MARCH 2015 golfcourseindustry.com **ECOURSE** SERVING THE BUSINESS
OF GOLF COURSE MANAGEMENT Aggressive new spike designs are chewing up putting surfaces. GCI investigates this nuisance and how to counter it.

INSIDE

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ALWAYS DRIVEN



"THE ADDED POWER, VERSATTACH,

FUEL SAVINGS,

TURNING RADIUS, IT'S QUIET...
THEY DID IT RIGHT."

Don Garrett • The Walker Course



Don Garrett says it was Carryall's

good looks that caught his eye. But once he put three new vehicles into service on The Walker Course, it was the wealth of features that earned his respect and set Carryalls apart from all other light-duty utility vehicles features that make his crews' jobs easier, and save money for Clemson University. "They're ready to work," says the head superintendent.

"The loads they can pull, the way VersAttach protects my gear, the longer service intervals that save time and

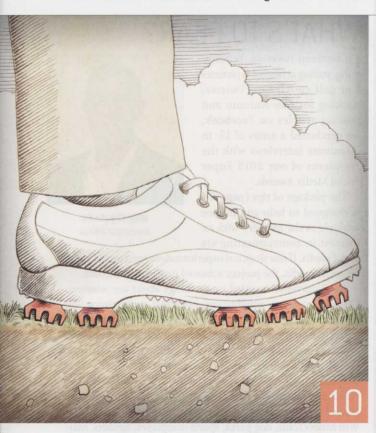
money, Carryalls do things no other utility vehicles in my fleet can." See for yourself that Carryalls are more than just a pretty face. Watch Don's video and learn more at **clubcar.com.**





Martin Hargreaves designed this month's cover illustration. To see more of his work, check out www.illustrationweb.us/artists/MartinHargreaves VOL. 27 NO. 3

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Annual bluegrass weevils are on the march. Here's what superintendents need to know to stop them in their path.

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AN ANDY OF ALL TRADES

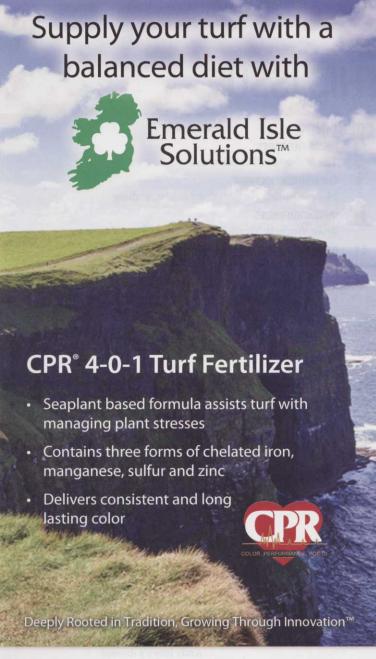
Instilled with his father's work ethic, The Country Club of the Crystal Coast superintendent Andy Ipock's diverse background has helped

him survive a volatile golf market.





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WHAT'S TO FEAR?

n between tweeting, retweeting, staring at beautiful pictures of golf courses on Twitter, packing for San Antonio and posting articles on Facebook, we conducted a series of 15- to 20-minute interviews with the recipients of our 2015 Super Social Media Awards.

The package of tips (page 20) is designed to help and inspire anybody in the industry with an interest in communicating via



Guy Cipriano Assistant Editor

social media. If one skeptical superintendent reverses his views on social media, the project achieved its desired outcome.

The interviews revealed many things about our winners. They are engaging, enlightening, energetic, entertaining and accommodating. In short, they are capable of guiding the industry into an era of openness where many fears are eliminated.

Fear, unfortunately, blankets the industry like the shade provided by an unwanted tree behind the 12th green. What happens if golf fails to connect with Millennials and their children? How far can participation numbers plunge? Are we headed toward a future with fewer than 10,000 U.S. courses? Will fitness trails, dog parks, sports complexes, farmers' markets or the dozens of other spaces Millennials value replace the land where golf courses rest?

Overcoming three fears linked to social media, coincidentally, are ways to eliminate uncertainty about golf's future. The fear of the unknown, getting fired and adding one more task to already crammed schedules are among the reasons why some industry professionals avoid social media, which happens to be a quick and easy way to connect with Millennials.

Sure, the unknown is intimidating. Yet anyone who has worked on a golf course has operated a utility vehicle, trimmed a branch or maneuvered a mower around a tight spot. Tweeting and blogging is much easier – and less dangerous – than any of those tasks.

Unless you are former PGA of America president Ted Bishop, losing a job because of a tweet or blog post is extremely difficult. Bishop, by the way, still has his full-time job in Indiana .

The time commitment can be minimal or abundant. The more effort you put into social media, the more you glean from it. Superintendents are saving money, turf and aggravation through communication channels that didn't exist a decade ago. What's not to like?

The award recipients featured in this magazine will tell you they are better at their respective jobs because of social media. They are living fulfilling lives while bringing positive attention to their respective facilities. They have succeeded by eliminating trepidation. It's comforting to know that examples of industry veterans who are overcoming this fear exist. GCI

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NOTEBOOK

GCI at GIS

Meetings, pictures, news conferences, education sessions, tours and tweets... GCI was everywhere during the Golf Industry Show. Here's a quick recap of what we saw in San Antonio. More pictures can be viewed on our issue app.



Winners of 2015 Super Social Media Awards celebrate with Pat Jones following the awards ceremony at the Aquatrols booth. Winners include, front from left, Steve Cook, Oakland Hills Country Club; Jason Hooper, Quilchena Golf & Country Club; Adam Garr, Plum Hollow Country Club; Scott Griffith, University of Georgia Golf Course (accepting for the Georgia GCSA), and back from left: Pat O'Brien, Hyde Park Golf and Country Club; Scott Dey, Mission Viejo Country Club; Matthew Wharton, Carolina Golf Club; and Joey Franco, Brookstone Golf & Country Club.



Isleworth (Fla.) Golf & Country Sean Duffy was summoned to the floor following the conclusion of the trade show for a good reason: He won the Golf Course Builders Association of America's Harley-Davidson raffle. Proceeds from the raffle benefitted the GCBAA Foundation's Sticks for Kids and scholarship program.



Jacobsen's GIS presence was anchored by the new Jacobsen Truckster XD heavy duty utility vehicle. Serving as a replacement for the venerable Cushman Turf-Truckster, the XD has a payload of 3,550 pounds, which allowed the company to place gigantic television screen in its bed.



Not all of the activity happened inside the Henry Gonzalez Convention Center. The "Zoysia as a Game Changer Tour" brought more than 100 superintendents to Bladerunner Farms and Golf Club of Texas for discussions with David Doguet and other zoysiagrass pioneers. Type http://bit.ly/18i0dY1 into your web browser for a recap of the tour.



GIE MEDIA'S HORTICULTURAL Scholarship

SCHOLAR SEARCH

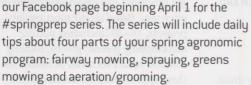
Golf Course Industry, and its parent company, GIE Media, the leading media company serving the lawn and landscape, golf course, nursery, greenhouse and garden center markets, has established a fund to support academic scholarships for outstanding college students focused on leading in the green industry. GIE Media is giving away two \$2,500 scholarships, including The Stanley Zontek Memorial Scholarship. Type bit.ly/1EOHISy into your web browser to download the application. Please print off and fill out the form completely, then mail it to Chuck Bowen, Lawn & Landscape, 5811 Canal Rd., Valley View, OH 44125.

To be eligible for an academic scholarship or an internship program, you must be enrolled at a recognized two- or four-year college or university working toward a degree in horticulture, environmental science or other field related to a segment of the green industry.

#SPRINGPREP

GCI is partnering with Toro to provide a series of turf tips to get you ready for spring via social media in April.

Follow along @ GCIMagazine and @ torogolf on Twitter and



The month will culminate with a Twitter chat hosted by GCI publisher/editorial director Pat Jones.







Straight from the Twittersphere, here's what superintendents thought about GIS '15 in San Antonio.



Will bowling

@McWillis24

What an awesome week at #GIS15 in San Antonio! It was such a blast! Already looking forward to #GIS16 next year! San Diego here I come!



Paul Johnson

@bleedingreen10

It looks like only @GolfChannel got it right with any coverage of the Golf Industry Show, #educatethegolfer #supportyourlocalsuper #GIS15



Jesse Shaver

@GLCCTurf

Awesome to finally meet some fantastic guys and put some faces to names at the #GCITweetUp15 @tonynyssegcs @LowBudgetSupt @ CGCGreenkeeper



Jon Lobenstine

@ilobenstine

#GCITWEETUP15 Thanks to all the social media innovators out there! @Aquatrols @ GCImagazine #GIS15 good work folks!



Bob Porter

@hiawathaturf

Thanks to those that attended the education seminars and sessions. Those of us fortune enough to teach them appreciate it very much! #GIS15



Sam Reznicek

@SRez_Turf

Back home from #GIS15 always great meeting and sharing stories and info with some of the best GC supts in the business.

GREEN REBUILDING METHODS



Jeffrey D. Brauer is a veteran golf course architect responsible for more than 50 new courses and more than 100 renovations. A member and past president of the American Society of Golf Course Architects, he is president of Jeffrey D. Brauer/GolfScapes in Arlington, Texas. Reach him at jeff@ jeffreydbrauer.com.

₹rom time to time, I see confusion among greens committees on green reconstruction. They may have heard that Tiddly Links Country Club "rebuilt" their greens for only \$300,000, and their architect is proposing "rebuilding their greens" at Massive Heart Attack Club for over \$3 million.

The confusion stems from the fact that there are many different ways to rebuild greens, each with its own price level.

TURF REPLACEMENT

- Interseeding (Greens may even stay in play)
 - · Aerify and remove plugs
 - · Place seed/sand mixture back in holes
 - · Multiple processes eventually converts green to new selection
- No-till method
 - · Kill existing turf with Roundup or equal
 - · Rototill turf to remove, discard
 - · Add 1-2 inches of same greens material to replace any lost with turf
 - · Plant with new and improved turf, without any greens modifications
- Partial greens mix replacement/modifications an opportunity to:
 - · Kill existing turf with Roundup or equal
 - Remove top 4–6 inches of mix (including thatch and roots), discard
 - · Replace with similar replacement mix (as close as is available)
 - Rototill old and new mix together for consistent blend throughout top 10 inches (Taking care not to disturb gravel layer)
 - Change contours 1–2 inches up or down with mix depth to soften contours, if necessary
 - · Plant with new and improved turf

SOIL AND DRAINAGE REPLACEMENT FOR AGRONOMIC IMPROVEMENTS (GREEN AND COLLAR ONLY)

- Provide complete new growing medium by removing/replacing:
 - · Kill existing turf with Roundup or equal
 - · Rototill turf to remove, discard
 - · Remove all 12 inches of greens mix (if substandard), and tie off any drainage
 - · Restore green core or
 - · Opportunity to cut new green core and:
 - Expand/enlarge green surfaces, but must tie into collar/banks to minimize cost

- Rebuild green to USGA or other standards with:
 - Gravel, choker and drainage
 - · Make contour changes as desired and required from ground up.
- · Add to/replace 4-inch tile drain-
- · Replace irrigation in best new locations
- · Re-turf green and collars with seed, sprigs, sod or combination of each.

DESIGN IMPROVEMENTS TO PUTTING SURFACE AND SURROUNDING HAZARDS

- Provide complete new growing medium on green and totally new green surrounds to similar or totally different design.
 - Strip sod and topsoil on ¼ to ¾ acres around green (Typically out to path, re-use sod if possible for other course repairs)
 - Remove existing greens mix and bunker sand (Re-use for fairway or rough topdressing, tee sand capping, if possible)
 - · Import fill to build green or reshape existing material with bulldozer to new design
 - Build USGA or similar green as above
 - · Place drainage, liners and sand in any new bunkers
 - · Seed green, sod remainder for quickest maturation time (Possible to seed/sprig if budget is limited, but extends grow time, increases risk)

As can be seen, these vastly different programs also have vastly different price tags. Based on my most recent projects, 18-20 (including putting and chipping greens) greens, totaling 130,000 square feet, can be rebuilt for these approximate numbers, subject to a wide range of material costs in different areas of the country:

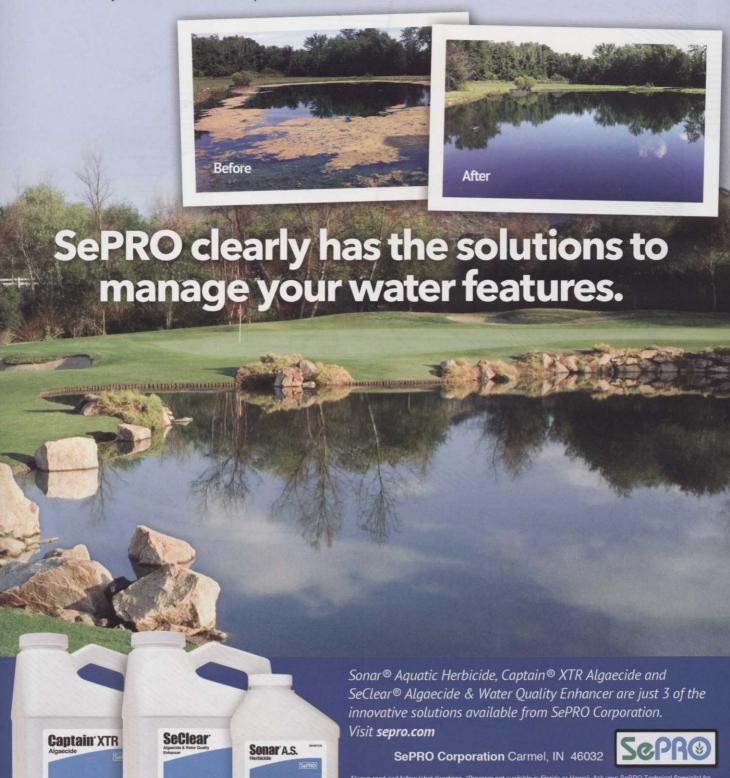
Interseeding: Usually within club budget, no outside help

(BRAUER continues on page 65)

SePRO Corporation—the leader in aquatic restoration products—has helped golf course superintendents manage and maintain one of the most important aspects of their golf course—water.

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Aggressive new spike designs are chewing up putting surfaces. GCI investigates this nuisance and how to counter it.

here's a silent assault on the most scrutinized parts of golf courses. The effects of aggressive soft spikes on greens is an increasingly common sight, raising tricky agronomic and sensitive political questions and evoking memories of metal spike clanks produced years ago.

New spike models initially snuck up on many superintendents. Something as simple as messages from the pro shop like the ones Curt Brisco receives can make superintendents think a match-ready Lionel Messi had stepped on the property.

"The pro relayed to me on one of these occasions he thought somebody with soccer spikes had been out there," says Brisco, the superintendent at Fox Prairie Golf Course and Forest Park Golf Course in Noblesville, Ind. "We went out and looked and for a period of time that's what we thought. Then we were out a couple of weeks later and we had someone out again and found out it wasn't soccer cleats. It was just this aggressive shoe."

The Adidas Adizero Tour released in 2013 is the first model superintendents mention when describing the silent assault on greens. The large indentations created by the Adizero Tour led to multiple United Kingdom greenkeepers convincing their respective clubs to ban the shoes. Adidas released the Adizero One, a lighter model the company promotes as being more "green friendly" last year.

Multiple superintendents interviewed by GCI responded they started noticing changes in their greens in the last "two or three years." Likewise, images from the 2015 PGA Merchandise Show are alarming superintendents because manufacturers are continuing to release shoes with aggressive characteristics, such as thick, unyielding, elongated raised spikes and points of contact throughout sole. Three major golf shoe manufacturers didn't respond to a GCI request for information about their agronomic considerations when designing new products.

"I have been in golf maintenance for 25 years. I

have been in the business long enough to remember when metal spikes were the norm," says Kevin Breen, the superintendent at La Rinconada Country Club in Los Gatos, Calif. "What a huge improvement it was seeing the quality of putting surfaces when those spikes went away and we went to soft spikes. Lately, with some of the aggressive shoes, I have seen putting green quality decline."

Breen and his crew maintain small bentgrass/Poa annua greens with high-traffic areas susceptible to aggressive spike damage. The most vulnerable turf surrounds the cup, which is where golfers take the most steps and leave abundant footprints. The damage, He says, is noticeable early in the morning and late in the day when sunlight levels are low. "What I have seen are footprints where I can identify every spike on the bottom of the shoe," Breen says. "That's different than what I would have seen with shoes four to five years ago."

GETTING A GRIP

Blair Rennie begins his 11th year as greens superintendent at Whitevale Golf Club in Whitevale, Ontario, on April 1, and last year proved to be one of his most challenging years since entering the business. A harsh winter forced Whitevale to overseed its 18 regular greens

and begin the 2014 season with temporary greens. Rennie started noticing damage caused by aggressive spikes prior to last season, increasing his anxiety about what might happen when the overseeded greens were ready for play.

Rennie discussed the situation with Whitevale's golf professional, general manager and board of directors. The group reached a consensus to highly discourage members from wearing ultra-aggressive spikes last season. The club hosted events with shoe manufacturers and offered members an opportunity to purchase less-aggressive models at cost.

Whitevale entered 2014 with

a plan regarding shoes and turf damage because of what Rennie noticed the previous season. "My brain is telling me that shoe manufacturers are pushing certain brands and certain models on the golfers and trying to sell a product and certain golfers are assuming that, 'Hey, I need that traction on the golf course," he says. "I'm not going to pretend to know all the different spikes, but some of them come to mind. When you see guys walking on the cart paths and you can see light underneath their feet because spikes are holding them up that far off the asphalt, then that makes me nervous."

The nerves aren't confined

RESEARCH

The stance on spikes

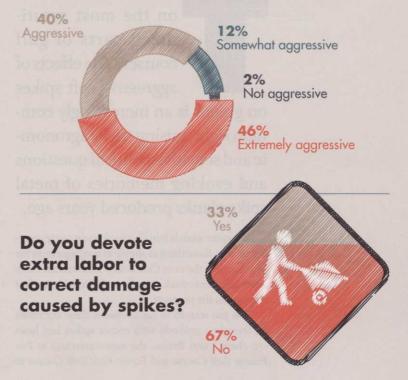
Walk on any green and you'll see how spike technology has changed over the last two decades. The prevailing attitude from turf heads is that golf shoe spikes are getting longer, sharper, wider and more aggressive. As a result, the modern golf shoe is impacting playing conditions by damaging greens.

Is it time to take a hard line against soft spikes?

We asked GCI readers what they thought and this is how superintendents responded to some key questions on this issue. In February, GCI created and facilitated a survey vie the online portal Survey Monkey that examined superintendent attitudes toward modern golf cleats. The survey was promoted to GCI readers via Twitter and Facebook, with 242 GCI readers responding. No incentive was offered to complete the survey. Of the respondents: 90 percent were turf professionals (76 percent superintendents and 14 percent assistant superintendents); and 76 percent were from single-course facilities.

- The Editors

Categorize today's models of soft spike shoes and their impact on turf.



to one geographic region or turfgrass variety. GCI surveyed 242 superintendents and golf industry professionals about the impact today's golf shoes have on turf. Nearly half (47) percent of respondents characterized today's models of golf shoes as "extremely aggressive," with another 39 percent labeling the shoes as aggressive.

"They seem to have a thicker spike, so it actually makes a depression," says Cory Brown, the superintendent at Overlake Country Club in Medina, Wash. "They are a lot stiffer. They don't have that flexibility. I remember when the Black Widow spike came out. I thought that was ridiculous. How can

you put this on your greens? But they never really seemed to be much of a problem. The new ones are thicker and they are just stiffer. They don't have that spread to them that some of the older models had."

Only 2 percent of respondents classified the new models they are seeing on their courses as "not aggressive." Rogers Park Golf Course superintendent Bill Kistler hasn't observed turf damaged caused by new models of shoes on his course. Rogers Park is a public course in Tampa, Fla., with Bermudagrass greens, and Kistler says he's spotting customers with athletic-looking golf shoes. "You have a lot of different

cross sections of players here," Kistler adds. "At this particular course, we happen to have quite a few low-handicap players out here and I notice a lot of the guys have gone to those multipurpose shoes, which is what I call them, and it seems to be going over well."

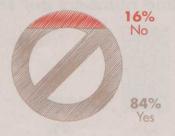
Melvin Waldron, the superintendent at Horton Smith Golf Course in Springfield, Mo., hasn't noticed problems on his course because regular players aren't frequently buying new shoes. Waldron, though, is aware problems exist because of pictures superintendents are posting on social media.

"I'm pretty surprised at what they are seeing," Waldron says. "Part of me says I would think the shoe manufacturers would do more research with their products before letting them out on the market and then some of it is I wonder, and I probably think too much sometimes: Are we creating part of that problem too because we are mowing so low these days? Part of it also could be green construction. Is it old soil greens and not sand and things like that. That's kind of what I think when I do see those pictures. It's hard to say, especially when we don't see the issue at our golf course, but I think there are reasons for that. We mow at .156. We will stay on a little bit of the dry side because

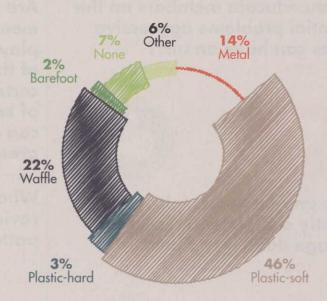
Does your course ban any form of soft spikes?



Should your course ban certain models of plastic spikes?



What spikes would you prefer?



Editor's note: "Others" included: Ecco style nubs; and "teaching shoes" that the pros wear.

we can with the height of cut, but mostly it's because we have senior golfers who aren't buying new shoes."

Still, Waldron is concerned the problems colleagues are experiencing could spread to his course. "Our golfers are going to have to buy new shoes sometime down the road and hopefully they aren't buying these types of shoes that have these kinds of spikes and cause these types of issues," he says. "I'm hoping that with better communication somebody will do some research and we can avoid this issue all together."

DELETE THE CLEAT

Endorsing and enforcing bans

can be a challenge, especially at private facilities. Only 7 percent of respondents say their course has banned some forms of soft spikes, but 84 percent indicated their course should ban certain models of spikes. "It's a delicate issue," says Scott Schurman, a second-generation superintendent who works at Kearney Country Club in Kearney, Neb. "We don't try to rub it the wrong way up in the pro shop. We have a good working relationship. If I'm in league play or playing a casual round of golf, I will take note of it. I learned from my dad to tread lightly. Just try to be politically correct about it."

Kearney Country Club fea-

tures firm bentgrass greens, and they can be mowed and maintained below one-eighthof-an-inch when the weather cooperates. A low height of cut might magnify problems caused by aggressive spikes, according to Schurman. "I remember as a kid, and even at times past that, they were mowing greens on the Tour at a quarter-of-aninch," he says. "Now we are well below an eighth. There's not much of a plant there. It's not like walking on concrete. Height of cut might be part of it, but I'm only finding issues with one brand of shoe. If it was all the other brands, we would have footprints everywhere."

Member/customer demands

for slick greens makes raising the height of cut unrealistic at many private facilities. Superintendents are defending their greens through agronomic practices such as topdressing and frequent rolling to promote firmness. But few defenses exist against spike damage in soggy conditions.

"When there's more moisture in the soil, we see more damage, no question," Rennie says. "When we are getting to what I call the shoulder season, early spring, late fall, when the growth of the turf is diminishing and slowing up, it can't heal from that sort of damage. Once you get into the warm of summer and you can dry things out,

The stance on spikes RESEARCH

Do you educate members on the potential problems aggressive spikes can have on turf?





Have any members/players recently complained about turf damage done by spikes?





Are your members/ players aware of the damage certain models of soft spikes can cause to greens?



Who should take the lead in reviewing the various spike patterns and numbers per shoe?









GCSAA

PGA Tour

Pro's perspective

Douglas Frazier sells golf shoes and works closely with the person at his course responsible for repairing damage caused by aggressive spikes. He's also a veteran of industry dilemmas caused by aggressive spikes.

Frazier, the PGA Professional at Newark (Del.) Country Club, pushed for colleagues to ban metal spikes at their facilities and he says the soft spike era has now yielded unintended consequences. "Like many well-meaning things in life, it has gone maybe too far the other way," Frazier says.

Frazier, who once worked for a golf shoe manufacturer, says soft spikes are becoming aggressively long. In his view, the situation mirrors the one created by longer metal spikes in the 1990s.

"I started noticing it two years ago," Frazier says. "A lot of it has to do with the platform of the shoe. The spike now sits on a POD. We are a course built in 1921 in the Northeast with push-up greens. I won't say we are overwatered. But when we are soft, there are indentations in the greens that literally can stay there for two days and mowing doesn't take it out. I took pictures of spike imprints last summer and actually went to my superintendent to talk to him about whether we should look at doing something."

Newark hasn't banned any new models of shoes – yet. "I'm at the point of thinking about banning certain types of soft spikes and/or shoes at our club," Frazier says.

Frazier has stopped selling several new models in the pro shop. He says the problems are extending beyond one manufacturer. He ordered eight models of shoes from one manufacturer and the shoes he's receiving include three different types of spikes. He says the manufacturer isn't permitting him to order the spikes he wants for the shoes he's receiving. He has mentioned the turf damage caused by shoes with aggressive spikes multiple times to a sales representative from a major manufacturer. "He seemed surprised that it seemed to be an issue," Frazier says.

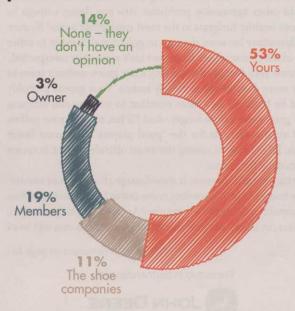
Frazier attended this year's PGA Merchandise Show in Orlando and he played multiple private courses while in Florida. Scenes from the trip are convincing him that challenges caused by aggressive spikes are not confined to one geographic region.

"I played at some really nice clubs and there were footprints and an unreasonable ability to make three-footers because of foot traffic," he says. "It was middle of the day on really fast greens and very sandy greens with not a lot of thatch. They just didn't have a good root structure, not that anything was wrong with the greens. When you walk up on the first green, you're like, 'Wow, these greens are beautiful, but it looks like a pinball machine,' I don't know if it's crisis mode, but that's where we are at."

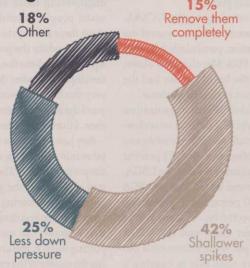
you are getting good growth. When we are doing our regular mowing and rolling, I would tell you that it's not as big of a concern at that time of year."

Courses with small greens in soggy geographic regions are facing the biggest challenges. Whitevale falls into this category. Rennie says he would like to see golf courses experiencing turf damage caused by aggressive spikes to receive USGA support through research. The USGA Green Section Record published an extensive study in 1983 about the effects of multiple shoe models on putting green quality. The USGA also performed a study on the effects of golf-sole shoes on put-

If you explained the issue to them, which side would your golf pro be on?



If you had the opportunity, what would you tell a shoe company about golf shoes?



Editor's note: "Other" responses included: recessed, not surface mounted; less aggressive edges; smaller spikes; less spikes; fewer points of contact; less ridged, give more; more sole surface; better displacement; less disruptive.



Only 7 percent of respondents say their course has banned some forms of soft spikes, but 84 percent indicated their course should ban certain models of spikes.

ting greens in 1958-59.

While the USGA Green Section isn't conducting research on the effect of current shoe models on golf courses, they continue to monitor the anecdotal evidence as observed by the USGA field agronomists, says Dr. Kimberly Erusha, managing director, USGA Green Section. "The continual change in golf shoe design makes research complex," she says. "Ultimately, it also comes down to individual facilities and golfers as they evaluate the impact of products on the quality of their putting greens."

According to the GCSAA, the membership is aware of the situation, particularly following the PGA Merchandise Show, but the board has not had the chance to discuss the issue.

Asked which organization should take the lead on reviewing various spike patterns and numbers per shoe, 53 percent of respondents said the USGA, followed by GCSAA and PGA at 20 percent and 18 percent, respectively, "If some of the bigger clubs and the USGA did put some information out there that this is causing a negative impact to the putting surface and playability, I think people would start to listen," Rennie says.

HEAVY METAL

Metal spikes presented similar challenges to those responsible for maintaining golf course and even clubhouses - in the 1990s. A combination of spike marks and weakened turf on greens and spike-related damage inside clubhouse facilities and locker rooms led to widespread metal spike bans in the 1990s. Some superintendents say the industry is approaching a similar crossroads - albeit without the clank produced by metal spikes.

"I think the people who are engineering these shoes are smart people," Breen says. "I think there are ways to engineer shoes to reduce the pounds per square inch where the weight is developed on spikes that aren't very flexible that protrude beyond the sole and bottom of the shoe. I think that is the solution - they just engineer a shoe that takes into account the quality of the putting surface. The game of golf is played on the greens. A big part of the scoring is on the greens. When you design a shoe that degrades the quality of a putting surface, you are degrading the quality of the experience and the game." GCI

Guy Cipriano is GCI's assistant

THE OTHER SHOE TO



Tim Moraghan, principal, ASPIRE Golf (tmoraghan@aspire-golf.com). Follow Tim's blog, Golf Course Confidential at www.aspire-golf.com/ buzz.html or on Twitter @TimMoraghan

he issue of golf shoes and cleats damaging the golf course - specifically greens - is gaining traction. After raising concerns last month in this column, I've heard from superintendents and others in the industry. Their reaction added fuel to the fire, which is why GCI devoted this month's cover story to the problem.

All of which is well and good. We need to identify and acknowledge the problem before we can do anything about it. But what can we do about it? Much more than you think. And it starts with us.

SUPERINTENDENTS

It starts locally. Review our own course, which means doing a careful, hole-by-hole, green-by-green analysis of what sort of damage is being done, where it's worst, and where it's limited.

Are you hearing complaints from your members about course conditions? How much can be attributed to shoes/cleats? Can you identify particular shoes/cleats that are doing the most damage?

Be careful that you're not using shoes/cleats as an excuse to explain other agronomic problems. Are you doing enough to promote healthy turfgrass in the most susceptible areas? Be sure to differentiate between damage to greens and damage to other parts of the course where its impact isn't as great or unexpected.

Review your height-of-cut policy since green surfaces seem to suffer more damage when closely mown. Your greens probably would be healthier and more resistant to scuffing and scraping if the grass were a little longer. And I'll bet most of your golfers won't even notice. As for the "good players" who want faster greens, I'll bet they're among the worst offenders when it comes to damaging the greens.

Perhaps most important, is shoe damage affecting your maintenance budget? Are you sending crews out to fix this damage when they should be doing something else? Are spending more on seed, fertilizer, or labor? Because this is the information that will be of

(MORAGHAN continues on page 18)

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GREEN/GOLF COMMITTEES AND CLUB MANAGEMENT

As soon as there's evidence of damage, get your committees involved. Not only do they need to know (to approve extra money, if necessary, and take other action), but you can't be the lone voice on this. It's too big, affects too many people and courses, and can easily blow up in your face (and your job) if you don't have the support and understanding of club management.

Tell the committees everything you've learned: most susceptible areas of the course (do you need to mark more "ground under repair" areas?); most damaging shoes/cleats (should the club ban certain makes and models?); possible responses to the problem (are they okay with higher cuts?). You are the expert and the committees should listen to you, but only if you come to them with facts, figures and some remedies.

Where you really need the committees' support is dealing with the other golfers/ members. You'll be the point person, of course, but it's the committeemen and club officers who have to convince their fellow members that evaluating every brand of shoe and cleat is in the best interest of the course, and to take whatever actions you collectively deem necessary. The committee members need to approach the worst offenders to affect change.

Taking this responsibility on by yourself is not a good idea. You also need the support of...

THE GOLF PRO

If you have a good relationship with your pro, now's the time to make the most of it. Especially if his favorite brand of shoe – and the one he's selling most of – is a leading offender. Chances are the pro has noticed the same damage you have as he's hearing complaints from members, especially when they're out playing and scratched, torn turf is affecting their money putts.

If your pro puts up a fight, remind him/her of this: Shop revenue depends on the number of players on the course; if course conditions decline, so will the number of players. Even if you aren't best buddies, on this issue you should be soul mates.

Check out which shoes are for sale in the shop. Ask the pro which are the best sellers and determine if they're among the worst offenders. Maybe he can stock some other models or more choices in replacement cleats that are less intrusive. Even if he does stop selling certain shoes, that won't stop Mr. Smith from going to the big-box golf store and buying them. But the pro's word usually has more sway with the members than yours does, so get him on your side.

If this is a serious enough problem – and especially if you're hearing the same complaints from other supers and pros in your region – ask your pro to take it up with his local association and begin pushing it up the ladder of influence, the next step of which is...

LOCAL ASSOCIATIONS

Raise the issue of shoe/cleat damage at your local superintendent chapter meetings. Encourage other supers to do the same sort of research you did to identify where and how damage is occurring. From the local chapters, move up to state and regional groups. I guarantee you'll find other superintendents and pros dealing with these same problems at every level.

You won't know until you start to ask and make noise. They're probably as nervous as you are about ruffling feathers, but it only takes a few people with like minds and similar concerns to begin affecting change.

There are a few specific questions to ask at all levels, including: What's been the impact on labor costs? Are you having to use more/different chemicals and fertilizers? Do you have to change your maintenance practices? Are your members/players complaining, and therefore do you feel your job is in danger?

Once there's a small group of you who've identified the problems and are in need of solutions, ask your local, state, and regional chapters to allocate funds to do more comprehensive, professional research. Because now you need to collect and analyze the data. And to do that right, contact...

RESEARCH FACILITIES/UNIVERSITIES

Get your regional groups involved as soon as possible asking schools and research labs to conduct studies and tests that accurately measure the breadth and depth of the problem. The leading universities that study turf and other golf-related issues would be thrilled to get involved with shoe/cleat research if they see enough local evidence of problems. Once those schools are involved, it's time to talk to...

THE BIG BOYS

At some point, this issue is going to land squarely at the feet of the shoe manufacturers and golf's governing bodies, notably the USGA, PGA of America, and our own GCSAA. If these organizations are truly committed to preserving and protecting the game (both for their members and the golfing public), they're going to have to conduct their own research and – just as they've done with long putters, the environment and other issues – take a stand. It will take time, but it will happen. But only if...

IT STARTS WITH YOU

Each one of you, individually, at your own course. Then talking to others in your area. Then taking it up the ladder step by step. This issue can get the attention it deserves at every level, but only if you take it upon yourself to do your part. GCI

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FROM THE

Winners of the 2015 Super Social Media Awards reflect on their own social media beginnings and share ways to effectively use an emerging best management practice.

By Guy Cipriano

For the first time in the event's four-year history, a group consisting entirely of superintendents stepped onto the Aquatrols stage and accepted plaques during the GCI TweetUp at the Golf Industry Show in San Antonio.

The superintendents hailed from six states, a Canadian province and three time zones. Their reasons for taking their course's maintenance activities viral are as contrasting as their courses yet they all know tweeting and blogging has developed into something bigger than an industry fad.

Social media has become a best management practice, one where individual and corporate investments are yielding significant rewards. Starting an account is a big step. But what's the best way to maximize your time online?

We bypassed the consultants, experts and professors and allowed this year's award winners to share their social media stories. The stories demonstrate how a technologically timid superintendent at a high-profile club blossomed into an industry leader and why agronomists at private facilities are exchanging information on public forums.

Get your smartphones and tablets ready. We're presenting Tales from the TweetUp.

JOHN KAMINSKI LEADERSHIP AWARD STEVE COOK

Oakland Hills Country Club, Bloomfield Hills, Mich.

Less than five years ago, Steve Cook was sitting in a restaurant when his wife obtained an instant answer to a question by performing a search on her iPhone. "She said, 'Boy, you should get one of these. This is really neat." Cook says. "I said, 'No way. I'm not interested in that."

The scene reveals the evolution of an industry leader.

Cook, the director of agronomy at Oakland Hills CC for nearly two decades, eventually flipped his views on smartphones, especially when he realized how effectively using one could improve communication with his membership. The pictures he took with the phone found their way onto his blog, ohccturf.blogspot.com.

The blog was created for one purpose: to better educate members about agronomic procedures.

Little did Cook know the blog would inspire other

superintendents to improve their own communication efforts. The blog had instant credibility among colleagues because Cook was using a public forum to reach members at an exclusive top-100 club. "I didn't anticipate it becoming an industry thing," he says. "It was more trying to explain things like why we aerify, and it kind of grew from that."

A man who once shunned

smartphones also started the Twitter account @OHCCTurf. The account has more than 1,400 followers. Cook, though, concedes his intended audience is minimal. "But I would say it's enough that there are some regular users of the club who are up there (at the clubhouse) every day who do follow me and do read it and it has really helped in the conversations that occur over lunch because those guys have access to that information," he adds. "They will bring it up. While I might not have contact or access to dozens and dozens of members, the ones who do follow it follow it pretty regularly and they are better informed, and they help put out some of the fires if you will. It has been really good."

Accuracy is an emphasis when Cook blogs or tweets. If he needs to, he will pull a textbook to make sure he's properly explaining a topic. He also stays away from controversial subjects. "I gave a talk last year at a meeting and my point was that if I can do it, then anybody can do it," he says. "I'm not computer savvy or tech savvy. I would say it took me an hour maybe to set the blog up and it takes me five minutes to post something. It's so not time-consuming. It's just you have to think about it."

Cook also uses social media to promote charitable causes such as Make-A-Wish Michigan and Wee One Foundation. Cook is attempting to summit Nepal's Ama Dablam in October as part of a Make-A-Wish Michigan fundraising effort. He's hoping to raise a minimum of \$22,500, which equals about \$1 for every foot he climbs. The elevation of the mountain is 22,349 feet. More information about his effort can be found at www.steveswishclimb. blogspot.com.



SCOT DEY

Mission Viejo Country Club, Mission Viejo, Calif.

Scot Dey started as a receiver, but he has developed into one of the industry's best givers.

Dey opened his Twitter account @scotdey upon the advice of industry consultant and GCI columnist Tim Moraghan. He waded into social media carefully, spending his first two years on Twitter learning from others. "I didn't want to embarrass myself," he says. Dey was becoming too comfortable observing, so he asked a club member with social media experience for some guidance. "He said, 'There's only one way to get your feet wet and that's get into the water," he says.

Dey, coincidentally, works in a region with a major water conundrum. Mission Viejo CC has positioned itself to endure water shortages by using drought-tolerant kikuyagrass. Twitter is an ideal forum to share information on the variety.

"So I'm growing kikuyagrass in Southern California and I'm learning about kikuyagrass every day from guys like Michael Wolpoff at Friendly Hills," Dey says. "It's such a little niche grass in this Southern California coastal situation. Where else is it growing? It's growing down in Australia and in South Africa. So we're trying to engage on a worldwide level with what guys are doing with kikuyagrass is other areas."

Dey builds tweeting into his daily schedule. "It doesn't take long to take what you are doing and write a quick sentence about it and post it," he says. "This is just a tool. It's another tool like a shovel or a moisture meter or a vehicle or an irrigation system."

BEST OVERALL USE OF SOCIAL MEDIA

MATTHEW WHARTON

Carolina Golf Club, Charlotte, N.C.

The best superintendents adapt with their memberships – even when it leads them to unexpected places. Matthew Wharton still considers himself a social media "newbie" despite the popularity of his blog, carolinagreenkeeper.blogspot.com, and @ CGCGreenkeeper Twitter account. He started blogging in 2011 and joined Twitter in 2013 because he noticed the average age of the Carolina Golf Club membership was dropping.

"Like a lot of superintendents, I have done a club newsletter submission, and the newsletter went by the wayside as everything went electronic," he says. "I used to just do direct emails to members, but the software that our club uses, I didn't find it to be very user-friendly. It was hard to upload pictures and I just took it upon myself one day in the fall of 2011 to start using Blogger. About two years later, I'm noticing that my blog posts



were going from 7 to 10 days on average to closer to 21. My membership was getting younger, and I'm thinking to myself, 'Well, maybe Twitter is something that these young guys would be more in tune with.'"

Twitter propelled Wharton into a realm he didn't know existed, one where a superintendent in Charlotte could interact with peers in the United Kingdom and Australia. He uses Twitter to inform members of frost delays and cart restrictions, and he's been introduced to new techniques with the potential to help Carolina Golf Club. Now, colleagues are approaching Wharton about how to start accounts.

"I just had this conversation with my best friend in the business," he says. "I told him to start an account and just follow. Follow the local guys. Just observe. See what kinds of things people are sharing, what they are writing, what they are talking about."

PAT O'BRIEN

Hyde Park Golf and Country Club, Cincinnati, Ohio

White grubs infested Hyde Park Golf and Country Club in 2010. The rough was declining. And Pat O'Brien was fielding more questions than he had at any time since arriving at the private course in 2004. While sitting in the hospital waiting for his wife to give birth, O'Brien received a call from Hyde Park's grounds chairman requesting an update. The call convinced him to reflect on his communication methods. "I thought to myself, "There has to be a good way of being proactive instead of repeating the same thing over and over."



Enter hydeparkgolfandcountryclub.blogspot.com. 'Brien posted his first blog entry in December in 2010. A few months later, he started the @pobrienhpgcc Twitter account. "My goal was to reach the membership," O'Brien says. "I spoke with my GM and got his thoughts on it. He had no problem with it. Twitter was a challenge at first because trying to get something into 140 characters was new to me. The audience wasn't there yet early on. But a lot of members eventually started to follow it."

O'Brien's blog and Twitter feed are interlinked. He tweets each blog post and his Twitter feed is easily found on the blog's left column. Photo slideshows, weather conditions, useful links and videos are also prominently inserted into the front page. O'Brien is using Vine, a platform to post short videos, to demonstrate maintenance practices on Twitter.

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BOOSTING AN ASSOCIATION

The winner of this year's Best Video award, the Georgia GCSA's "Stewards of the Land" video, depicts the positive relationship between golf and the environment at three distinct courses: Cateechee GC in Hartwell; Rivermont Golf & CC



in Alpharetta; and The Landings Club in Savannah. With upbeat, music and clean imagery, the video was at last year's Georgia Environmental Protection Division conference. "It was a hit from the beginning," Georgia GCSA executive director Tenia Workman says. "Our board is great. They are forward-thinking and they just wanted to do something different. We didn't want our videos to be like anybody else's."

The video has been used in the association's lobbying efforts with politicians and environmental groups. Progressive leadership has allowed the Georgia GCSA to work through some tricky situations, including some of the nation's strictest water restrictions. The video represents a reminder of how the Georgia GCSA must reach key political leaders to effectively serve the state's superintendents.

KEVIN HICKS

The Coeur d'Alene Resort Golf Course, Coeur d'Alene, Idaho

Kevin Hicks recently celebrated his one-year Twitter anniversary. The occasion led to reflection. "I don't know why I jumped on to be honest with you," says Hicks, who operates the @golfsuper1992 account. "But it took me 10 minutes to find the value of it with guys throwing out ideas all the time and pictures. Pictures have been awesome. It fits my attention span really well too. 140 characters is about right."

Hicks quickly left what he calls "the voyeur" stage and started tweeting about almost everything: the beauty of Coeur d'Alene's floating green, diseases, course projects, equipment repairs, and challenges finding and retaining reliable labor. "You can put a picture out there and say, 'Hey guys, 'What do you think this is?" he says. "I have been on the giving end and receiving end of that. That's where the value is at in our industry. It's so quick and so to the point. You don't have to mess around. Somebody will shoot a picture and what they have done to solve the problem. It's just awesome for that."

Some superintendents fear peeving their members or bosses when starting Twitter. Hicks had a different fear. "Ad-



diction," he says. "That was one of the reasons why I had never been involved before. I'm one of those guys who are constantly trying to learn new stuff. I'm pretty much addicted now. My fear came true."

Hicks recently obtained a drone, so video represents the next step in his social media evolution. He's also working with ownership to use the images he collects to bolster Coeur d'Alene's marketing efforts. "We have purchased some tools which are going to allow us to create a much bigger and much better social media presence," he says. "Since no one else was doing it, I decided I ought to jump in. I'm the one that's out here all of the time snapping pictures of nature and things going happening in the golf course. I thought, 'Why not be involved in that regard?""

JASON HOOPER

Quilchena Golf & Country Club, Richmond, B.C.

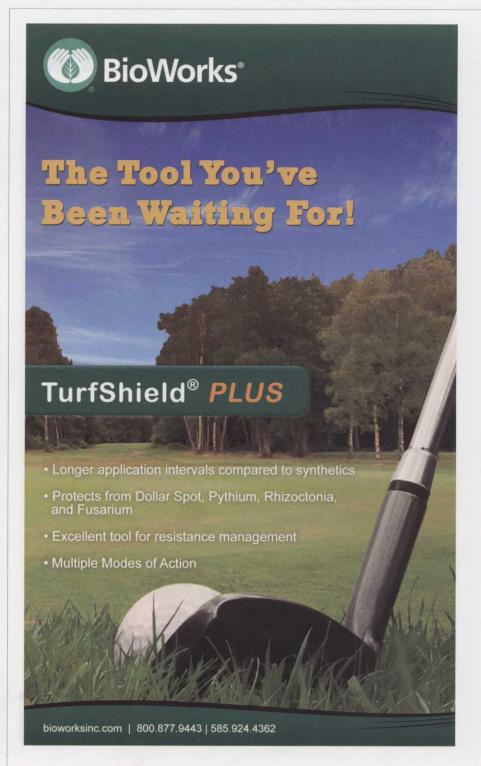
Jason Hooper didn't want to make a mistake and post something that yielded industry ridicule. He quickly realized, though, talking turf with industry peers on Twitter was nothing like raising your hand in class. Hooper created the @superjhooper 2011 as an extension of his blog, which started to "put out 19th hole fires" at Quilchena Golf & Country Club.

"I was a little reluctant to dive into [Twitter] initially and I figured, 'What the heck? It can't hurt." he says. "I was just overwhelmed with the number of turf industry professionals on there, but what I have always enjoyed about the industry is the willingness to share knowledge and pick each other's brains and help other guys solve problems. That was just immediate. I can be out on the golf course on the fifth hole, snap a picture of something on the fairway and by the time I got to the sixth green from scouting in the morning, I could have six responses already."

Besides sharing an abundance of pictures and anecdotes, Hooper uses Twitter to reveal glimpses into his own life. Superintendents are split on whether to post personal information on Twitter, but personal tweets are helping Hooper build connections with members.

"As you have seen from my account, it's not just the golf course," he says. "I share my life on there, from my family to what I like to do with my own personal time. There has been no backlash with the mem-

bership. If anything, I feel like I have gained a human connection with our membership and I have got responses from my members like, 'Hey, I saw your Twitter account and you took your kids over there. That's great."







BEST BLOG JOEY FRANCO

Brookstone Golf & Country Club, Acworth, Ga.

Joey Franco started his blog, brook-

stonegcm.blogspot.com, on Valentine's Day 2014. It was instantaneous career love.

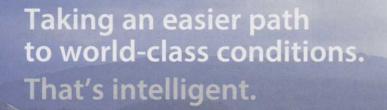
Franco works as the superintendent at a nearly 30-year-old club that operated without a greens committee until 2013. He started blogging to prevent members from having to use Internet search engines to find answers to agronomic questions. Franco also wanted to establish a connection between the maintenance staff and memberships.

Blogging has become a part of Franco's daily routine. He arrives at work anywhere from 4:30 and 5:15 a.m. and often uses the time to post entries. It's hard finding a superintendent who blogs as often as Franco. He posted 26 entries last December. Greens committee meeting minutes and co-worker of the month features are among the staples of his blog, and Franco has recently started posting videos. Franco says simple works when communicating with members. He recommends determining a focus before launching a blog.

"First off, I would say, 'What's your approach with it? What do you want to do with the blog? Do you just want to supply educational information? Or do you want to build a relationship between the blog and the member?" he says. "Sometimes you can put some very scientific information in there and these members don't want to see that. They want to see the basics. I would say try and keep it as basic as possible, supply just enough information. Mine might look a little bit complex, but we are trying to simplify the information and group it to a point where if you want to do videos, have your video screen in the blog. If you do slideshow, have that in there, so members can just look for it."

Basic information has cultivated a satisfied membership. Complaints about the golf course have been reduced by 90 percent since the blog started, according to Franco. Unlike many clubs, Brookstone has increased its membership in recent years, and Franco understands prospective members can easily find his blog. "The blog is really catching on more and more with members because they see what's going on," he says.





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ADAM GARR

Plum Hollow Country Club, Southfield, Mich.

Adam Garr has an English degree and always wanted to be a writer. Instead, he flipped career paths and became involved in turf.

When he was promoted to superintendent at Plum Hollow Country Club in 2010, he realized he might have a forum to combine his turf and writing passions. He waited a few months and launched his blog, phccgreens.blogspot.com, in January 2011. Garr modeled his early work after a Michigan turf leader – Steve Cook.

"I look at guys like Steve who were out in the forefront



when very few guys were communicating to their members this way," Garr says. "I thought it was a great idea. One of our issues at Plum Hollow before my blog was communication."

The situation is different in 2015. Garr uses his blog to tell, and maybe more importantly show, members what happens on the Plum Hollow turf. The posts have helped Garr avoid some of the angst involved in difficult agronomic issues. "I will say it's a labor of love," says

Garr, who incorporates extensive videos using a GoPro camera and drone into blog entries. Still, Garr has limits. "I sacrifice some sleep,"

he says. "One thing I will never do is sacrifice family time."

The videos are powerful. But Garr says superintendents shouldn't overlook their writing skills as they trudge into social media.

"Being able to write is a skill I think a lot of superintendents need to have, just to be an effective communicator," he says. "I see guys on Twitter who sometimes struggle to string a sentence together or they haven't proofread their

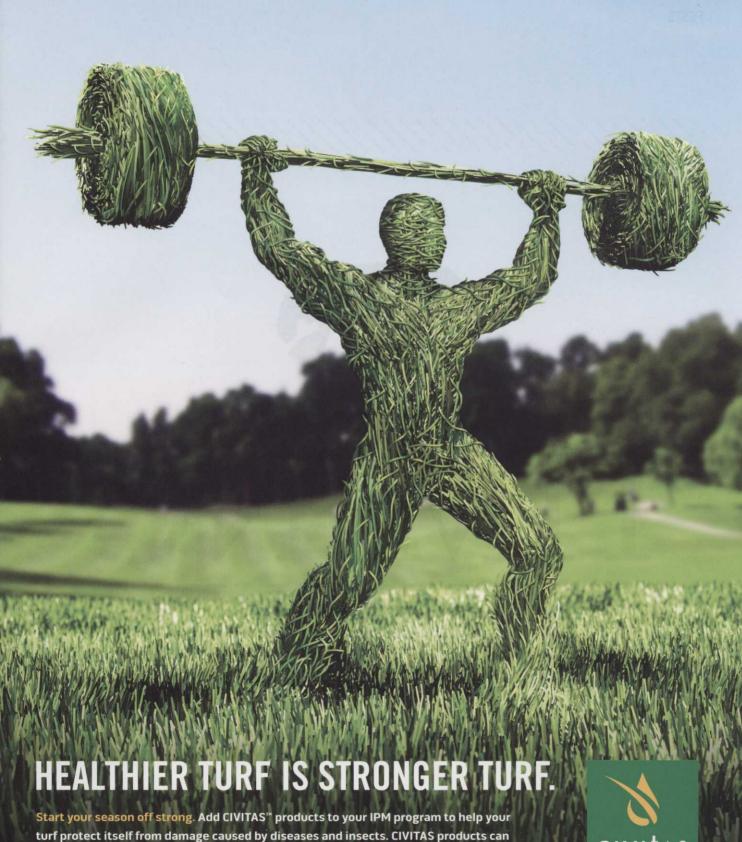
blog. When your members are reading something, it needs to be professional and it needs to look like you know what you are doing.

"I have definitely learned along the way things not to say. Not to get on a soapbox. Remember, it's not your golf course. It's the members' golf course. Don't talk down to them. To somebody starting out, I think the best advice is to be yourself and find your own voice. Be an individual and communicate it in the easiest way that your audience can understand. GCI

Guy Cipriano is GCI's assistant editor.







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TIMING IS EVERYTHING

Annual bluegrass weevils are on the march. Here's what superintendents need to know to stop them in their path.

By Rob Thomas

hile little is known about the annual bluegrass weevil, this tiny pest is making plenty of noise in the Northeast, and slowly making its way to other parts of the country.

According to Albrecht M. Koppenhöfer, professor and extension specialist in the Department of Entomology at Rutgers University, the annual bluegrass weevil (ABW) is in the Curculionidae family within the insect order of the beetles (Coleoptera). Weevils generally have an elongated snout and contain the largest number of species of any known family of anything living.

Museum records show the ABW is found throughout much of the continental United States and southern parts of Canada, but next to nothing is known about it outside of the golf course habitat, Koppenhöfer says.

It is supposed to be semi-aquatic which would explain its preference for wetter areas on golf courses, he says. Yet, as a problem on golf courses, it was first reported in the New York City metropolitan area in the 1930s and has been slowly spreading out from there like an introduced pest. It is now causing problems on golf courses from southern Quebec and southern Ontario south to Maryland and west to eastern Ohio. There are also at least two isolated problem areas in eastern Virginia and in the foothills of North Carolina, Koppenhöfer adds. "Maybe the insect adapted to the golf course habitat in the NYC met area, and this 'golf course strain' has been spreading from there," he says

The ABW's method of spreading is another question mark. It can fly but is not very good at it, Koppenhöfer says. It may be spread on infested turf, which might explain such isolated populations as in eastern Virginia and western North Carolina. "Golf courses that don't have this insect, yet, should be extremely careful to accept sod from other golf courses that already have this insect," he says.

Air temperatures are used to estimate movement, though soil temperatures may be better predictors. However, tracking soil temperatures in relation to ABW activity is a fairly recent activity, says Benjamin McGraw, associate professor of turfgrass science at Penn State University, although he can't say for certain. He adds sudden freezes following a warm period only cause the insect to become suspended in its activity.

"[It] doesn't kill them," McGraw says. "They are well suited for being exposed to cold temperatures. The adult overwinters a few centimeters in the soil, so I am sure that they can handle it."

Cold periods during the spring migration period will slow down the ABW to the short mown areas, but adults already on the short mown areas tend to "hunker down," Koppenhöfer says. This results in apparent dips in the number of adults found when monitoring, but it does not affect their survival.



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Spraying earlier is not necessary as the adults have not started to lay eggs, yet, Koppenhöfer says. Earlier spray, he adds, will only increase the chances of resistance development for three reasons: people will tend to apply another adulticide a couple weeks later; they unnecessarily kill beneficial insects including predators of ABW, and they result in sub-lethal insecticide concentrations when the majority of adults will appear on the short-mown areas.

As for knowing when the ABW has arrived at your course, McGraw says an early warning sign would be to look for the initial yellowing of the turf caused by larval feeding, but even then it might be too late. It would be better to look for adults prior to that.

"I would look for adults in mower baskets, especially from greens and collars where they The best and most sustainable way to manage ABW is to keep the annual bluegrass populations on the playing surfaces as low as possible wherever possible.

are easily removed," he says. "Look for larvae by taking triangular sections of turf and dipping them in a saturated saline solution to extract even the youngest stages."

Managing the spring generation is crucial because it sets the tone for the rest of the season, Koppenhöfer says. Use plants as phenological indicators.

and plants depend on the environmental conditions (especially temperature) for their development, certain plants just happen to be in certain conspicuous stages when the ABW is doing certain things," he says. "When using

"Because both ABW

WeevilTrak Update

Syngenta announced upgrades to its WeevilTrak (weeviltrak.com) platform. The key to a successful annual bluegrass weevil control program is proper decision-making on the timing of treatments early in the season. WeevilTrak alerts registered users on the optimum time to control weevils.

- · Three new independent researchers have been added as consultants, including Dr. Albert Koppenhöfer, Rutgers University; Dr. Ben McGraw, Penn State; and Dr. Rick Brandenburg, NCSU. "We're excited to have more opinions and research coming in from the field," says Mark LaFluer, Syngenta spokesperson.
- · A blog has been added for WeevilTrak researchers to post their field observation. "Each researcher has anywhere from two to six courses that they're following for ABW," LaFluer says. "Since WeevilTrak is a guide, the researches will be reporting back on what they're seeing when their doing their course visits. The blog will be every bit as important as the notifications we put out."
- Syngenta has reassessed its WeevilTrak courses to more accurately represent the spread and scope of ABW pressure from North Carolina, to Maine and out to Ohio.
- This year, researcher engagement extends from first generation into subsequent summer generations. "In the past, summer generation projections have been based on models, which is a good guide," LaFluer says. "Extending researchers to track summer generations through

the blog is critical for people to follow what's happening... and this will really help with providing superintendents with better intel than from just using models."

Syngenta rebuilt its Ference program - an ABW control insecticide launched last year - for use beyond first generation ABW and to incorporate its use to get season-long control. "Syngenta has a product that controls all larval stages," LaFluer says. "And it serves as a resistance management strategy, as well, to really save ABW-control options down the road."







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- · When forsythias are in full bloom, the overwintered adult ABW migrate to the shortmown playing surface. Do not apply adulticides at this time. Toward the end of this period, monitoring for adult ABW should be started to estimate if and where adulticides (i.e., insecticides targeting the adults) need to be applied;
- · Around the time when forsythia are about half gold/ half green, adult ABW reach peak densities on the shortmown areas. This is the best time to determine adult densities and with that, the need for applications. In areas where adult ABW densities are too high, an adulticide should be applied at this time. This time corresponds to about 110-125 GDD50. Effective adulticides for non-resistant populations include pyrethroids and chlorpyrifos. Against resistant populations, chlorpyrifos may still work, but lower levels of resistance to this compound have already been observed;
- · When flowering dogwood and eastern redbud are in full bloom, ABW egg-laying has begun. After this, adulticides become less effective as they do not kill the eggs. About one week after onset of full bloom dogwood is the time when systemic compounds should be applied that target the early ABW larval stages feeding inside the grass stems. This time corresponds to about 175 GDD50. Effective systemic compounds for non-resistant ABW include Acelepryn and Ference. Against resistant population, Ference may still work, but the database for its efficacy versus resistant ABW is very limited; and
- · When Catawba Rhododendron hybrids are in full bloom, ABW larvae start to

One super's fight

Superintendent Chris Carson, Echo Lake Country Club in Westfield, N.J., is a leader in ABW control. For nearly a quarter-century, Carson has dealt with ABW and still only considers it a nuisance.

"He has been doing what I preach people to do: Minimize insecticide applications in space and time and keep Poa annua populations as low as possible wherever possible," says Albrecht M. Koppenhöfer, professor and extension specialist in the Department of Entomology at Rutgers University.

According to Carson, the first sighting came at the cost of half of his 16th green in June of 1988 - "a horrible weather year," he says. Having never heard of hyperodes weevil, a colleague from Westchester County consulted. Summer patch had also been wreaking havoc on greens that season. "Since then, we have treated preventively once per season for adults on greens and a few approaches and fairway spots only," Carson says. "We have used a combination of triplex mowing, collecting clippings and other cultural methods to naturally convert our fairways and approaches to mostly bentgrass.

"At times, ABW has hit us in places," he adds. "We've spot-treated or let the infestation run its course, thinning out Poa and letting bent fill in. The key is to scout and treat promptly for us to avoid turf loss."

Other than a once-per-year preventive treatment for adults, spot treating collars when he sees ABW is about all he does now - knowing exactly when and where to look first.

Understanding what the loss of grass - especially on greens - means, Carson is fully aware of the panic that can overcome a superintendent battling ABW.

"The instinct becomes to prevent and treat widely and often," he says. "As it relates to ABW, though, this instinct has ramifications that, in the long run, can make things very much worse. Sort of a downward spiral, or inescapable whirlpool."

If your course is in a region affected by ABW but have yet to see any damage, resist the urge to begin the battle. "I wouldn't recommend treating unless you know you have it and have sustained some damage in the past," says Benjamin McGraw, associate professor of turfgrass science at Penn State University. "Sounds harsh to some, but why treat unless it is a problem? Finding ABW doesn't always translate into damage. I would recommend focusing on growing the healthiest turf possible."

come out of the plants to feed externally on the grass crowns. This is the time when one can start monitoring for larvae in the soil and start to apply larvicides targeting the larvae in the soil where their numbers are high. This time corresponds to about 350 GDD50. Effective systemic compounds for non-resistant ABW include Conserve, Provaunt and Dylox. Against resistant ABW, only Conserve may be effective.

Eradication is not possible, Koppenhöfer says. Superintendents who try this only end up with "glow-in-the-dark" insecticide-resistant ABW, he says in jest. The best and most sustainable way to manage ABW is to keep the annual bluegrass populations on the playing surfaces as low as possible wherever possible.

"ABW prefer annual bluegrass as a host plant and annual bluegrass is a lot more susceptible to it than creeping bentgrass," he says. "ABW can also infest and develop on creeping bentgrass, but it may take three to four times higher ABW larval densities to cause damage. And bentgrasses may look bad for some time, but usually recover. Annual bluegrass gets wiped out.

"The thing with ABW is that it is a pest that people have to learn to live with and manage it by practicing true integrated pest management (IPM)," Koppenhöfer says. "Trying to control it with excessive insecticide applications seems to inevitably lead to resistance, and broad resistance at that. At that point, ABW becomes a nightmare." GCI

Rob Thomas is a Clevelandbased writer and frequent GCI contributor.

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NO SUCH THING AS A 'SURE' THING



Monroe Miller retired after 36 years as superintendent at Blackhawk CC in Madison, Wis. He is a recipient of the 2004 USGA Green Section Award, the 2009 GCSAA Col. John Morley DSA Award, and is the only superintendent in the Wisconsin Golf Hall of Fame. Reach him at groots@charter.net.

arly in my career I spent a lot of time thinking about and searching for sure things. I suspect this stems from an aversion to great risks and a drive for perfection. This, despite the well-worn phrase, "The only sure things in life are taxes and death." (And a good accountant can sometimes remove the tax part.) From the time we are born, we are on an inexorable march to the grave. That is a sure thing you can count on.

This past Christmas, our gray and khaki-colored landscape was causing consternation. "Don't worry," I'd say, "we always have a white Christmas. That's a guaranteed sure thing." Well, not this year. Such incidents have happened to me in my life more times than I could count.

I'm not alone among superintendents when I say I was always on the lookout and searching for a sure thing. It wasn't that long ago a colleague and good friend announced he had found the answer to putting green aerification. "It's a sure bet," he told me. His sure bet lasted until the greens committee nixed it.

For me, that search for a sure thing covered the spectrum from control of certain diseases to green speed. I read all of the popular journals, many of the scientific ones that had some connection to turf. I was usually in the front row of seminars and educational meetings, hoping to learn the sure thing that would solve a serious problem I was confronting. I was on a search for a combination of factors that, taken together, would be the silver bullet of my turf management program.

Right after I started my career as a superintendent, the sure thing for better fairways was replacing tractor-drawn pull-frame mowers with an out-front mower. It took time and a lot of promises to get those Toro 223s, and by that

time, I was searching for a sure thing to control summer patch disease on our fairways. Summer patch was a "new" disease and was initially called "Poa annua decline." Fungicides weren't working, and I offered our sixth fairway for some fungicide trials by our turfgrass pathologist, Dr. Gayle Worf. I was giddy when an experimental material showed nearly perfect control. It was a material that eventually became Bayleton, the first of the sterol-inhibiting fungicides. All I could think of was "here's my sure-fire

When you accrue a certain amount of experience on a golf course, at some point it dawns on you that you

probably won't ever find that sure thing. It doesn't mean you stop searching and calculating, but that ultimate prize, however defined, gets away."

answer to nearly perfect fairways."

It did work very well, for a time. Then we had to raise the rate we were using; then it was settling for some reduced control. That led to studies that indicated resistance was a possibility with these materials. Then came the research leading to combinations, timing, and a host of other factors. A sure thing? Not even.

When you accrue a certain amount of experience on a golf course, at some point it dawns on you that you probably won't ever find that sure thing. It doesn't mean you stop searching and calculating, but that ultimate prize, however defined, gets away. However, the quest isn't a waste of time. You make your assessments and evaluations, measure what did and did not work, make corrections, and learn from the process. I guess you call that experience.

Years ago it was Franklin Pierce Adams who changed my thinking. He was a well-known writer, columnist and radio personality from my parents' generation. He observed: "The best you get is an even break." It made sense when I first read it, and it has taken on even more significance as the years have gone by. You never will find silver bullets for your golf course problems. It would be too easy. The alternatives? Hard work, smart management, attention to detail and a hundred other traits we are all familiar with. FPA was right about an even break, and that is what most of us hope to catch. Or at least a good break to smooth out the tough ones that will inevitably come your way.

Adams' observation makes even more sense for superintendents because we deal with the weather (unpredictable), plant growth and health (extremely variable), and people (players and employees). Throw in government regulation, economics and machinery, and one wonders how we can ever hope to catch an even break. But I suspect we will never stop looking. GCI



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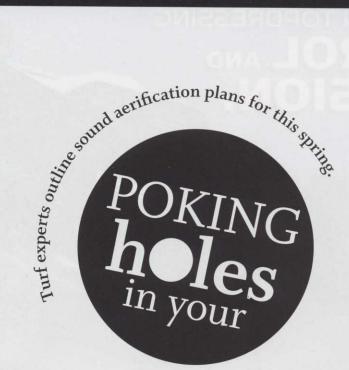
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By Rob Thomas



hile no two winters are exactly the same, it is possible to take note from the season we're in to have an idea what awaits when spring emerges. Superintendents and researchers can look at the short, wet fall and cold, snowy winter for historical perspective on upcoming challenges this spring.

Winter injury is most likely lurking under the snow and ice, says Jared A. Hoyle, assistant professor and extension turfgrass specialist at Kansas State

University.

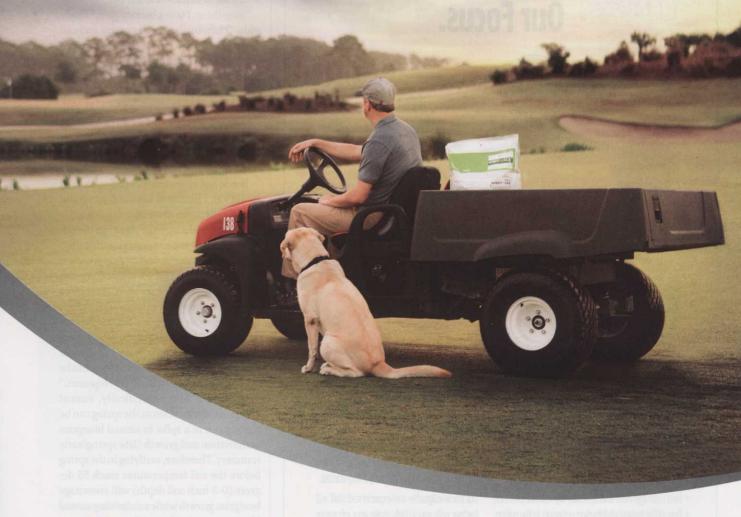
"This includes many different types of injury, including but not limited to: freezing injury, desiccation, freeze covering (ice) and traffic (wear)," Hoyle says. "Although, the general trend for the North Central United States was a wet fall and cold, snowy winter, here in Kansas we have had a dry, cold winter with a couple of days mixed in where the temperature got well above 60 degrees. When the temperatures get in

the 60s or even in the 50s in the middle of a Kansas winter, everyone who has the 'golf bug' crawls out of their houses to go play some golf in the nice weather.

"Who knows, after that warm spell it might not get above 32 degrees for another 10 days," he says. "During this time, the entire golf course is subjected to all sorts of traffic and injury from play. Golf carts are driving on frozen fairways, golfers are creating traffic pat-



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terns on the greens, and wet tee boxes are being ripped apart by the endless spike combinations that golf shoe manufactures are producing. But like all situations in managing golf courses, each golf course,

putting green, tee box and fairway is unique. Therefore, it is hard to predict exactly what Mother Nature is going to give us this spring."

With regard to spring aerification,

Hoyle says preparation is the best strategy to follow.

"Start now and have all equipment ready to go and have all supplies ready," he says. "Step two: Have a plan. When you think you have a plan, then think of how this may need to be adjusted if something should go wrong or if the weather does not cooperate with your aerification schedule.

"Step three: Have a backup plan," Hoyle adds. "Planning is very important and can determine how your summer is going to go. There are two times a year when superintendents can push their turfgrass for a healthy growth; spring and fall. Growing a healthy turf in the spring will help with maintenance in the summer. If a turfgrass manager does not do due diligence to their turf in the spring, they will be playing catch-up all summer long."

While not all inclusive, Hoyle points to fertility and timing as keys to a successful spring aerifcation program.

"Always make sure the plant has the nutrients it needs to recover from aerificaiton injury," he says. "A fertility application a couple weeks prior to aerificaiton can increase the speed of recovery. This gives your turf a jump-start prior to aerification.

"Timing your spring aerification can not only help with thatch reduction, compaction, improved drainage and provide a smoother putting surface, but it can also be timed to help prevent weed development," Hoyle adds. "More specifically, annual bluegrass. Aerification in the spring can be timed prior to a spike in annual bluegrass germination and growth (late spring/early summer). Therefore, aerifying in the spring before the soil temperatures reach 55 degrees (0-2-inch soil depth) will encourage bentgrass growth while minimizing annual bluegrass encroachment."

Kevin Frank is hopeful the conclusion of this winter doesn't meet the level of the prior winter that produced ice cover on putting greens from Chicago to Toronto. While Frank, an associate professor and extension turf specialist at Michigan State University, has seen reports of thin ice sheets at various locations, reports seem to show the ice formed approximately the third week of January - or about three weeks later than ice forming the previous



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Being prepared and having a plan is important. Superintendents may need to aerify or verticut earlier in the season than expected if the right conditions are present. The same is true if spring comes later than expected.

winter. His hope is a "normal" spring will result in this ice melting off before damage may occur to *Poa* greens.

As for Frank's idea of a spring aerification strategy, that depends on what species you're trying to manage - Poa or bent.

"If you have predominantly Poa annua greens, then the

thought is to aerate following seed production," he says. "During seed head production, the *Poa* is not producing many new roots, so once it's over, this is the time to try and grow some roots before summer temperatures arrive.

"I think this is still the case if you're suppressing seedheads with plant growth regulators, as typically you don't get 100 percent seedhead suppression from PGRs," Frank adds.

"If you're trying to favor bentgrass, then the idea would be to aerate during the beginning of *Poa* seedhead formation," he continued. "*Poa* is busy pushing seedheads, not roots, so bentgrass is at a competitive advantage during this time."

The reality with either of these strategies can be affected by weather that could make optimal timing strategies difficult due to excessive soil moisture, Frank says.

As for verticutting, Frank doesn't generally feel strategies should be affected by winter unless there is significant damage from the season. That damage may cause superintendents to consider verticutting to facilitate reestablishment and recovery, he says.

Because verticutting injures the turf, Hoyle says it is important to know why you are verticutting.



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DRY SPOT

As drought conditions range from D0 (Abnormally Dry) to D4 (Exceptional Drought) across much of the West and Southwest, superintendents are going to be faced with the



difficult decision on when to aerify or verticut their turf.

According to Patrick Gross, director of the USGA's G

According to Patrick Gross, director of the USGA's Green Section West Region, the decision on when or if to aerate isn't necessarily related to the drought. Do not aerate or verticut a stressed plant.

His advice? First, make sure the turf is as healthy as possible. And pay close attention to the irrigation system so you're not wasting water. There's a long list of best management practices, such as using wetting agents or hand watering, so ensuring the turf is healthy is the priority.

Fortunately, aerating and verticutting are generally spring and fall activities, so the turf is less stressed than it is during the summer months.



Time spring aerification prior to a spike in annual bluegrass germination (late spring/early summer). Aerifying before the soil temperatures reach 55 degrees will encourage bentgrass growth while minimizing annual bluegrass encroachment.

Spring aerification strategy depends on what species you're trying to manage – *Poa* or bent.



"Verticutting in the spring can help remove dead and dormant organic matter," he says. "It can also help expose the turf crown to improve soil warming and promote greenup. When vericutting is part of your spring management plan, keep in mind your goals and objectives. Is your goal to recover from winter injury, plant new seeds, remove thatch, etc.? This can determine the aggressiveness of your verticutting practice and how you incorporate it into your plan."

Regardless of the type of spring — cool vs. warm, dry vs. wet — Hoyle suggests superintendents go back to the basics and adjust their strategies accordingly.

"Superintendents may need to aerify/verticut earlier in the season than expected if the conditions are present and the same is true if spring comes later than expected," he says. "With that being said, being prepared and having a plan is most important."

Too late? Missed the window for preventative maintenance. Again, go back to the basics.

"Do what is needed to grow and maintain a healthy turfgrass stand," Hoyle says. "Proper irrigation, weed control, mowing and fertility, we sometimes forget about when we are faced with a challenge. We tend to lean toward a 'silver bullet' when we are thrown a curveball. We want to apply one product or do that one 'miracle' management practice that can get us out of this hole because Mother Nature was not kind to us this past winter, but in reality we can get back on top by going back to the basics.'

Work with one another, Hoyle adds. Working with other superintendents and turfgrass managers by asking questions, finding out what worked for them and most of the time eliminating what didn't work, can help everyone build new plans for the future.

"Keep detailed records," he says. "Not only dates of when applications or management practices have been implemented, but also include weather data. We all know that each year is different: Spring can come early or late. Knowing what worked/didn't work in the past when we have been faced with a challenge will also help in building future plans."

It's important to read the keys and give the turf what it's asking for, Frank says.

"Depending on what Mother Nature delivers, I've always thought, 'Don't be afraid to get the water on,' especially if it's dry and warm, which we sometimes get coming right out of winter/snow melt," he says. "Generally, if it looks like it needs help, don't be afraid to give it some, whether that means water or some fertilizer." GCI

Rob Thomas is a Clevelandbased writer and frequent GCI contributor.

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Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

ow many hours have you and your staff spent looking for an isolation valve, wire splice or pipe? How frustrated have you been looking at an as-built that shows you where an irrigation system component is, but it's not there? You are not alone. The value of a good irrigation system "as-built" cannot be underestimated. As-builts are worth their weight in gold, but of course, they don't weigh much!

Today, an as-built is called a "record drawing." It's a record of what was installed, not exactly how it was built. In the past, record drawings, if there even was one, were estimates of where equipment had been placed. The record drawing tried to contain the essentials: pipe routing, sprinkler locations, quick coupler locations and hopefully controller and isolation valve locations. A really good one might have shown wire routing, size and splice locations, though the component was not always installed where the drawing indicated or the correct size. With time, the maintenance staff would be able to read through the coffee stains and many pieces of hopefully clear tape where the drawing had torn. You still considered yourself lucky to have something of a record drawing. Of course, the best record is a staff member who was at the course when the irrigation system was installed.

Decent record drawings didn't come into the mainstream for golf systems until the 1980s when irrigation systems started to get larger and more sophisticated. Most are GPS-based, so they are very accurate and all the necessary equipment is usually included. Equipment symbols are easy to understand and the drawing is at an accurate scale. The use of color allows for more distinction between wiring and pipe routing as well as different types of valves, sprinklers and nozzles and other equipment. With a GPS-based record drawing, you can use GPS coordinates to find the equipment if it has been buried or grown over using an inexpensive locator.

A good record drawing will be a set of drawings, not a single drawing. Pipe and size, sprinklers and nozzles and valves are shown on one drawing (mechanical) and wire routing and size, controllers, wires splices, grounding grids and controllers or decoders on a second drawing (electrical). This makes both drawings much easier to read, understand and follow. You might also have a utility drawing which would show pump station power wire, drinking fountain

power and water lines and aerator or fountain power wire supply routing and size. Anything installed under the golf course should be mapped and recorded. Although it is not irrigation, GPSing the drainage piping, especially the inlets, is a good idea, too.

With current irrigation central control systems, the record drawing has the ability to be imported into the software to make the central control system and record drawings even more powerful. The record drawing as a map can become interactive with the central control software. Depending on the manufacturer, you can use the map to turn on and off sprinklers from the computer or remote device or to prepare work orders pinpointing the area where the work is required and what needs to be done.

Record drawings also provide a base map of the golf course. A computer-aided-design (CAD)-based record drawing can provide accurate square foot measurements of features that can help you when ordering materials. Lastly, it can be a basis for ordering sprinkler yardage markers.

There is no substitute for an accurate record drawing of a golf course irrigation system. GPS-based drawings are the most beneficial. When the data is properly collected and processed, they are very detailed and accurate. These drawings also provide excellent base drawings for work to be done on the golf course. GPS is not the only way to get an accurate record drawing. You can survey in your equipment or just go out and measure it with a tape and document it. Remember you want to take measurements from two permanent locations so the exact point can be located in the future. Although a record drawing will cost more than its weight in gold to obtain, they are well worth it. GCI



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It's difficult to predict the impact this winter will have on **dollar spot pressure**. Our experts provide insight to control this costly turf pathogen.

by John Torsiello

t's sometimes called "million dollar spot" when poor maintenance practices lead to a severe outbreak on greens. As a result, considerable cost is required to rectify dollar spot outbreaks and to keep paying golfers happy with playing conditions.

In Wisconsin, for instance, it has been reported that golf course superintendents typically spend 60 to 75 percent of their chemical budgets spraying for dollar spot. Caused by the fungal pathogen *Sclerotinia homoeocarpa*, it impacts the majority of turfgrass species, and is active under a wide range of temperatures. Dollar spot is the most common turfgrass disease in North America, with the exception of the Pacific Northwest and western Canada.

So what's in store for superintendents this growing season?

Given the abnormally warm, long autumn most of the country experienced followed by a bitterly cold and snowy winter for most of the upper portion of the U.S. and even some parts of the South, industry experts say so many scenarios are involved it's difficult to predict dollar spot severity.

"Extreme late fall and winter weather might reduce mycelia density on the infected tissues and thatch and theoretically leave certain regions with reduced dollar spot pressure in spring," says Dr. Geunhwa Jung, associate professor of turfgrass pathology/breeding at the Stockbridge School of Agriculture at the University of Massachusetts. making the impossible...

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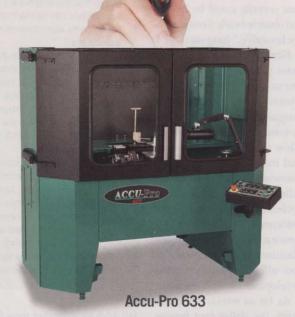


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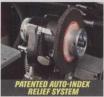
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Seasonable warm temperatures this spring and ample moisture will favor dollar spot appearing early, but dry conditions and cooler temperatures will delay infection. "If late fall dollar spot infections were prevalent, it is likely that dollar spot severity could be higher and observed early if conditions are favorable," Jung says.

North Carolina State turfgrass pathologist Dr. James Kerns advocates going into winter "clean" because the fungus overwinters readily in foliage. If superintendents allow the disease to develop and infection centers to sit overwinter it provides "an excellent source of inoculum for epidemics" the following year. "Moreover, for those that experience snow mold pressure, applications in the fall for dollar spot will help limit snow mold development as well," he adds.

As far as winter temperatures, the dollar spot fungus can survive readily in foliage and most likely thatch in extreme weather conditions, Kerns says. "We examined this in a three-year study in Wisconsin and we were always able to find the fungus even after the harshest winter," he says. "As an example, we can store the dollar spot fungus on filter paper at -112 Fahrenheit and it will survive if it has had an opportunity to dry down."

Spring weather is crucial to dollar spot outbreaks, and if a region has a mild, humid spring the disease will readily develop. Superintendents should watch RH values and use temperature only as a guide. "We know dollar spot can develop from temperatures ranging from 50-95 F if relative humidity is sufficient," Kern says.

If a region experienced a late

Outbreak!

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Well-timed applications before symptoms develop is ideal, but timing is key. However, this is a bit of a challenge.

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"The pathogen has to be active (not visible to the eye or before signs and symptoms) to be effectively suppressed by an effective fungicide," says Todd Hicks, program coordinator of turfgrass pathology in the department of plant pathology at The Ohio State University. "Often, there is a two-week or so window before superintendents will see symptoms but this can vary. Applications can be made too early and will not be effective. For applications, use a systemic product that you know works on your course.'

If an outbreak occurs, North Carolina State turfgrass pathologist Dr. James Kerns says select an effective fungicide. "If prevention is missed, I always advocate a tank-mixture of products to get the disease back under control," he says. "Then I suggest adding supplemental nitrogen in the tank, as well. We think of dollar spot as a low-nitrogen disease and that is true to some extent, because with nitrogen the plant cannot recover from the disease."

Once present, a mixture of fungicides should be applied as quickly as possible to bring the disease under control, says Dr. Paul Koch, assistant professor in the department of plant pathology at the University of Wisconsin-Madison's Molecular and Environmental Toxicology Center. Use a contact fungicide to quickly limit the spread of the infection, and a penetrant fungicide to protect emerging leaf tissue. Reapplication intervals should then be tightened for several weeks following the outbreak to allow the turf to fully recover.

fall with an extended time for dollar spot activity (it stayed warm later than normal) there could be two possible dollar spot scenarios.

"One, it gave you more time to clean up disease if present and go into winter in a healthy condition," says Todd Hicks, program coordinator of turfgrass pathology in the department of plant pathology at The Ohio State University. "Or, two, if there was dollar spot and you did not manage the disease, the turf would be in poorer condition going into winter and with disease that will be more difficult to manage the next year."

A warmer than normal spring with moisture and high humidity will enhance early dollar spot development that could be severe, adds Joseph Rimelspach, program specialist of turfgrass pathology in the department of plant pathology at The Ohio State University.

However, it's unknown the effect a severe winter will have on dollar spot severity, making an accurate prediction for the 2015 season difficult, says Dr. John Inguagiato, assistant professor, turfgrass pathology at the University of Connecticut's Department of Plant Science and Landscape Architecture. "There is still a lot we don't know about the biology of this pathogen and how overwintering is affected," he says. "However, my opinion is that the winter will have little to do with the severity of dollar spot epidemics this spring and summer."

Researchers consider dollar spot epidemics to be polycyclic, meaning as long as favorable conditions for disease exist,

the pathogen will infect its host and quickly grow its population. "Therefore, the severity of dollar spot epidemics this upcoming season will most likely have more to do with temperature and humidity this spring than anything that has happened over the winter," Inguagiato says.

Adam Moeller, agronomist for the USGA Green Section's Northeast Region, is optimistic despite the crushing amount of snow and cold his region received during the second half of Winter 2014-15, "I don't think a distinct correlation between a late-fall or extreme winter weather and dollar spot problems will be noticeable in the Northeast region," he says. "Superintendents did not express these concerns last season following one of the most severe winters in the past 30-plus years." However, he adds, warm, humid spring weather is likely to bring on dollar spot activity.

Spring weather has a more pronounced impact on the pathogen's severity than winter or fall conditions, says Dr. Paul Koch, assistant professor in the department of plant pathology at the University of Wisconsin-Madison's Molecular and Environmental Toxicology Center. Warm and wet conditions in the spring encourage faster fungus growth, which leads to more pronounced symptom development during the summer. "However, the dollar spot fungus grows quickly, and dollar spot symptoms can develop rapidly in the summer even without conducive conditions in the spring," he adds.

Superintendents should take into account their grass species. For example, creeping bentgrass is the most susceptible



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species to dollar spot, Jung says. Superintendents should also closely monitor "indicator" or "hot-spot" areas in which dollar spot historically shows up first. These spots are likely to have extended leaf wetness from poor drainage/more morning shade or lack of air movement.

Dollar spot severity should be "objectively" assessed if an outbreak occurs, taking into account the entire scope of the course, Moeller says. In many cases, a very small outbreak does not warrant an extra fungicide application outside of a traditional preventative program. Superintendents should increase efforts to manage the disease culturally via dragging fairways to remove dew on days when mowing is not performed and increase nitrogen inputs.

Inguagiato suggests checking sprayer output to ensure fungicides are applied at the proper rate, in a carrier volume of one to two gallons per 1,000 square feet, with flat fan nozzles that produce a medium to coarse droplet size."If dollar spot damage is evident, consider using a water-soluble nitrogen source to grow out of damage," he says. "When outbreaks occur we often find it necessary to temporarily shorten fungicide reapplication intervals to arrest further disease development."

Early spring fungicide applications, applied after second or



Dollar spot impacts the majority of turfgrass species, and is active under a wide range of temperatures. Dollar spot is the most common turfgrass disease in North America, with the exception of the Pacific Northwest and western Canada.

third "true" mowing events, is another strategy. "Early spring applications have shown some positive results for delaying dollar spot outbreaks in early summer (May and June) and have the potential to reduce

the number of overall applications," Jung says. "If renovating, choose a cultivar that has displayed good dollar spot tolerance."

If dollar spot infection occurs and curative action is required,



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Hewlett, N.Y., believes his snow mold application should suffice for dollar spot coming out of Winter 2014-15. And if he needs to, he'll make further applications. "We can always bump up the nitrogen with some ammonium sulfate or nitrate to grow it out in the early spring as well," he says.

Bryan Barrington manages spring outbreaks of dollar spot by applying an extra dollar spot spray such as Daconil or Curalan. "I believe this knocks down the pathogen going into the following spring, therefore my the infection of dollar spot is less," says the superintendent at The Golf Club at Oxford Greens in Oxford, Conn.

When spring arrives, Barrington applies an early application of the same chemical he applied in late fall, along with a granular application of ammonium sulfate at 3/4 pound of nitrogen per 1,000 square feet. "I do have a blend of bentgrass and two of the three varieties are dollar spot resistance," he says. "This is also a benefit I have opposed to a course that may have older varieties and/or Poa annua."

Jung says to tank-mix contact and systemic fungicides to stop infection and maintain a regular (14 to 21 days) application interval following initial curative application. However, he adds selection of the proper fungicide classes is critical since resistance to three fungicide classes: DMI (demethylation inhibitors) such as (metconazole, myclobutanil, propiconazole, tebuconazole, triadimefon, triticonazole and tebuconazole), dicarboximide (iprodione and vinclozolin), and benzimidazole (thiophanatemethyl) has been reported on golf courses. Multi-site fungicides (chlorothalonil and fluazinam) are good options to partner with single-site fungicides under high disease pressure. "Resistance has not been reported to the SDHI (succinate dehydrogenase inhibitors) fungicide class (boscalid, fluxapyroxad, and

provides very good dollar spot control," he says.

Research from multiple universities indicates making an early-season fungicide application well before symptoms typically appear can have long-lasting and positive impacts on disease control.

"For example, some of our research here at Wisconsin showed less dollar spot three months following an early season application on May 1 relative to a non-treated plot," Koch says. "Fungicides with long-lasting dollar spot protection, such as Xzemplar, Emerald, and Banner MAXX, should be used for these early-season applications. In addition to early-season applications, superintendents can watch for initial dollar spot symptoms developing in their highest risk 'indicator areas' to inform them when applications for the entire course can be scheduled." GCI

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Henry DeLozier is a principal in the Global Golf Advisors consultancy. DeLozier joined Global Golf Advisors in 2008 after nine years as the vice president of golf for Pulte Homes. He is a past president of the National Golf Course Owners Association's board of directors and serves on the PGA of America's Employers Advisory Council.

eware the Ides of March!" Caesar was warned by the soothsayer.

Caesar, a very superstitious man, wasn't the sort to take a soothsayer lightly.

Nor should those of us in the golf business dismiss the warnings the calendar issues as it turns to the third month of the year.

Before the end of the year, you should have communicated to your board of directors and owners your plan in 2015. By mid-March you should be implementing the actions that will achieve your strategic goals and objectives. Effective goal-setting should address specific and measurable outcomes, including:

- · Increased participation and membership growth.
- · Improved member and golfer satisfaction.
- · Improved course conditions.
- · Non-dues revenues.

In most clubs and at most courses, course conditions are the No. 1 consideration. The condition of the golf course defines the level of management attentiveness and competence. Even non-golfers are distrustful of an unsightly golf course. Course conditions are a signal of the lifestyle of the community the course serves.

Hopefully, your plan includes something new that will make 2015 more fun for your members and customers. Maybe you should try FootGolf or introduce 15-inch cups to give the game a fresh look.

What new wrinkles can you add to the traditional member-member or member-guest events? The key to finding the right mix of creativity and traditional is to ask your members and regular golfers what aspects of the club appeal to them most and where they would like to see new options. But remember, if you're going to ask for their opinions, you should be prepared to deliver on at least some of their suggestions. Failing to do so breeds a lack of confidence.

Now is also the time to make sure your staff understands its role. Top-performing businesses are characterized by employees who are fully dedicated and committed to key performance goals.

Have you told your staff what you want to achieve this year? Have you applied measurements — corporations refer to these as Key Performance Indicators or KPIs — to your goals so that everyone understands how the team is performing?

Weekly and even daily goals can add energy to long summer days, especially for your hourly workers. Such goals can be as simple as hosting more rounds, selling more putters or conducting more special events than the year before.

Post a score! One of the attributes of golf that makes it so engaging is that every player has an opportunity to post a score at the end of his or her round and then to improve on it the next time out. Similarly, you can give your team measure-

able goals and post daily, weekly and monthly performance metrics. Every staff member should know what you want to accomplish in 2015 and what their role is in meeting the goal.

Heed the winds of change. Club leaders and key managers must be attuned to external influences that can impact performance. Here are several to watch:

Employment. Trending favorably this far in 2015, this indicator affects consumer confidence, which can encourage or discourage decisions to join clubs and use recreational facilities.

Crude Oil Prices. The cost of petroleum-based products has a direct influence on many expense line items, including maintenance equipment, energy costs, food prices and most everything delivered to your front door.

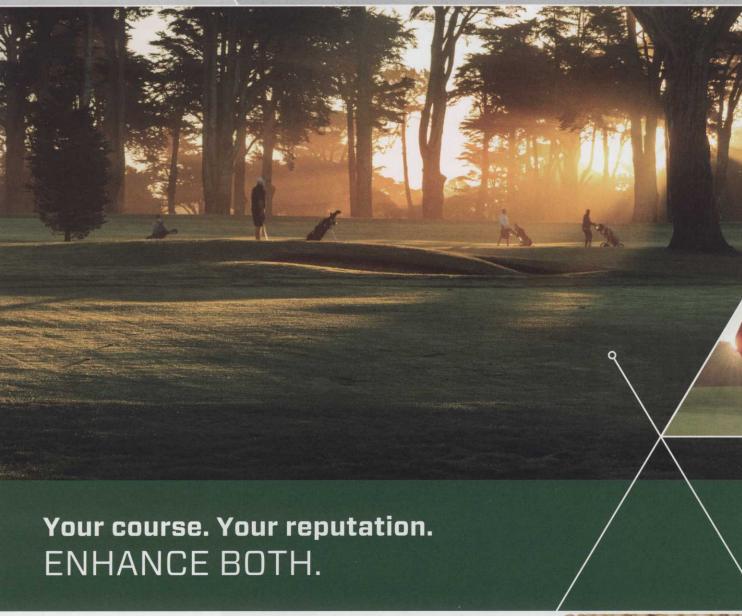
The broader market recovery driven by macro forces has enabled golf to re-set its pricing and re-focus on key market influences. In many market areas, these factors have turned positive and will be good for the clubs paying attention to key goals and performance measurements.

Weather. No one factor will more directly affect how cautious or aggressive you should be with your budget. It's March and every club and golf operator should have a clear understanding of predicted weather trends.

The broader market recovery driven by macro forces has enabled golf to reset its pricing and re-focus on key market influences. In many market areas, these factors have turned positive and will be good for the clubs paying attention to key goals and performance measurements.

For those facilities, the Ides of March hold great promise. **GCI**





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An **Andy** of all trades

Instilled with his father's work ethic, The Country Club of the Crystal Coast superintendent Andy Ipock's diverse background has helped him survive a volatile golf market.

By Trent Bouts

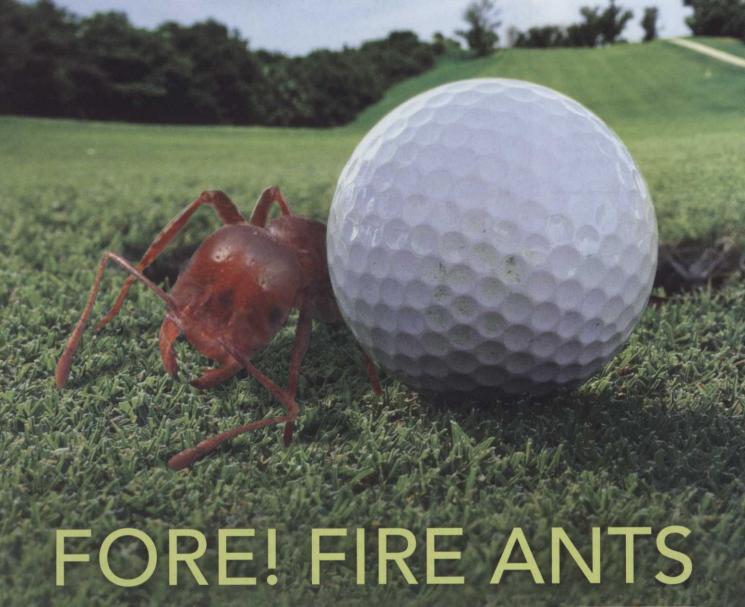
ome people are born to their profession but Andy Ipock came to his via the grave. His father Lennis dug more than 4,000 burial plots over a 30-year career - all by hand. Like most kids, Ipock helped the old man from time to time, earning a few dollars, learning to work the dirt. Over time, he dreamed of being a landscaper. Eventually, he became a superintendent at The Country Club of the Crystal Coast on North Carolina's Outer Banks.

Years later, the father – with "forearms like Popeye" and since retired – went to work for the son. Looking to ease Dad into golf, Ipock asked him to dig holes for trees to be planted around the clubhouse. When he returned, the holes were in the right places, and perfectly square. Old habits are hard to break. It wasn't the last head-scratcher in their working relationship.

Soon after, Ipock and the club's general manager were outside the pro shop looking down the 10th fairway as someone ran a tractor over a quick coupler sending water gushing 30 feet into the air. "Who's that idiot?" the GM asked as the driver fled the tractor for dry ground. "That's my dad," Ipock shouted over his shoulder, already in a sprint to catch the still-moving tractor.

"I'd fire him about once a month," Ipock, 35, laughs now. "He'd leave but then he'd be back the next morning as if nothing had happened." That went on for years.

For all the fun he pokes at his father, Ipock does so with no small amount of gratitude. "He's one of a kind" he says. "His work ethic is above and



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Andy Ipock teamed up with a new GM and members to bring The Country Club of the Crystal Coast back from a bank total of \$700.

beyond. He's my hero."

That work ethic is a hallmark of the son, and one of the reasons The Country Club of the Crystal Coast survived a near-death experience through the recession and has since regained considerable health. There's next to nothing Ipock hasn't done at the club. His being a Jack of all trades has been one of their aces since a fateful board meeting when the treasurer announced the club had \$700 in the bank.

With two infants and a mortgage on a new house, Ipock had already taken a 10 percent pay cut. That was a Tuesday night in spring 2009 and he remembers thinking, "Hold on... We get paid on Thursdays. How in the heck is that going to happen?"

In the year to that point, the club lost more than 200 members and ran a \$300,000 deficit. "Everything was a mess," Ipock says. "Everyone else pretty ASSESSED TO THE REAL PROPERTY.

much jumped ship."

Ipock walked out of that meeting haunted by the ghosts of superintendents past. "At that point, I was learning more and more about the golf industry and how volatile it was," he says. "I'd hear about guys losing jobs without warning and I was thinking, 'I'm going to be one of those guys. I guess I'd better get to the unemployment office."

He never quite made it. Club

members stepped forward and with their own money - some of it through personal loans staved off bankruptcy. Ipock picked up a check on the Thursday and kept coming to work. Over the following year, with most of the senior staff gone, "Everything pretty much came back to me," he says.

The club eventually secured a new GM, Chip Chamberlin, an industry veteran from Michigan and Florida, who himself had become "one of those guys" after decades at Donald Ross-designed Dunedin Country Club. He was happy for the opportunity and Ipock was happy to have help. They've made a good team. Membership is up to nearly 340 and the club, celebrating its 40th anniversary, has been profitable for each of the past three years.

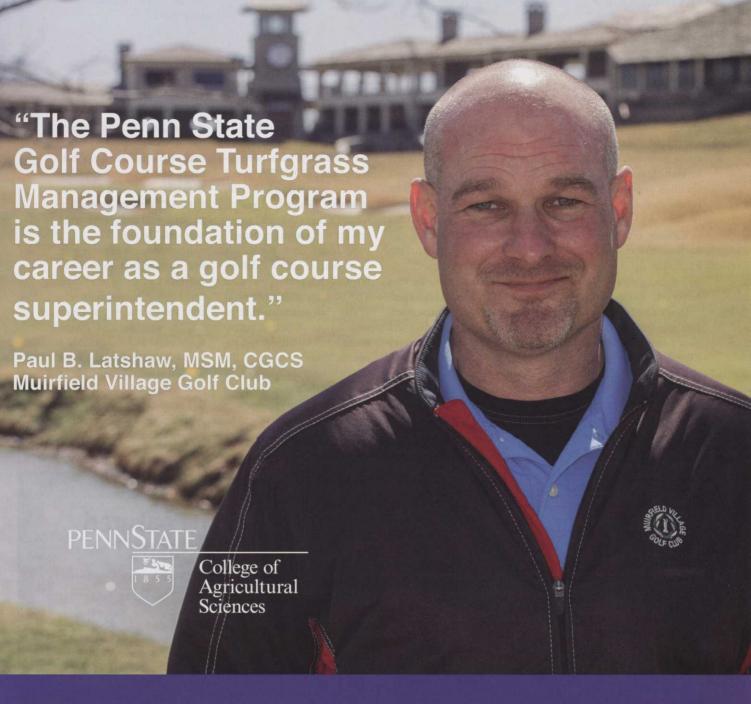
There was also \$110,000 from the state to pay for an easement in a first-of-its-kind green flood mitigation project. The Country Club of the Crystal Coast is squeezed onto barely 100 acres of a narrow barrier island that runs like a rib separating Bogue Sound from the Atlantic Ocean. "The whole island is basically a septic system," Ipock says. A heavy rain would often flood the town of Pine Knoll Shores.

The collaborative city, state and club project installed a powerful system to draw storm water through the course and its natural filtering system of ponds and eventually into the Sound. "The town notifies me when a storm is coming and I start lowering my ponds," Ipock says. "We're on a giant sand dune basically so I can run water for hours and you'll never see any of it on the golf course."

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closely monitor water quality leaving the golf course and entering the sound, which is home to significant and sensitive shellfish populations. Water is now cleaner than it used to be, the town is less susceptible to flooding and golfers can be back on the course quicker. Economically, agronomically and environmentally, "We're all better off," Ipock says.

Ipock's old-fashioned grit and initiative has been critical. "Andy does a phenomenal job," Chamberlin says. "He's one of the top two superintendents I've worked with in 36 years as a general manager. He does a great job and has helped this club come back from almost not

making it."

Ipock had never been on a golf course when he took a job as a laborer in 2002. Two days after graduating with an agronomy degree from North Carolina State University, his fiancée spotted a newspaper ad. It paid just \$7 an hour, but it was something.

Six months later, he was promoted to assistant superintendent. Within three years, he was the superintendent and has been saving the club money ever since. Some of it is easy to show in black and white. His maintenance costs come in under budget ever year. Last year he was \$15,000 in the black.

"It's easy to save on budget

when you've got nothing to spend," he laughs, harking back to the dark days when purchasing became COD. "We save a ton because we do a lot of stuff in-house. Honestly, I get offended if they (the club) go out and ask for bids on anything."

So Ipock does it all. For examples: He built a 5,000 sq. ft MiniVerde putting green for a \$8,000. He built stone walls at the club entrance that go with myriad stone and paving features he's installed across the course. There's more than 200 feet of tongue-and-groove bulk heading in the clubhouse he did at cost – \$35 a linear foot versus \$120-plus for a contractor.

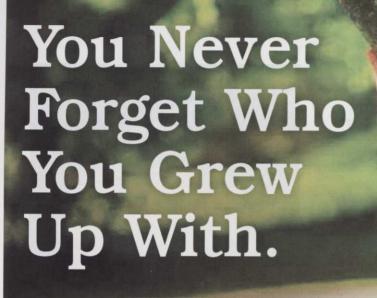
He wouldn't mind upgrad-

ing his aging TifDwarf surfaces but "membership is very much against it." They are more than happy with the putting quality he produces despite a lot of mutations. "I treat my greens like an ultradwarf and they respond very well," he says.

Ipock appreciates the people who showed faith in him and exercised patience at critical times. "I kept hearing from vendors 'You guys haven't paid your bill," he says. "But a lot of them were very understanding. I found that a lot of them – if you just talk to them – are willing to work with you. Chip (Chamberlin) came in and found ways to get them some of their money to keep things moving." GCI



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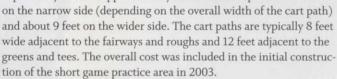
Globetrotting consulting agronomist Terry Buchen visits many golf courses annually with his digital camera in hand. He shares helpful ideas relating to maintenance equipment from the golf course superintendents he visits - as well as a few ideas of his own - with timely photos and captions that explore the changing world of golf course management.



Terry Buchen, CGCS, MG, is president of Golf Agronomy International. He's a 41-year, life member of the GCSAA. He can be reached at 757-561-7777 or terrubuchen@earthlink.net.

QUIETER CART PATHS

ark Smith, CGCS, at The Quarry at La Quinta (Calif.), and his construction team came up with a cool idea for quieter-sounding cart paths. The expansion joints are at two different angles, instead of perpendicular with the edge, so the golf cart tires do not make the typical "rap-rap-rap" sounds when crossing over them. The concrete is not tinted, but it has the decorative appearance of being so. The concrete thickness is 5 inches placed over the top of a decomposed granite base native soil material, with 3,000 PSI fiber mesh separating the two layers. The expansion joints are approximately 20-32 inches apart





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Golf Course Superintendents Association of America

National Golf Foundation

Golf Course Builders Association of America

The Irrigation Association

Responsible Industry for a Sound Environment





Turf replacement: No-till - \$1-\$1.50 per square foot -\$135,000-\$200,000

Turf replacement: Remove/replace top 4-6 inches of mix \$1.75-\$2.25 per square foot - \$225,000-\$290,000 Full California-style greens reconstruction: \$2.25-\$3.50 per square foot - \$290,000-\$455,000

Full USGA recommended method reconstruction: \$4.25-\$6.00 per square foot - \$550,000-\$780,000

Full USGA recommended method reconstruction plus green surrounds: Add \$6-8 per square foot for \$10.25-\$14.00 per square foot, or \$1.35 million-\$1.825 million

It is easy to see why some projects seem outrageously expensive, or cheap, if you don't know the particulars involved. It is also easy to see some confusion about what method to pick. In general, your choice is based on:

- Agronomic analysis from your superintendent and agronomic consultant, if necessary
- Business goals established by your club (agronomic marketing consultant, if applicable)
- Design problems identified by your golf course architect. The most expensive part of greens reconstruction is importing suitable top mix and choker layer sand, gravel and installing drain tile at \$4.25-\$10 per square foot for USGA greens. Re-designing the surrounding areas at least doubles the cost of rebuilding just the green surface itself, but presents opportunities to improve green surrounds and maintenance via an entirely new design, and may be necessary to meet ADA, environmental or sustainability requirements, or to help you rebrand the course for business reasons.

In general, you want to spend as little as possible to fix your problems, but just enough to do it right. With greens in particular, you don't want to go too far in cutting corners, although there is some debate as to whether California Greens is "cutting corners" over the more expensive USGA recommended method. For that matter, most of us consultant types generally frown upon less than complete rebuilding, because we fear less predictable results. That said, there are many courses out there more than happy with their new no-till greens and the problems — usually that older turf varieties are not completely killed off and may return — don't seem to matter to them. At low-budget courses, perfection is usually an unnecessary luxury.

In the right situation, all of these rebuilding types might be appropriate. In the last few years, I have performed green resurfacing at costs similar to above. When the course reopened, play and revenues were up 27 percent and the return on investment was a stout 440 percent. Given how important good greens are, just improving the putting paid off handsomely. A nearby course underwent a total, \$3 million renovation and rebranding, which doubled revenues for a total return of 53 percent. More total revenue increase, at greater construction cost. Both obviously fit the need and improved business for the course.

There are many ways to improve your greens, and one is probably best for your situation. GCI

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Qualipro	quali-pro.com	31
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SipcamAdvan	sipcamadvan.com	67
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AN OPEN LETTER TO GOLFERS



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ey! How's it going? Great day for golf, huh? Nice shirt! Is that an Ashworth? Listen dude, you don't know me but I'm kind of an old fart who's been around the turfy side of golf business for a long time. I just need about three minutes of your time to share something your course superintendent really wants you to know but is probably too polite to tell you.

If you play regularly, you probably think about your feet a lot. Should they be shoulder-wide or should you go for the super-wide Charles Barkley stance? Should your weight be on the balls of your feet or evenly distributed? Point your left foot out a little or keep it perpendicular? All good questions!

But today's question is about what's under your feet. Specifically, I'm talking about those thingies on the bottom of your shoes that are designed to improve your traction. Technically, they're called "cleats" but everyone calls them spikes or soft spikes or whatever.

Unless you're Phil Mickelson, a scratch club rat with an attitude, or a geezer who's too cheap to replace the FootJoys you bought in 1978, you've probably long abandoned metal spikes for these plastic doohickeys. They came into vogue about 20 years ago and, I must say, superintendents and greenkeepers around the world rejoiced!

The new soft spikes were vastly superior to old-school nails. We could all walk safely across hard surfaces, wear them anywhere inside and out and the damage to greens was dramatically reduced. If you're of a certain age, you probably remember the cat-scratches you'd have to endure because the idiot in front of you shuffled around the pin with those dull, half-inch spikes. A lot of those problems

disappeared overnight when plastic cleats came along and golf courses - particularly those precious putting surfaces - were way better off for it.

Well, the past few years we've seen a disturbing trend growing beneath golfers' feet. Giant, ugly, painful plastic cleats have emerged as a "hot" choice for fancy new golf shoes. I have to admit they look cool on the shelf at Golf Galaxy. They're almost as big as soccer or football cleats and boy do they dig in. They are, in a word, aggressive.

And that's the problem. They are far too aggressive for most greens. I'm on Twitter a lot and I've seen hundreds of pictures like this one of the damage they cause.

It's almost like having dozens and dozens of unrepaired ball marks on every green. Is that what you want to see

at your course? Do you want to be playing behind this guy? Mostly, do you want to be the chucklehead who leaves this kind of damage in your wake? Do you want to be "that guy"?

Some of the best courses on the planet are already banning these things for good reason. They ruin putting green quality and they spoil the experience for everyone else.

So, here's what your superintendent would tell you if he or she wasn't so nice: Don't wear them.

If you already have some shoes like this, go back to Dick's Sporting Goods or wherever and get some lower-profile cleats to switch them out. Get rid of them before you show up someplace cool ready to play golf only to find they won't let you on their course with these stupid things on your feet. Get rid of them because you want to be considerate to the other folks who have a right to enjoy their round. Get rid of them because they won't make any measurable difference in how you play. Get rid of them because it's the right thing to do.

Golf is the greatest game of all because of the shared culture of the sport. Part of that culture is being kind to the people who follow behind you. You fix your divots, rake your bunker shots and repair your ballmarks. Those niceties are just another part of the game we all love... but these crazy cleats shouldn't be.

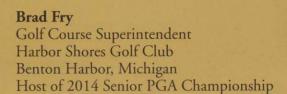
Thanks for listening. Hit 'em straight! GCI



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