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Plus
Getting to know the nematode
Q&A: USGA on proposed new rules
Bermudagrass adaptability in northern climes

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The path to promotion is longer than ever for assistant superintendents. Is it time to rethink the hours they work and the pay they receive?

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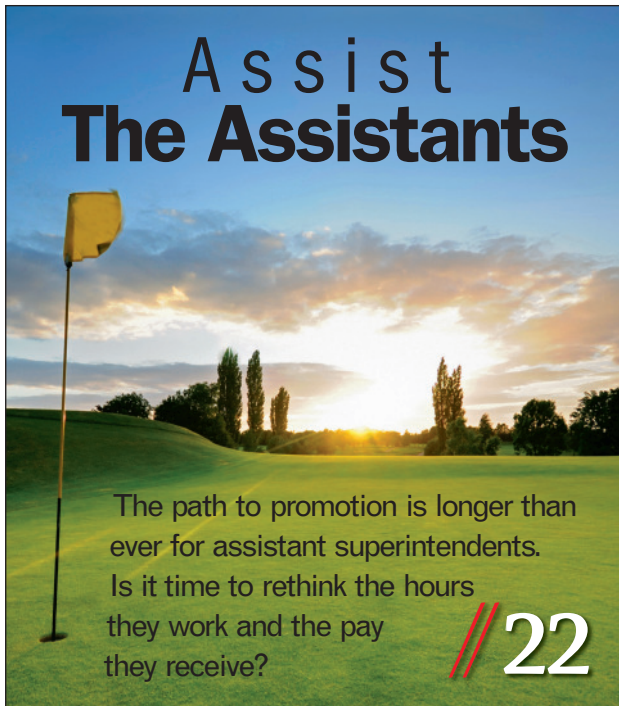
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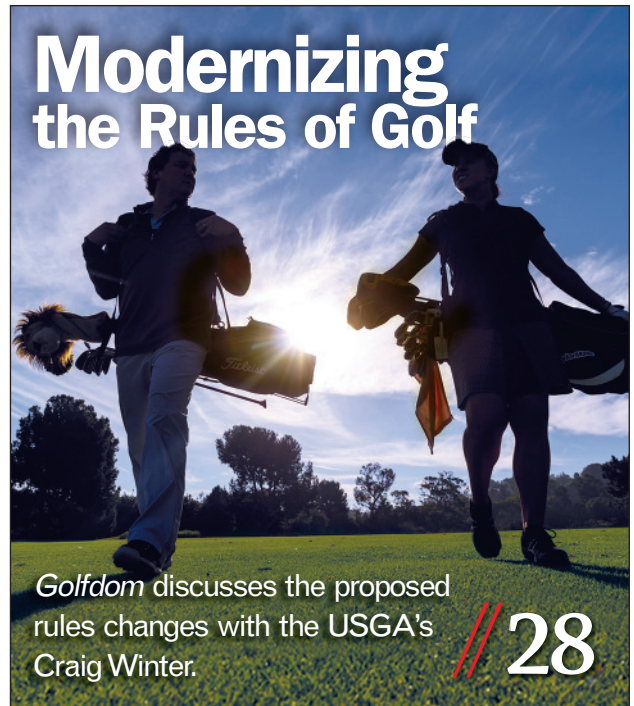
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YEARS

Assist The Assistants



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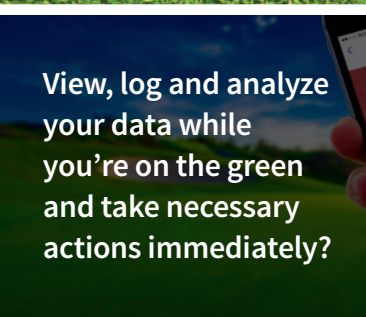
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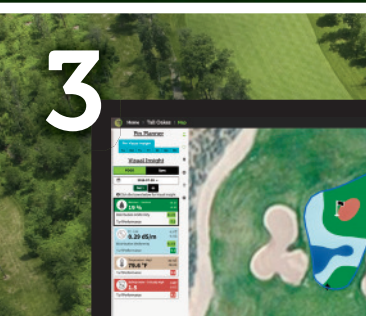
1

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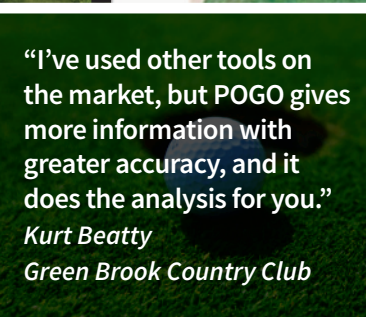
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2



3

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Green Brook Country Club

4

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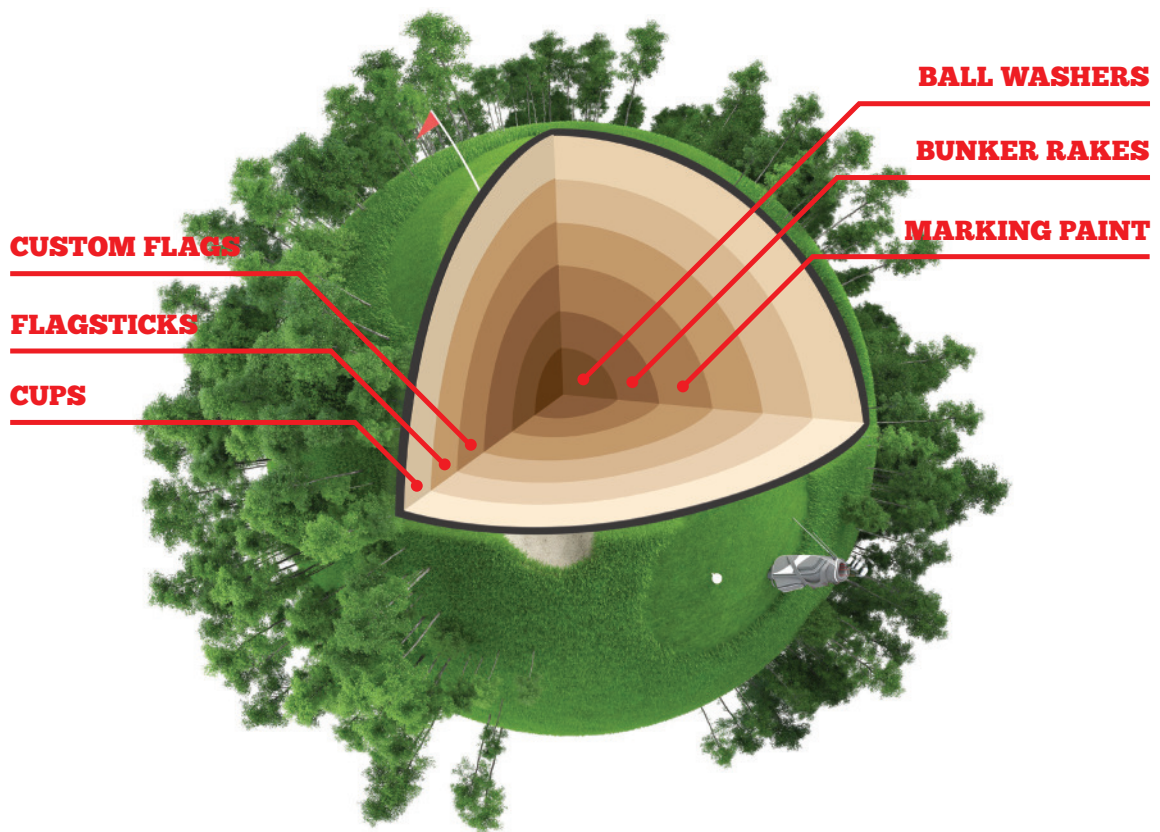
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“I was nervous for two reasons: 1) I was making a new presentation for the first time, on my predictions for golf’s future and 2) I don’t really know any of these dudes in South Dakota.”

SETH JONES, *Editor-in-Chief*

Inspiration in tire fires

Sometimes bad omens bother me — like recently when I saw a band named Bad Omens was playing in Lawrence, Kan., the same night my Jayhawks were playing Michigan State in the NCAA tournament.

It turned out to be worry over nothing (sorry, Spartan friends) and the Jayhawks prevailed.

There were a couple bad omens on my recent road trip to South Dakota to speak at the SDGCSA conference. The most ominous was a giant tire fire in Rock Port, Mo. The black smoke wafted across the highway and the smell was terrible. As I drove through it I thought to myself, “Yep, this is going to be me tonight — my presentation is going to be a tire fire!”

I was nervous for two reasons: 1) I was making a new presentation for the first time, on my predictions for golf’s future and 2) I don’t really know any of these dudes in South Dakota.

My first of two presentations was to take place after

dinner that night. I arrived in Sioux Falls in time to get unpacked, changed and seated for a quick pregame pint at the hotel bar. My second fear was immediately assuaged when Dean Heymans walked over and introduced himself. Though I didn’t know these guys, turns out I was among friends.

Heymans thanked me for coming to the event and seemed genuinely pleased I took the time to drive north for the talk. We got to chatting and Heymans told me he had recently retired — Jan. 31 — after being at Hillsvieview GC in Pierre, S.D., since 1974 (superintendent since ’78).

Recently retired! Maybe that’s why he was so convivial. No, turns out everyone in South Dakota is this nice. At least that was my experience.

Check out the picture of Dean and his pals on page 14, photo 4. He’s clearly beloved by his colleagues. He already has the South Dakota GCSA Lifetime Achievement award. He’s a founding member of the SDGCSA. They gave him another plaque at this meeting just to say thanks and congrats.

“We have a community here,” Heymans told me. “Everybody works with each other — that’s what makes it so much fun to be a superintendent in South Dakota.”

I told Heymans about the cover story I was working on, focusing on the plight of assistant superintendents and how difficult it is to move up the ladder these days. I asked him about the job atmosphere in South Dakota.

“We don’t have that many

golf courses. A lot of superintendents, especially friends of mine, have stuck around a long time,” Heymans said. “There wasn’t much of an opportunity for assistants to get jobs in South Dakota, so a lot moved out of state to take assistants jobs, then maybe come back later.”

I asked if he had any advice for today’s assistants. He realizes the difficulties of today’s market, yet he’s positive.

“Just stick with it,” he advised. “Bide your time. Keep working on it. The opportunities will come. Stick with it and be patient.”

The next afternoon I made the drive home. When I hit Rock Port I found the tire fire was still smoldering. I had forgotten about it up until then. The day before it gave me a chill, like 10 black cats had just crossed my path. The next day, it still stunk but it didn’t seem so ominous.

The previous day when I saw the fire I got serious, turned off the music and started rehearsing my new presentation. By the time I got to Sioux Falls I had it memorized. The fire inspired me to get focused and prepare for that evening’s presentation. For the first time giving that presentation it felt natural.

The current job market might feel ominous, like that tire fire, to assistant superintendents. But if they can stick it out, that first superintendent position, once obtained, might feel natural.

Email Jones at:
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NEWS, NOTES AND QUOTES



// DESTRUCTIVE PROTEST



Environmental activists vandalized a putting green at Trump National Golf Course in Rancho Verdes, Calif.

CALIFORNIA TRUMP COURSE DAMAGED BY VANDALS



A group of environmental activists vandalized a putting green at Trump National Golf Course, Rancho Palos Verdes, Calif., last month, as first reported by *The Washington Post*.

A self-proclaimed “anonymous environmental activist collective” sent a 64-second video to the *Post*, which showed the group jumping a fence, walking down a hill bordering the course, then using garden tools to carve 6-foot letters to create the message, “NO MORE TIGERS. NO MORE WOODS.” into the course’s 5th green.

A member of the group also provided a statement to the *Post* that said the vandalism was in response to the Trump Administration’s “blatant disregard” for the environment.

“Tearing up the golf course felt justi-

fied in many ways,” the member said. “Repurposing what was once a beautiful stretch of land into a playground for the privileged is an environmental crime in its own right.”

The Los Angeles Times reported that authorities received a call from a course employee after 8:30 a.m. that “someone had dug into the grass” at the property, the Los Angeles Sheriff Department said in a statement. The Sheriff’s Department is still investigating the incident, but added there is no information on the suspects. The department also estimated the damage to the putting green at \$20,000.



// AVAILABLE FOR DOWNLOAD

SYNGENTA LAUNCHES GREENCAST TURF APP

Syngenta has released its GreenCast Turf App, available for both Apple and Android smartphones and tablets.

The recently released app is a free record-keeping application designed to streamline the tank-mixing calculation and record-keeping process by recording more efficient and accurate spray applications and calculations, according to the company.

“We recognize the importance of precise tank-mixing and product rates for optimized application as well as environmental stewardship,” says Stephanie Schwenke, turf market manager at Syngenta, in a press release. “This new app simplifies communication and application planning through accurate tank-mixing calculations. These plans can be easily saved and shared with your applicators in English or Spanish.”

The GreenCast Turf App can generate specific tank-filling plans for users that include both product and water volume, and create reports to be saved within the app or emailed in multiple file formats.

// INNOVATION AWARD

MUSSER FOUNDATION NAMES AWARD OF EXCELLENCE WINNERS

The Musser International Turfgrass Foundation named Matthew Jefferies, Ph.D., and David Jespersen, Ph.D., its 2017 Award of Excellence recipients.

The annual awards, given since 1989, are presented to outstanding doctoral students of turfgrass science who have made significant and innovative contributions to turfgrass science research. Each of this year’s recipients were presented a \$35,000 cash award.

Jefferies completed his Ph.D. in the Department of Crop and Soil Sciences at North Carolina State University, focusing on pesticide environmental fate in turfgrass systems. Jefferies has accepted a position at BASF Corp. in Research Triangle Park, N.C.

Jespersen received his Ph.D. from Rutgers University in 2016. He studied physiology and molecular biology of heat stress in creeping bentgrass. He currently is an assistant professor at University of Georgia’s Department of Crop and Soil Sciences.

//THE SUPERINTENDENT SHUFFLE

Mark to Muirfield, Zimmers to Inverness

Certified Golf Course Superintendent Paul B. Latshaw's move to Merion GC, Ardmore, Pa., set the carousel of superintendent jobs into motion, and two superintendents will transition to new positions at Muirfield Village Golf Club and the Inverness Club.



Chad Mark

never anticipated leaving Inverness just one year after taking the job, but it was

Chad Mark, formerly of the Inverness Club, Toledo, Ohio, will be moving a couple of hours down the road to Muirfield Village GC, Dublin, Ohio. Mark

an opportunity he couldn't turn down.

"It's a dream come true," Mark said in a recent interview with *Golfdom*. "When you grow up in Ohio and go to Ohio State, it's most students' dream job... that's the job you aspire to, to be at a place like that."

Taking over for Mark at Inverness will be one of his mentors, Oakmont (Pa.) CC's Superintendent John Zimmers. Mark worked as an assistant at the Sand Ridge Club, Chardon, Ohio, where Zimmers held his first superintendent job before accepting the position with Oakmont.

After 18 years as superintendent and hosting four major championships at

Oakmont, Zimmers will be returning to the Buckeye state. Zimmers told *Golfdom* that the job is "a wonderful opportunity in a wonderful area, and the design and architecture of it is a really, really great golf course," but that it was not an easy decision for him, either.



John Zimmers

"It's always a difficult decision when you're leaving a place like Oakmont that you've been at for 18 years. You become emotionally attached to the golf course, to the staff and the membership," says Zimmers. "It's clearly been an honor to take care of such a historic place like that. There's a lot of emotion involved."

Zimmers' final day with Oakmont will be June 3, 2017, according to a special announcement from the club's leadership to its membership.

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Orange County National Golf Center and Lodge was built 20 years ago as more than just a place for tourists and locals to play golf. The public facility houses several rapid infiltration basins, called RIB sites, that are used for filtering excess effluent water while replenishing water to the Floridian aquifer, an aquifer essential to the surrounding Florida orange industry.

Today the approximately 590-acre property is meant to be a one-stop location for golfers with two 18-hole courses, a 9-hole short course and a 42-acre circular driving range. It hosts around 100,000 rounds per year, with a majority of those being played from January until May, according to Superintendent Jason Morris.

"Currently, we're doing about 200 rounds per day on each of the 18-hole courses," says Morris. "After May is when we really get into our cultural practices. We'll go from May to September with that plan and then try to shift gear again in September before the season starts again."

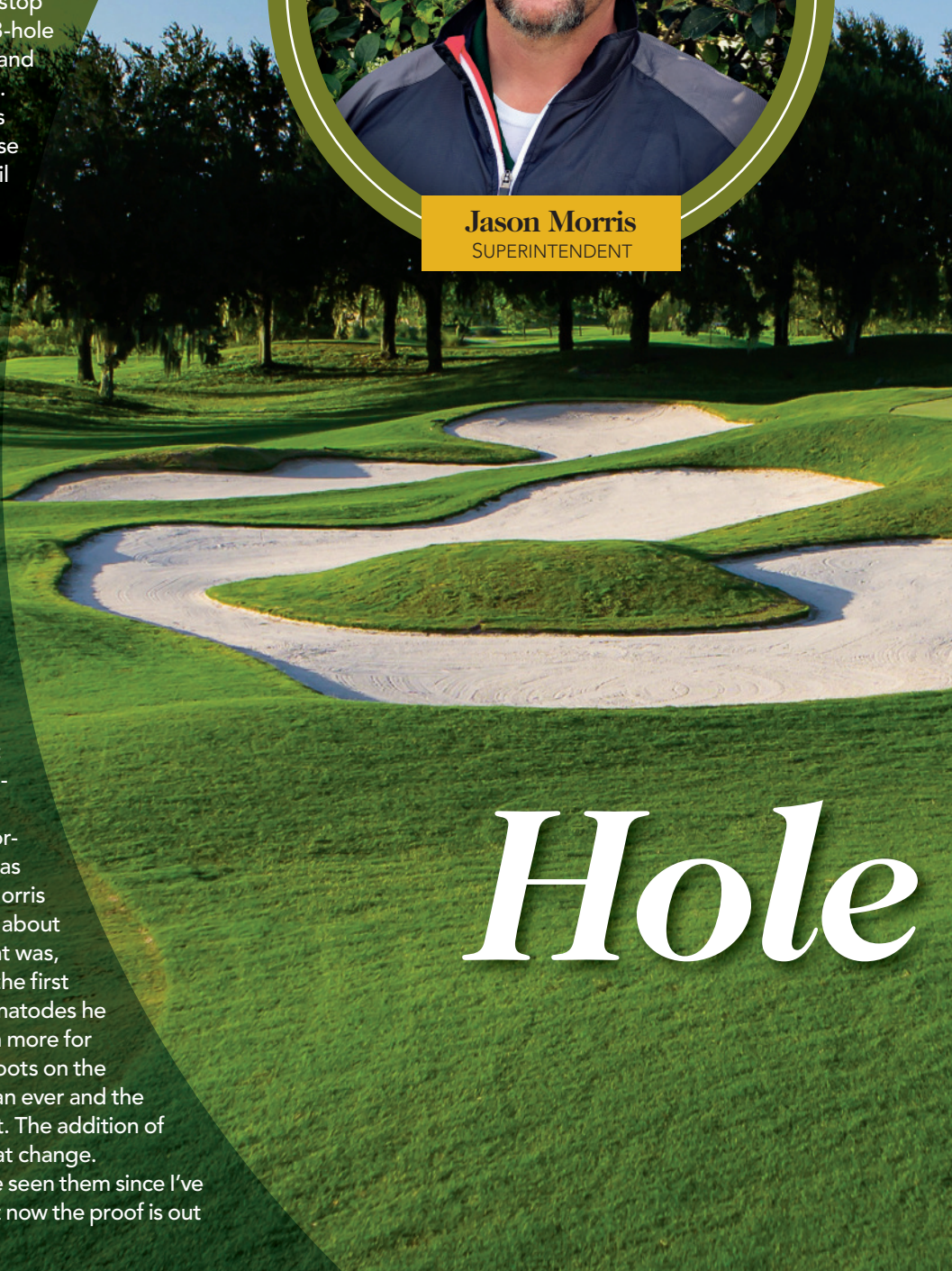
With that many golfers, wear has been an issue for Morris during his four years at Orange County National, and there usually were some weak spots on the courses. To fight that decline, they rely on some of Syngenta's staples: Secure, Daconil, Briskway, Heritage and Velista.

Like many golf courses in Florida, Orange County National has to contend with nematodes. Morris says when he was approached about using Divanem, his first thought was, "Well, it can only help us." It's the first program designed to fight nematodes he has used, but it has done much more for the turf. Morris adds that the roots on the courses' greens are deeper than ever and the turf is denser than in years past. The addition of Divanem has been a part of that change.

"The greens are the best I've seen them since I've been here," says Morris. "Right now the proof is out there. It's pretty good."



Jason Morris
SUPERINTENDENT



Hole

Hole No. 16

Orange County National

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My Second Office

BECAUSE THE COURSE IS YOUR FIRST

About our host

After 14 years, **BARRY J. KENDALL**, superintendent at Green Valley Ranch Golf Club, says Colorado feels like home.

The Michigan native studied turf at Michigan State, then took an internship at Cherry Hills CC, Cherry Hills Village, Colo. He was on the crew when the

course hosted the 2005 U.S. Women's Open. This year marks his 10th anniversary at Green Valley Ranch, two years as assistant and eight years as superintendent.

Green Valley Ranch, a Perry Dye design, opened in 2001. Every year the

course hosts the Colorado Men's Open, the Colorado Women's Open and the Colorado Seniors' Open. That makes for 30 Colorado Opens that Kendall has experienced, plus one Division II national championship. The course also has a par three course.



"We do 45,000 rounds a year so it's busy here, but it's a great place to work."

1 GO SPARTY "That's our tee marker. Being a Michigan State alum and fan I took one and painted it half green, half white."

2 FAMILY MAN "Those are family vacation photos; my wife, Jessica, of 10 years, my daughter (Raegan) is six and my son (Brayden) is four. We'll take trips up to the mountains, there's also a shot from a vacation to Petosky, Mich."

3 LOYAL READER "The new (January *Golfdom*) came the same day we took this photo. I like *Golfdom* because it has a little bit of everything for everybody."

4 BOOK WORM "I've got the GCSAA Membership Directory; 'Who's Your Caddy?' by Rick Reilly, a priceless book; 'The Fundamental of Soil Science' from college, Dr. Crum might like that; and more turf books."

5 LOOKS LIKE A SOCCER PLAYER, BUT... "That's a Michigan State statue, right in front of it that golf ball is my first hole-in-one. Last August I tore my meniscus while installing lighting in the backyard. This was my first round of golf after surgery, at Highland Hills GC (Westminster, Colo.) I bought drinks for my group, but the chapter already had a keg so I got off easy."

6 OLD SCHOOL ROLODEX "That's basically a dust-collector. I don't know that I've used it in five years."

BY SETH JONES // PHOTO BY MITCH SAVAGE
Proud of your second office? Email us a photo of you in it to sjones@northcoastmedia.net, and we may feature you and your office in an upcoming issue of *Golfdom*.

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“ The 9009A is probably one of the best if not the best rough mower that’s on the market today for wide area rough mowing. ”

– Jeff Reich, Superintendent



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– John Patterson, Director of Equipment



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“ We felt the 9009A was the perfect fit for us here at Shelter Harbor. The quality of cut we got was just second to none. It was unbelievable how well that machine performed. ”

– Mike Dachowski, Superintendent



QUAIL HOLLOW CLUB

“ I love the A Model mowers, especially the reel technology. I’m even more impressed with some of the adjustments that we can make, thanks to the TechControl display. ”

– Keith Wood, Superintendent

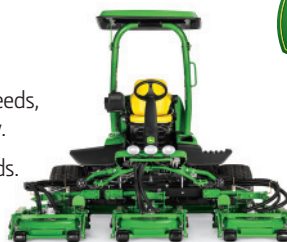


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9009A Rough Mower



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Golfdom Gallery

1 Turbo Tom and Too Tall Tim Roaming the South Dakota GCSA trade show we saw two familiar faces — Tom Steigauf, Bayer Environmental Science, and Tim Flegel, MTI Distributing, Toro distributor for the upper Midwest.

2 Fancy flip phone Initially we were impressed to see Ken Bouldan, Moccasin Creek CC, Aberdeen, S.D., rocking a flip phone at the South Dakota GCSA conference. And then we saw...

3 Five for flipping that Bouldan was not alone in his appreciation of the flip phone! Then we asked why. Answer: They're more rugged and durable — just like our readers in South Dakota.

4 One last rodeo It was a retirement party for Dean Heymans, long-time superintendent at Hillsview GC in Pierre, S.D. Front row, left to right: Ross Santjer, Moccasin Creek CC, Aberdeen, S.D.; Bill Stromberg, Madison (S.D.) G&CC; Heymans; Tedd Evans, CGCS, Brookings (S.D.) CC; (Back row) John De-Long, Slayton (Minn.) CC; Waren Muller, CGCS, Hillcrest G&CC, Yankton, S.D. and Mark Clark, The Bluffs, Vermillion, S.D.

5 Wit's world Rick Wit, CGCS, along with friend Brian Mohr, Spencer (Iowa) Municipal GC. Wit wears two hats in South Dakota, that of superintendent at the Golf Club at Red Rock, Rapid City, S.D., and as executive director of the SDGCSA. He clearly wears those hats well.

6 Make golf fun again Kevin Norby (right), ASGCA, wrote a blog for *Golfdom* called "Make golf fun again!" Jason Happe (left), Southern Hills GC, Hot Springs, S.D., couldn't agree more.

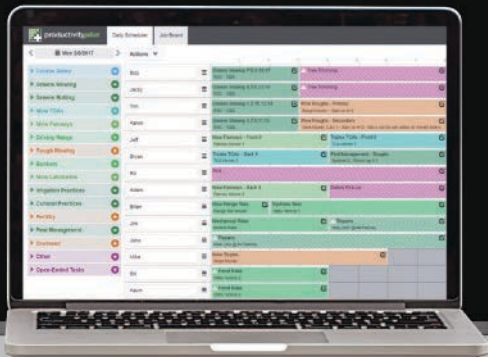
7 Western New York state of mind Lest you think we only visited South Dakota this month, we present the following photo. Kevin Doyle, GCSAA field staff for the Northeast Region, with *Golfdom* publisher Pat Roberts, at the WNYGCSA/FLAGCS annual education day, where Roberts was keynote speaker.



PHOTOS BY: SETH JONES (1, 2, 4-6); TEDD EVANS (3); THAD THOMPSON (7)



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“Anyway, here I thought all along that my family just knew that I/we/golf did all these great things. They certainly were raised on a golf course, but they weren’t part of the ‘choir.’”

STEVEN WRIGHT, CGCS, *Pine Tree GC, Boynton Beach, Fla.*

Telling our story

Golf course superintendents, in general, are good about sharing positive stories, experiences and events to promote our profession. We’re most comfortable preaching to the choir or to like-minded individuals in the business.

I often refer to our business as a sort of fraternity. Although I’ve never been in a fraternity, I can relate through some of the experiences and comradery I’ve had throughout my career. No matter where I’ve hung my hat, it’s always the same — superintendents always are a good bunch of guys who will do anything for the good of the business and environment. And when high-profile subject matter is shared industry-wide, we’re at the ready to help.

If you need an example, just look at the bad press on neonicotinoids and bees. It seems like the entire country jumped on that train too quickly. Talk about extreme vetting! Or now, fertilizer ordinances that have blackout periods when the turfgrass most needs the fertility.

We’ve dealt with noise ordinances, no pesticides and no backpack blowers, WOTUS, POTUS and OTIS. We’ve had to talk to city/county officials, police/fire and members/board members of our clubs. Our industry is ready to act anywhere it’s needed.

But I’m here to tell you that I think we’re missing a major segment of supporters. Well, I was missing them, anyway.

I was having a discussion about organic farming with my family. I asked the old question of what makes a fertilizer organic. After giving two examples of fertilizer with a carbon (C) element in them, I asked the simple question: Would you rather have plants grown with ground-up poultry byproducts or a clean, synthetic organic fertilizer? They all chose ground-up poultry. Nothing against the fertil-

izer industry and ground-up poultry — it’s a great way of recycling — but I use it on my grass, not my food. In my opinion, I would rather have clean urea fertilizing my food.

The discussion that ensued ran the spectrum of what we (golf) do as good stewards of the environment, and what some “organic” farmers really do. Yes, I used bees, water, riparian buffer zones, slow-release, biodegradable, recycled water for equipment washing, bird boxes, native plantings, BMPs and recycling. I think you get my point. It might have been a bit of overload for the family. But was it all just “golf course stuff?”

Interestingly enough, in the jury-rigged world of organic agriculture, most synthetic fertilizers/pesticides are prohibited. Exceptions to this rule are based on need.

But what does that mean?

Anyway, here I thought all along that my family just knew that I/we/golf did all these great things. They certainly were raised on a golf course, but they weren’t part of the “choir.” I know I shared a lot of information, but they don’t get the emails, see the videos, read the reports or hear the experts talk. I assumed that just because I was doing the right thing and sharing this with them that they would not have an opinion influenced by someone or something else. You know, like TV, magazines or teachers at school.

There are so many influencing factors. I didn’t think of it as them not listening to me, but maybe someone else was their “expert” when it came to subjects not associated with a golf course. It was a bit of a slap in the face when I realized this.

So, what? Well, it’s time to talk to your friends, family and others about golf’s environmental awareness and start sharing some of our successes with them. You don’t have to bombard them, just share some of your expertise, or maybe share an interesting article or two from an expert. I can think of a few Facebook posts from Dr. Brandenburg that I should’ve shared with people not in the “choir.” Just saying.

Steven Wright, CGCS, is golf course superintendent at Pine Tree GC in Boynton Beach, Fla. He can be reached at steven_wrightcgcs@pinetreegolfclub.net or followed at [@wrightsteve19](https://www.instagram.com/wrightsteve19).

The Golfdom



FROM THE ARCHIVE

Have you ever just wanted to vent to someone else? In the February 1952 edition of *Golfdom*, the editors allowed three superintendents, Ray Gerber of Glen Oak GC, Glen Ellyn, Ill., James A. Reid of the Suburban Club in Pikesville, Md., and Burt K. Anderson of Augusta (Maine) CC, to do just that. They talked about the three things that gave them their headaches: labor, turf maintenance and weather. To read the full article, visit golfdom.com/exclusive.

Superintendents' headaches never disappear

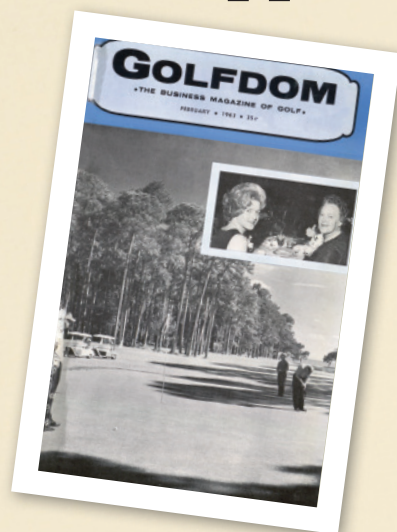
SOIL HARD TO DENT

Anderson traces the source of Augusta's trouble to impermeable soil. Agronomists agree with him that perhaps 30 to 40 percent of the course is covered with soil that has little or no penetrative quality. In recent years, the U.S. Soil Conservation Service has helped Burt attack the problem. Waterways and diversion ditches have been dug, drains opened and tile lines put in, but it is going to take a few more years and a considerable cash outlay before the entire course is reclaimed.

Subpar soil of this nature, of course, results in poor drainage. Every year a good deal of Augusta's fairway turf is lost because of spring sogginess and is replenished with nothing more promising than annual bluegrass and knotweed.

THOSE MAINE WINTERS

A superintendent can go along with this condition, says Anderson, hoping in time to correct it. But when he has subnormal drainage combined with Maine winters to contend with, that is something else. Alternate rain and snow and freezing and thawing through November and December usually give a good start to an ice layer by the first of the year. Thirty days later, greens, and for that matter practi-



cally the entire course, are locked in ice.

With circulation shut off from above, there has to be good drainage if the greens are to have a chance of surviving. Having endured the ice condition for a number of years, Anderson believes that bentgrass tolerates having the air shut off during the winter and the waterlogging that comes with the spring thaw much better than annual bluegrass.

THEORY ON WINTERKILL

Experience and observations have prompted another theory that Anderson believes should be considered by superintendents in the northern climes. "When

the frost leaves the ground," he says, "the ice layer separates from the turf and starts to weaken or break up in spots." From this time until the snow departs is a critical period. If the ground is impermeable, or nearly so, water fills the space between the ice and earth and smothers the turf. If the soil can be penetrated, water passes off, allowing the air to circulate in this void and enabling the grass to survive. "If at all possible," the Maine green master concludes, "the ice should be removed from the greens during the critical period."

The last statement, of course, brings up the question of how the ice is going to be removed. That is one that has stumped the experts for a long time. There is no effective ice-removal equipment available today, and even if there were, getting it to the green sites would pose a difficult transportation problem. Until thawing conditions set in it is almost impossible to get rid of the ice sheets that cover the greens.

THE LABOR PROBLEM

In going into the labor situation, Ray Gerber looks at it from an overall viewpoint, while Jim Reid cites some specific cases in examining it, adding that these are typical of what a superintendent repeatedly has to put up with, whether he's in the business for three or 30 years.

"In our locality," observes Ray Gerber, "it's almost impossible, except by accident, to get reliable men under prevailing conditions. Turnover is much too high, and almost constant training of new men takes too much of our time. It may be necessary very soon for clubs to provide living quarters for maintenance department employees as they do for others if they are going to attract the right kind of help."

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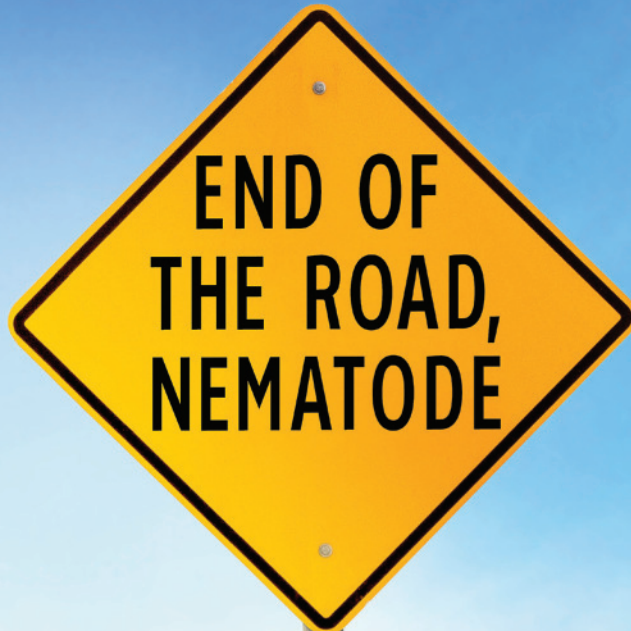
– Derek Settle, PhD, Bayer Green Solutions Team Specialist

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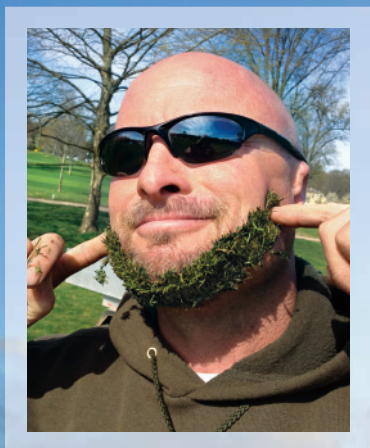
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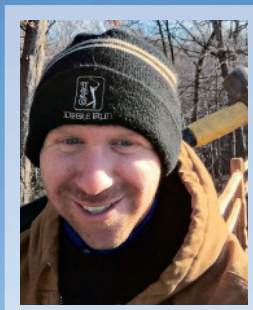
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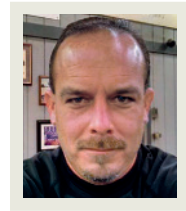
Kristopher Negley



Ian Daniels

“According to a recent Golfdom survey, 62 percent of readers say assistant superintendents are not being paid a fair wage, while 68 percent say it has become more difficult in recent years to keep talented assistant superintendents.”

LABOR PAINS
PART 1 OF A 3-PART-SERIES



Scott Slomiany

Assist THE ASSISTANTS

The path to promotion is longer than ever for assistant superintendents. Is it time to rethink the hours they work and the pay they receive?

BY SETH JONES

Kris Negley takes his job seriously as senior assistant superintendent at the Clubs of Cordillera Ranch in Boerne, Texas. And he should. His job managing a crew of 16 is his passion. For the last seven years he's been putting in the hours, working at the pace of "a sprint, not a marathon." With bent-grass greens in the Texas summers, 70-hour summer weeks don't even make him blink.

But after eight years of working at this breakneck pace — and following his marriage, the birth of his two sons and now the end of his marriage — he's starting to wonder about the cost.

"I didn't get into this to be a career assistant superintendent. I want to run my own course someday," Negley, age 34, says. "That's looking less and less possible to happen in the near future. So now I'm trying to justify the hours worked and the pay."

Negley's two sons are young, ages 4 and 3. He has split custody of his children. He says his current marital status partially can be blamed on his career choice.

Continued on page 24



Rodney Crouse



James Dobbins

PAUL PURDOM Assistant Superintendent, Golfcrest Country Club, Pearland, Texas // **JERRY STOCKMAL** Senior Assistant Superintendent, Whitemarsh Valley Country Club, Lafayette Hill, Penn. // **JOSH BECKER** Assistant Superintendent, TPC Deere Run, Silvis, Ill. // **CHAD YOTTER** Assistant Superintendent, Mayfield Sand Ridge Club, South Euclid, Ohio // **ANDREW LEWIS** Assistant Superintendent, Colonial Country Club, Fort Worth, Texas // **CARLOS SANES** Assistant Superintendent, Fairview Country Club, Greenwich, Conn. // **KRISTOPHER NEGLEY** Senior Assistant Superintendent, The Clubs of Cordillera Ranch, Boerne, Texas // **IAN DANIELS** Assistant Superintendent, Corning (N.Y.) Country Club // **JAMES DOBBINS** Assistant Superintendent, Quail Hollow Country Club, Painesville, Ohio // **SCOTT SLOMIANY** Assistant Superintendent, Pinehurst (N.C.) Resort & Country Club

// ASSIST THE ASSISTANTS

After working eight years as an assistant superintendent, Kris Negley is wondering if the jobs' costs outweigh the benefits.



Continued from page 23

“A lot of guys in my position, it’s hard to justify (the job) to our wives, girlfriends, kids. ‘No, no, no, the payoff is coming!’ — when it doesn’t seem to be happening,” he says. “A lot of guys are telling us that the industry has changed, everyone acknowledges this. Things are different than the way they used to be. OK, that’s easier said than done, being in my position.”

A long ride

Though it’s of little solace to Negley, his superintendent brethren largely agree with him. According to a recent *Golfdom* survey, 62 percent of readers say assistant superintendents are not being paid a fair wage, while 68 percent say it has become more difficult in recent years to keep talented assistant superintendents.

Certified Golf Course Superintendent Ralph Kepple, who hosts the Tour Championship at East Lake GC in Atlanta, has two assistants who are “outstanding,” but he worries that the clock is ticking for them.

“I think there’s going to be a point where, sooner or later, their wives are going to say, ‘How long is this going to take?’ There’s

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“I have two titled assistants, but the reality is I’ve got six or seven guys who could be superintendents somewhere else right now.”

going to be some pressure at some point,” Kepple says. “It’s difficult because right now, in the Atlanta market anyway, there’s not been a lot of superintendent movement. I’m going on my 25th year, and there are a lot of us in that age bracket. I’ve still got 25 years to go, in my opinion, if not more. There’s not an increasing number of golf courses, there’s a decreasing number of golf courses.”



Ralph Kepple

Josh Heptig is the superintendent for San Luis Obispo County in California. Three courses fall under his supervision; Morro Bay GC, Chalk Mountain GC and Dairy Creek GC. He sees the same thing as Kepple in Atlanta — a lack of movement. Heptig has been with San Luis Obispo for nine years and says he has some of the least experience on staff. A lot of his crew have been there for 15 years, and three have more than 20 years of experience. “I have two titled assistants, but the reality is I’ve got six or seven guys who could be superintendents somewhere else right

now,” he says. “We’re unionized labor. We pay well, we live in a beautiful place, guys went to school there, they don’t want to leave.”

Kepple says he has been fortunate in that East Lake has a budget on the rise and not in decline. Like Heptig, he has been able to pay his assistants a competitive salary. Still, he says, “It’s a long ride these days from assistant to superintendent.”

For Dave Burr, assistant superintendent at Sycamore Creek CC in Springboro, Ohio, that ride is coming to an end. Not because he’s moving up, but because he’s moving out.

Burr, age 32, got married last October. His wife has a good job in Dayton. While he loves the work at Sycamore Creek, he does not like the feeling that he’s stuck in his current job with only lateral moves available in the area.

“I’m not willing to pick up and move
Continued on page 26

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Continued from page 25

anymore like I did when I was younger,” Burr says. “I’ve been an assistant since 2009. I can think of maybe one guy I know who I went to school with who moved up to be a superintendent. A lot of guys are moving on instead of moving up.”

Worth the while

For Burr, his move is back to school to pursue a degree in mechanical engineering. His superintendent, Brian Burke, says the toll will be heavy when Burr leaves in August.



Brian Burke

“I’m competing with clubs in this area on a limited budget. A guy like Dave as the assistant is why we’ve excelled in the past,” Burke says. “I know assistants leave all the time, but we’ve made a great team. It’s going to be very difficult to replace his value to the department and the club.”

Wherever he lands after completing his new degree, Burr says a 40-hour work week in an air-conditioned office isn’t the end goal. The hours have never bothered him, he says. If the prospect to move up were just better, Burr wouldn’t be leaving the industry at all.

“I don’t need a \$150,000-a-year job,” he says. “I like the work. But when you start off below where you should, and the bumps are so slow and the jobs aren’t moving... it’s not worth the while.”

Jon Canavan is the golf and recreation turf manager for Milwaukee (Wis.) County Parks. He oversees 15 courses, nine championship-level courses and six par-3 courses. The crown jewel is Brown Deer GC, which hosted a PGA Tour event for 27 years.

Canavan manages a total of nine assistant superintendents. He says he is so desperate for talented assistant superintendents that he has started grooming young staffers himself, even helping them pay for schooling.

He believes the Millennial generation has begun to turn its back on a job that asks for too much for too little in return. He warns that a change in the industry already has begun.

“We are a different breed. The average person can’t do this job, I get that. So maybe we shouldn’t (anger) the people who are different enough to do this job.”

“I don’t think you’re going to have guys working more than 40 hours. I think you’re going to have to respect people’s weekends. I just don’t see people making that commitment in their lives any-



Jon Canavan

more,” Canavan says. “You’re going to have a few guys, but I don’t think you’ll have an overflow of people willing to work 65 hours, get paid X, and never see their wife, girlfriend, kids for six months a year. I think those days are long gone.

“I think when people adapt to that sooner, we’ll have better luck having younger people stay in this profession.”

A different breed

At Cordillera Ranch, Negley says he “100 percent” has had the conversation with his boss about his career and his frustration with a lack of advancement. They even discussed if he should pursue a different career path.

Negley loves the profession too much to leave it.

“There’s no other job that brings me the same joy of watching my course green up after a long winter, or of seeing the members enjoying the playing conditions,” he says. “I haven’t found that elsewhere yet.”

Negley says his friends all tell him he’s a “different breed” to love the work he does, and he agrees.

“We are a different breed. The average person can’t do this job, I get that,” he says. “So maybe we shouldn’t (anger) the people who are different enough to do this job.”

Negley’s favorite thing to do outside of work is to “wrestle with his two little chaps,” Cyrus and Augustus. He says they also love coming out to the golf course with him.

But would he let them pursue his career?

“I’ll tell them what my dad told me: ‘Be smart, use your brain, not your brawn,’” Negley says. “Dad was a garbage man for 30 years and died early, age 51, a massive heart attack while at work. I don’t want to end up like Dad did. It’s a tough pill to swallow when I think about it and realize I work more hours than he worked. But I’ll never tell my boys they can’t do something they love.”


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Modernizing the Rules of Golf

Golfdom discusses the proposed rules changes with the USGA's Craig Winter, director of rules and amateur status.

BY SETH JONES

Five years in the making, the United States Golf Association and the Royal & Ancient last month unveiled proposed changes to “modernize” the Rules of Golf.

This preview allows for six months of review and discussion before being finalized in 2018 and implemented in 2019. For a complete overview of the proposed changes — 24 in all — visit usga.org/rules.

Shortly after the proposed changes were announced, *Golfdom* caught up with Craig Winter, the USGA's director, Rules of Golf and amateur status, to discuss these proposed changes to the rules.

Golfdom: It's been a busy time for you. What's the clubhouse leader in the proposed rules changes that you've been asked about most often?

Winter: Probably, “Why don't I get relief from my ball in a divot?” and, “How have you fixed stroke and distance?” We certainly recognize that stroke and distance is a problem for many people in the game. We've fielded a lot of questions on that particular issue, and we've put out quite a few resources of what we thought about to date. We're committed to continuing that discussion to find a solution.

Golfdom: Do you think any of the proposed modifications will be of particular interest to our readers, in that they could impact the way superintendents do their jobs?

Winter: Yes, I think there are probably two. I'll start with one that is less so — allowing players to repair just



Craig Winter

about anything on a putting green before they play. This is one where — we hope anyway — that this is encouraging maintenance of the putting green, not just with what your readers do, but also everyone who is playing the game. Hopefully that trickles down to make it easier for superintendents to provide that surface they're looking for.

The bigger change we're proposing is about how courses are marked. Today there's the opportunity for committees to decide whether a water hazard is marked a little left or right of where it might be, but ultimately water hazards must be marked under the Rules of Golf. There's a specific procedure on whether it's red or yellow. Ultimately, what's being proposed here is the red/yellow designation be lifted. If the committee wants to mark a water hazard red they can, yellow they can, it's ultimately about what relief options they want to provide to the player. That's a

pace-of-play saver.

Where this most impacts superintendents in how courses are marked is that it's not just about water hazards anymore (we're calling them "penalty areas.") It allows courses to mark areas that previously were not possible to be marked, such as desert, lava rock, forest, tall grass areas.

I would assume a lot of budget goes into maintaining those areas to keep pace of play, because when a ball is lost in an area that is not a water hazard under the rules today, the player's only option is to go under stroke and distance, walk back or play a provisional ball. Here, if a course would like to, they could put a yellow line, a red line around it, and if the player doesn't find their ball, the player can take the water hazard relief option that we know today and continue. It's possible that may lead to areas that don't need to be maintained to the level they are today.

Golfdom: Speaking to greens and al-

lowing golfers to fix damage, some of that damage comes from aggressive new cleats that golf shoe manufacturers have out on shelves. Any chance those could be banned to help prevent this damage from occurring in the first place?

Winter: That's more of an area that we would look at from the equipment than the rules. Spikes that a player may have, whether spikeless, composite, metal — as far as equipment goes — are not addressed in the Rules of Golf. Obviously, there are a lot of products on the market; generally, we don't like to get in the way of that. But that may be an area where they are looking at, but I'm not aware of it.

Golfdom: It's interesting that there's a proposed rule to give golfers a chance to take a drop outside a bunker with a two-stroke penalty.

Winter: We have a code of rules that modifies the Rules of Golf for golfers with

Continued on page 30



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Continued from page 29

disabilities. This is an option that's been in those modifications since they were put together. When we looked at it, it also deals with the pace-of-play issue. In the back of our minds on all these changes were things we can do (to benefit pace of play), but still maintain the fundamentals of golf, the traditions, the history. This one, we felt, a lot of golfers could benefit from, especially beginning golfers or higher-handicap golfers.

Golfdom: I think a lot of people will appreciate dropping the two-stroke penalty for hitting the flagstick with a putt.

Winter: This one can come into play so often. This is a whole lot about pace of play. When you're playing by yourself or just with a couple people, the reality is you're always optimistic when you have that 40-footer. If you look back at the history of the rules — and we did that throughout all this process — this is (a rule) that came

and went, came and went. The late 1960s was the last time golfers were permitted to putt with the flagstick in. Is there really any reason to have players pull the flagstick, especially in those situations where it's just going to slow down play? We didn't see a reason to do so.

Golfdom: I'm seeing more and more people with music in their golf carts, and I might be one of them. Why did the USGA and the R&A feel compelled to touch on this topic?

Winter: Well, we do call this the "rules modernization initiative," and I think this is one of many changes that (if) you look at the way the game is played today, it's not the same as it was played in the past. The prohibition was introduced only in 2014 by decision. We have a rule in golf that limits how golfers can use artificial devices. This is really just a recognition that if you want to listen to music on the golf course because you want to be entertained, that's

OK. But we still have a line in the sand that says, look, if you're doing it to help with your tempo, to relax you, to eliminate distractions — we still don't want artificial devices to be able to assist you, so that particular use would still be a prohibition.

Golfdom: Do you like to listen to music on the golf course?

Winter: I don't do it that often, but when I go on some golf trips I've certainly been known to appreciate the music that others have put on.

Golfdom: OK, but if you were choosing the tunes, what would you put on?

Winter: If I was doing it? When I go to the driving range I typically have something — classical or folk music. Emmylou Harris, Ben Harper would be playing in my ears. But the purpose of that would be to eliminate distractions of the other folks working on their games. Doing that on the golf course would be exactly why we prohibit it. **G**

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LEAVING A PATH OF DESTRUCTION

ANNUAL BLUEGRASS WEEVIL ON THE MOVE

The annual bluegrass weevil (*Listronotus maculicollis*), or ABW, is on the move. What was once a pest specific to the Northeast now has superintendents as far south as North Carolina and west into Ohio anxious that their course could be next.

This turf-destroying insect feeds primarily on *Poa annua* (annual bluegrass), a variety common to golf courses in this part of the country. ABW adults overwinter in protected areas around the course, including tree litter, brush and roughs. In spring, they emerge and migrate to shorter turf (fairways, collars, greens and tees), where they lay eggs between the sheath and stem; the larvae develop and then feed.

The first to third instars are stem borers, moving between turf blades to feed and complete their development. The fourth and fifth instars are more damaging, as they move outside of the plant and forage on the turf crown, killing the plant in the process.

“We were able to apply MatchPoint during a time that worked for our schedule, and we didn’t have to worry about watering it in immediately.”

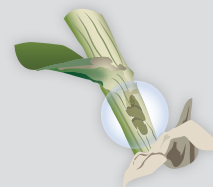
— Scott Wunder,
Piney Branch Golf Club

Scott Wunder, golf course superintendent and general manager at Piney Branch Golf Club in Upperco, Maryland, has been battling ABW since 2005, and this year is no exception. The unseasonably warm spring and summer, mixed with excessive humidity, created an ideal breeding ground for ABW.

“This May, we put down MatchPoint insecticide for our first application of the season,” he says. “We were able to apply MatchPoint during a time that worked for our schedule, and we didn’t have to worry about watering it in immediately.”

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“We typically make up to six ABW applications each year,” Wunder says.



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// **SOUTHEASTERN RESIDENCE**

GETTING TO KNOW THE NEMATODE

By Glenn Galle and Jim Kerns, Ph.D.

Turfgrasses on many golf courses are under constant disease pressure, especially from nematode feeding damage. Sting nematode (*Belonolaimus longicaudatus*) is one of the most damaging turf pathogens. Root-knot nematode (*Meloidogyne spp.*) is also damaging, but feeds and reproduces within the roots and can be difficult to reach with nematicides. Little is known about how sting and root-knot nematodes move within the soil profile or where they primarily reside during the different seasons in North Carolina and the southeastern United States. A better understanding of nematode population dynamics throughout the year can lead to more effective control.

Our objectives are to determine the population dynamics of sting and root-knot nematodes within the soil profile of golf course greens. Twelve-inch soil cores were taken from the perimeter of golf course greens throughout central North Carolina and sectioned into three 4-inch sections. We extracted nematodes and counted.



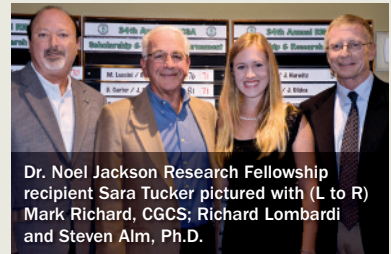
The photo on the left is an untreated area with severe sting nematode feeding damage. The photo on the right is on the same putting green, but nematocide application was properly timed.

Primary findings from this study show that during the winter and early spring months, a majority of the sting nematode population is found in the top 4 inches of the soil column. However, in the late spring and summer months the nematode population moves deeper, between 4 and 12 inches in the soil column. We found root-knot nematodes exclusively within the top 4 inches of the soil column throughout the entire year.

The findings indicate that nematocide application should occur earlier in the season, when both sting and root-knot nematodes are found within the top 4 inches of the soil column. This can increase the potential for nematode-nematicide contact and help lower the population before they start to increase in numbers and move deeper heading into the stressful summer months.

Glenn Galle and Jim Kerns, Ph.D., are at North Carolina State University. You may reach Glenn at ghgalle@ncsu.edu for more information.

NEWS UPDATES



Dr. Noel Jackson Research Fellowship recipient Sara Tucker pictured with (L to R) Mark Richard, CGCS; Richard Lombardi and Steven Alm, Ph.D.

RHODE ISLAND GCSA AWARDS \$28,000 IN SCHOLARSHIPS

The Rhode Island Golf Course Superintendents Association has awarded a total of \$28,000 in scholarships to 10 college students for 2017.

Sara Tucker, a University of Rhode Island graduate student working on a project titled, "Bee Forage and Habitat for Rhode Island Golf Courses," was awarded the \$10,000 Dr. Noel Jackson Research Fellowship. She will be working on this project over the summers of 2017 and 2018.

The C. Richard Skogley Memorial Scholarship and Ryan Reynolds Legacy Scholarship were awarded to Andrew Garcia, University of Rhode Island, and Catherine Felicetti, Ithaca College, respectively. The following students were awarded RIGCSA scholarships: Austin J. Cabral, Community College of Rhode Island; Lauren Callahan, University of Miami; Lily Chalifour, Eastern Connecticut State University; Emma Colombo, University of Massachusetts Amherst; Nathan D. Eichner, Methodist University; David Mihailides, Community College of Rhode Island; Randi Tella, Rhode Island College.

“WE DISCOVERED CHALLENGES TO GROWING BERMUDAGRASS IN NORTHERN CLIMATES. SOME OF THESE CHALLENGES ARE BEYOND OUR CONTROL.”

Matt Williams

(see story on page 34)

// SUSTAINABLE YEAR TO YEAR?

Bermudagrass adaptability in northern climates

By Matt Williams, David S. Gardner, Ph.D. and John R. Street, Ph.D.

Superintendents always look for ways to increase playability and durability of turfgrass stands, particularly under periods of stress. They often achieve this by selecting a species or a group of species for a specific climatic zone (i.e. warm-season grasses in the South and cool-season grasses in the North). This works well if the golf course has a grass that performs well for much of the year.

However, there still are growing season periods when stressful climatic conditions affect turf quality. To minimize this, golf course managers in the Transition Zone have used a combination of both warm- and cool-season grasses through overseeding programs. This can work well, but it can also affect turf quality during the transition periods.

With the advancement of cold tolerance and winter hardiness in common and hybrid bermudagrasses over the past 15 years, we have



Research provided and funded by USGA.

proposed using both warm- and cool-season grasses independently on the golf course. So, on northern golf courses we proposed dedicating areas of the course to warm-season grass (bermudagrass) during the year when it performs best. Consequently, this approach should allow recovery time for cool-season turf areas during these same periods. This allows courses to survive the stressful summer months with little or no play.

Can a golf course dedicate a significant section of its driving range, tees or tees on par-3 holes or others to bermudagrass with the idea of utilizing it during

July and August, when it performs best? The answer to that question lies in whether those bermudagrass areas can be sustainable from year to year without a significant increase in maintenance.

In conjunction with the USGA Green Section, we established a study designed to determine if different cultural practices can provide enhanced cold tolerance to four winter-hardy bermudagrass cultivars grown at the northern limit of bermudagrass adaptation.

STUDY METHODS

The study was initiated in April 2014 on a sand-based area at the Ohio Turfgrass Foundation Research and Education Facility, Columbus, Ohio (Figure 1). Four cold-tolerant cultivars of bermudagrass (Latitude 36, Riviera, Patriot and Northbridge) were established by sod while still dormant. Latitude 36 and Riviera were grown at the research facility and were harvested and transplanted. Patriot and Northbridge were provided by a sod farm in Delmar, Md. Treatments were applied and data were collected during the fall of 2014 and reported to the USGA Green Section. In the spring of 2015, all bermudagrass cultivars suffered virtually 100-percent winterkill. The study was reestablished June 1 for fall treatments. It was determined that sprigging would be the best method of establishment. The plots were sprigged on July 14 and mowing began Aug. 3.

The plots were mowed five times per week at 0.75 inches. In the spring, we used foramsulfuron (Revolver) to control annual grassy weeds and overseeded ryegrass (from samples

Continued on page 36

FIGURE 1



Establishment of bermudagrass research plots at the Ohio Turfgrass Foundation Research and Education Center in April 2014.

ALL PHOTOS COURTESY MATT WILLIAMS

FIGURE 2



Color differences between the covered study and uncovered surround.

FIGURE 3



Research plots demonstrating fall color retention in October 2015.

TABLE 1

2014 Fall Color by Cultivar

Trt	Cultivar	9/9	9/22	10/01	10/08	10/14	10/22	10/31	11/07
1	Patriot	4.25c	4.95b	5.29a	5.1	5.02c	4.72b	4.52ab	2.75
2	Northbridge	4.33c	5.38ab	5.08ab	5.31	5.54ab	5.43a	4.46b	2.9
3	Riviera	6.5a	5.66ab	4.63b	4.85	5.19cb	4.96ab	4.04b	2.46
4	Latitude 36	5.25b	5.79a	5.38a	5.42	5.69a	5.41a	5.00a	3.04
LSD(0.05)		0.69	0.8	0.53	NS	0.49	0.61	0.48	NS

[†] Color rated on a 1-9 scale where 1 = brown, 5 = lowest acceptable rating, 9 = dark green
[‡] Means followed by the same letter are not significantly different (P=0.05) according to Fisher's Protected LSD test
[¶] NS means not significantly different (P=0.05) according to Fisher's Protected LSD test

TABLE 2

2015 Fall Color by Cultivar

Trt	Cultivar	10/08	10/15	10/22	10/30	11/06	11/25	12/01
1	Patriot	6.52	6.77a	6.71a	5.21a	5.02a	4.31a	3.81a
2	Northbridge	6.50	5.94b	6.40ab	5.02a	4.94ab	3.46b	1.98b
3	Riviera	6.42	5.5c	6.06bc	4.85a	4.54b	4.27b	2.17b
4	Latitude 36	6.69	6.29b	5.62c	5.40a	5.46a	3.46b	1.85b
LSD(0.05)		NS	0.43	0.53	NS	NS	0.63	0.69

[†] Color rated on a 1-9 scale where 1 = brown, 5 = lowest acceptable rating, 9 = dark green
[‡] Means followed by the same letter are not significantly different (P=0.05) according to Fisher's Protected LSD test
[¶] NS means not significantly different (P=0.05) according to Fisher's Protected LSD test

TABLE 3
2015 Fall Color by Cultural Treatment

Trt	Treatment	10/08	10/15	10/22	10/30	11/06	11/25	12/01
1	Untreated	6.58ab	6.25a	6.33ab	5.15b	5.00b	3.71a	2.27b
2	Pigment	6.75a	6.40a	6.48a	5.44a	5.33a	3.77a	2.52a
3	PGR (Hybrid)	6.39bcd	6.11a	6.08b	5.03b	4.92b	3.50ab	2.5ba
4	PGR (Common)	6.17d	5.25b	5.33c	4.58c	4.33c	3.00c	1.83c
5	PGR + Pigment (Hybrid)	6.50bc	6.19a	6.30ab	5.06b	5.05b	3.75a	2.72a
6	PGR + Pigment (Common)	6.3cd	5.25b	5.42c	4.75c	4.25c	3.33b	2.58a
LSD(0.05)		.25	0.30	0.28	0.24	0.28	0.28	0.24

[†] Color rated on a 1-9 scale where 1 = brown, 5 = lowest acceptable rating, 9 = dark green

[‡] Means followed by the same letter are not significantly different ($P=0.05$) according to Fisher's Protected LSD test

[¶] NS means not significantly different ($P=0.05$) according to Fisher's Protected LSD test

Continued from page 34

received for the sod farm) at a rate of 0.4 fl. oz./1,000 sq. ft. During the growing season, the bermudagrass received 0.5 lb. of nitrogen/1,000 sq. ft. (ammonium sulfate) weekly and were sand topdressed and dethatched every two weeks.

We replicated treatments three times and used a split-plot design. The main plot factor was bermudagrass cultivar and the subplot factor was cultural practice. We initiated cultural treatments Sept. 1 and continued until all plots were dormant each fall. The cultural treatments consisted of:

- 1) Untreated control
- 2) Turf colorant at a rate of 16 fl. oz./1,000 sq. ft. every 14 days
- 3) Trinexapac-ethyl at a rate of 0.125 fl. oz./1,000 sq. ft. every 14 days
- 4) Trinexapac-ethyl at a rate of 0.375 fl. oz./1,000 sq. ft. every 14 days
- 5) Turf colorant at a rate of 16 fl. oz./1,000 sq. ft. plus trinexapac-ethyl at a rate of 0.125 fl. oz./1,000 sq. ft. every 14 days.
- 6) Turf colorant at a rate of 16 fl. oz./1,000 sq. ft. plus trinexapac-ethyl at a rate of 0.375 fl. oz./1,000 sq. ft. every 14 days.

We used no covers during the fall or winter of 2014. Because of the

significance of the winterkill during the study's first winter, we installed covers on the plots daily during the fall of 2015 when the forecasted overnight low was less than 50 degrees F. The covers were left on for the entire winter.

RESULTS

There were dramatic differences in spring green-up among treatments from year to year. We saw virtually 100-percent winterkill after the first winter and no observed difference in spring green-up after the second winter. We speculate that this was due to the vastly different weather patterns of the two winters and the decision to use winter covers during the second year (Figure 2).

We observed acceptable color ratings (greater than 5) through mid-October in both years for all cultivars (Figure 3). Generally, the hybrid bermudagrasses (Latitude 36, Patriot and Northbridge) outperformed the common variety (Riviera) (Tables 1 and 2).

Treatments that included pigments produced both observed and statistical differences in fall color ratings. (Table 3)

There were no observed differences of soil temperature, canopy temperature or divot recovery between

treatments or cultivars throughout the duration of the trial.

MORE QUESTIONS THAN SOLUTIONS

As occurs many times with research, you sometimes come up with more questions than solutions. We discovered challenges to growing bermudagrass in northern climates. Some of these challenges are beyond our control. This was demonstrated in the loss of the plots during the first year of the trial.

The 2014-2015 winter was one of the colder winters in Ohio in some time. This trial was designed to determine if the winter-hardy bermudagrass varieties along with cultural practices (pigments and PGR) could survive Ohio winters. After much discussion, we initially decided against using winter covers as they were considered an additional input that wouldn't be needed on a similar cool-season turf. However, we decided to use covers in the spring of 2015 to protect against losing the plots in two consecutive years.

Subsequently, the winter of 2015-2016 was extremely mild, and covers may have mitigated any differences that may have been observed without them. This trial was performed

on a 100-percent sand root zone. We have plans to conduct a similar trial on finer-textured soil and compare the differences to this trial.

The cold-tolerant bermudagrasses in this trial maintained acceptable color ratings well into October in both years. This is well past the July-August window that we proposed using the turf as an active teeing area on the golf course.

There were no differences in fall divot recovery between variety and treatment. However, an average of 70-percent divot recovery occurred by Nov. 1 on divots that were created on Sept. 1 across all cultivars.

There is work to be done to ensure that bermudagrass can be managed sustainably from year to year on a golf course in a northern climate. We believe it is worth further research because of the potential benefits it could provide during the hot summer months, when it has the potential to outperform cool-season grasses under the same conditions.

Matt Williams, an M.S. candidate, is a program coordinator for the Ohio Agricultural Research and Development Center at The Ohio State University, David S. Gardner, Ph.D., is an associate professor of Turfgrass Science at Ohio State, and John R. Street Ph.D., is a professor emeritus of Turfgrass Science at Ohio State. You can reach Dave Gardner at gardner.254@osu.edu for more information.

Acknowledgements

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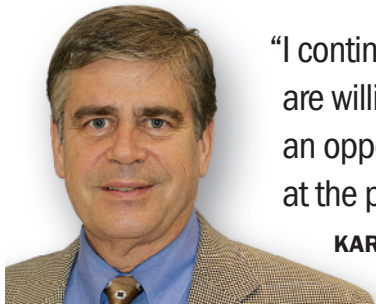
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"I continue to tell students that if you are willing to go anywhere, you have an opportunity to get the job you want at the pay you desire."

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

Sorry, Doc, golf isn't dead, it's changing

In the last 10 years or so we have seen assistant superintendents leaving the profession to the point where there is a lack of new college graduates to fill assistant superintendent positions around the country. The loss and lack of assistant superintendents does not bode well for the future of the profession.

Before we look forward, let's look back. The impact on golf of the Great Recession (late-2000s) both in measurable terms and in the psyche of the public, cannot be overstated, and continues today. My doctor retired a year ago. At my first checkup with the new doctor, she asked me what I did for a living. After I told her, she responded, "I thought golf was dead." Since then, I've been aware of how many people share my doctor's view. That attitude doesn't encourage young people to get into the profession.

Since the Great Recession, superintendents have seen course closures, budget cuts, longer work hours and a notable drop in personal wealth associated with retirement accounts, which contributes to a sense of loss in personal security.

Suddenly, superintendents who might have thought about early retirement or changing jobs prior to the recession were lucky to have a job, and retirement funds tanked, delaying

retirement. Assistant superintendents became stuck, with the ability to move up to a new superintendent opening coming to a halt. The days of an assistant working hard and moving on to a superintendent position after just a few years became 10 years or longer. Faced with this prospect, assistants began looking for employment outside the profession.

This has trickled down to students working on golf courses. Traditionally, the lifeblood of turf programs at universities are high school or college students hired as summer employees. If you think of how you got into golf course maintenance, you probably trace it to a superintendent mentoring and encouraging you into the profession. I've not seen much of that in the last several years. Many students working on golf courses have been discouraged because of a rather negative (and probably realistic view) of the profession.

A common explanation for the low number of college turfgrass students —

and thus potential future assistant superintendents — is cost. Based on 2015 data, 68 percent of public university graduates have incurred college loans averaging \$30,000. However, if cost were the single most important factor, 1- and 2-year technical schools would have reported an increase in the number of turfgrass students, which is not the case. The technical schools don't have the turfgrass students, either.

Salaries for assistant superintendents have been stagnant and relatively low. However, this is changing to a large degree because of the current lack of good students to fill openings. I continue to tell students that if they are willing to go anywhere, they have an opportunity to get the job they want at the pay they desire.

The issue with moving anywhere is that assistants entering the job market now face personal issues that were not as prevalent 30 or 40 years ago. In a world where both partners in a relationship work and pursue their own careers, compromise is a part of life. Assistants are often restricted to a locale because of a spouse's employment requirements. And given shared responsibilities in raising a family, working 70 hours a week is not feasible.

Some think Millennials don't have the same passion or won't work as hard as previous generations. I have found through my interaction with turf students that their attitudes, love and passion for golf course management hasn't changed. The environment in which we work and live has.

Given the issues the golf course management industry faces, we often forget what a great profession it is. Do you remember why you got into the profession? The next time an employee is inquiring about being a superintendent, tell him or her why you did.

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

All things wetting agents

Doug Karcher, Ph.D., is a turfgrass scientist at the University of Arkansas. Doug has conducted extensive research and teaches numerous seminars on wetting agents. You may reach Doug at karcher@uark.edu for more information.

QAre preventative wetting agent applications more effective in controlling localized dry spot than curative applications?

Preventive applications are more effective controlling localized dry spot (LDS), especially on greens with a history of LDS and greens with slopes, mounds and south exposures that quickly dry out.

Curative applications can work, but usually not before turf quality declines to some extent. If you are in a situation where your only option is a curative application, pay close attention to the greens, and make an application of wetting agent the first day you see LDS appear.

QWhen should a superintendent start making preventative wetting agent applications?

In Arkansas, we typically start in mid-April to mid-May and continue until late September or early October. It's better to make the first application too early than too late. If you are experiencing a warm, dry winter, a wetting agent application in early spring makes sense, especially if the irrigation system has not been turned on. Except for the cost of the product there is no downside

to making a wetting agent application in early spring. If irrigation is not available, try to time the application prior to a rainfall event.

WE RECENTLY INITIATED AN EXPERIMENT TO INVESTIGATE IF APPLICATION VARIABLES MIGHT AFFECT SURFACE SOFTNESS OR PUFFINESS.

We are conducting an experiment on ultradwarf bermudagrass greens in which we are examining the impact of late fall/early winter wetting agent applications. Our past few winters in Arkansas have been dry, with periodic warm weather — conditions that favor desiccation. Under such conditions, we have seen earlier spring green-up and better turf quality in early spring following a wetting agent application in early December.

QDo wetting agents cause more water to be held at the turf/soil surface?

This is the No. 1 concern of superintendents. Many contend that a softer, puffier putting surface sometimes results from wetting agent application. In 10-plus years of research testing a few dozen products, the wetting agent-treated plots never held more moisture at the turf/soil surface than the

untreated control. That research used traditional monthly applications in a relatively high spray volume of 2 gal. per 1,000 sq. ft.

We recently initiated an experiment to investigate if application variables might affect surface softness or puffiness. We are comparing

wetting agents applied at a full rate every 28 days in a high volume of water versus wetting agents applied at a half rate every 14 days in a low volume of water to compare the label recommendation with the method many superintendents use to apply wetting agents. In one of two years for a couple of tested products we saw a slight increase in moisture at the turf/soil surface. We are trying to determine the importance of these findings.

From late June through August, as day length shortens while temperatures remain high, we frequently observe creeping bentgrass greens becoming puffy, regardless of whether they have been treated with a wetting agent. This is when many superintendents notice more moisture at the soil surface and when many have ramped up their wetting agent program. I think that a lot of the reported puffy/soft surfaces resulting

from wetting agent application is more of a correlation based on the time of year rather than a causation effect. If surfaces become soft I strongly urge superintendents who are concerned about this issue to use soil moisture meters and monitor treated and untreated areas to verify whether a wetting agent is the culprit.

QIs there anything else you would like to add?

Golf organizations are funding a higher level of university research to better understand many aspects of wetting agents that have not yet been examined. Topics being researched include removal of organic coatings from sand particles, determining if some wetting agents function to move water through the profile and the effectiveness of wetting agents applied in late fall/early winter.

Superintendents need to use a moisture meter if they are dealing with LDS. Wetting agents improve soil moisture uniformity throughout the soil profile. Using a soil moisture meter helps superintendents take advantage of the improved soil moisture uniformity by increasing the time between irrigations or hand-watering.



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

The Shop

// MUST-HAVE NEW EQUIPMENT



1



2



3

1 G885 golf rotor

The G885 golf rotor gear drive will push through anything that gets in its way, according to **HUNTER INDUSTRIES**. The rotors have part-circle and full-circle rotation capabilities from 60 degrees and 360 degrees, and the water pressure range is 50 psi to 100 psi. The spray radius reaches 43 inches to 91 inches with a discharge rate of 8.2 To 57.5 gallons per minute. The G885 can be used on new constructions, retrofits and system upgrade situations.

hunterindustries.com

2 MT 3500 S

With a 38.9cc engine that delivers 2.0 hp, the MT 3500 was recently released from **EFCO**. The chain saw features an on/off switch, choke and throttle lock incorporated into one switch for simple operation. Also included is a six-point anti-vibration system for operator comfort, a lateral chain tensioner for chain adjustments and an in-board clutch for simplified maintenance, according to the company. Efcop supports all of its products with a five-year consumer and two-year commercial warranty.

efcopower.com

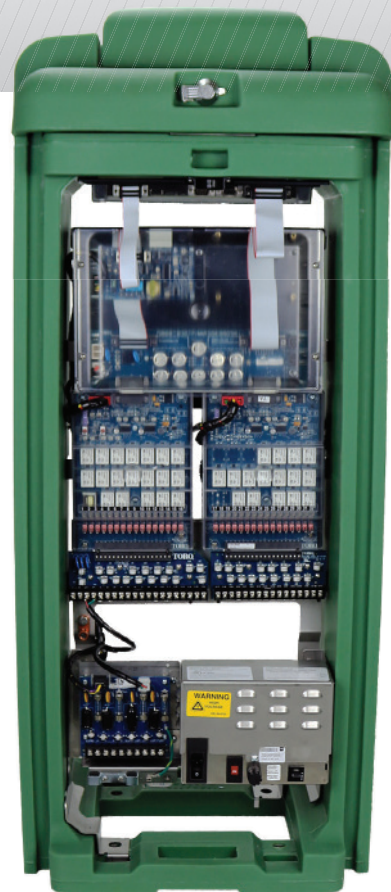
3 ProMaster van

The ProMaster van helps users get more done at whatever time you're doing it. This van from **RAM** is available in 15 different configurations and has more than 460 cubic feet of cargo capacity. Its max hauling capability can reach 5,100 lbs. and it can haul a payload of up to 4,420 lbs. The van comes standard with a 280-hp, V6 engine, but a 3.0L ecodiesel engine option is also available.

ramtrucks.com



5



6



4

CHECK OUT MORE NEW EQUIPMENT ONLINE

To stay up to date on all the latest products and services, visit golfdom.com/category/products

4 Integrated Control System

RAIN BIRD's Integrated Control (IC) System links a golf course's central control directly with its rotors, eliminating the need for decoders or satellite controllers. The IC System uses up to 90 percent less wire, decreasing the costs associated with installation. Since control is built right into the rotor, the IC System requires 33 percent to 50 percent fewer splice points, decreasing opportunities for potential failure, according to the company.

rainbird.com/golf

5 Ultramax Blue

The multi-purpose, heavy-duty UltraMax Blue hose from **UNDERHILL INTERNATIONAL** offers 1200 psi burst pressure strength, long-life TPE material construction, machined brass couplings, flexible handling and abrasion resistance. It's 45 percent lighter than comparable commercial hoses and is a practical solution for syringing greens and tees and general club maintenance, according to the company. All UltraMax Series hoses are available in 3/4-inch and 1-inch widths, and 50-foot, 75-foot and 100-foot lengths. Custom lengths can also be specified.

underhill.us

6 Lynx Smart Satellite

A successor to the **TORO** Network VP, the Lynx Smart Satellite is an all-new golf course irrigation controller designed by the company for enhanced performance and greater reliability. The entire Network VP platform has been integrated into the Lynx Smart Satellite system. Its new features includes an updated user interface with a larger backlit display, enhanced wireless communications, sensor input kit compatibility and new diagnostic tools.

toro.com

The 19th Hole



Thad Thompson



SUPERINTENDENT // Terry Hills GC, Batavia, N.Y.



So, Thad, this will be the first 19th Hole I've done in a state of emergency. Our governor declared a state of emergency last night at midnight before the snow even started. They're saying up to 2 feet.

Tell me about your family. I've got two sons, Daley, who is 20, and Dylan, who is 18. Daley is at the University of Buffalo, getting ready to go for his Masters. Dylan is at (SUNY) Brockport and is a drummer in a heavy metal band.

Hey, Keystone Light cans? Excellent. Nobody's cooler than Keith Stone.



What are your sports teams? Buffalo Bills and Buffalo Sabres. I grew up around here. And we host the Jim Kelly Celebrity Classic every year.

Tell me about your course, Terry Hills. It's busy. It's a 27-hole, daily fee course. It's the home of the Jim Kelly Classic. We're the first to open and the last to close in the area. And most important, it's run by a great family; they're extremely supportive.

So, do you know Jim Kelly? Well... I see him every year. He presented me with a bag last



"THE MOST RANDOM THING IN MY OFFICE IS PROBABLY A SIGNED JIM KELLY FLAG... ACTUALLY, MY BOSS WOULD SAY IT'S MY DESK, BECAUSE I NEVER SEE THE (EXPLETIVE) THING."



year for all my "outstanding work."

Fill in the blank: In the next five years, the golf industry will...

Become much more transparent. We now have, in New York, publicly published best management practices. Environmental awareness is going to be at an all-time high. I think we can use it to our advantage for public relations. In New York state we have water reporting, which I bet will be made public at some point — which is fine because it's going to show that I'm an environmental steward based on these things. It's going to be more transparent, it's got to be.

Tell me about your first superintendent job. My first superintendent job, I got in the fall of '91, it was one week into my last year in college. My best friend and mentor at the place

I started at died of a heart attack on the 7th green. I was offered the job at his funeral. I ran a 9-hole public course while I was in college; I was still a 21-year-old kid.

That's incredible. And your brother also is a superintendent? Drew likes to tell people I got him into this business, which is crap — he forged his own way. Now he's the certified superintendent at East Aurora (N.Y.) CC. We get to work together one day a year. He gets to host the International Junior Masters every year, it's the oldest junior golf invitational in North America. I go for the final round, we go and change the flags and have a cocktail as we do it.

OK, if I throw you a surprise birthday party, what do I need to make sure we have? My son's heavy metal band, my neighbors and a big ol' tub of Keystone Light.

As interviewed by Seth Jones, March 14, 2017.

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