability to give timely feedback to the operator and service technician. A message appears in the display screen alerting the operator and the status screens help the technician quickly and accurately diagnose the issue.



The LoadMatch™ screen lets you manage the conditions in which you are mowing, as well as the terrain. Thanks to Load Match, if the reels come under heavy load while mowing, the machine's traction speed will slow allowing reels to turn and maintain cut quality.



The new A Models. More control. Better results.

PrecisionCut™ and E-Cut™ Hybrid Fairway Mowers

The rear tires on 4-wheel fairway mowers have been shifted outward so they match the inside pattern of the front tires, making an evenly rolled pass every time and enhancing after-cut appearance. And the adjustable hydraulic down pressure and rear-attaching point help maintain cutting units at a consistent height of cut.

Also, the industry's only E-Cut Hybrid fairway mowers have engine RPM Control that reduce max engine operating speed. Running at reduced engine rpms can save up to 30% in fuel compared to conventional, non-hybrid models.

7500A

7700A

8700A

7500A E-Cut

8000A E-Cut

7200A and 7400A Trim & Surrounds Mowers

Along with the eHydro, hydraulic internal wet disc brakes, TechControl display, and Reach and Width on Demand systems, these mowers also feature an increased traction drive system for superior hill climbing.

7200A

7400A

8800A Rough Mower

Now equipped with a new 55 horsepower four-cylinder engine – 27% more power than the current model and LoadMatch – the 8800A has plenty of ability to mow the rough and climb hills for more productivity and produce excellent cut quality with its double yoke contouring deck system.

8800A



7500A E-Cut™ Hybrid



The rear tires have shifted outward so they match the inside pattern of the front tires.



7200A PrecisionCut™



Increased traction drive system for superior hill climbing.




8800A TerrainCut™



27% more power with a new 55 horsepower four-cylinder engine.





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Once you step up and into the seat of one of our new A Model mowers, you'll discover what it means to have control right at your fingertips. You'll discover the endless possibilities of our TechControl display and all the capabilities it enables. The power and performance of our eHydro transmission. The automotive-style operation of our AutoPedal system. The comfort and convenience of our operator station. And, most importantly, the superior after-cut appearance of both our reel and rotary deck mowers.

For a demo of the new A Model mowers, call your local John Deere Golf distributor or sign up online at JohnDeere.com/Demo.

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A Golden Touch

BY SETH JONES

It is graduation weekend, and Gil Hanse's daughter Chelsea is graduating from Villanova's School of Law. People are flying in at this very moment. But Hanse doesn't seem rushed.

Dressed in a pink golf shirt, the lanky architect (he's 6'5" but says fellow ASGCA members Roger Rulewich and Bill Love are taller) is the picture of easygoing. That's a valuable asset to the architect hired to construct the 2016 Olympic course in Rio de Janeiro.

Hanse might not be golf's tallest architect, but he is certainly the game's hottest architect. Along with the Olympic gig, Hanse Golf Course Design keeps scoring high profile jobs.

We sat down in the Hal Davis Library at the Applebrook Golf Club in Malvern, Pa. — Hanse's home course — to chat with the architect about the Olympic course, his sudden rise in fame and how he would describe his style.

Golfdom: Gil, thanks for taking the time. I know you must get asked this ten times a day, but what is the latest on the course in Rio?

Hanse: My pleasure. We finally have irrigation turning, it is installed on 16 holes at present and we have grass on ten greens and six holes completely grassed.

All 18 holes are shaped, we finished shaping the last hole in March so they are all ready to go. It's just the function of getting the irrigation in the ground and then allowing us to start doing finish work, which is progressing nicely under the supervision of Neil Cameron, Kyle Franz and Ben Warren from our team.

We'll try to wrap up by November, which gets us to a point that will give them two sum-

mers to grow it in. Their summer is opposite ours. If we get grass on the ground in November, that will give them the summers of '14 and '15, and then '15 and '16 to have it grown in. It is critical we get grass on the ground for this coming summer.

Golfdom: Neil Cleverly, the superintendent for the project, did you know him previously?

Hanse: I know him very well now, we have been going through this battle together. You know he is ex-military, so he understands what that means.

We didn't meet him until after he was selected. He was interviewed at the GCSAA show in San Diego, which I did not attend because I was living in Rio at the time. Neil's got a ton of experience overseas, primarily with warm-season grasses. Although he doesn't have experience with Zeon zoysia, which is the primary grass on-site, he's well equipped to deal with it and he has been a Godsend.

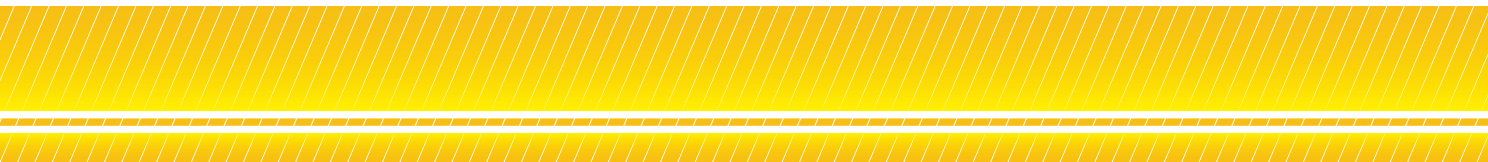
During the early parts of construction it was basically myself and a couple of guys who work with me who were down there. We were trying to make our way through the myriad complexities of the project. When Neil showed up he immediately took over as project manager. He is not only a great turf manager, but also an excellent project manager from the construction standpoint. So he has been the rock of the construction part of the project.

Golfdom: Give me an update on what other projects you're working on now.

Hanse: We are just getting started at Winged Foot, completing our restoration of the East Course. I went out to Denver recently

Continued on page 30

Architect
Gil Hanse
discusses the
2016 Olympic
course, his
bevy of new
projects and the
importance of
hiring a talented
superintendent





Richard Brogan, PGA Golf Course Properties, Kyle Franz, GHGCD, Peter Dawson, International Golf Federation president and Hanse surveying progress in Rio.

Continued from page 28

for two days, Chris Swim is the superintendent at Lakewood CC. He has been a friend of mine for 20-plus years and Lakewood was the first club that ever hired us, after I left Tom Doak. I just flew out there to shape two bunkers.

I just returned from Dubai, where we are building a course for Donald Trump. Then I'll be down in Mississippi, Starkville area,

doing a practice facility for Mississippi State University, and then after we finish that we will start a new 18 hole golf course there that's a private club close to Mississippi State. Then back to Rio.

We're fortunate, we have a lot going on. Some stuff is coming down the pike that we haven't locked up yet, but it's really promising.

Golfdom: Talk to me about your philosophies with working with superintendents. When do you like to see them get involved with construction projects you do?

Hanse: The most humbling thing for a golf architect — and most of us aren't very humble by nature — at the end of the day only about 5 to 10 percent of golfers really appreciate the design and understand strategy and risk/reward and analyze golf courses that way. But 99 percent of golfers appreciate good turf conditions. From that standpoint, the most important person on the project, from the public perception, is the superintendent. And we absolutely embrace that and understand it.

I think when you have a great golf course is when there is a combination of excellent design and excellent maintenance. Then I think everybody understands it. You can't overestimate

Continued on page 32

Superintendents on Hanse Design

We asked superintendents from around the country to give their take on working with Hanse and his team. Here are a few of the responses.

"From a superintendent's standpoint, (Hanse) is phenomenal to work with. He listens to your side and goes out of his way to be supportive. When we were discussing a green, he asked me, 'What machine are you going to use to maintain this?' In other words, was I going to use a triplex or walk-mow? Because maybe we'd need more room to turn around if we were using triplexes. He'd ask, 'Can you maintain this slope? Is it too severe?' As opposed to just building it and saying, 'Deal with it, you're the superintendent.'"

— **Jared Viarengo, CGCS**, Applebrook GC, Malvern, Pa.

"If you're talking about Gil Hanse and don't talk about Jim Wagner and (former *Golfdom* columnist) Geoff Shackelford, you're doing the operation a disservice. The great thing about Gil Hanse Design, from a superintendent's standpoint, is they're able to clearly articulate a vision that allows you to operate within some boundaries... we

were able to take eight months' worth of work on the North Course and expand it to five years of progress."

— **Russ Myers**, Los Angeles CC

"I'VE KNOWN GIL FOR ALMOST 20 YEARS. HE'S EASYGOING AND DOESN'T MIND GETTING HIS HANDS DIRTY. HE FITS RIGHT IN WITH THE GUYS ON THE CREW. YOU CAN'T ASK FOR A BETTER, MORE HARD-WORKING GUY. WITHOUT A DOUBT, HE'S GOING TO DO A GREAT JOB WITH THE RIO COURSE."

— **Donnie Beck**, Fishers Island (N.Y.) Club

"He listens to the customer, and he doesn't just consider the members as his customer, that includes the superintendent. Everyone loves the product he delivered at Waverley. It's a departure from the standard golf courses of the Pacific Northwest that you've seen for the last 100 years. It wasn't a surprise to us at all when he got the Olympic course."

— **Brian Koffler**, Waverley CC, Portland, Ore.

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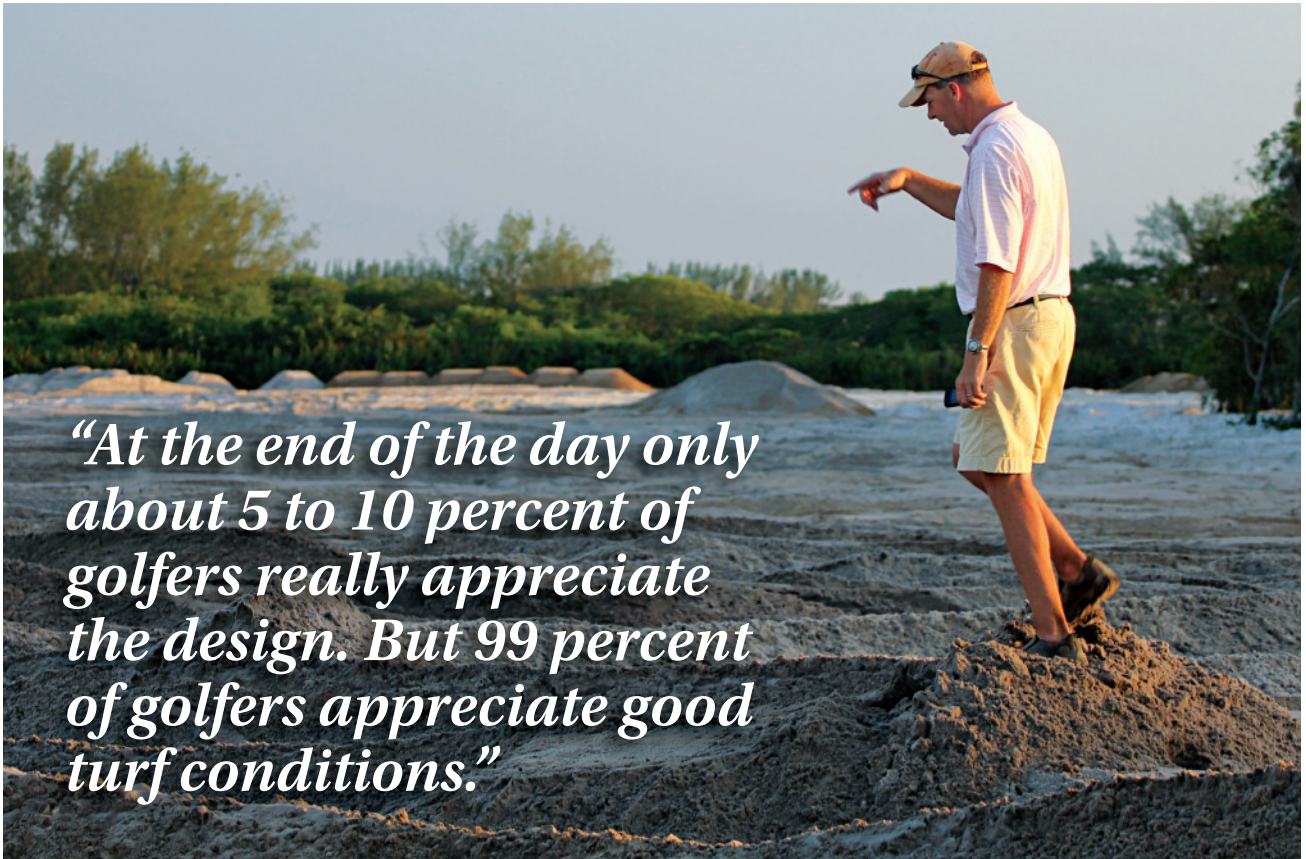
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“At the end of the day only about 5 to 10 percent of golfers really appreciate the design. But 99 percent of golfers appreciate good turf conditions.”

Continued from page 30

the importance the superintendent has on a project because we can have all the philosophy about design and strategies, (but) if the maintenance doesn't match up with it then it's all for nothing.

It's critical to have superintendents involved from day one, and as soon as construction starts. I think there are all these critical linkages that occur between design and maintenance, if you can have that team in place from day one, then your construction is going to be better.

Golfdom: It's hard to ask someone to describe their style, it's like asking someone to describe art. And yet I want to ask... Does Hanse Golf Course Design have a style?

Hanse: Well, we give the trade answer 'I hope we don't have a style,' and it doesn't sound sincere. But it's true, obviously there are trademarks to our work, you know (vice president/design partner) Jim Wagner and I believe that the golf course we are building should look like it belongs in that landscape. So our golf course in Boston is not going to look like our golf course in Rio.

The consistent theme through our work is that they feel natural, they feel as if they are a part of that site, part of that landscape. I guess our style would be that we work really hard to try to preserve and maximize the natural advantages that a site gives you. By doing that, we sort of defeat having a style.

Golfdom: What has getting the Olympic course done for your career?

Hanse: It has been a big positive; it has made us a known commodity in our industry. There is a recognition that comes along with it. We are obviously humbled and honored by the opportunity. I think the golf world, in this sort of small world that we all work and live in, we were a known commodity because of the quality of work.

It's helped us a lot, but we are trying not to let it change who we are and how we work. We still want to remain intentionally small and still focused. Still, my favorite part of the job is getting onto a bulldozer and shaping. I think if I lose that then I think we've lost the battle as opposed to being able to stay focused on what is important.

Golfdom: How did you find out you got the Rio job?

Hanse: The Golf Channel concocted this grand charade. They told me that they were sending camera crews to be with all eight of the finalists. They wanted to film (the phone call) because they are doing a documentary, they wanted to see the reactions of the people who didn't get it and the one person who did get it. So they asked Jim Wagner and I, we were at Doral, we had just been signed to do the renovation there. So they asked us to come down at 6:30 in the morning to wire Jim and I up.

Continued on page 34

TURFONOMICS™

Chapter 3

TOUGH TIMES NEVER LAST. GREAT PRODUCTS ALWAYS DO.

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TOP LINE THINKING

For rough mowing, one size doesn't fit all, but one company does – Toro.

With a choice of four cutting widths, the Toro Groundsmaster Contour™ Rotary family offers a productive width-of-cut for every job. Each has innovations you'd expect from Toro, including Contour Plus free-floating cutting units for reduced scalping in undulating turf and a picture-perfect striped appearance. More than mowers, they're the gold standard.

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Groundsmaster Contour Plus mowers lower costs by raising productivity.

With a maximum mowing productivity ranging from 7.6 to 10.5 acres per hour, the Groundsmaster 4500-D and 4700-D make short work of rough mowing. An InfoCenter for diagnostics and servicing helps reduce machine downtime. Both machines also feature SmartPower™ for consistent cutting in all conditions, plus our exclusive SmartCool™ system that automatically blasts debris from the air intake screens when the engine gets hot.

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We understand the challenges you face with rough mowing. That's why we make a complete line-up of innovative contour mowers that deliver the best overall course conditions combined with a lower cost of ownership over time. Then we back every product we build with our industry-leading support network. No one delivers more value than Toro.

It's simple Turfonomics.



Groundsmaster® 4500-D/4700-D



Continued from page 32

Tracey, my wife, and Chelsea, our oldest daughter, were there. We were all sitting on the couch and the phone call was supposed to come at 7 a.m. So 7 a.m. passes, 8 passes, 9 passes and then 10 comes and by this time Jim, who is one of the funniest guys you will ever meet, is being merciless with the crew. He asks 'Are you guys kidding me?' And trust me, I am cleaning that up.

I notice this guy standing over in the corner texting. Finally, at 10:20 my phone rings and everybody jumps with the tension... and it's somebody else. At 10:30 the call comes, it's the people in Rio, "Gil, you've got the job," and I am like, "Oh my God, this is great," and the mystery person leaves. Tears and kisses and hugs and all that kind of stuff.

Come to find out later that they were the only camera crew, they knew we were going to get it. The call was supposed to come from Rio, but they didn't have my cell number! The guy texting in the corner was Mike McCarly, the CEO of Golf Channel. He texted my number to the people in Rio so they could call us.

It was kind of a funny, long morning, but very exciting news when it finally came.

Golfdom: Why do you think they picked you?

Hanse: Nobody has ever told me directly. I sort of heard through the grapevine two things; that our presentation was

excellent, we really did a good job delivering the message when we had to deliver it to the group. Secondly was our commitment to move there and live there. None of the other architects were either able based on schedule, or life, or whatever, to do it. So I think that really separated us.

Golfdom: What would be your storybook ending for you and your team for the Olympics?

Hanse: The storybook ending would be that the golf course is well received, but it's not the main part of the story, the story is that there is great competition and whoever plays for the gold medal, that the golf course was a great stage to create drama for that finish.

If the golf course is the main story that probably means something went wrong. If they are all talking about the golf course, generally speaking that's not a good thing. So I'd rather the story mainly be about the competition, and we built something that was able to host a really great competition.

Golfdom: So tell me, how many times in a week are you asked about the progress in Rio?

Hanse: I'll tell you this: We turned "What's going on in Rio?" into a drinking game.

For an extended version of this interview and video interviews with both Gil Hanse and superintendent Neil Cleverly, visit golfdom.com.

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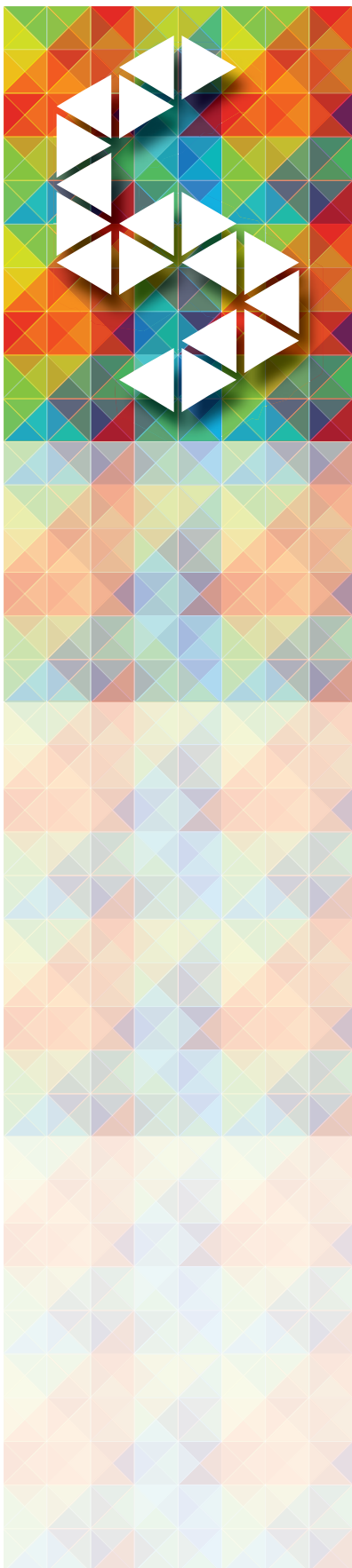
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SUPER APPS

Superintendents tell us which apps they can't live without, and how they utilize them on the course.

► **BY MOLLY GASE**

It might be hard for an accountant to believe this, but we're betting superintendents will believe: According to a recent study by internet analytics company comScore, Americans now spend more time staring at their smartphones and eReaders than they do their computer monitors.

Count Ryan Bourne, superintendent at Terradyne CC in Andover, Kan., as a believer. "I look at it as my phone is my office," Bourne says. "I'm out there (on the course), I'm rarely in my office."

The same study reports most of that time on hand-held digital devices is spent looking at apps. comScore (comscore.com) reports smartphone users download on average three apps a month.

As we've been told when talking with readers, apps can be the perfect office aid, as trustworthy as a good utility vehicle or aerator. The right app at the right moment can solve problems with the touch of a button.

Here are five apps recommended by superintendents who believe that this is the digital age of grass growing.



NSN Connect

NSN Connect is an app by Toro that allows

users to connect with the SitePro or Lynx Control System remotely. Through the app, users can sign into NSN Connect and from there, control their Toro irrigation systems.

The app is free in the iTunes store and is available on iPhone, iPad or iPod Touch.



The Android app is currently under development according to Toro's website.

"I can monitor my pump station and go straight to the pump station and make sure everything is shutting off when I asked it to. It makes for a lot less running back and forth to the golf course."

— **RYAN BOURNE**
Superintendent,
Terradyne CC
Andover, Kan.

Continued on page 38

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Dismiss
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HERBICIDE

*FMC recommends two applications of Dismiss turf herbicide or one application of Dismiss South herbicide for optimal control of purple nutsedge. Always read and follow label directions. FMC and Dismiss are trademarks of FMC Corporation. ©2014 FMC Corporation. All rights reserved.



Continued from page 36



iSpeak Spanish

iSpeak Spanish is an app meant to bridge the communication gap.

The app pronounces words and phrases back to the user in the target language. Users can save translations to their device as they go. It's also helpful for text messaging. Simply type in English into the app, then cut and paste the translation into a text message. When a reply comes back in Spanish, reverse the process.



The app costs \$1.99 on the iTunes store and is available on all new Apple devices.

"Most of my crew is Spanish-speaking. iSpeak Spanish allows you to type in anything that you want to say and have it translated into Spanish at the click of a button. That's been a tremendous thing for me in terms of being able to be much more efficient and to be able to communicate with the guys."

— **TOM KAPLUN**, Superintendent
North Hempstead CC
Port Washington, N.Y.



"I look at it as my phone is my office. I'm out there (on the course), I'm rarely in my office."

RYAN BOURNE, Terradyne CC



Twitter

Sorry, but message boards and forums are a thing of the past. Twitter has taken over as the medium to ask questions, share photos and make connections. Users can share course updates,

photos, thoughts and questions through 140-character posts.

Twitter is a free app for both Apple and Android platforms and is available for most devices.



"I would say that it's one of the best apps there is out there for people in the industry for networking, education and seeing things that other people in the industry are doing."

— **ROSS DOMINIQUE**,
Assistant Superintendent
Hickory Ridge GC
Amherst, Mass.



Google Drive

When you are on the go, you want to have your files at your fingertips. The Google Drive app allows users to access files uploaded to the app and view them on smartphones, tablets or computers.



Users can invite others to view, edit or leave comments on files.

The app is free and is available for both Apple and Android platforms.

"I can use Google Drive to do a lot of things with my paperwork, but the main thing I'm using it for right now is working with our university marketing department. I'm out on the golf course — I can take pictures on my phone, drop it into my Google Drive and the marketing department instantly has it."

— **PATRICK REINHARDT**, Superintendent
Georgia Southern University GC
Statesboro, Ga.



Sun Seeker

So the members want to move that tee box back and to the left? Bet they're not concerned about sunlight, but you are. Sun Seeker is an app that allows users to track the path of the sun. It also allows users to identify spots on the golf course that will be plagued by shade over time.

Sun Seeker is available for purchase on both the iTunes store and Google play store for \$6.99.



"If you're thinking about building anything and want to see how many hours of sunlight you're going to be getting at that time, in that position, it allows you to see where your shade is. It also allows you to take a picture like a screenshot. If you need to convince your membership whether or not to take down a tree, it definitely gives you a visual image of why you need to."

— **SCOTT GRIFFITH**, Superintendent
The University of Georgia GC
Athens, Ga.

Read about more apps online at golfdom.com/category/online-exclusive.

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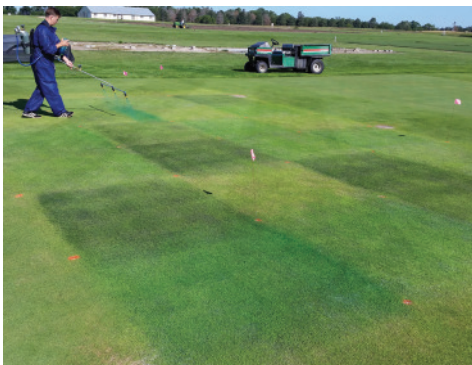
TURF COLORANTS MAY AFFECT SHADE TOLERANCE

Bill Kreuser, Ph.D.

Applying plant colorants to turfgrass has become increasingly popular in the golf industry. This has led to an explosion of new colorant products that are marketed to alleviate UV stress, extend the growing season, cool the plant and induce plant systemic resistance against pests.

Most colorants are an emulsion that contain the green mineral pigment phthalocyanine. Prior research showed that turf colorants sustained turfgrass health during exposure to UV light in a growth chamber. The pigments likely quenched the damaging UV light before it reached plant tissue.

Other research showed plant colorants also absorb a significant amount of red and far-red light. This light is important for photosynthesis and may affect shade tolerance. The objective of this study is to determine how colorants affect creeping bentgrass grown in shade.



Plant colorants are applied to a creeping bentgrass fairway plot in Mead, Neb. The plot is then covered with shade cloth to reduce sunlight intensity by 70 percent.

This study is being conducted on a creeping bentgrass 'L-93' fairway at the John Seaton Anderson Turf Center in Mead, Neb. Different colorant products are applied at various rates every 10 days. The plot is covered with shade cloth to reduce sunlight intensity by 70 percent.

Turfgrass visual quality rating, tiller density rating, chlorophyll content, turf canopy temperature and clipping yield are measured weekly during the summer. Photosynthesis and tiller density measurements will be taken at the end of each growing season.

The 70 percent shade has had a dramatic effect on turfgrass quality and tiller density rating. Colorants initially improved turfgrass quality because they increased the green appearance. However, colorants appear to have accelerated decline in turfgrass tiller density by July. The colorants also dyed the top of the sand root zone blue and increased the canopy temperature a couple degrees Fahrenheit.

We'll continue to monitor the response for another year. Until then, use caution with plant colorants under heavy shade.

Bill Kreuser, Ph.D., is a turfgrass scientist at the University of Nebraska-Lincoln and can be reached at wkreuser2@unl.edu.

NEWS UPDATES

UK STUDY YIELDS POSITIVE RESULTS FOR CRYSTAL GREEN

Recent research from the United Kingdom shows that Crystal Green slow-release phosphorus has a positive impact on stress recovery, rapid spring green-up and general visual improvements.

The case study was completed with independent research by DLF Trifolium Ltd. Over two years, the study looked at turf establishment and growth, as well as spring recovery and summer stress.

Results were measured on color, shoot density, fineness of leaf and number of weeds. This study was completed using different turf mixes, with different cuts, to monitor results on a variety of playing surfaces.

Crystal Green is an enhanced efficiency fertilizer with a plant-activated mode-of-action that doesn't require water or irrigation to release, but instead depends on citrates released by growing roots. According to the company, benefits include denser root mass, faster recovery, increased stress tolerance, less risk of runoff and reduced application rates. Ostara Nutrient Recovery Technologies, manufacturer of Crystal Green, has more than 50 trials and demonstrations currently being conducted. For more information visit CrystalGreen.com.

WE HAVE HAD SELECTIONS REMAIN BELOW A MOWING HEIGHT OF THREE INCHES MOST OF THE GROWING SEASON. THE MAJORITY OF SELECTIONS ONLY REQUIRE A SINGLE MOWING."

Eric Watkins, Ph.D.

(see full story on page 40)

// ALTERNATIVE TURF

Improvement of prairie junegrass as a low-input turfgrass

By Eric Watkins, Ph.D.

As economic and environmental pressures mount on superintendents to reduce inputs on their courses, turfgrass breeders have been working on developing grasses that require fewer inputs but still perform at acceptable levels.

For the past nine years, the turfgrass breeding program at the University of Minnesota has been focused on the development of lower-input turfgrasses. The grass that may have the greatest potential for long-term impact as a low-input turf in the northern half of the United States is prairie junegrass. Prairie junegrass (*Koeleria macrantha*) is native to much of the United States, especially the Great Plains of the western part of the country. The grass can be found growing in poor soils and stressful environments, and is known to be able to survive extreme heat and cold (Dixon, 2000).

Our research program has identified a number of strengths this species could offer a turfgrass manager including excellent winter hardiness, low fertility requirement and resistance to many common turfgrass diseases. Superintendents would also benefit from the very slow vertical growth rate seen in this species. We have had selections remain below a mowing height of three inches most of the growing season and the majority of selections only require a single mowing each month. However, this slow growth rate does not come without problems.

A FEW CONS

One of the great weaknesses we have seen with this species is its very slow



Research provided and funded by USGA.

establishment rate. The same characteristic that makes this grass an excellent option once established (slow growth), greatly limits its use for many turf managers. We will continue to look for better establishing selections and will work with industry partners to look for alternate ways to improve germination and establishment rates through seed coating technology.

Another weakness of this grass is that many of the native selections go into dormancy early during a

summer stress period (some European germplasm does not do this to the same extent). In addition to summer dormancy, another problem that detracts from the quality of native prairie junegrass is poor mowing quality (Fig. 1).

Finally, the species is quite susceptible to rust disease, which is often a problem in low-input management environments. We have found some resistance to our local rust races with locally collected germplasm however, we do not know if that resistance would be effective in other parts of the country.

My former graduate student, Matthew Clark, evaluated germplasm from around the world for seed production (Clark and Watkins, 2010a) as well as turf quality characteristics (Clark and Watkins, 2010b; Clark and

FIGURE 1



Many native prairie junegrass populations do not exhibit acceptable mowing quality.

PHOTO BY: ERIC WATKINS

FIGURE 2



European-derived cultivars and selections of prairie junegrass provide an excellent low-input turf, but are not widely used due to poor seed production and seed quality. In this photo, three European cultivars are surrounded by native populations with poor turf quality.

Watkins, 2012). He found great diversity and promising turf potential in this species. A number of germplasm accessions showed turfgrass quality that would be acceptable in a low-input turf, and a number of accessions showed seed production at a level that could become economically viable. Unfortunately, an individual accession that possessed both of these characteristics (seed production and turfgrass quality) at a sufficient level was not found.

FOREIGN PRAIRIE JUNEGRASS

In addition to native populations of this grass, there are cultivars and selections that have been developed by other breeders using European germplasm. These grasses have greater turf quality and performance than the native material we have evaluated.

In fall of 2008, we planted a dormant-seeded trial of prairie junegrass that consisted of germplasm from North America, as well as from a number of countries in Europe and Asia. We also included cultivars developed from European germplasm, such as Barleria and Barkoel, both developed by Barenbrug.

Since the trial was established in spring 2009, the plots have received

no fertilizer, no pesticides, minimal mowing (one to two times per month) and no supplemental irrigation. Figure 2 shows an example of some of the top performing cultivars in summer 2013.

These plots grow slowly, stay green all summer, green up rapidly in the spring and experience little disease pressure. Unfortunately, for the most part, these European selections do not produce enough seed that is of the quality necessary for a highly used cultivar. As you can see in Figure 2, some of the plots that surround these grasses are performing poorly and do not have adequate turfgrass quality; these are the populations that can produce seed. In the next few years, we will be working with industry partners to combine these traits into a more widely adapted cultivar that can produce seed at acceptable levels.

NOT QUITE READY FOR ROUGH

An improved prairie junegrass variety could be utilized in golf course roughs where lower inputs of water, fertilizer and pesticides are desired. Maintaining acceptable quality turf without any inputs other than occasional mowing would make this grass more desirable than many of the grasses found in golf

course roughs in the northern United States today.

Developing new turfgrass varieties takes several years, and in the case of a 'new' species such as prairie junegrass, the timeline is significantly longer. Nevertheless, we will continue an aggressive breeding program that aims to provide an excellent, low-input turfgrass option for superintendents throughout much of the United States.

Acknowledgment

The author would like to thank the United States Golf Association for their financial support of this project. Additional funds were provided by the Minnesota Agricultural Experiment Station.

Eric Watkins, Ph.D., is an associate professor and turfgrass breeder at the University of Minnesota. He can be contacted at ewatkins@umn.edu.

References

- Clark, M.D., and E. Watkins. 2010a. Seed production characteristics of prairie junegrass germplasm accessions. *Crop Sci.* 50:1057-1065.
- Clark, M.D., and E. Watkins. 2010b. Turfgrass characteristics of prairie junegrass germplasm accessions. *Crop Sci.* 50:2092-2102.
- Clark, M.D., and E. Watkins. 2012. Broad-sense heritability estimates of turfgrass performance characteristics in native prairie junegrass germplasm. *HortScience* 47:1228-1233.
- Dixon, J.M. 2000. *Koeleria macrantha* (Ledeb.) Schultes (*K. alpigena* Domin, *K. cristata* (L.) Pers. pro parte, *K. gracilis* Pers., *K. albescens* auct. non DC.). *J. Ecol.* 88:709-726.



“Many of the caddies come from poor to extremely impoverished backgrounds. They know little, if anything, about golf.”

KARL DANNEBERGER, PH.D., *Science Editor*

Southeast Asia's complicated caddy program

Having lunch with superintendents and club managers in Thailand and Malaysia is not much different than lunch with their counterparts here in the United States. Small talk is on agronomic issues, golf and golfers — all at an enthusiastic level. However, for me, one topic that I could not resist bringing up was the women caddies.

The Southeast Asia golf courses that I was at this past summer and in past years had a large number of women caddies. There are male caddies, but they were in the minority at the clubs I visited. The caddies (male or female) did not physically carry the bags; they either pulled/pushed the bag using a trolley, or drove/rode the golf cart. Watching the women caddies, I was impressed with their professionalism and golf knowledge — like where to properly stand on the tee, fairway or green, their ability to help provide distance and proper club selection, cleaning a golf ball and, when asked, reading a putt. The caddies were always smiling and upbeat. It was like ordering a coffee at Starbucks.

So at lunch I asked a couple of the club managers about the women caddy programs. These gentlemen told me that some clubs actually recruit caddies from Indonesia or other countries in Southeast Asia. Many of the girls come from poor to extremely impoverished backgrounds. They know little, if anything, about golf.

Once at the golf course, the caddies enter intensive training programs learning about golf and golf etiquette — proper safety for the golfer, enhancing pace of play and practices that maintain the quality of the golf course.

The golf courses provide the caddies with payment during the training period and also restrict their movement on and off the property. In one case, the caddies were only allowed to leave the

golf club's premises one day a week, between the hours of 10 a.m. and 7 p.m.

One of the reasons given for restricting the women to the premises initially was to reduce the likelihood of losing some of them to prostitution, which is prevalent in the region.

As the women begin caddying and generating money for the golf club and themselves through tips, life changes for many of these women. Often you see a few of these caddies with iPhones and iPads, a sign of upward mobility. At the very least, caddying has provided a means to help escape abject poverty for some of these women and their families.

Golf is not going to solve the world's ills; nor do I suspect every Southeast Asia golf course's women caddy program are like the ones described to me. But if you can change the life of one person or 70 at one golf course, is that not something worthwhile?

As I was leaving and walked past the club's caddy stand, I couldn't help but think about the heyday of caddy programs here in the United States and the impact those programs had on the lives of so many young people — including me.

Karl Danneberger, Ph.D., *Golfdom's* science editor and a professor at The Ohio State University, can be reached at danneberger.1@osu.edu.



The caddies in Southeast Asia are primarily women. They are professional, knowledgeable and upbeat.

PHOTO BY: KARL DANNEBERGER

Some Things are Worth Waiting For!

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Inside the USGA Turfgrass and Environmental Research Committee

Early August is the time of year when the USGA Turfgrass and Environmental Research Committee meets to review research proposals and decide which research projects to fund. I have the good fortune to serve on the committee. With the approval of Kimberly Erusha, Ph.D., managing director of the USGA Green Section and Mike Kenna, Ph.D., director of Green Section Research, I want to take you inside the committee and describe how the proposal review process works and funding decisions are made.

Discussions of the committee are confidential, but I can describe how the process works.

First, a step back to 1920 when the USGA funded its first turfgrass research by creating an office that was to become the “Green Section.” This office worked in close cooperation with the USDA on “the scientific and technical aspects of turfgrass maintenance.” Since 1920, the USGA has provided over \$40 million in funding for

turfgrass research. Most of the funding has gone to universities and much of the funding provided to universities has gone to support graduate students.

Ask a turfgrass professor and chances are they received funding for their assistantship from the USGA or have received a USGA grant.

The USGA has a long history of supporting the turfgrass breeding programs at the University of Georgia,

Penn State University and Rutgers University. It is a good bet that at least one of the grasses growing on your golf course originated at one of these universities and that you, and the golfers, at your course are the beneficiaries of USGA funded research.

Back to 2014 and the committee meeting in early August — the process started in April when Kenna issued a call for proposals that was widely distributed inside and outside the turfgrass scientific community. All are welcome to submit a proposal and 56 proposals were submitted for consideration for funding. The total funding requested was over \$1.2 million.

Each and every proposal is discussed by the committee members. Committee members include: Dale Bremer, Ph.D., Kansas State University; Erusha; Mike Fidanza, Ph.D., Penn State University; Ali Harivandi, Ph.D., University of California (retired); Keith Happ, USGA Green Section agronomist; Kenna; Jim Moore, USGA Green Section Director of Education; Jim Murphy, Ph.D., Rutgers University; Paul Rieke, Ph.D., Michigan State University (retired); Scott Warnke, Ph.D., USDA-ARS and myself.

Let’s return to the proposal review process. Every committee member has the opportunity to offer their

comments on every proposal.

The comments pertain to scientific soundness, whether a proposed methodology is feasible, if the project can be completed in the proposed time, if the funding requested is appropriate for the amount of research proposed and, most critically, how important the proposed research is to the golf course industry.

This is the opportunity for each committee member to make a case for funding or not funding a specific project. After the discussion of each proposal, committee members rank each proposal on a scale of one to nine, with nine being the most important to fund. After all proposals have been reviewed, Kenna averages the scoring of each proposal and all proposals are ranked.

At this point, Kenna, based on available funds, decides how many research projects can be funded. At this meeting 16 new proposals were funded with total funding of over \$765,000 over the next three years.

After having served on the committee for over 10 years, I can say the review process is sound and fair, and that the best proposals always rise to the top.



Clark Throssell, Ph.D., loves to talk turf. Contact him at clarkthrossell@bresnan.net.



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WHISTLING STRAITS MECHANIC KNOWS THE KEY TO KEEPING STRING TRIMMERS FIT

BY **SETH JONES** // *Editor-in-Chief*

1. Spot Overseeder-Spiker

The **MILTONA** Spot Overseeder-Spiker prepares mid-sized areas for overseeding. The 8-inch by 11-inch spike pad, which features 72 $\frac{1}{4}$ -inch diameter spikes spaced 1-inch on center, is designed to be stepped or jumped on to force the spikes $\frac{1}{2}$ inch to $\frac{3}{4}$ inch into the ground. It's all steel construction will stand up to the most intense overseeding projects and saves time while doing so. A 100-square-foot area can be prepared for overseeding in less than 20 minutes. A video demonstration of this product can be viewed on Miltona's website. miltona.com

2. Weed Wand

From **STANDARD GOLF** comes the Weed Wand, ideal for precision chemical applications around flowerbeds, fragile plantings and other tight areas. It is a lightweight handheld tool, 37-inches in length and 1-inch in diameter. Designed to minimize spills and for easy refills, the applicator tip precisely controls chemical flow and eliminates overspray. The size of the Weed Wand makes it easily transported from place to place.

standardgolf.com

3. Accuform Star Spiker

The Accuform Star Spiker from **PAR AIDE** features a 12-inch steel head with 18

CLIFF HENNING, head mechanic at Whistling Straits, Kohler, Wis., has worked on his fair share of Stihl FS 110 string trimmers. Since the steep hills on the course can't be driven on with equipment, they're mowed down with the handheld FS 110s.

Henning says they're reliable. They need to be, considering the 2015 PGA Championship arrives next August. "We try to maintain our course to tournament standards every day," Henning says.

individually rotating stainless steel star spikes. The Accuform Star Spiker also features an ergonomically bent 54-inch aluminum handle. According to Par Aide, the product is a sturdy, heavy duty, easy to use, effective spiking tool. The Accuform Star Spiker is also effective at breaking up algae, doing spot overseeding or scarifying greens.

paraide.com

4. Turf Ex TL20 handheld sprayer

TURFEX'S new TL20 handheld sprayer is designed for professional application of liquid chemicals, including fertilizers, herbicides, insecticides and pesticides. The TL20 offers a 2-gallon tank with a high-efficiency pump for quick pressurization. It also contains professional-duty seals and O-rings for maximum durability. The sprayer comes with a professional-duty spray wand with adjustable and flat-fan nozzles to accommodate a variety of applications. Other standard features include a pressure relief valve and a 3-in-1 accessory, which serves as a funnel for easy

tank filling, a filter for straining the liquid and a spray shield for focusing the application.

turfexproducts.com

5. ECHO PB-760LN

ECHO'S PB-760LN is loaded with upgraded, professional features for better ergonomics, more performance and easier serviceability. The top-of-the-line blower is equipped with a powerful 63.3 cc engine, an air ventilation system and is available in either hip-mounted (PB-760LNH) or tube-mounted (PB-760LNT) throttle. And, with an ultra-quiet 65dB(A) output, it's perfect for use in areas where noise may be a concern. Other features include a straight back "L" frame, an extra-flexible tube, dual-stage, side-mounted, heavy-duty air filtration, wide-angle tube rotation, padded backrests and shoulder straps, and a leaf guard. The ECHO-exclusive vented back pad allows air to circulate around the user for comfortable operation in hot weather. Performance specifications include 535 cfm at the pipe and 214 mph maximum air speed.

echo-usa.com

TIPS FROM CLIFF HENNING

- "We run a 4-cycle string trimmer that uses mixed fuel. My biggest tip to anyone using 2-cycles, or 4-cycles that use mixed fuel, is to accurately and properly mix your fuel."
- "If the fuel is mixed too lean it'll prematurely wear out the machine, because it doesn't have proper lubrication. If you have too much oil, you end up with excessive carbon build-up, which will also wear out the machine, because the carbon acts as sandpaper in there."
- "Here's another tip: We add extra dye to our mixed fuel so it's easy to tell the difference. It's a petroleum dye specifically used for dyeing petroleum products."



2



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**CONTINUED
ONLINE**
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category/
products](http://golfdom.com/category/products)





1

CONTINUED ONLINE

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2

1. Polaris GEM eM

POLARIS INDUSTRIES recently added the Polaris GEM eM1400 light utility vehicle to its line of compact electric vehicles. As the first GEM model to be completely designed and engineered by Polaris, the eM1400 was built to be a customizable work vehicle. It is an off-road light utility vehicle with a 1,400-pound payload capacity and a rear cargo-carrying capacity of 1,100 pounds. GEM eM1400's 7.0-hp AC motor, independent rear suspension and front IFS MacPherson Strut ensures the safe and efficient transport of people and cargo, even when towing up to 1,250 pounds. Featuring a top speed of 19 mph, the eM1400 can be driven both indoors and outdoors and has a range of up to 45 miles per charge depending on temperature, grade, payload and driving style.

GEMcar.com

2. Workman HDX Auto Utility Vehicle

The Workman HDX Auto is the industry's first heavy-duty utility vehicle with an automatic transmission. This model eliminates the need for additional training for operators who are unable to drive manual transmission vehicles. It also helps minimize turf damage that can occur when stopping and starting a fully loaded vehicle on a hillside, because there's no clutch pedal to engage.

TORO'S proprietary SpeedContr'l ensures precise ground speed to engine speed, critical for accurate application rates with bed-mounted topdressers and sprayers. The Workman HDX Auto is powered by a 28-hp Kohler LH775 twin-cylinder, liquid-cooled, electronic fuel-injection engine, and boasts travel speeds of 11 mph in low range and 20 mph in high range. Additionally, the Workman HDX Auto provides a total payload capacity of 3,299 pounds and a towing capacity of 3,500 pounds. It also features a four-wheel, hydraulic disc brake system; an easy-to-use operator panel that includes an electronic switch to engage rear differential lock; and an on-demand four-wheel drive option, which takes the guesswork out for operators.

toro.com

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efficient nozzle sets



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TTS

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Clear flange compartment for illustration purposes only

◀ G885 Golf Rotor

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1



2



3

1. Abacide 2

According to **MAUGET**, Abacide 2 is the best defense against conifer beetles and invasive insects. This insecticide features new higher-dose rates and provides multi-year protection for forest, woodland, Christmas and ornamental trees. Abacide 2 can be used whether preventing a future attack or battling early stages of an infestation.

mauget.com

2. StaLok Waterless Bunker Liner

StaLok Waterless technology from **STABILIZER SOLUTIONS** transforms natural crushed stone fines into a unique natural bunker liner. Patented polymer technology gives the bunker liner increased strength, resulting in increased traffic resistance, but also maintains a degree of flexibility. This prevents the material from becoming too rigid like concrete and other chemical liners. Its unique surface characteristics resist weathering from water. Water rolls off of the StaLok surface to be captured in drain lines. It simply needs compaction to activate, saving time and water during installation for in-house crews or outside contractors.

stabilizersolutions.com

3. Wedgle Direct-Inject System

ArborSystems features tree trunk injections with no drilling damage using the Wedgle Direct-Inject Tree Treatment System. Treat almost any tree in five minutes or less and prevent drilling damage with this system. No guarding or return trips and no mixing at job sites using **ARBORSYSTEMS** insecticides, fungicides, antibiotics, growth regulators, micronutrients and eight Quick-Connect Injection Tips for hardwoods, conifers, palms and difficult-to-treat trees. ArborSystems are known for its tree-friendly Pointer insecticide that has been credited with saving thousands of Ash trees from emerald ash borer (EAB) since 2002 as documented by Michigan State University. All of the Wedgle's hardware components are made in the United States.

arborsystems.com

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The 19th Hole



Andy Bates

SUPERINTENDENT // Nemacolin Woodlands Resort (Mystic Rock and The Links courses), Farmington, Pa.



What are you drinking? A draught beer... a Sam Adams is good.

Where did you go to school? Ohio State Agricultural Technical Institute. It's the ag school in Wooster, Ohio. My degree is in turfgrass management, graduated in 2006.

Did you watch the NFL kickoff game yesterday? I'm not huge into professional sports. My team is the Buckeyes. Being in Pennsylvania, I get a lot of slack for that.

Will the Buckeyes be OK with their quarterback being out for the season? I think so. They recruit great. I remember when Braxton Miller was the freshman quarterback. There's always a new stud. I hate that he got hurt, he was a Heisman candidate... but they'll be OK if they can figure out the offense. They're always in contention.

There is so much to do here at the resort. What do you enjoy the most? The resort is so large, one of the

things I like to do is hop in my golf cart and just drive around the property with my daughter Aubrey, look at the animals, check out the play areas. I love the golf courses, so golfing is at the top of my list, of course, but I'm biased. I also like the shooting academy; I try to do it once a year.



Hold old is Aubrey? What's her favorite part? She'll be 2 ½ next month. She always wants to check on the lions. There are literally lions, tigers, bears and zebras here. She likes the birds, too.


Do you have big plans for the weekend? I have to work Sunday. My parents are coming in tonight. We try to see each other once a month. Today is my dad's birthday, so we're going to Ligonier, a nice little town in the mountains outside Latrobe.

If you could sneak one more hour in your day everyday, how would you use it? It would be extra family time with Aubrey and my wife Jessica. You really have to hold on to that time you get to spend with each other on weekends and after work. Being in the golf business, you do have to work weekends and that's hard.

"WE HAD THREE SHOTGUNS IN ONE DAY. A 7:30 A.M., A 12:30 THEN A 4:30 REVERSE 'GUN. YOU SEE SO MUCH YOU GET USED TO IT, YOU DON'T EVEN THINK ABOUT IT."



As interviewed by Seth Jones, September 5th, 2014.



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