

JANUARY 2019 | golfcourseindustry.com

GOLF COURSE[®] INDUSTRY



2019 STATE OF THE INDUSTRY
STAYING TOUGH

A successful season starts with a deeper respect.

Beneath your turf is the most complex biological system on the planet—evolved over millions of years to support the plants. Early this season as your soil warms, microbes within it will spring into action, turning complex carbons and trace elements into bioavailable superfood for your turf.

Most liquid fertilizers contain a few nutrients for feeding your grass. But our Foliars+ sprays are formulated with 30 active ingredients. You get a rich mineral mix to



boost your plant growth. And you get much more: Advanced bioactive humic acids that stimulate the microbial activity within your soil and fortify the ecosystem that supports your turf. Altogether, it gives your turf the legs to start strong and stay strong all season long.

We can offer you a Foliars+ program for your specific soil conditions and goals, so call us at 800-732-8873 for a consultation. Because our products are made with a deeper respect for the work you do.

Foliars+



Ask us about the EarthWorks Foliars+ 555 Program

EarthWorks

A Deeper Respect

Come See Us
In San Diego
at booth
#4923

COLUMNS

14 GAME PLAN

Henry DeLozier: Will millennials save golf?

32 OUTSIDE THE ROPES

Tim Moraghan: Balancing act

56 AMERICA'S GREENKEEPER

Matthew Wharton: Call me old fashioned

82 PARTING SHOTS

Pat Jones: Futurama

DEPARTMENTS

4 TEEING OFF: Receiving and giving

6 EDITORS NOTEBOOK: 126 tees? Why me?

78 TRAVELS WITH TERRY: Equipment ideas

81 CLASSIFIEDS

81 AD INDEX

2019 STATE OF
THE INDUSTRY
STAYING
TOUGH

15

FEATURES

Cover Story

15 STATE OF THE INDUSTRY 2019

Weather. Management. Players. Budget. Stress. Our annual State of the Industry survey looks at the condition of the golf market following a tricky 2018.

Management

34 LOVE & LEADERSHIP

The workplace is changing faster than the turf. Carlos Arraya, CGCS, offers his secret to managing different generations on your team..

Conversations with Jonesy

50 OUTSIDER NO LONGER

Armen Suny's latest career as a top recruiter proves curiosity can take you anywhere.

Pests & Disease

62 OUR FAVORITE VILLAIN

No matter what superintendents throw at it, *Poa annua* just keeps fighting back. But opinions on it, like the plant itself, might be evolving.

Career

70 FIVE IMPORTANT THINGS I LEARNED FROM OTHER SUPERINTENDENTS

Anthony Williams, CGCS, reveals enduring career lessons from interactions with colleagues.

Construction

40 THE UNITED STATES OF REVETTING

Sod-stacked bunkers are increasingly popular for inland courses looking to add international sizzle. Plus, a column from Tim Liddy.



50

RECEIVING AND GIVING

Our holiday highlight arrived in the second week of December. Without any begging or bribing, Carlos Arraya sent us an article. Carlos is the talented, engaging and enthusiastic director of agronomy and grounds at Bellerive Country Club in St. Louis. You might have seen Carlos a few times in 2018.

His team hosted a PGA Championship won by Brooks Koepka and invigorated by Tiger Woods, navigating Transition Zone booby traps and creating a canvas for a pulsating tournament. By keeping turf alive in a year when environmental factors suggested it should die, the Bellerive team boosted civic, club and industry pride.

Carlos made himself visible and accessible before and during the championship. He chatted turf, but he preferred discussing culture, leadership and people. The tournament ended with Tiger awkwardly hugging Koepka's model girlfriend following the final putt. Since that made for social media moment, Carlos has further used the spotlight hosting a major championship provides to positively shape the industry.

His desire to reach a wide audience convinced him to send us an article about his biggest work passion: managing people (page 34). We immediately threw more work on Carlos and he responded with a sidebar about Bellerive University, an internal program designed to enlighten and empower club employees.

We love Carlos for thinking of us and we're hoping more superintendents, assistant superintendents, equipment technicians, crew members, researchers, architects, builders, owners and general managers use *Golf Course Industry* as a platform to reach their peers in 2019. You don't need a major championship pedigree to write for us. You simply need to put your ideas in writing and email them to gcipriano@gie.net. And don't just save them for our annual Turfheads Take Over issue in December. We love unexpected gifts in the other 11 months. Don't feel restricted by topic or length. This magazine is about you and your peers, so we'll work with you to find the proper print or digital avenue to tell your story.

The second part of our holiday exacta arrived two days after Carlos clicked send: We received the first of what will be dozens of columns from Matthew Wharton.

While our quest for professional utopia isn't as weather dependent as yours, we are always seeking to elevate our product. Sometimes that quest drives us a bit zany. Sound familiar? Our assessment led us to a weakness. The industry's best columnist lineup lacked a current superintendent.

Thousands of turflicious people exist, yet we conducted a quick and decisive search to find our newest columnist. We offered the gig to Matthew, the superintendent at Carolina Golf Club in Charlotte, N.C. He accepted the offer less than an hour later.

If you have read Matthew's contributions to our past three Turfheads Take Over issues, his blog entries and tweets, you understand why he's now formally part of our team. His knowledge, dedication and passion, and folksy writing style, resonate with turf managers at facilities of all levels. We're calling his column "America's Greenkeeper," a play on his fabulous blog, "The Greenkeeper." The title foreshadows the relatable columns Matthew plans on producing.

His debut column (page 56) will spark conversations about decorum and generational differences. Managing different generations perplexes superintendents everywhere. Data from our annual State of the Industry survey (page 15) proves people are causing superintendents more angst than disease, finances or awful weather.

At least one of Matthew's colleagues feels he's conquered generational divides. Fortunately, he reveals his secret on these pages. **GCI**



Guy Cipriano
Guy Cipriano
Senior Editor

GOLF COURSE INDUSTRY

Vol. 51 No. 1

GIE Media, Inc.
5811 Canal Road
Valley View, Ohio 44125
Phone: 800-456-0707
Fax: 216-525-0515

PUBLISHER

Dave Szy
dszy@gie.net

EDITORIAL

Pat Jones

Editorial Director pjones@gie.net

Guy Cipriano

Senior Editor gcipriano@gie.net

Terry Buchen

Technical Editor at-large

Bruce Williams

Senior Contributing Editor

GRAPHICS / PRODUCTION

Jim Blayney

Creative Director

Caitlin McCoy

Advertising Production Coordinator

SALES

Russell Warner

National Account Manager
rwarnar@gie.net • 216-393-0293

Lucas Coleman

Account Manager
lc Coleman@gie.net • 216-393-0223

Bonnie Velikonya

Classified Sales
bvelikonya@gie.net • 216-393-0291

CORPORATE

Richard Foster

Chairman

Chris Foster

President and CEO

Dan Moreland

Executive Vice President

James R. Keefe

Executive Vice President

Christina Warner

Audience Development Director

Michelle Wisniewski

Production Manager

Maria Miller

Conferences Manager

Kelly Antal

Accounting Director

Irene Sweeney

Marketing Director

Kevin Gilbride

Business Manager, GIE Ventures

Golf Course Industry is a member of:

Golf Course Superintendents

Association of America


National Golf Foundation

Golf Course Builders Association of America

The Irrigation Association

Responsible Industry for a Sound Environment





*PondHawk creates subsurface
aeration with solar even in the rain!*

AERATE THAT POND!

...with PondHawk® The solar-powered aeration system

Nearly all ponds need management to help keep the habitat, water quality and clarity in a healthy balance. Far too often though, water assets are neglected or treated with chemicals and dyes, which can easily damage the delicate pond ecosystem.

PondHawk is the patented solar-powered aeration system that works without batteries. It is designed for use 365 days a year and requires minimal maintenance.

And because PondHawk is not connected to the electric grid, its operating costs are very low. The innovative design installs quickly, doesn't require a special license and can be situated away from the pond and easily secluded if necessary.

PondHawk is quiet, doesn't require a lot of space and needs no batteries, making it the most ecologically-friendly solution on the market.

**Find out about the new PondHawk
Lease Program – call 888-755-1950
or visit www.LINNEindustries.com**

See us in
San Diego at
the 2019 Golf
Industry Show
Booth #3725





Longleaf Golf and Family Club in Southern Pines, N.C., has seven tees on each hole.

126 TEES? WHY ME?

Superintendents learning to make maintenance tradeoffs as facilities implement design changes to attract new business.

Jason Friedman mows so many tee boxes he could count them instead of sheep to fall asleep at night. There are 126 in all at Longleaf Golf and Family Club in Southern Pines, N.C. On the face of it, that sounds more like a nightmare for a golf course superintendent than the stuff of dreams. But Friedman has tweaked his operation to a point where the extra tee care is “effectively net neutral” from a maintenance perspective.

His facility is home to the Longleaf Tee System, a joint initiative of the American Society of Golf Course Architects and U.S. Kids Golf. In short, the system provides tees suited to a golfer’s driving distance so that long and short hitters are more likely to play the same club into a green. Colored markers on the driving range help players determine how far their drives carry and, therefore, which tees they should play.

The Longleaf system, with seven tees

per hole, was one of the stars of a recent ASGCA Foundation symposium on “Forward Tees and Other High-ROI Ideas” in Pinehurst, N.C. Along with short courses, putting courses and courses with fewer holes, speakers reported that concepts like the Longleaf system are resonating with busier and younger golfers.

“I don’t have people coming into my office telling me they play here because we have tees better suited to their game,”

Friedman says. "But in the pro shop, we are hearing that people are enjoying their time on the golf course and we can see that with increased rounds."

Longleaf's owner and instigator of tailoring tees for how far golfers hit the ball, Dan Van Horn, told the symposium that rounds increased 20 percent in the year the system was installed and another 17.5 percent this year. "We're trying to revolutionize how kids are brought into the game," he says. "Other sports scale their playing arena for kids." The Longleaf system allowed those kids and their much longer-hitting dads to play the same course at the same time.

Kids may be the primary audience, but they're not only ones attracted. "In our first year, 93 percent of rounds played by women were played on tees that did not exist on the golf course previously," Van Horn says. "People are asking for scorecards at the end of their round because they want to take them back to their course and get the same thing introduced there."

To keep his budget "net neutral" despite maintaining so many extra tees, Friedman made savings in two key

areas. The first was in reducing heavily maintained acreage in out of play areas, about 10 acres in all that are now "sandy, natural" expanses planted in part with lovegrass, wiregrass and broomsedge. "We're not just saving money and labor, these areas now provide a contrast and help highlight the golf course itself," Friedman says.

He has also trimmed about eight acres of fairway mowing across the course. Many of the forward-most tees are simply rectangles mowed at tee height in what was formerly the start of fairways. Allowing the bermudagrass around them to grow to rough height, not only reduces mowing but helps distinguish the tees, which Friedman paints in winter.

It takes a total of 16 hours to mow every tee – eight yards wide by 10 yards long – twice weekly in the growing season. Friedman mows with triplex units in straight lines. He tried rounding the corners to save a little time and money, but found the inside wheel, even with no tread, was wearing and tearing the turf. "It was just too tight a turning radius so now we back up," he says.

Scott Brown admits he "wasn't too enthused" by the idea of installing new forward tees at Surf Golf and Beach Club in Myrtle Beach, S.C. He felt he had enough on his plate. In two years as superintendent at the club, Brown endured an ice storm, flood and greens renovation. Then, six days after reopening, Hurricane Matthew arrived, bringing a direct hit from a tornado.

"Someone's got it in for me," he told the symposium in Pinehurst. "Besides famine, I think I've got it covered!" But with significant areas on the nearly 60-year-old course opened up by resultant tree loss, the club engaged architect John LaFoy. "When he started talking about putting in forward tees, I wasn't too enthused," Brown says. "But I started looking at the demographics of our club."

What he found was that just 2 percent of the membership was between the ages of 16 and 35, and about 80 percent of men were 65 years or older. "Maybe I was part of the problem," Brown says. "They'd come to me saying they couldn't get on the green in two on some holes, and I'd just tell them to find another tee box to play."

You could say those aging men "saw red" at that suggestion, the red color of what they had always known as "ladies tees." When LaFoy installed new forward tees, creating a new course option of about 4,000 yards Brown learned he could entice some of those male members forward if he painted the tee markers silver or, on some holes, a mix of half silver and half red.

"We now actually have eight different tees and combination tees to help put the fun of golf back into play," he says. "We see kids out there now with their grandpas on same tee boxes enjoying themselves ... This forward tee stuff is awesome. It's been a real eye-opener for me."

Trent Bouts is a golf writer and editor based in Greer, S.C., and a frequent GCI contributor.



Longleaf Golf and Family Club superintendent Jason Friedman.

#SBI18: EVERYBODY'S DIFFERENT

Before reading any further, update your resume. Start brainstorming ideas for a 250-word essay describing why three days of business training will help you, your crew and your course.

Done yet? Chill. Time is your friend. Applications for the 2019 Syngenta Business Institute won't open until the spring. Attendees of the previous 10 versions urge colleagues to devote tremendous effort, energy and enthusiasm into applying. Who can't learn more about the most important shade of green at any golf operation?

When two-dozen superintendents gather at Graylyn, a throwback hotel and conference center owned and operated by Arnold Palmer's alma mater later this year, the same part of the program will generate animated conversations like it did last month.

Topic: *Leading across cultures & generations*

Presenter: *Amy Wallis*

Get your ice cream – a bountiful SBI perk – ready.

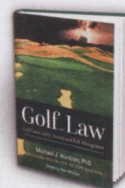
Wallis is the organizational behavior

expert who stands in front of the room and listens to supervisors reeling from a challenging year lament the work habits, attitudes and lifestyle choices of younger generations. To the surprise of some superintendents listening to Wallis, managing a golf course maintenance team isn't much different than leading workers in other industries. Success hinges on motivating people hailing from diverse backgrounds.

Supervisors in all fields flop because they can't connect with others who aren't like them. Learning how to prevent managerial implosions takes longer than one continuing education class. "We're not going to come to conclusions in a couple of hours," Wallis says.

But quality discussions spark engagement and this one had plenty, with superintendents revealing the makeup of their respective crews during the culture portion of Wallis's presentation and their bewilderment with millennials in the generational part. Don't know what bewilderment means? Your phone will tell you. Phones, expectedly, crept into the generational conversation and

Tartan Talks No. 30



Harder assignment: Designing a golf course or writing a book?

"Designing a golf course is far easier than

writing a book," Dr. Michael Hurdzan says. "And writing a book is far easier than finding things to illustrate the point that you are making."

Hurdzan wrote enough words and found the proper images to recently release, "Golf and Law," the seventh book in a storied design, writing and speaking career. The book examines golf course safety, security and risk management, a trio of topics Hurdzan discusses with tremendous zest in a Tartan Talks podcast.

"Safety, security and risk management on golf courses is something that's not taught in any turf program," Hurdzan says. "It's something that you have to be mentored in, or something you have to want to study and learn."

Hurdzan collaborated with friend and *Golf Digest* architecture editor Ron Whitten, a former trial attorney, on the book. Besides describing the impetus for the book, Hurdzan offers suggestions in the podcast for superintendents and other managers looking to create or bolster safety programs. Enter <https://goo.gl/veYSrs> into your web browser to hear Hurdzan's ideas.



Superintendents participated in interactive exercises at the Syngenta Business Institute.





AMVAC®

NEW FUNGICIDES. NEW ANSWERS. A NEW CHAPTER IN DISEASE CONTROL.



AMVAC® Four-Season Solutions™: year-round protection and cost savings.

AMVAC's expanding fungicide portfolio delivers peace of mind year-round—with trial results to prove it. New Previa® fungicide gives you an excellent value on chlorothalonil and joins our outstanding PCNB-powered solutions to anthracnose and snow mold. Get the latest answers in control, all from one company—all four seasons of the year.



SEE TRIAL RESULTS AND ROTATION PROGRAMS AT AMVACANSWERS.COM/FOURSEASONS

PREVIA
FUNGICIDE

PREMION
FUNGICIDE

Turfcide
TURF FUNGICIDE

Important: Always read and follow label instructions. PREVIA, PREMION, TURFCIDE 400 and TURFCIDE 10G are EPA registered. Some products may not be registered for sale or use in all states or counties. Please check with your state agency responsible for pesticide registration to ensure registration status.

©2019 AMVAC Chemical Corporation. All rights reserved. AMVAC, PREVIA, PREMION, TURFCIDE and FOUR-SEASON SOLUTIONS are trademarks owned by AMVAC Chemical Corporation. EIFG is a trademark of the Environmental Institute for Golf. A300-054991-8 12/18

AMVAC ANSWERS

AMVAC-chemical.com

superintendents are as split on their role in the workplace as they are on robotics and other technology-themed topics.

The American workforce, Wallis says, has shifted from an industrial economy to a service economy to a knowledge economy. Golf course maintenance

touches all three segments, expanding the potential for workforce diversity. Some employees enjoy physically producing a daily product such as a well-conditioned course; satisfying members and guests motivates other employees. Data and design might attract another

segment of employees, making a golf facility part of the knowledge economy. Imagine an automaker placing the assembly line, dealership and corporate offices on the same plot.

Understanding the differences between cultures and generations takes years of unwavering practice, and the process involves a tenuous start. "Unless proven otherwise, we assume everyone is like us," Wallis says. The slides, words and activities Wallis crafts for her SBI presentation nudge superintendents toward considering a customized form of management. Different cultures and generations possess distinct values and motivations. Handling a 19-year-old who wants a summer job on a golf course because it fits an outdoorsy lifestyle like somebody striving for a superintendent job at an elite club is a modern managerial blunder. And good luck fielding a crew if you force employees to work every weekend and holiday.

Superintendents needed their employees more in a challenging 2018 than most of their employees needed a golf course maintenance job. Historically low unemployment rates and soaring wages mean hourly workers should have incredible leverage and options again in 2019.

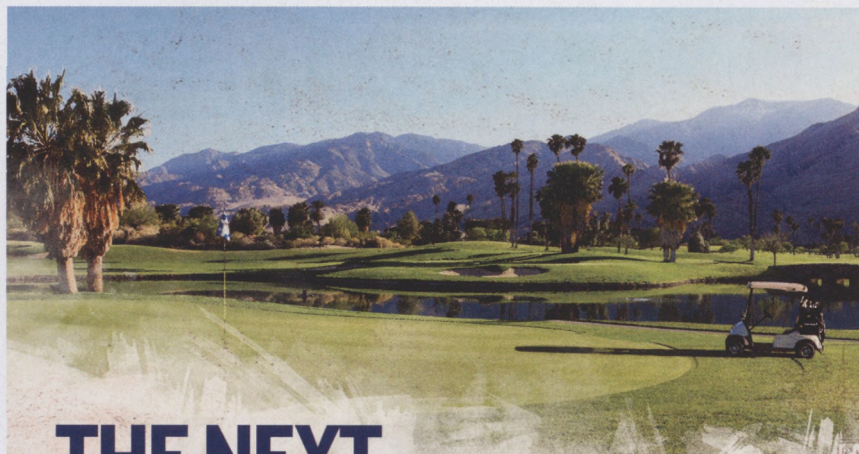
Agromony degrees are more plentiful than psychology degrees in the turf business. But people are changing faster than turfgrass varieties or irrigation practices, and higher cultural and generational learning must be incorporated into any continuing education strategy. "When you chose this career path, you probably didn't know how much you'd be managing different generations and cultures," Wallis says at the beginning of the session.

Enter the business for the turf or the sport. Establish longevity because of the different people you will lead.

Now about Arnold Palmer's alma mater and Wallis's place of employment ...

Wake Forest is an enchanting place to learn for three days, even if the school doesn't sit in the same location as it did during Palmer's college days. Get a customized essay ready.

Guy Cipriano is GCI's senior editor.



THE NEXT GENERATION OF HIGH QUALITY BERMUDAGRASS

If you liked Pennington® Princess®77 Bermudagrass Seed, you will love Pennington® Arden I5 Certified Hybrid Bermudagrass Seed:

- Excellent turf quality
- Significant cold tolerance (great for transition zones)
- Early spring green-up
- Fine leaf texture



Dr. Arden Baltensperger

Revered turf-grass researcher and scientist Dr. Arden Baltensperger bred this cultivar to deliver a quality stand at a reasonable price—all backed by research and confirmed with NTEP data.



pennington.com

Pennington is a trusted manufacturer and distributor of grass seed since 1945

Pennington, Pennington with design, and Princess are registered trademarks of Pennington Seed, Inc. ©2018 Pennington Seed, Inc. PT72



CONFIDENCE

IS KNOWING YOUR BATTERY WILL OUTLAST YOUR GAME.



We've played an essential role in enhancing the golfing experience for decades. Now we're charging forward to meet your future needs with dependable, high-performance, deep-cycle batteries.

TRILLIUM™
TROJAN INTELLIGENT LITHIUM

Learn more about Trojan's products including our new Lithium Ion solutions for golf applications.

trojanbattery.com

SOCIAL MEDIA SUPERSTARS

Sun. Sand. Coastal serenity. And social media.

The industry's brightest indoor show returns to San Diego as GCI and Aquatrols will present the eighth annual Super Social Media Awards at the 2019 Golf Industry Show.

The awards recognize individuals and organizations who do the best job of using social media to communicate about their programs, practices and industry at large. Winners will be honored during #GCITweetUp19 at 3 p.m. PDT Wednesday, Feb. 6, 2019 at Aquatrols both #3845 inside the San Diego Convention Center. The celebration begins at 2 p.m. with a happy hour and live music in the expanded booth. Use #GCITweetUp19 to follow live coverage of the event.

And the winners are ...



#GCITWEETUP19

Kaminski Award

Jason Haines, *Pender Harbour Golf Club, Pender Harbour, British Columbia*

Best Overall Use of Social Media

Craig Boath, *Carnoustie Golf Links, Carnoustie, Scotland*

Jessica Lenihan, *Hayden Lake Country Club, Coeur d'Alene, Idaho*

Best Twitter Feed

Paul Van Buren, *Kanawha Club, Manakin-Sabot, Va.*

Scott Ramsay, *The Course at Yale, New Haven, Conn.*

Best Blog

Tyler Bloom, *Sparrows Point Country Club, Baltimore, Md.*

Kevin Komer, *Stowe Mountain Resort, Stowe, Vt.*

Best Use of Video

Ontario GCSA
"Today in Ontario"

Conservation Award

Matthew Gourlay, *Colbert Hills, Manhattan, Kan.*

**Give yourself
an advantage—
learn from a leader.**

Earn your Penn State Turfgrass
degree or certificate—100% online.

A world of possibilities. Online.



PennState
World Campus

Request a brochure
worldcampus.psu.edu/gci

TORO®**Count on it.****NEW**

WHAT MATTERS

The all-new Greensmaster® 1000 Series walk greensmowers with telescoping handle.

Consistent playability on every green, everyday, regardless of who mows!



MOST

Routine compliments from members and improvements to your bottom line!

What Matters Most to You Matters Most to Us.

A new legend is born. The all-new Greensmaster 1000 Series walk-behind greensmowers are designed to bring every operator and greensmower into perfect harmony with one another. With an industry-first telescoping handle, each machine can accommodate operators of different heights and/or skill levels to deliver a consistent, unparalleled quality of cut on each and every green. And... the modular design makes it easier than ever to maintain – saving significant time and money - resulting in a lower cost of ownership.

Join the conversation

 **@ToroGolf**

©2019 The Toro Company. All rights reserved.

Call: 800-803-8676

Visit: toro.com/GR1000Series



Will Millennials Save Golf?

A few years ago, Time magazine published an exhaustive look at millennials titled “The Me, Me, Me Generation.” The story took some shots at a generation characterized as “lazy, entitled narcissists who still live with their parents,” but concluded that the world’s 80 million 18- to 34-year-olds will “save us all.”

Global Golf Advisors has done extensive research into what makes millennials tick – especially from a golf perspective – aimed at answering this question: “Will they also save golf?”

Their numbers portend their potential. Millennials are responsible for the majority of purchases of everything from groceries to automobiles. They’re also beginning to settle down, with careers, homes and kids of their own. As they do, their global spending power is estimated in excess of \$600 billion a year.

There are about 6.4 million millennial golfers, according to the National Golf Foundation. That’s more than any golf cohort, other than 6.8 million Gen Xers, whose birth years are generally considered 1965 to 1984. By contrast, there are 5.4 million baby boomers, once thought to be golf’s saviors, but now on the back nine of their golfing careers. Here’s what else we know about millennials:

- They are the first generation of tech natives. They practically teetted on their PCs, tablets and smartphones. They love their

phones, but hate talking on them.

- They crave new experiences, even more than material goods.
- They need to feel like what they’re doing is important.
- They aren’t as willing as former generations to sacrifice their personal life to advance their careers.
- They’re heavily influenced by product reviews, Q&A’s and photos posted by other consumers.

But what will it take to turn their potential into our reality? Global Gold Advisors teamed up with Nextgengolf to survey millennial golfers across the U.S. Here’s what we learned:

The No. 1 reason millennials play golf is to hang out with friends. That’s closely followed by enjoying being outdoors and athletic competition. Interesting, business-related reasons, such as growing their network, were last on their list. They just want to have fun.

The millennials in the survey who play at daily fee courses are frugal. Slightly more than 80 percent want to spend \$50 or less on a round of golf. Sixty percent typically spend between \$25 and \$50.

Three-quarters of millennials will consider joining a private club in the future. Twelve percent are already a private club member. Nearly half of participating millennials plan on joining a private

club within the next three to 10 years.

Factors influencing their decision to join a club also show the importance of the social side of the club experience. The most important factor that influences a membership decision is a recommendation. Eighty-three percent of survey respondents said encouragement from a friend, colleague or family member might cause them to join a club. These are folks who are accustomed to reading reviews and acting on the recommendation of others. The second most influential factor was a positive experience while attending a tournament or special event at the club.

For most, though, golf is not enough of a draw to join a club. You must remember: millennials are social animals. Many are involved in as many as 10 recreational activities. That’s why a workout center, for example, is a valuable investment for clubs and golf facilities that want to increase their appeal to millennials.

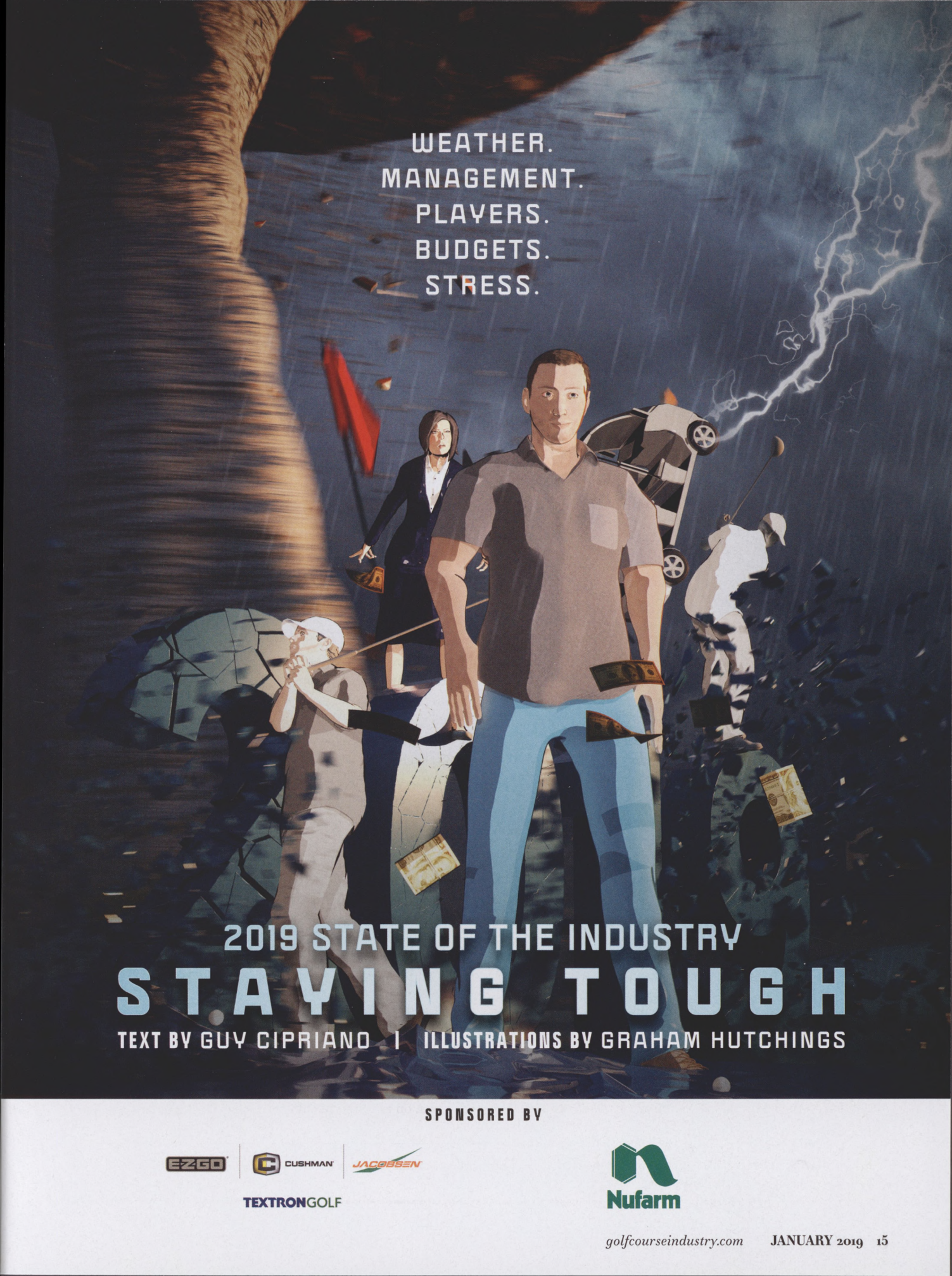
Millennials like options and flexibility, and that characteristic was borne out in the portion of the survey focusing on entrance fees and dues. Forty-one percent of millennials would prefer to pay more annually than pay an entrance fee to join a private club. Approximately half said they would prefer an annual fee of \$3,000 or less to belong to a club.

The challenge for clubs? To create an environment that not only appeals to the new wave, but also one where members of all generations can co-exist. **GCI**

“Millennials are responsible for the majority of purchases of everything from groceries to automobiles.”



HENRY DELOZIER is a principal in the Global Golf Advisors consultancy. He is currently Chairman of the Board of Directors of Audubon International.



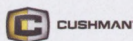
WEATHER.
MANAGEMENT.
PLAYERS.
BUDGETS.
STRESS.

2019 STATE OF THE INDUSTRY
STAYING TOUGH

TEXT BY GUY CIPRIANO | ILLUSTRATIONS BY GRAHAM HUTCHINGS

SPONSORED BY

EZGO

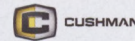
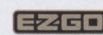


JACOBSEN

TEXTRON GOLF



As this year's State of the Industry report once again shows, the golf industry continues to evolve. As it does, Textron Specialized Vehicles is changing with the times and positioning its brands to serve you better.



TEXTRON GOLF

2018 continued to be a year of transformation, with E-Z-GO®, Jacobsen®, Cushman® and Textron Fleet Management continuing to deliver new equipment and technologies. We are uniquely positioned to be a single-source solution for a course's equipment needs, from E-Z-GO golf cars, to Cushman utility and hospitality vehicles, to Jacobsen turf-care equipment and Textron Fleet Management.

In 2018 we debuted our ongoing commitment to innovation with the launch of several new products across our brands and product lines. Jacobsen introduced its TR and AR series, delivering Jacobsen's unparalleled quality of cut and the ability to tackle hard-to-reach areas of your course. Textron Fleet Management launched its new Shield Plus™ technology, designed for professional turf equipment and utility vehicles. Utilizing geofencing and real-time data, Shield Plus offers a wide range of management features focused on driving efficiency within your operation.

Cushman also added several new vehicles to its line of highly functional utility products. The Hauler 800/800X series, available in either gas or AC electric powertrains, was designed to offer heightened versatility, and can be customized with accessories for almost any job your course demands. And Hauler 4x4 models, offered in gas or diesel, deliver an impressive 2000-lb towing capacity and the power and durability to handle the heavy lifting at your facility.

We are proud to sponsor this year's State of the Industry report and expect that you will find it informative and helpful as you plan for the future. As the industry changes, you can count on our brands to continue to evolve with it, providing a steady drumbeat of new and improved products and services to help you adapt to change, better serve your customers, and grow a larger, more profitable business.

Sincerely,

Michael R. Parkhurst

Vice President, Golf Textron Specialized Vehicles Inc.

INVESTING IN THE NOW AND LATER

Nufarm is a dependable global partner behind thousands of growing success stories. For more than 100 years we've been finding effective ways to fight disease, weeds, and insect pressure by turning world-leading scientific breakthroughs into local solutions.



As golf continues to grow and mother nature hands superintendents some real challenges, Nufarm works tirelessly to assure the performance, safety and simplicity of its golf turf solutions. We invest in a proven portfolio of fungicides, herbicides, insecticides and PGRs that can help maximize time and achieve your maintenance goals.

We offer innovations, including Anuew™ PGR, the industry's highest-performing late-stage plant growth regulator. We also deliver top dollar spot defense with Traction™ and Pinpoint® – two must-have MOAs for your fungicide rotation, controlling even SDHI-resistant strains.

Nufarm is also focused on the bigger picture, taking steps to make the golf course industry and communities we serve better. We developed the EXCEL Leadership Program in collaboration with GCSAA. EXCEL offers leading-edge development opportunities for future golf course management leaders.

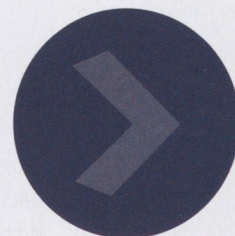
Each year 12 assistant superintendents are chosen from many excellent applicants to assemble three times per year for three years. They learn leadership training in areas such as career, community, and industry stewardship. When we announced the creation of the EXCEL Leadership Program in Fall 2016, we believed it would benefit future leaders. We didn't envision how quickly the positive impact would be realized through new skills, knowledge, alliances, and even career promotions.

Learn more about the EXCEL Leadership Program or connect with our experts any time at NufarmInsider.com. At the end of the day, Nufarm is always here – ready to help solve the turfgrass challenges you face today and support the success you grow tomorrow. That's why it's our pleasure to bring you this year's State of the Industry.

Kind regards,

Cam Copley

Golf National Accounts Manager



STAYING TOUGH

IT'S OVER.

Well, at least the calendar portion of 2018 has ended. With images of saturated and seared turf lingering and labor equations not computing superintendents stagger into a new year with one thought: It can't get much tougher.

Polled in December as part of *Golf Course Industry's* annual State of the Industry survey, 90 percent of superintendents indicated the job is tougher now than when they entered the business. Don't look for that statistic in any GCSAA or turf school marketing campaign.

From weather swings – What happened to spring and fall in many cool-weather regions? – to shrinking labor pools, managing pristine playgrounds on budgets struggling to keep pace with inflation required athlete grit, actor charisma and artist ingenuity. But conquering enormous challenges such as recovering from a flood, hurricane or wildfire, preserving greens with shallow roots because spring never arrived, and completing the work of 15 with a crew of 10 provides lasting fulfillment.

"It's hard to say which years are tougher, because you know how revisionist history can be," says Jim Huntoon, superintendent at Heri-

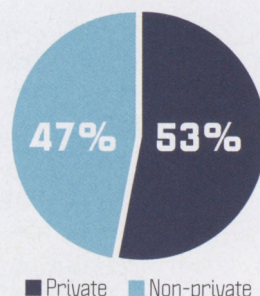
tage Club in Pawleys Island, S.C. "But as I have done this longer, I have gotten better at dealing with it. You get better at understanding there are things you can't control, and you just prepare the best you can and figure it out."

Results of the survey, now in its eighth year, won't simplify a tough job. But they should prove reassuring and provide snapshots of budgets and attitudes following a year that has thankfully ended.

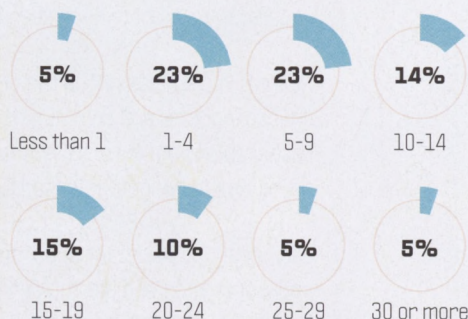
"I'm optimistic 2019 is going to be a better year, because I can't imagine we can have a repeat of 2018," says Robert Alonzi Jr., a second-generation superintendent at Fenway Golf Club in Scarsdale, N.Y.

A couple of details about our methodology. *Golf Course Industry* administered the survey online via SurveyMonkey. The survey, which was demanding because of the budget detail we asked for, generated 186 responses, with 53 percent of respondents working at private golf courses. As an incentive to complete the survey, *Golf Course Industry* committed to making a substantial donation to the Wee One Foundation, a charity group started in the memory of Wayne Otto, CGCS, that helps superintendents and other turf professionals in need.

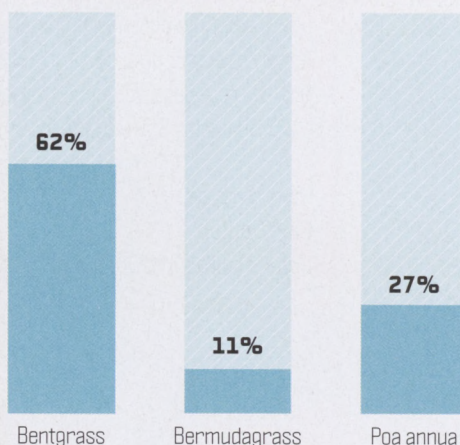
Type of golf course where you work



Years in current position

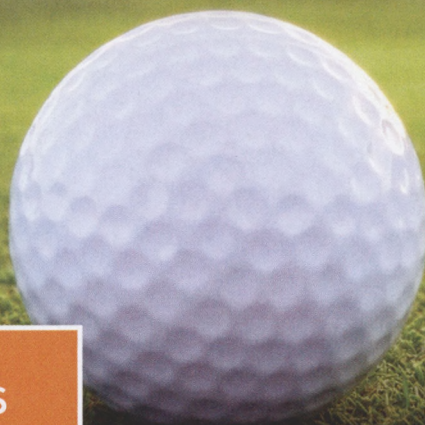


Dominant grass varieties on your course's greens



RESULTS

WORTH THE SWITCH



3 REASONS ANUEW™ PGR PERFORMS BETTER ON BENTGRASS

— TRIAL PERFORMANCE VS THE COMPETITION —

Long-lasting and more active
at lower application rates

Only late-stage inhibitor to evenly
regulate Poa in mixed stands

Fast improvement of turfgrass
density and appearance

// SEE RESULTS AT NUFARMINSIDER.COM/ANUEW

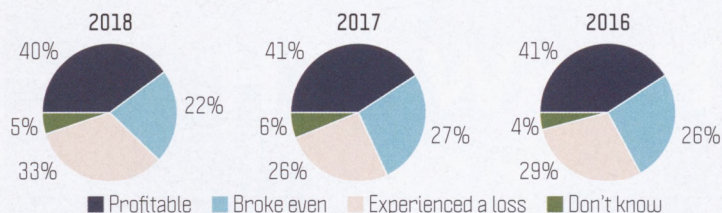
SEE US AT GIS '19
NUFARM BOOTH #3937



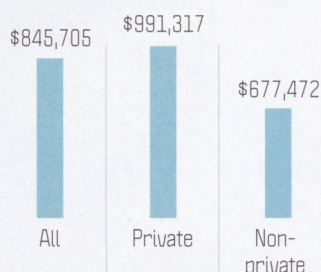
Grow a better tomorrow

©2019 Nufarm. Important: Always read and follow
label instructions. Anuew™ is a trademark of Nufarm.

Was your course profitable?



Average non-capital maintenance budget



Average non-capital maintenance budget the last five years

2019	\$845,705
2018	\$911,705
2017	\$798,200
2016	\$750,000
2015	\$697,000

Projected capital improvement budget in 2019

\$250,000	\$359,903	\$89,064
All	Private	Non-private

Budget chart

Mowing/cultivation equipment	\$40,718
Shop tools	\$2,045
Handheld equipment	\$2,235
Course accessories	\$4,439
Fuel	\$23,365
Energy-electrical/natural gas	\$18,589
Granular fertilizers	\$17,988
Liquid fertilizers	\$16,231
Water	\$19,909
Irrigation parts, heads & maintenance	\$10,240
Fungicides	\$41,556
Insecticides	\$7,035
Herbicides pre-emergent	\$6,314
Herbicides post-emergent	\$3,940
Plant growth regulators	\$5,324
Wetting agents	\$6,782
Sand	\$17,847
Aquatic weed control/water quality	\$2,882
Dyes colorants	\$967
Software/data collection devices/programs	\$1,099



FENWAY GOLF CLUB
SCARSDALE, N.Y.

COPING WITH COMPARISONS

Choosing to become a superintendent in the New York City metropolitan area means hearing and handling comparisons. The region, after all, boasts dozens of clubs vying for Top 100 recognition.

"Expectations for all courses, from the lowest level to the highest level, run high," Fenway Golf Club superintendent Robert Alonzi Jr. says. "It's a concern and it's something you have to balance."

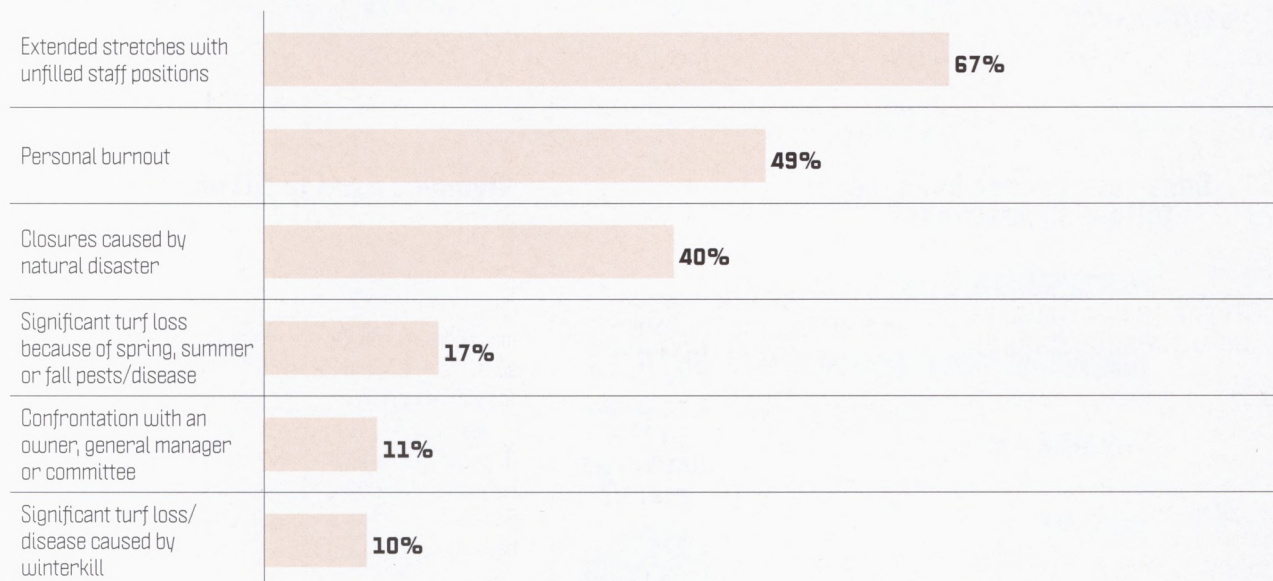
For Alonzi, a second-generation superintendent, and his Met GCSA colleagues, meeting expectations developed into a soggy, sultry and stressful task in 2018. Fenway received more than 60 inches of rain, with three-quarters of the total arriving after July 1. Fenway lacks wall-to-wall cart paths, so members needed to follow rigid rules implemented to protect vulnerable turf. "It was hard to live up to member and personal expectations," Alonzi says.

Challenges extend beyond enormous expectations and weather. Being positioned in a community where the median home price hovers around \$1 million nearly eliminates the possibility of attracting workers who reside within 30 minutes of the club. And then there's an impending budget reality: a mandated \$15 per hour minimum wage reaches Westchester County in 2021. "There are certainly a lot of things that I don't recall worrying so much about when I first became a superintendent or even when my father was a superintendent," Alonzi says.

Even as colleagues and friends leave the business, Alonzi continues to display zest for the profession. Alonzi expects to begin 2019 fully staffed and the club has commissioned architect Gil Hanse to update a master plan developed in the late 1990s and early 2000s.

"Working in the Met is fantastic," Alonzi says. "It's a great area of the country. Some of the greatest courses are within that area. It's hard to stick out sometimes, because you're surrounded by such fantastic classic golf courses and country clubs. It's very competitive, but at the same time, very fulfilling."

Issues experienced in 2018



The average non-capital maintenance budget has **increased by \$223,205** since 2012.

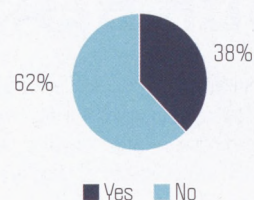
Maintenance budget change compared to 2018

Increase 20% or more	1%
Increase 10% to 19%	5%
Increase 1% to 9%	48%
No change	32%
Decrease 1% to 9%	11%
Decrease 10% to 19%	1%
Decrease 20% or more	2%

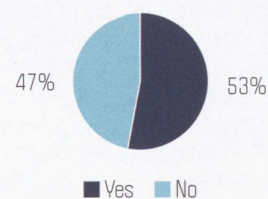
Maintenance budget devoted to labor and overhead

Less than 30%	2%
30% to 39%	9%
40% to 49%	10%
50% to 59%	44%
60% to 79%	34%
80% or more	1%

Does your department feel pressure to produce additional revenue because of financial losses in other areas of your facility's operation?



Does your facility have a long-range plan to improve and adapt for the future?

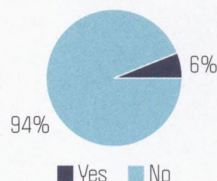


Average size of maintenance staff	22	8	11	3
	TOTAL	FULL-TIME	SEASONAL	OTHER

Does your course have the following positions?

Equipment technician	85%
First assistant	82%
Second assistant	33%
Irrigation technician	33%
Spray technician	29%
Intern	16%
Assistant in training	15%
None	6%

Have you used the H-2B program in the last three years?



Avenues used to fill open positions

72%	53%	40%	37%	22%
Retirees	Help wanted ads	Local high schools	Local colleges	Customers/members looking for extra income
13%	13%	12%	8%	6%
Workers lured from other industries	Job fairs	Sports teams	Junior golfers	Volunteer programs

BEAUTY AND THE LABOR BEAST



HIGHLAND COURSE AT PRIMLAND MEADOWS OF DAN, VA.

Brian Kearns jinxed himself at the Carolinas GCSA Conference and Show last November, telling colleagues the Highland Course at Primland avoided weather-induced hassles other facilities faced in 2018. "A day later," he says, "we had the worst ice storm I had ever seen here. So, 2018 can go bye-bye!"

The storm damaged tree limbs along the Highland Course, one of several amenities at a majestic resort in southern Virginia's Blue Ridge Mountains, and cleanup continued into December. At least the half-inch of ice arrived at a slow stretch.

With valet parking only at the clubhouse and luxury treehouses along the course, Primland tussles for seasonal business in one of golf's smallest sectors: the high-end resort market. Kearns has experienced every golf event in the resort's history, joining the management staff in 2004, two years before British architect Donald Steel completed a course without a par 4 until the fifth hole. Kearns' duties as superintendent involve attending sales and marketing meetings. Gaining a competitive advantage

requires adding amenities maintained by the agronomic team such as a disc golf course and hiking trails.

"When you have a membership, you have that cash flow coming in," Kearns says. "With a resort, you're relying on day-to-day business. Our budget has remained pretty level for the last several years. It hasn't declined, but our responsibilities have increased."

While visitors hail from across the Northeast and Southeast, a rural location makes finding enough bodies to handle the increased responsibilities a tricky task, especially in a prosperous year. Kearns received an unexpected labor gift when a pair of unemployed corporate supervisors needing work joined the crew at the start of the Great Recession. Those days are gone. In 2018, the crew operated at full capacity for less than two weeks.

"Labor is by far our biggest challenge," Kearns says. "We probably had the best staff we ever had (in 2018). We just need more of it."



CUSHMAN
LET'S WORK.®



TAKE YOUR OFFICE WITH YOU.

Only Cushman® Hauler® Vehicles Are Loaded With The Functionality You Demand.

Sure, your facility can hold a lot of stuff, but how well does it handle? Cushman Hauler vehicles were designed by Superintendents to make your workday easier and more productive. With 75 percent more storage than the competition, a fully customizable bed and plenty of stamina to handle long days, every Hauler is ready to tackle any challenge with ease. And now, with the new Hauler 4x4 and 4x4 Crew, the family is complete. Load 'em up, and move 'em out.

Explore the line at Cushman.com/Hauler



HAULER 800



HAULER 800X



HAULER 1200



HAULER 1200X



HAULER PRO



HAULER PRO-X



HAULER 4x4



HAULER 4x4 CREW

TEXTRONGOLF

© 2019 Textron Specialized Vehicles Inc.



CONWAY FARMS GOLF CLUB
LAKE FOREST, ILL.

TIME FOR TIERS

Multiple students have recently contacted superintendent Connor Healy about pursuing internships at Conway Farms Golf Club.

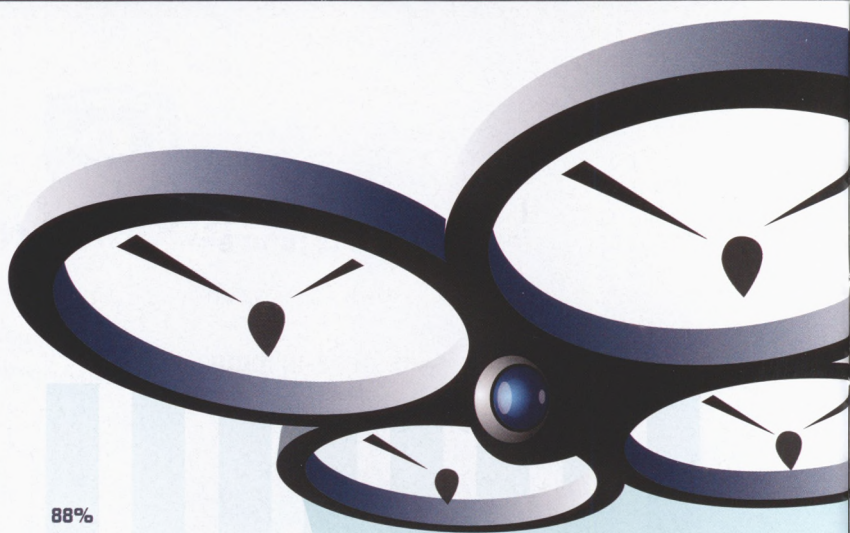
"Before, if we got one, I felt like I was winning the game," Healy says. "To potentially have multiple interns is winning the game. I feel very fortunate to be in that position."

A revitalized internship program is one of several tactics Healy hopes will help Conway Farms combat a dwindling labor pool in Chicago's private-golf-rich north suburbs. Following a 2018 slowed by either record cold or rainfall in the spring months, Healy reevaluated how he approaches labor.

Instead of relying on traditional tenured-based tactics, he's implementing a performance-based compensation system for workers. Hourly dollar amounts are attached to six tiers of employees and motivated workers can advance a tier as early as three to four weeks after joining the crew. The system is designed to keep the labor budget manageable while dangling the recruiting hook of early advancement. Healy also views the changes as a proactive measure for what he considers the "inevitable" escalation of the region's minimum wage to \$15 per hour.

"A lot of things seem to be coming to a head all at the same point, it feels like for me," he says. "There's this dramatic labor pressure out there, there's wage pressure and there's also low unemployment. There just aren't enough people to fill the jobs from the pure labor perspective, but also from the higher skillset, there aren't as many people out there who want to become assistants. Positively, I'm starting to see a little more from my efforts as far as people getting back to me about wanting to work (in 2019)."

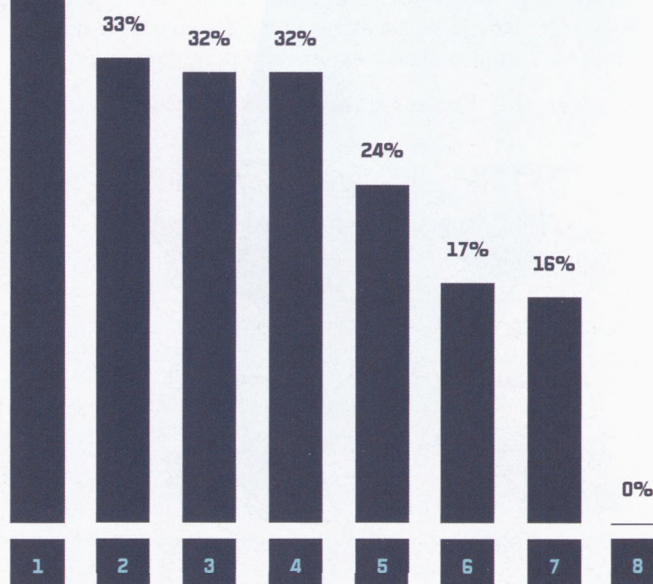
Healy's crew should be backed by significant resources. The Tom Fazio-designed course, which opened in 1991 and hosted the PGA Tour's BMW Championship in 2013, 2015 and 2017, is continually examining the condition of its infrastructure. "I feel fortunate to be at a club that's committed to investing," Healy says. "I see it pretty readily throughout the area."



88%

Technology utilized by your course

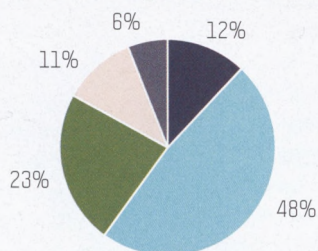
1. Handheld moisture meters
2. Battery-powered equipment
3. Digital job boards
4. Data management programs
5. Aggregate bunker liners
6. GPS sprayers
7. Drones
8. Autonomous mowers



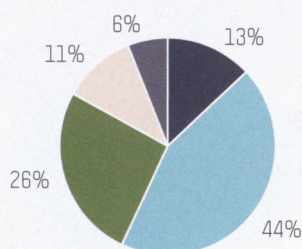
How likely are you to use any of the following in the future?

■ Never ■ Not Likely ■ Somewhat likely ■ Very likely ■ Definitely

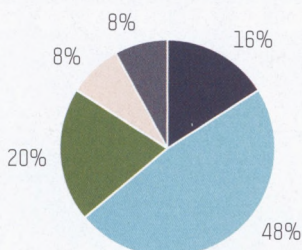
Autonomous greens mower



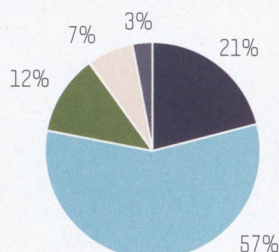
Autonomous fairway mower



Autonomous rough mower



Autonomous bunker rake



OTTER CREEK GOLF COURSE
COLUMBUS, IND.

TOUGH BEGINNINGS

Brent Downs didn't receive much of an opportunity to settle into his new job as superintendent at Otter Creek Golf Course, a public facility in the Transition Zone city of Columbus, Ind. Downs arrived in March. From May 7 until June 28, the course absorbed 20 inches of rain.

"I would describe it as the most difficult year of my career," Downs says. "Different regions of Indiana got different amounts of rain, but Columbus seemed to be in a rain corridor. On the days it didn't rain, we were over 90 degrees and overnight temperatures were in the mid-70s. That made it a really difficult environment to grow grass in."

Otter Creek, a 27-hole facility that debuted its first 18 holes in mid-1960s as a gift from the Cummins Engine Co. to the city of Columbus, supports a variety of golfers, ranging from scratch players competing for state titles to beginners. Unfortunately, there were times in 2018 when nobody played the course. Otter Creek lost an equivalent of 15 full-play days from Memorial Day to Labor Day, according to Downs. Riders account for most of Otter Creek's play and cart path only rules negatively affect business.

The course possesses six holes within a floodplain. The 11th hole lost a significant portion of its bentgrass/*Poa annua* fairway because of weather-related damage last season. Through the muck came one of Downs' proudest moments, as his team needed just two months to reseed and revive the surface. "That took a lot of people, a lot of hard work and a lot of resources," he says. "In a way, my biggest embarrassment, became our greatest accomplishment."

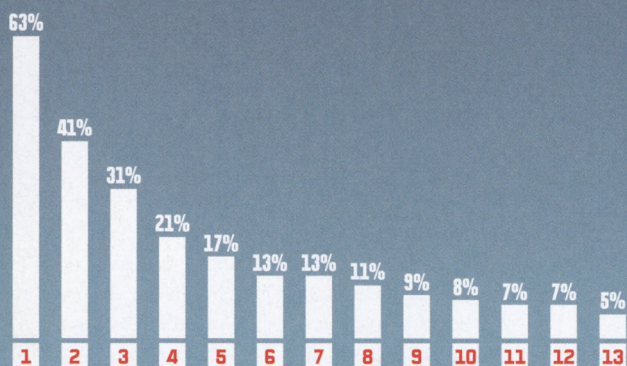
Connecting with a loyal crew and frequent communication with his bosses, including using drone imagery to document the damage and recovery, helped Downs endure a brutal year.

"Nobody wishes for a year like this to happen," he says. "But I'm glad it happened in my first year, because I kind of saw the course and all the drainage challenges it presents up front, so now we can get to work fixing them."

52% of superintendents use *Twitter* for work.

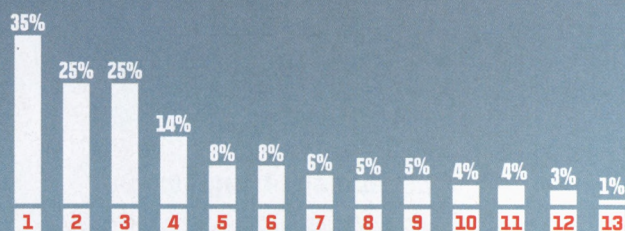
The percentages show how many superintendents indicated they are **"very concerned"** about a particular challenge entering 2019.

1. Finding and retaining quality labor
2. Aging course infrastructure
3. Weather
4. Personal expectations
5. Bunker maintenance
6. Protecting the course from golfer/cart wear
7. Member/customer expectations
8. Rising cost of living/housing costs
9. Regulation and cost of water
10. Relationship with GM/member committees
11. Turf pests and diseases
12. Producing desired green speeds
13. Pesticide, fertilizer and noise regulation



The percentages show how many superintendents indicated they are **"not concerned"** about a particular challenge entering 2019.

1. Regulation and cost of water
2. Rising cost of living/housing costs
3. Relationship with GM/member committees
4. Pesticide, fertilizer and noise regulation
5. Member/customer expectations
6. Bunker maintenance
7. Protecting the course from golfer/cart wear
8. Weather
9. Turf pests and diseases
10. Aging course infrastructure
11. Producing desired green speeds
12. Finding and retaining quality labor
13. Personal expectations



AVOIDING DISASTER



HERITAGE CLUB
PAWLEYS ISLAND, S.C.

Jim Huntoon contemplates aloud 15 minutes into an interview about his 2018 experiences maintaining a golf course in the crowded Myrtle Beach, S.C., market.

"We haven't even talked about hurricanes," he says.

After getting walloped by Hurricane Matthew in 2017, Heritage Club, where Huntoon has spent nine years as superintendent, dodged the crippling parts of Hurricane Florence. But that didn't make 2018 a soothing year.

Snow and below-freezing temperatures closed the course for 10 days in January, unseasonably cool temperatures in March and April hampered spring business, and flooding

of the Waccamaw River following Hurricane Florence created uneasiness in September. Seeing his crew and the club's other departments work in harmony to prepare for a worst-case scenario that didn't arrive following Florence enthused Huntoon.

"I'm happy we don't have any natural disasters to pick up after," he says. "We are getting a lot of stuff done this winter. I try to keep a positive outlook. This thing can beat you down so fast. If I didn't truly love it, I wouldn't do it."

A two-decade veteran of the Grand Strand, Huntoon observed how changes in the region's golf market are benefitting Heritage Club. Instead of relying on tourists to carry revenue burdens, steady year-round play al-

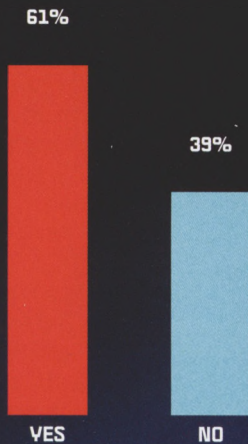
lows quality facilities to recover from a disappointing March and April. Even in a cranky weather year like 2018, Heritage Club supported 60,000 rounds. Huntoon has adapted his agronomics to fit an evolving business model, bypassing overseeding bermudagrass surfaces and maintaining reasonable speeds on severely contoured greens.

"Myrtle Beach has changed a lot over the last 15 years," he says. "It used to be that the spring and the fall were everything to business, catering to the package player and tourists. But so many people have moved down here, so wintertime has become more important and certainly summertime has really changed a lot because there's a lot more business."

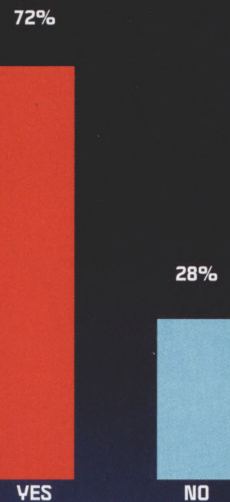
72%

of private course
superintendents say they
experience physical symptoms
or anxiety

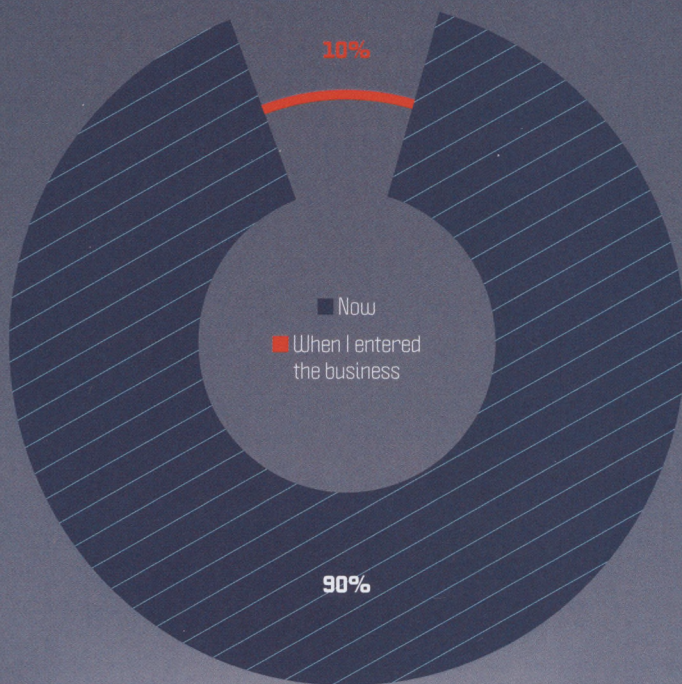
Does work-related stress
hurt your home life?



Do you ever feel physical
symptoms or anxiety
related to work?



Is it tougher being
a superintendent
now or when
you entered the
business?



MINOT COUNTRY CLUB
MINOT, N.D.

ALL ALONE

Minot Country Club has one constant on its turf team: superintendent Chris Strange. In fact, he's the North Dakota club's only full-time agronomic employee.

Destroyed by a flood in 2011, the club unveiled a new course on a different site in 2015. Strange, who arrived in Minot, a North Dakota city on the periphery of the energy-rich Bakken Formation in 2013, worked alongside several different assistants until losing one to an Arizona club in 2017. The position remains vacant.

"We didn't have a good candidate pool," Strange says. "That was different from 2013 when we were building the course. When I had that job posted, the rest of the United States was going through a recession. We had a lot of applicants then and people were flocking to North Dakota for jobs. It was a different ballgame than last year."

Minot CC's labor situation might be as unforgiving as a hardened landscape where winter temperatures plummet to minus-40 degrees and summer readings soar past 100. Entry-level energy jobs advertise starting wages of \$20 per hour and more. Strange prepared to spend another work winter alone as he awaits the annual spring arrival of workers obtained via the H-2B visa program. "They're my only solution every year," he says. "I'm always on pins and needles waiting to see if we get our visas."

Golf is a seasonal game in Minot, with Strange working almost daily from mid-April until the end of the October before receiving a winter respite. Turf stress following a dry 2017 tested Strange in the early parts of the 2018 golf season. Once the crew arrived and conditions stabilized, the course continued to mature, allowing the club to satisfy a young membership that plays the bulk of its golf on weekday evenings. The recent drilling of a second irrigation well should help the club handle wild weather swings. "We will have a reliable water supply in 2019," Strange says, "and that will be a game-changer."

WIN — THE — WAR

Pinpoint[®] + Traction[™]
FUNGICIDE FUNGICIDE

DOLLAR SPOT DESTRUCTION

Stay in command of dollar spot, even SDHI resistant, with Nufarm-exclusive Pinpoint and Traction – the must-have MOAs in your fungicide rotation.

[NUFARMINSIDER.COM]

SEE US AT GIS '19
NUFARM BOOTH #3937



Grow a better tomorrow

©2019 Nufarm. Traction[™] is a trademark of Nufarm.
Pinpoint[®] is a trademark of Valent U.S.A. LLC.



**HAGGIN OAKS
SACRAMENTO, CALIF.**

CALIFORNIA CREATIVITY

It takes more than an accessible and affordable course designed by a Golden Age juggernaut to make a municipal facility bustle these days.

Consider Haggin Oaks, a 36-hole City of Sacramento facility operated by Morton Golf Management. Alister MacKenzie designed one of the two courses, yet modern revenue-generating tactics include a golf expo, "Golf and Guitars" country music festival, FootGolf, and hosting major cross-country races.

"There's a lot of stuff going on that they don't teach you in turf school," says Morton Golf director of agronomy Stacy Baker, who oversees the maintenance of the MacKenzie Course and Arcade Creek at Haggin Oaks. "You have to put your other hat on and think about it as a business and not just 18 greens."

Baker leads a crew ranging from 18 to 22 workers during the peak summer season. Pulling workers away from agronomic tasks to help with event setup is a common – and accepted – practice. Haggin Oaks supplements its crew with volunteer labor, a sign of the facility's value as a community asset.

The golf statistics are jarring: Haggin Oaks occupies 593 acres and its 42 greens cover more than 300,000 square feet. The two courses receive a combined 70,000 to 100,000 annual rounds depending on the weather and offering starting wages of \$14 per hour yields few job candidates. Operating a crew of 18 in 2018 cost the same as a 24-person crew a few years ago because of California's rapidly escalating wages, Baker says. To handle the increased workload, Baker has developed a versatile team.

"We don't have titles here," he says. "We don't have an irrigation tech, we don't have a spray tech, we don't have three assistants. Besides myself and my equipment technician, nobody has a title. We all pitch in and we all can do most of the jobs."

As the scope of Haggin Oaks evolves, the weather also changes. Smoke from the Northern California wildfires of 2018 reached the course, forcing employees to wear dust masks for multiple days. Despite the formal end of the most recent California drought, water remains a concern. "Whether it's a drought, whether it's El Niño, whether it's smoke from fires ... it just seems like every year you need to be prepared for some sort of weather event," Baker says.

88%

of courses
utilize
handheld
moisture
meters



WHEN EVERY BLADE COUNTS.



Raise your standards for perfect turf with the new Jacobsen® SLF530.

With a patented lift-arm mechanism and precision cutting motion that allows reels to follow contours more accurately, the Jacobsen SLF530 delivers a quality of cut that the competition can't match. Combine that with the industry's lowest ground pressure to prevent unneeded stress on your turf, and you'll see what every blade receiving a flawless cut looks like.

Get more details at www.jacobsen.com





Balancing Act

In my many years in this business, I've noticed that superintendents are hard workers: It must be something in our genetic makeup. But I've also noticed that we can also be hard on ourselves, certain that nothing is ever going to get done fast enough or good enough, or be completed on time and on budget.

As if that weren't enough, for all the stress we put on ourselves, we work in a field that is famous for relying on two very unreliable and uncontrollable forces — people and the weather. Plus, we put ourselves out there every day by how we maintain our golf courses, leaving us open to criticism from many quarters.

Do you ever stop and think about what the job is doing to you? And by you I also mean your family, your friendships, and even your health? Are you putting so much pressure on yourself that you are harming these essential relationships?

If not, you should. Now. It's time to prioritize your life.

Think about this: If you had only six months to live, how would you look at your life and the way you balance it with your work? I'm not saying to actually face such a grim reality, but I do recommend stepping back and taking a good, hard, long, honest look at what's important to you and how you keep it all in harmony and perspective.

Far be it from me to look inside your head and advise you how to think. But I follow a simple thought that might work for you:

"No matter what happens, I am not going to get upset. I am not going to let outside influences get in the way of my happiness at work, with my family, or in my life."

Yes, easier said than done, particularly with all the chatter from the outside world — members, golfers, even TV commentators — carping about your golf course conditions or the state of the golf industry. One stray comment can easily turn a good day at work

into a crappy one.

Your objective is to not let that happen. Your goal, each and every day, should be to stay happy and not let negative comments and pressures of work take away from your enjoyment of life. You can't control what others say, but you can control how you react to it.

Start by assessing your place in our industry. You can take great pride and satisfaction if the "right" people — peers, researchers, governing bodies — respect what you do. Even better if your members or golfers are happy with it, too.

When members chirp, remain calm. Losing control of a situation not only costs you happiness, but it also diminishes your power, both personally and professionally.

Stay happy, embrace being outdoors and doing what you love, and stay committed to your craft. As long as you can look forward to going to work, you should stay motivated. But when you lose the passion for what you do and it doesn't feel so good, it may be time to reevaluate.

Keep home separate from work. But if you feel that it's hard to disengage from work, don't worry, you're not alone. Many studies have shown that people have a difficult time making a break between their professional and personal time.

Technology has made this problem worse, because we're never more than a click away. How can we do a better job of leaving work at work, and letting our home lives become more pleasurable and less

stressful?

I've read a lot about how to make the break, and recommend the ideas of Dr. Deb Bright, who specializes in executive coaching. She offers tactics to put a true end to our workday so we can be truly "at home." Among her suggestions:

Do one small task. Before leaving the office, make a short phone call, sign a document or respond to an email. This way you end your day on a positive note of completion. There's gratification in knowing that you elected to push yourself and now have one less thing to do the following morning.

Write a to-do list. On paper or digitally, make a record of tasks to accomplish tomorrow, ideally in order of importance.

Straighten up your work area. Putting things away and organizing the piles will put you in better position to start fresh the next day.

Start the evening on a positive note. When you walk in the door at home, rather than greeting friends and family with the standard "How was your day?" — which invites thinking about work and may lead to unwanted discussions — ask instead, "What good or exciting things happened today?"

A final thought: Actions prove who you are; words are who they want you to be.

Life is short. Make the most of it, starting by taking better care of yourself. **GCI**



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

Heading to San Diego?



Our Forecast is **BRIGHT**

Booth 727

innovative technologies
customized solutions

OARS. Ps
biological solutions
uniform soil moisture
vermicompost extract
reduce water frequency
infiltration
surface hygiene

multi-branched
soil health
cultivation
penetrant

WORM POWER
Turf

research backed
roots

LESS OUNCES

plant health
consistent
reliable

imant's
cultural solutions
balanced soil profile
improved moisture retention

EFFICIENT

OARS.
moisture management solutions
root development

thCa

PBS 150
thatch reduction
soil solutions
enhances

Vredo
aeration
roots

best-in-class
VERDE-CAL K Plus
L-Amino Acids
availability

DIAL-IN
Hydra-30 Plus
hydration

OARS. Hs
improve stress tolerance

inter-seeding
patented chelation
increase nutrient uptake

VERDE-CAL G
technologically advanced

calcium





LOVE & LEADERSHIP

The workplace is changing faster than the turf. Carlos Arraya, CGCS, offers his secret to managing different generations on your team.

YOU MAY BE WONDERING WHAT THIS ARTICLE IS ALL ABOUT?

Honestly, it's two-fold. First, I must admit I'm repurposing my own writing as this article was published in our local superintendent newsletter. The feedback was so positive, and many colleagues requested I share it with a large-scale audience. So, here we go. Secondly, my hope is it's something new for you to ponder or at the very least enjoy.

The purpose of this article is to allow myself to be vulnerable. Yes, you read that correctly. A person (in my case, being a man), admitting he wants to be vulnerable. My vulnerability centers around sharing with you my own professional secret that has allowed me to achieve great success in the area of building and developing teams (culture).

Am I able to grab your attention long enough to share with you my secret so you can apply it in a fashion that may fit you? Are you vulnerable enough to admit you want to read further and not get frustrated by a peer's opinion on a sensitive topic? If so, keep reading.

There is a mighty ever-growing challenge in our workplace and it's not turf related. It has nothing to do with erratic weather patterns or perfect greens. It has everything to do with the people. Yes, the people are the new age challenge. In my view, they represent our greatest opportunity to further cement our greatness as superintendents. Long gone are the days where folks were frustrated over who is assigned to mowing the rough and who is always favored to rake a bunker. Also, long gone are the days where you provided a

Bellerive U

The labor shortage has changed our approach and you should be commended for your outside-the-box thinking in recent years to combat the labor challenges. The golf industry recruiting techniques have changed. They have been purposeful to attract various generations and intentional efforts are in place to retain team members.

During one of our impromptu senior management meetings, a question was asked that sparked reflection and honesty amongst our group. Are we doing enough for everyone on the team? My internal knee jerk reaction, emphasis on "JERK," was absolutely. The basic question forced us to look deep in the mirror, especially me. Our staff consists of tenured individuals whom have been at the club for over 30 years, interns who have been there for one month, aspiring managers and the core seasonal operator group. After sitting quietly and listening to the team, not only was I wrong, I desired to find a way to bring a close group even closer together.

How do we learn from a staff member who has provided years of service at our club? How do we take the opportunity to learn from our members' professional successes and failures? How do we apply life lessons each of us carry privately to bring a working group together? The answer and objectives were simple to all three of those questions. TLC was required: Teach, Learn and Connect. To deliver our objectives, we started Bellerive University. On every second and fourth Friday of the month, the entire team is invited to sit and discuss a topic with each other. Select meetings are taught by members who are experts on the topic. At times, the assistants teach the topic and other meetings are basic life lessons that generate personal growth with no agenda. The idea has grown and other club departments desire to be in on the meeting.

It was an idea that I thought would die on the vine. Boy, I was very wrong. Team members look forward to the teaching, learning and connecting on those days. The takeaway for me? People are more like turf than you think. Provide them input, nutrients, care and they will grow even in challenging times.



One of Bellerive CC's regular safety meetings.

uniform, lunch and benefits package to employees and you were in good shape. These basic employee benefits 10 to 15 years ago resulted in new applications overflowing our desks.

Believe it or not, the day has arrived where people will take less money for the right fit for themselves and a desire to work in a great culture. That's right. A clash of the titans is occurring in our workplace. It is documented that currently in the workplace there are four different generations represented and working on a golf course at the same time: Baby Boomers, Generation X, Generation Y and Generation Z. It seems impressive until after careful review. Significant challenges are driven by behavioral differences of individuals representing each generation.

In more general terms, we are crossing old-school managerial expectations with the need for autonomy, more time off, connectivity and self-worth with the new school. All of us are experiencing this at such a rapid pace that we are either blaming a labor shortage on our labor issues or choosing to ignore the fact it's hard to recruit and retain staff that are clashing without authentic leadership.

What might be happening is that

we are having a trouble recognizing leadership skills necessary to change and meet the needs of the people, whether it's Baby Boomers, Generation X, Generation Y or whatever other great label attached to our lovely folks. And we still must deliver impeccable golf conditions! Honestly, let's embrace it, because it's not going away and gaining traction in the entire world outside of our golf courses.

So, how do you lead the various personalities clashing like titans at your facility and create a work culture that is cohesive, self-motivating, and produces extrinsic and intrinsic benefits for everyone on your team? How do you handle old school vs. new school workers?

MY SECRET

Remember I told you my purpose was to be vulnerable. So, my secret is vulnerable because it's not conventional. I aspire to be a leader. My behavioral skill sets clearly define me as an organizational change agent and a hard driver for success. I have been blessed, like all of you, to be cursed by the love of turf and have established a reputation to deliver organizational workplace cultures that are transcending courses.

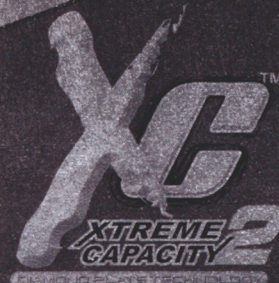
INFORMED
ENCOURAGE
DISCOVER
LEARN
TEACHING
GROWTH

We Put The GO in Golf

XC2 High Density Paste
Maximizes Runtime and Battery
Life

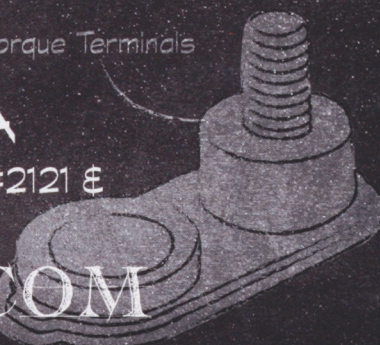
Heavy Duty Lead Plates w/
Heavy Duty Internal Connections

Tough Polypropylene Case Design



- Highest initial capacity.
- Fastest cycle up to full rated capacity.
- Highest total energy delivered over the life of the battery.

High Torque Terminals



Handcrafted in the USA

Visit Us at the PGA Merchandise show Booth #2121 \$
the Golf Industry Show Booth #3616

WWW.USBATTERY.COM



Employee recognition events are key parts of the management program at Bellerive CC.

My success is in my secret. My professional secret is summed up for you as a four-letter word. Not the four-letter word you would expect, but the most powerful four-letter

word in our world: love. Love has almost become taboo in the golf industry. But, love the old school – and love the new school. Love to manage or lead using your authentic being.

Love yourself to know when you're right, yet love yourself as much, if not more, when you are wrong. Love enough to recognize and educate to the world how our industry is hard, but

it's rewarding. Educating the world isn't so burdensome, as some like to communicate via social media platforms.

Love your staff and dedicate the appropriate time getting to

© PHOTOS COURTESY OF CARLOS ARRABA

Take Sod Cutting to the Next Level with Hydro Drive!

Effortless operation and maximum productivity for any job on the course!

- Set & Forget™ blade depth adjustment to 2.5"
- Laser clad cutting blade for precision cut and 3x blade life
- Knobby wheels for shallow cut, softer touch bent grass



One & Done Reciprocating Hydro Aerator

Due to its unmatched maneuverability and durability, offers the ideal solution for green, tee and bunker surrounds, cart path edges and areas around the clubhouse for tight hole spacing and deep core aerations.



VISIT US
AT THE GOLF
INDUSTRY
SHOW BOOTH
#4947!



POWERED BY
HONDA

www.billygoat.com



A better world starts with CLEAN WATER.

Your waterscape deserves the same detailed maintenance as your turf. Air-O-Lator's eco-friendly, high-performance products keep your ponds healthy and sustainable while being easy to install and maintain.

As a leader in pond and lake management for over 40 years, our aerators and fountains provide a powerful and efficient solution to water management while accentuating your turf landscape.

Contact an Air-O-Lator professional today!

airolator.com
800-821-3177





Members of the Bellerive CC green committee participate in "teaching days" with the staff.

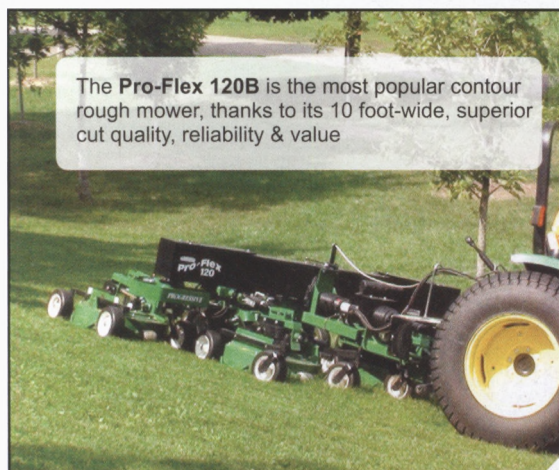
know them beyond who is the best at cutting cups or mowing greens. Love team members enough to value their views and perspectives of your operations. Love in your own authentic way

that grows a culture focused on people's growth and conditioning as much as the turf receives growth and conditioning. Love to set your department as the example at the club no matter the staff

size. Some of you are already loving in this way, although you may not term it love. I do, because it frees me to be different and it allows my team's culture to feel distinctively different.

This is a two-part secret. That love is not only mushy, gushy or a rah-rah speech, which I get accused of on social media. Love will deliver exceptional expectations and accountability in your facility. Love enough to terminate and free anyone who is a bad fit for your team. Love the lifer employee. Have faith in love in the workplace. Be a leader who loves. Love is the most powerful four-letter word. It's an action that will develop. Most importantly, love will help tame the clash of the titans in the workplace. Let's lead, be free and love. **GCI**

Carlos Arraya, CGCS, is the director of agronomy and grounds at Belle-rive CC in St. Louis, Mo.



The **Pro-Flex 120B** is the most popular contour rough mower, thanks to its 10 foot-wide, superior cut quality, reliability & value



NEW! The **Pro-Roll 10** and **15** are wide area contour rollers featuring easily removed solid ballast on each roller. This allows for consistent compaction, between 5.8 - 11.6psi per roller assembly, regardless of the terrain

The Progressive Turf Equipment **ADVANTAGE** We Can Handle Your Contours!

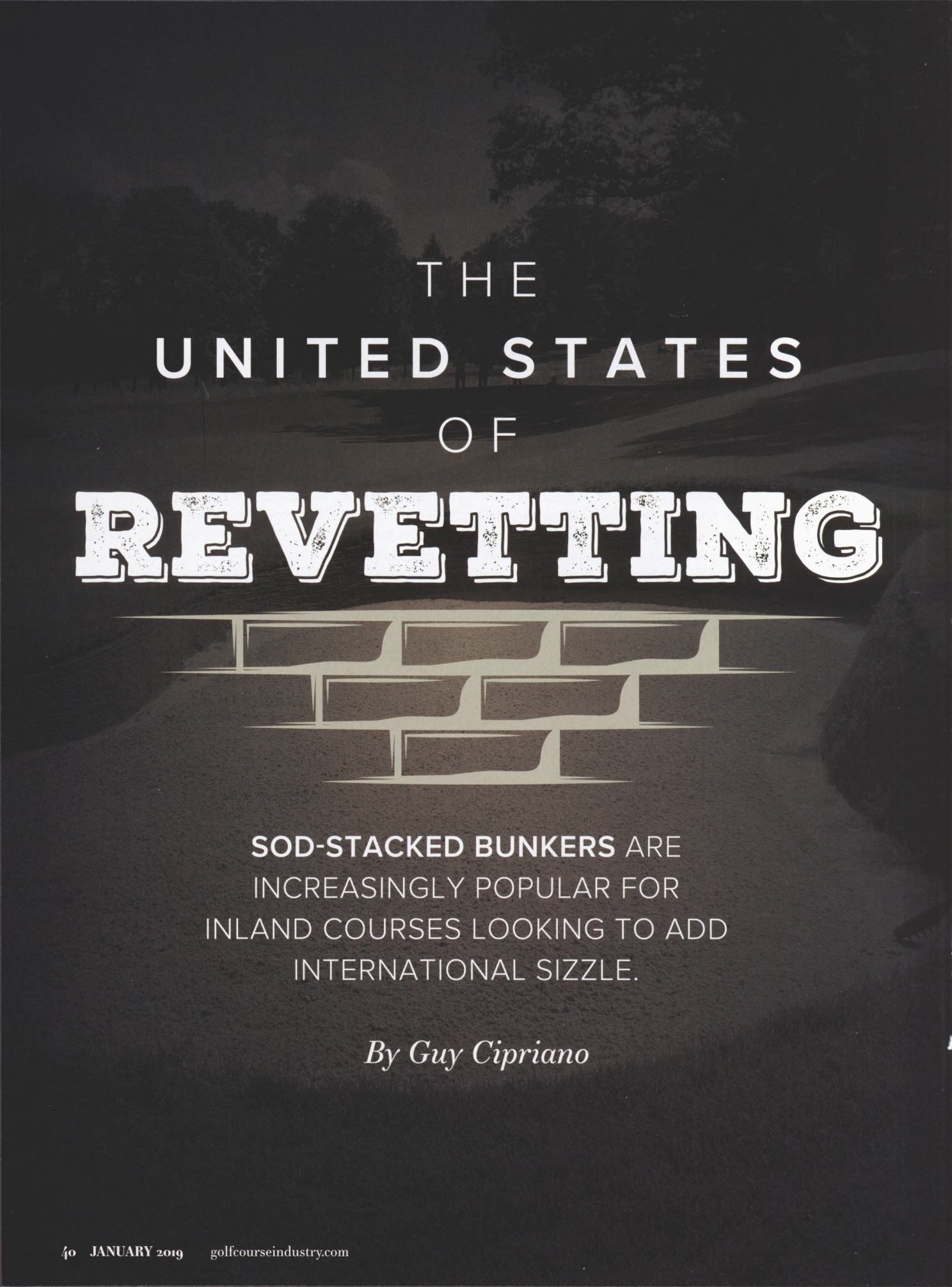
It is all about getting the job done, on flat or contoured turf, quickly and efficiently with a finish that you'll be proud of. The simplicity and low operating cost of a utility tractor and a **Pro-Flex 120B** or a **Pro-Roll** is a key advantage. The **Pro-Flex 120B** has 5 independent mower decks. The **Pro-Roll 10** has 5 rollers across 10'8" width. The **Pro-Roll 15** has 7 independent rollers spanning 15 feet.

***** LEARN MORE AT GIS! BOOTH 938 *****

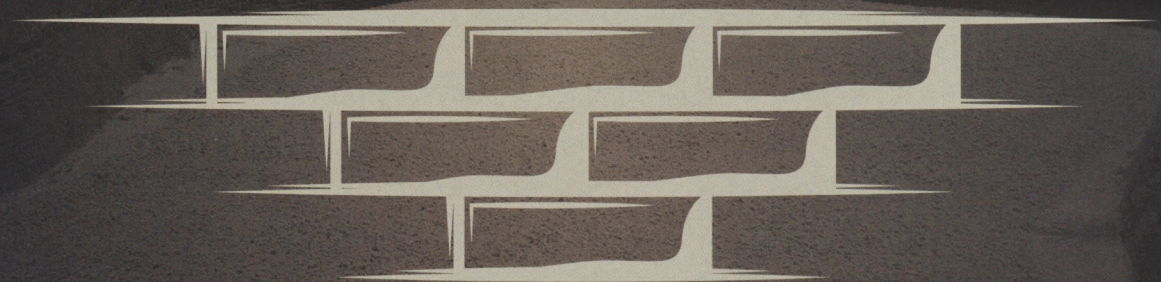
PROGRESSIVE
TURF EQUIPMENT INC.
The Better Built Choice.™

(800) 668-8873
(519) 527-1080
fax: (519) 527-2275
www.progressiveturfequip.com
info@progressiveturfequip.com

For over 30 years, professionals worldwide have relied on Progressive mowers. Find out why a Progressive mower is... The Better Built Choice.™



THE UNITED STATES OF REVETTING



SOD-STACKED BUNKERS ARE
INCREASINGLY POPULAR FOR
INLAND COURSES LOOKING TO ADD
INTERNATIONAL SIZZLE.

By Guy Cipriano

Brickyard Crossing resides within the hallowed grounds of Indianapolis Motor Speedway, a sprawling complex in a flat, densely populated Heartland neighborhood. Even those responsible for maintaining the course understand matters involving engines, tires and concrete, not irons, drivers and turf, dominate decisions.

A.J. Foyt and Jeff Gordon established legacies on the complex's 2.5-mile oval racetrack, which includes four golf holes inside the legendary loop. The race to enhance an amenity in the ultracompetitive high-end public golf market took a wild turn when Pete Dye renovated the course in 1993.

Dye designed six deep, sod-stacked hazards, known as revetted bunkers. In non-golf terms, think intricately constructed decorative brickwork. Every two or three years, the Brickyard Crossing agronomy team resembled a pit crew as they scurried to fix the bunkers. "About the time you got them finished and had them looking really good, it was time to tear them up and redo them," says superintendent Jason Stewart, a prideful Hoosier and full-time Brickyard Crossing employee since 1999.

Just like racing, technology evolves in golf course design, construction and maintenance.

Preserving links golf features within the design became less nettlesome following an in-house project that has, so far, restored all six of Dye's original bunkers and added three new revetted bunkers.

A booming bunker business created through the industrywide hustle to offer enhanced, easier-to-maintain course features and the emergence of United Kingdom-developed synthetic edge technology is making revetted bunkers feasible options for U.S. courses. Durabunker and EcoBunker list numerous American courses as clients and both compa-

nies sell into the U.S. market, while PermaEdge, a system developed by EcoBunker inventor and CEO Richard Allen, is offered through Binghamton, N.Y.-based IVI-GOLF.

Natural revetted bunkers struggle in most U.S. markets because warmer climates promote microbial activity that "eats up" stacked layers, causing sod to compress and eventually collapse, says architect Dave Whelchel. Trips to Scotland through the years introduced revetted bunkers to Whelchel and curious colleagues. But architects strayed from widespread implementation because natural faces proved expensive and labor intensive.

Take away the frustrating build-rebuild cycle synthetic edges prevent, and revetted bunkers become serious options for American courses. "I'm very happy to have it as a tool," architect Lester George says. "Where I did it with real sod before, I didn't like the outcome because it was costly to keep looking right and functioning right. Now we have a function for it that's reliable and therefore it's back in my mental palette if I want to use it. You don't have to look far for examples of it. There are some magnificent ones out there." Since encountering synthetic edging at the 2017 Golf Industry Show in Orlando, George has designed revetted bunkers on multiple sites, including Vestavia Country Club in Birmingham, Ala., which reopened last year following a massive renovation.

Stewart, who says Dye's original revetted bunkers had become "dilapidated and unplayable" because of maintenance reductions sparked by the Great Recession, first associated synthetic edging as a possible long-term solution at Brickyard Crossing before the technology reached the U.S. Then, after becoming head superintendent in 2017, Stewart pushed to elevate the course's overall conditioning,





▲ Architect Lester George added revetted bunkers to multiple holes at Vestavia (Ala.) Country Club.

with work commencing on the first revetted bunker toward the end of the year. His crew juggled regular maintenance with the start of a bunker renovation last spring and the course restored had nine revetted bunkers with synthetic edging in time for LPGA's Indy Women in Tech Championship in August. Blending links golf aesthetics and strategy within a parkland setting makes Brickyard Crossing a Midwest golf anomaly.

SCOTTISH FLAIR IN APPALACHIA

The rooms in the stately Old White Hotel and surrounding cottages are the only spots where the ocean can be observed at The Greenbrier, a venerable resort in wooded southern West Virginia. Following a historic and tragic flood in 2016, director of golf course maintenance Kelly Shumate led a redesign of the resort's Meadows Course.

The Meadows starts from the same clubhouse as The Old White

TPC, site of the A Military Tribute at The Greenbrier PGA Tour event. The Greenbrier steers outings to the Meadows, so the course receives more group play than its PGA Tour brother, Shumate says. Besides various mountain views, the course lacked visual punch and the presence of greenside bunkers as far as 40 feet from putting surfaces bothered Shumate.

Presenting a memorable product to complement The Old White TPC led to a thorough evaluation of bunker design and function. Demonstrating superintendent practicality and architect creativity, Shumate designed just 39 bunkers, all of them using synthetic revetted edges.

"I go to a lot of courses, and I just think there are way too many bunkers," he says. "If there's an ugly patch of ground or if they are trying to steer your eye toward something else, they'll stick a bunker in there and it really doesn't come into play. Being a superintendent and being on the design side, I wanted to eliminate that. The best bunkers are hazards and very strategic."

Reopened toward the end of the resort's 2017 golf season, the Meadows bolsters The Greenbrier's post-flood golf business by introducing Scottish flair to Appalachia. The challenge of playing a shot



◆ Brickyard Crossing restored nine bunkers using synthetic edging before hosting a LPGA event last August.

© TOP: EVAN SCHILLER
BOTTOM: JASON STEWART



Premium Products for Optimized Turf Performance



A complete line of sophisticated products developed to increase the strength and resilience of highly maintained turf.

- Foliar Fertilizers
- Biostimulants
- Granular Fertilizers
- Colorants & Pigments
- Soil Surfactants
- Foliar Adjuvants
- Soil Remediation
- Soil Amendments

Plant Nutrition | Turf Strength Conditioning | Plant Defense Activation

Contact us to learn more.

TSP 001 AD R1_07-25-18

target-specialty.com | turfuel.com |





▲ Brickyard Crossing's Jason Stewart: "It's time-consuming at first, but by our second or third one, we had a process down and moved pretty quick after that."

from a style of bunker rarely seen in the U.S. removes angst from a wayward shot entering a tricky hazard, Shumate says. "It's going to catch their eye. They are going to think about it more, and they are probably going to get a little more excited and think less about the bad shot they just took to get in there. Instead, they are going to be excited to get it out."

Shumate shifts to superintendent-speak when discussing the impact of the bunkers on agronomy. The flat-bottomed bunkers include an aggregate liner beneath the sand, and preparing a course averaging slightly more than two bunkers per hole, even after rain, yields less than two hours of labor on heavy play days. Occasional weed removal by hand is the only form of maintenance Stewart and Shumate have encountered on synthetic revetted faces. Moss pockets and weeds, coincidentally, give the bunkers a natural look.

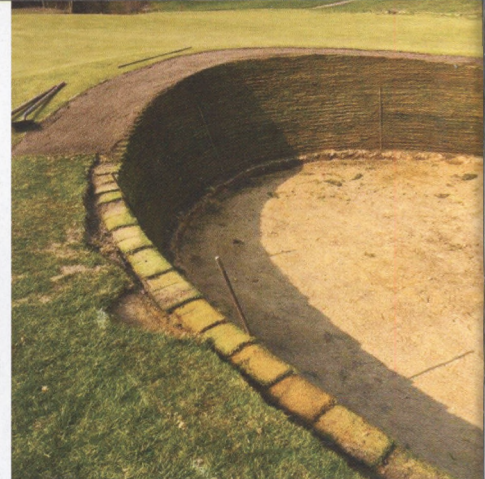
"I think you're going to see more and more of it," Shumate says. "But the revetted look is not for everyone. If I'm designing a course for a membership where that member-

ship is playing the same course over and over, I'd probably not go with it. For here and what the Meadows is, it was a very good fit for us. We don't have a lot of repeat play."

PERFECTING THE PROCESS

A call from former Fieldstone Golf Club superintendent Damon DiGiorgio sparked architect David Whelchel's interest in the long-term possibilities offered by synthetic edging. Fieldstone, a 20-year-old private club in Wilmington, Del., designed by Dr. Michael Hurdzan and Dana Fry, boasts an 8 ½-foot high sod-stacked bunker called "Lisa's Heart" on its par-5 18th hole. The bunker, a memorable course feature, crumpled every two to three years and rebuilding it cost the club more than \$10,000 each time, says Whelchel, who was involved in Fieldstone's original design.

When DiGiorgio explained he discovered a synthetic solution to keep Lisa's Heart intact, Whelchel flew to Wilmington and spent four days with a Southeastern Golf crew learning how to install synthetic edging on the 800-square foot bunker face. Sore from cutting tiles,



laying sod and dispersing backfill, Whelchel returned to his Arkansas home thinking, "Yeah, that's something I can use." Whelchel has rebuilt multiple bunkers using synthetic edging since Fieldstone fixed Lisa's Heart and colleagues now view him as a revetted bunker guru.

Whelchel has provided revetted bunker guidance to multiple fellow architects, including George, who was looking for a solution to restore a pair of dynamic revetted bunkers he designed at Kinloch Golf Club, a renowned private club in Richmond, Va. "They only lasted about three years with the inherent problems of trying to grow cool-season sod stacked up in Virginia, because we are not sand-based like Scotland and Ireland," George says. "You just end up spending too much money rebuilding them every 36 months."

At Vestavia, George used synthetic face technology to design multiple revetted bunkers, including a 6-foot

PERFORMANCE UNDER PRESSURE

Our golf portfolio performs under the **harshest** summertime conditions
and against the **toughest-to-control** pests, weeds and diseases.



 **Fame**[®]
Fungicide

 **Dismiss**[®]**NXT**
Herbicide

 **Triple Crown**[®]
GOLF INSECTICIDE

 **Xonerate**[®]**2SC**
Herbicide

Visit us at the Golf Industry Show, **booth 1429.**

FMC

Triple Crown Golf Insecticide is a Restricted Use Pesticide (RUP). Always read and follow all label directions, restrictions and precautions for use. Some products may not be registered for sale or use in all states. Dismiss, FMC, Fame and Triple Crown are trademarks of FMC Corporation or an affiliate. Xonerate is a trademark of Arysta Lifescience North America, LLC. ©2019 FMC Corporation. All rights reserved. 18-GSS-2377 01/19

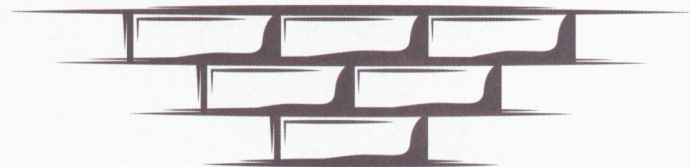
deep hazard on the drivable par-4 9th hole. Whelchel trained the contractor working at Vestavia on how to build the bunkers. Once trained, Whelchel says a crew of five or six can install around 120 square feet of synthetic face per day. Steps, according to Whelchel, include: constructing a “firm and unyielding” base, packing the base with a plate compactor, cutting tile, and stacking layers horizontally and vertically to desired widths and heights.

The Greenbrier used a crew of six to construct bunkers on the Meadows. Work started with Shumate painting lines, followed by excavation, drainage installation, sod stacking, aggregate liner installation and sand dispersal. The crew completed a bunker every two days.

Brickyard Crossing experimented on its early bunkers, even disassembling one twice before crafting a suitable hazard. A three- or four-person crew installs bunkers at 70 degrees angles, using what Stewart calls “a two-stack” method and a 60-20-20 sand-soil-peat backfill to support the synthetic sod. Stamping is a methodical layer-by-layer process. “It’s time-consuming at first,” Stewart says, “but by our second or third one, we had a process down and moved pretty quick after that.” Positive feedback from the Midwest golf community and LPGA players will likely result in Brickyard Crossing adding more revetted bunkers as the renovation progresses.

“More than anything, it just adds visually to the golf course,” Stewart adds. “I now have a robust enough operating budget and a staff where we can maintain the course back to the level it was. That’s what I wanted to push for – restoring the conditioning that we were known for. Redoing all the bunkers will be a part of it. These faces are crisp, intimidating and very noticeable. I definitely think it will enhance the experience.” **GCI**

REVETTED BUNKERS: USE JUDICIOUSLY



By Tim Liddy

What do superintends want? Less maintenance. What do architects want? Steep slopes adding contrast, more shadows typically adding to maintenance. The answer? Revetted bunkers using artificial turf.

What is a revetted bunker? The “Merriam-Webster” dictionary definition of revetment is: “a facing (as of stone or concrete) to sustain an embankment.” It comes from the French word “revetir,” which means “to put on, wear or don.”


The history of revetted bunkers starts in Scotland as a tool to stop wind erosion, to shore up the faces of deep bunkers when there was nothing else more practical. In golfing terms, a revetted bunker is one where sods (grass and the part of the soil beneath it held together by roots or a piece of thin material) are stacked to create a layered effect. Layers of sod have been used for this purpose for ages and have been a feature of Fife Golf since the 19th Century.

Greatly influenced by his visits to Scotland and early in my career with Pete Dye, we tried several times to build a revetted wall bunker on the third green at Crooked Stick in Carmel, Ind. Our mistake was building the revetted wall using locally grown sod planted in heavy clay soils. The revetted wall would invariably collapse from the weight of the soil after only a few rains. But we both loved the look with its strong shadow and textural contrast against the green surface as well as surrounding turf. He also liked the difficulty and intimidating view from the tee on this par 3.

Now let me explain how a modern revetted bunker adds contrast from a golf architect’s point of view. Notice the sketch on the following page. Let’s highlight the three hole locations on this green by using contrast:



Liddy



“Overall, not having to apply fertilizer every month saves us time and money.”

CHRIS HEDBERG
THE RIDGE AT CASTLE PINES

Chris Hedberg Creates a High-End Course Experience with UMAXX® Stabilized Nitrogen Fertilizer

“We have around 10 crew members. Whether it’s spraying fairways, applying fertilizer or simply making sure our day-to-day operations are running smoothly, each of us needs to pitch in.”

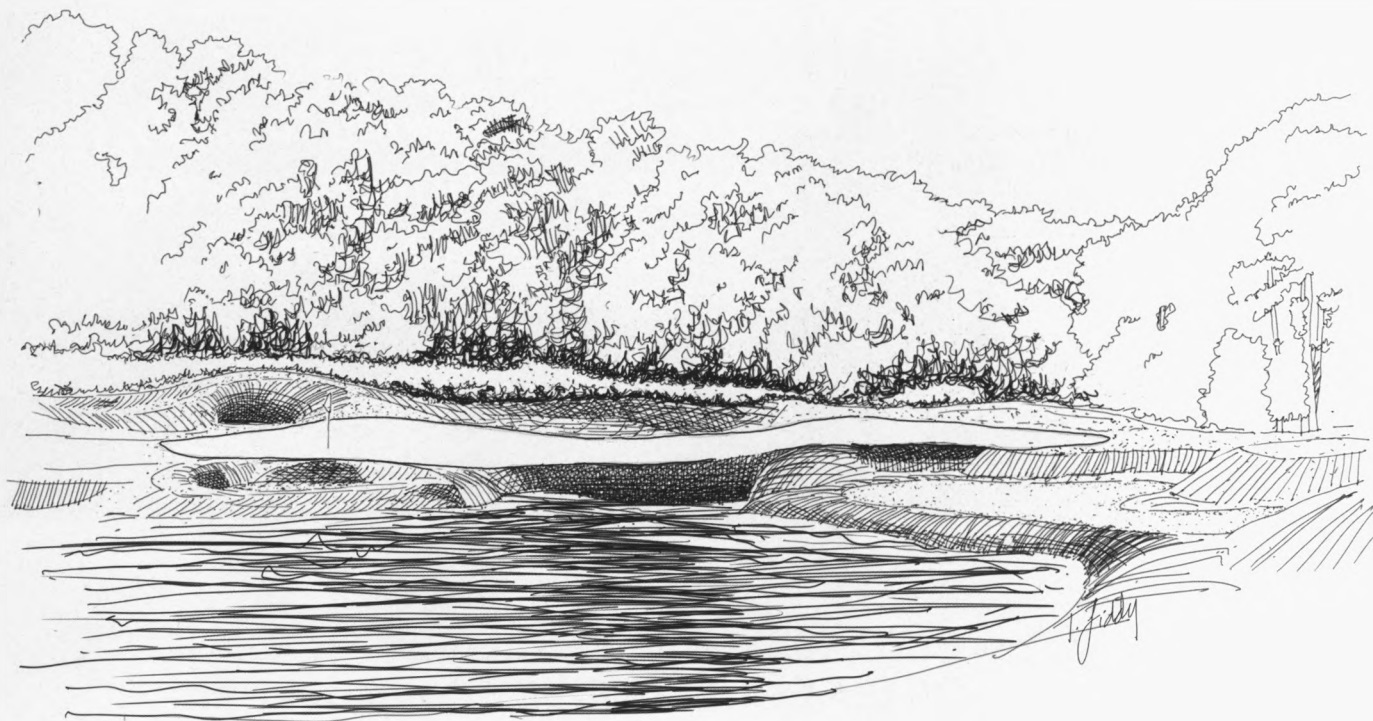
“Over the past six years, UMAXX has given us the biggest bang for our buck, and its performance has even allowed us to reduce the number of fertilizer applications we make each season.”

“When three guys can spend a day applying UMAXX and you can get two to three months of performance out of it, that’s a huge timesaver, rather than having to go out once a month or every six weeks.”

Chris Hedberg is superintendent of The Ridge at Castle Pines, just outside of Denver, CO. He has to get a lot done with a small crew while being as efficient as possible. For six years, Chris has used UMAXX to keep fairways and roughs green throughout his course’s busy season — all with just three applications a year.



Find out how else Chris uses UMAXX to improve the health and playability of his course at **KochTurf.com/GolfAdvantages**.



▲ Artificial edges make revetted bunkers such as the ones in this sketch by Tim Liddy a feasible option for American courses.

the left-front, the middle and the back-right. By adding a steeper slope at these locations, they highlight the required golf shot. The problem in the past has been these steeper slopes require additional hand maintenance and increased labor. But if these areas were constructed with artificial turf, it will actually reduce maintenance as no mowing will be required. With sustainability a major theme today, the timing for this artificial turf bunker face seems appropriate.

Conversely, revetted bunkers built with artificial turf are a great solution, but also a great worry by this architect. It is wonderful in small doses but can be overdone. Let's look at the Old Course at St. Andrews. Close to 90 percent of the bunker shots played on the Old Course now are sideways or backwards. The golfer who has hit into one of these has no hope. They become water hazards exacting a one-shot penalty. They should be hazards, of course, but where does

hazard end and sacrifice on the alter of appearance begin? Aren't we supposed to give a golfer hope that he can extract himself from the hazard with the potential to save par?

And let's talk aesthetics. Do you think bunkers on the Old Course look natural? Of course not. Peter Thomson absolutely hated the bunkers on the Old Course, not so much because of the revetting, but because they are virtually all just cylinders in the ground. Don't get me wrong. I think the judicious use of revetment is ideal, but if every bunker is revetted, it can provide an unnatural geometric appearance.

While we are on the Old Course bunkers, it is interesting that many are mostly hidden from view not for any architectural reason but mainly because they developed when the course was played in the other direction. That's why so many players who don't know the course get in them. They can't see them. On the other hand, the latest additions on the Old

Course – most obvious at the 2nd where the original bunkers have been moved nearer the green – are obvious and the famous Road Hole bunker itself, which is now a pit compared to the rather shallow affair it was back in Bobby Jones's time, now stares you in the face. Is this good architecture or just making the golf course harder to keep up with tournament play?

The use of artificial revetted bunkers has many advantages, including less maintenance and improved sustainability. But let's not get too carried by using them on every bunker of the golf course. Used judiciously, they provide interest and artistic contrast. As John Mayer sings in Gravity, "Oh twice as much ain't twice as good." **GCI**

*Tim Liddy, ASGCA, founded Tim Liddy/Associates Inc. in 1993. He has collaborated extensively with Pete Dye, designing and renovating some of the most acclaimed golf courses built in the last three decades. **GCI***



PUT MORE MUSCLE IN YOUR DISEASE CONTROL.

Make Manzate Pro-Stick your tank mix partner, and boost performance from tee to green.

Make your golf course stronger and healthier with Manzate® Pro-Stick™ from UPL. When used as a tank mix partner, Manzate Pro-Stick enhances your disease management program by providing broader spectrum disease control. Manzate Pro-Stick is effective against a wide variety of diseases, including brown patch, gray leaf spot, and dollar spot, as well as algae. And, with its multi-site activity, there is very low risk of building disease resistance. So, this year, put Manzate Pro-Stick to work for you. To learn more, contact your UPL distributor or sales representative. Visit us at upi-usa.com.



Always read and follow label directions and precautions. Manzate® and UPL logo are trademarks of UPL NA, Inc.
©January, 2019. UPL, 630 Freedom Business Center, King of Prussia, PA 19406. www.upi-usa.com.



Armen Suny leads superintendent recruiting for Kopplin Kuebler & Wallace.

Outsider No Longer

Armen Suny's latest career as a top recruiter proves curiosity can take you anywhere.

By **Pat Jones**

When I last interviewed Armen Suny in 2010, he had already reinvented himself from teenaged turfhead to working for Richie Valentine at Merion to major championship host at Cherry Hills to suit-wearing general manager at ritzy Shadow Creek to golf course designer partnering with a Tour player. At every step along the way, he had blazed his own trail.

You will be unsurprised to learn that, in the intervening decade, he has reinvented himself again ... and in a most unlikely way.

Suny, for many years the industry's leading outsider, has now become one of its top insiders. He has become The Man for superintendent recruiting at Kopplin Kuebler & Wallace, the club industry's leading search firm.

Suny has managed the search processes for some of the industry's elite

clubs who are all seeking elite superintendents. Suny and our friend, Tim Moraghan, account for many of the big-time superintendent jobs that have been filled in the past four or five years. And, as Baby Boomer superintendents begin to retire in earnest, more of those jobs will open for the first time in decades. In short, business looks good for those who help clubs find key personnel.

For those who want to know more about a man helping fill those positions ...

Suny is a Philly guy. He grew up in the cradle of golf between Aronimink, Rolling Green and Merion. He played as much as he could and caught a job working for our pal, Mike Rothenberg and Steve Campbell, at White Manor CC, who helped him get into the Penn State turf program. That's where Suny met Dr. Joe Duich, the legendary – and curmudgeonly – head of the program. The two would be lifelong friends.

Incredibly, after graduation, he was offered the assistant's position at Merion, where he understudied with Valentine. If you're younger, you may not understand that Valentine was Paul Latshaw before Paul Latshaw was Paul Latshaw. He was the pinnacle of our profession and Suny learned much from him. He stayed through the 1981 U.S. Open.

He ended up at Cherry Hills just four years later, hosting the 1985 PGA Championship. It was a landmark event for two reasons: Suny's unapologetically tough setup for the Tour players, and the fact that he demanded and received the first bonus paid to a superintendent for hosting a major. He later moved south to Castle Pines GC, where he annually hosted the cool and quirky old International, which was the only Stableford scoring event on Tour.

His next stop was Shadow Creek CC, the ultra-exclusive course outside Las Vegas which, at the time, was owned by the iconic Steve Wynn.



BELCHIM
CROP PROTECTION

***Remember When You Were Just
Responsible for the Quality and
Playability of the Course?***

... Neither Do We

Introducing....

Beloukha®

Safe Alternative for Weed and
Moss Control on Cart Paths,
Around Trees and Landscape Beds

ReLoad™
Fungicide

Effective and Preventative
Disease Control Against Pythium
Blight and Anthracnose

***Stop By GIS Booth 2411
to See What Else is New!***



2751 Centerville Road | Suite 100
Wilmington, DE 19808
Phone: 855-445-7990
www.belchimusa.com | info.usa@belchim.com

Suny was GM under one of the canniest businesspeople in the world. Much was learned. Eventually he headed back to Monument, Colorado (the man loves to ski), and began doing architecture work with Richard Zokol. He remains happily married to his wife Christy after 31 years. And, in another crazy *Golf Course Industry* connection, Christy introduced our friend, Terry Buchen, to his wife as well.

When I interviewed him in 2010, we covered his entire career and he

“

It always fascinated me that clubs felt they could do super searches on their own. To me, it's one of the most technical searches out there.”

seemed perfectly happy doing what he was doing. Little did we know that he had yet another career in store.

What's an average day like for you now?

I have two kinds of days. I have the ones at home and I get up 6:30ish, drink

coffee, and plan out emails and calls. Then I do a lot of phone interviews. I also look at Twitter. I love to see how superintendents are using Twitter. I'll obviously look at the Twitter feeds of potential job candidates. It tells me a little about how guys and gals are using it, and what they think is important.

The other days I'm getting on a plane. I do about 50 trips a year, usually just for a couple of nights. I'll be talking about proposed searches with clubs or doing interviews with prospects.

How do the searches usually work?

There is no typical arrangement other than we always work directly for the club. We're not a placement service for people looking for jobs. It's interesting that I do as many general manager searches as I do superintendent searches.

With superintendent searches,

sometimes the GM is driving the bus, but usually I'm working with the GM and the search committee. We spend our time trying to figure out what kind of candidate would be best. I survey the group, visit the site, talk with the staff – try to get insights from every angle we can.

For some searches, I'll narrow it down to six to eight really good candidates. I send out a questionnaire that's maybe 10 pages or more. It's a lot to digest so I tell the search committee they don't need to read the whole thing but instead focus on the questions they care about and believe to be the most important. From there, we reduce it to a manageable number for interviews, probably three to five. GCSs like to visit the course and sometimes come up with extensive reports. During the interview, though, I want face-to-face, eyeball-to-eyeball discussions, not a presentation. That's where we figure out the personal and cultural fit. There are lots of talented agronomists out there. Finding that fit between the candidate and the culture is where we really know we've done the job.

Seems like, with the Baby Boomers retiring, your business should be strong for quite a while.

True, but what's scary is that I think we're going to run out of talent in three to five years. Yes, kids are going to turf school, but also clubs have raised their expectations and there aren't nearly enough to fill that demand. We also aren't recruiting from communities and local kids anymore. It's gonna be a crisis unless we begin to find different ways to bring young folks into our business.

Do you just focus on the Top 500 or so facilities?

No, we work with a pretty wide variety of clubs. We maybe have 3,000 potential clients.

A lot of leads come from our reputation in the industry. That started

with Dick Kopplin, then Kurt Kuebler, then Tom Wallace. We've all been at great clubs so we get it. And it's not just GMs and supers. We do golf pros, tennis and fitness, chefs, and assistant GM searches. We are the largest firm in the club world that does recruiting. We are big on education scene which really helps us build relationships.

Why are more clubs using search firms for supers these days?

Why wouldn't they? It always fascinated me that clubs felt they could do super searches on their own. To me, it's one of the most technical searches out there. They don't know what a good answer is to the questions they're asking candidates, so they ought to get assistance with the search. Plus, it takes a lot of time and they're volunteers. They have way too much on their plate already.

How often are you placing a super at a club where KKW has already placed a GM?

A pretty high percentage – maybe half – are places we've already done a search. That said, I think that if they don't retain us to help with their search, that they hire someone else to assist with their search. Clubs really need professional help.

What's the biggest benefit to clubs?

Our finalists are often people who are not looking for a job until we go knock on their door. We look for the best talent, not just who's available.

What should candidates do? I'm always surprised at how reticent they are. Sometimes they just don't get it or sometimes they don't want to appear disloyal.

Everyone asks, “How do I get on the radar scope?” One of the first things I do is tell them there are two kinds of people that look at applications: the ones who look at cover letters and the ones who look at resumes. You have three or four seconds to get

A NEW VISION

TWO REVOLUTIONARY BENTGRASS PRODUCTS

Powered by



PUREGREEN

ADVANCED CREEPING BENTGRASS



PUREWAY

FAIRWAY CREEPING BENTGRASS

Introducing the latest advancements in bentgrass developed by Pure-Seed Testing.
Both blends deliver unmatched results. See the difference for yourself.

CONTACT US TODAY

PURESEED | **ADVANCED TURF SOLUTIONS**

+1 503.651.2130

www.pureseed.com

info@pureseed.com

their attention, so you need to make the most of the first few sentences of both the letter and the resume.

Remember that, ultimately, clubs hire you because of the person you are. You have to tell them why you're the right person for them. I think of one guy who listed his three top personal values. Not his objectives or successes ... his values. That's great. Most people put their career objectives at the top of a resume. No one cares what your objectives are. The bottom line is they want to know what kind of person you are and they are busy people, so you better get their attention fast.

What are some typical mistakes?

Dumb stuff like spelling mistakes or factual errors about club. Also, if they have a hard time reaching you or they try to call you and your voicemail is full or you haven't set it up. Not good.

I also see lots of candidates pitch their renovation experience. That's really secondary to most clubs. They are far more interested in the championship conditions you provide every day.

But I'll tell you the biggest mistake is not asking for the job. Imagine that, you get the interview, have a great interview and don't close by asking for the job and explaining why you believe that you are the right person. Mindboggling.

OK, what are some tips for winners?

In your cover letter, show you did some homework. You've read between the lines of the job description and added something

you learned that's special about the club.

Also, Ritchie Valentine always said lots of guys could grow grass, but few were good communicators. I think that almost always comes up in superintendent searches.

We don't offer services to candidates – we're only compensated by the clubs – but I get calls from guys all the time and I coach them the best I can. One thing I always says is that if there are two equal candidates, the passionate one is gonna get the assignment.

Hmmm ... that suggests the job might be open because the previous superintendent lacked that passion.

Every super should take this to heart. When you start driving by little problems you would have never driven by when you were younger, it's time to reassess. When you stop playing your own course, it's time to reassess. When you lose that passion, it's time to reassess.

What do you think has changed most about the qualifications to be a good super over the years?

It's interesting with golf being less of a draw for clubs than it used to be – it might not be the No. 1 or even No. 2 amenity for members – supers who have a global vision of where they fit in the club and they're part of the team become even more valuable. Those are the ones that fit in the organizations.

We grew up with the whole "man vs. nature" philosophy in our profession. That was the mindset of supers, to be rugged individualists. And that impacted their relationships with other managers, the us vs. them mentality. Plus, being geographically removed down in the barn didn't help. The ultra-successful people today understand that they're on a team and have great relationships. There's no more room for curmudgeons working in silos

Q&A continues on page 80

Armen Suny ▶ worked as a superintendent, general manager and course designer before settling into the recruiting side of the industry.



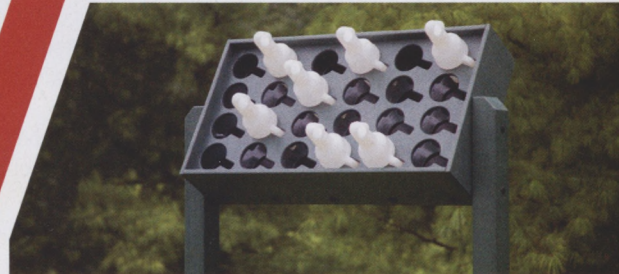
STANDARD GOLF[®] COMPANY

EMPLOYEE OWNED

in·no·va·tor
noun

FROM THE ST2000
TO THE HYBRID CUP,
CHECK OUT OUR
LATEST INNOVATION:
THE 2-PIECE
TOURNAMENT
PUTT-SAVER FLAGSTICK.

VISIT BOOTH 4037 AT
THE GOLF INDUSTRY
SHOW TO SEE OUR
COMPLETE LINE OF
NEW PRODUCTS
FOR 2019.





Call Me Old Fashioned

I received an invitation last month to the annual Past President's Dinner at Carolina Golf Club and the invitation read jacket required. I've been fortunate to attend this event each year since becoming golf course superintendent and it's always a great evening. The current board and members of senior level staff join the prior presidents of the club for an evening of lighthearted stories and good cheer just before Christmas.

This year's invitation reminded me of something that happened at one industry event recently and sparked the thought for this column. Let me explain.

The renowned Syngenta Business Institute happened last month at the fabulous Graylyn Estate in Winston-Salem, N.C. In the past decade, Syngenta and the Wake Forest University School of Business have gathered more than 250 superintendents and exposed them to business topics such as leadership, human resources, financial management and negotiations. Think of it as a crash course MBA for superintendents. I was fortunate to be accepted in 2015 and still say it's the single greatest professional education event I've attended. But the education you receive at SBI is more than just the topics each lecture covers.

Another great thing about SBI is the interaction on social media. Syngenta invites representatives of several industry publications to

“I don't know about you, but caps worn indoors is certainly a breach of custom in the South.”

cover the event for their readers and followers. And once you've attended SBI, following the various social media feeds each year is a great way to reconnect with your fellow alumni, remember and reinforce the lessons you learned, and stay connected with the proceedings. I noticed two things immediately when the first picture of the 2018 class surfaced online: I recognized two people in attendance and there was one person wearing a cap.

Professional attire is requested at SBI, thus the individual wearing a fleece vest and flat bill cap stuck out to me in the photo. I don't know about you, but caps worn indoors is certainly a breach of custom in the South. I don't know this superintendent, and from speaking with several folks who were there, it is my understanding he was one of the most engaged attendees in the class. That's great. But I still couldn't get over his cap.

It reminded me of a conversation that took place around the dinner table our last night at SBI. The dinner is held each

year in a cozy room inside the Manor House with formal place settings and the food does not disappoint. Our conversation centered on formal place settings where water glass and bread dish are yours vs. the person seated next to you.

Scott Griffith from Georgia told the group about his time in the U.S. Marine Corps and attending the annual Marine Corps Ball. Those of us familiar

began to share our own experiences of how we came to learn the customs and etiquette with those less familiar. John Jeffreys from Pinehurst No. 2 told everyone the owners of Pinehurst Resort expose all staff to formal dinner etiquette training to ensure they are well versed and comfortable in these social settings because they are representatives of the brand when out in public.

I know the world is constantly changing and as each new generation comes along it appears like formal customs and societal norms fade into obscurity. But many superintendents work for GMs, boards, owners and/or members who come from the professional world. Whether it be in the board room, a formal dinner or some other professional occasion, it's always good to know how to “fit in” as they say.

Events such as SBI not only provide you with the opportunity to learn the business things they did not teach us in turf school, but it also provides an opportunity to learn customs and etiquette that will help you in professional and social situations. Think of it like professional finishing school.

So next time you're asked to wear a jacket to an educational session or seminar and scoffing at the archaic notion, perhaps you'll remember sometimes there is more to learn than just the lecture topic. And if you're still not certain which water glass or bread dish is yours, look me up at GIS and I'll quickly share with you the foolproof country boy way to always get it right. GCI



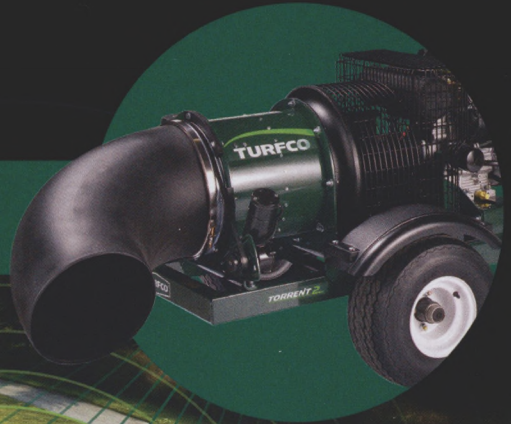
MATTHEW WHARTON, CGCS, MG, is the superintendent at Carolina Golf Club in Charlotte, N.C., and President of the Carolinas GCSA. Follow him on Twitter @CGCGreenkeeper.

Time. Our greatest invention.

Creating a perfectly breathtaking course requires your passion and knowledge. It also takes something you don't always have: Time. At Turfco, we're always looking for ways to free-up your time. Ways like saving up to two hours per day with the Torrent 2 Debris Blower. Reducing up to 720 passes on your greens per year with the WideSpin Topdresser. And seeding more quickly to achieve better results with the TriWave Overseeder. We bring innovative technologies that improve performance, while giving you back what matters most. Your day.

It's worth your time to see the difference. Schedule your demo today at www.turfco.com or call 800.679.8201

Torrent²
DEBRIS BLOWER



WideSpinTM 1550
BROADCAST TOPDRESSER



TriWaveTM 45
45-INCH OVERSEEDER



Schedule your demo today at www.turfco.com or call 800.679.8201



THE LEADER.



Innovation Never Stops: THE REVYSOL STORY

Revving Up the New Product Pipeline

By Pat Jones

(Editor's Note: This year, BASF and GCI are working together to tell the story of how a new active ingredient is coming to life for the golf market. The idea is to help you learn the scope of the R&D, testing, investment and plain hard work that goes on behind the scenes of product development. The specific formulations are not yet approved by EPA but indications are they will be available in 2019. This is part 1 of a 4-part series on the remarkable process of bringing new chemistry to your golf course.)

Think back a decade. It was early 2009 and we were at the beginning of the worst recession in most of our lifetimes. The golf market had already been softening since 2001 and some industry critics were predicting dire things.

One of those predictions was that we wouldn't see much innovation — particularly new chemistry — in our business moving forward. As the recession deepened, many budget-challenged superintendents had turned to cheaper post-patent products and there didn't seem to be much hope for brand new products

to combat specific diseases and manage resistance.

But despite the recession, the innovation at BASF never stopped. Their researchers identified a promising new molecule a decade ago that, after thousands of tests and a quarter-billion-dollar investment, is now bringing new turf compounds to life.

"We have two new products in the pipeline that, if approved, will both carry on that legacy of innovation and give superintendents a couple of pretty exciting new tools," says Kyle Miller, BASF's longtime Senior Technical Specialist. "We're pumped to get

them approved and get them out to customers who need them."

But let's not get ahead of ourselves. First let's talk about how that innovation came about and what it potentially means to you.

The skinny version is BASF is simultaneously launching several formulations of a new fungicide in both the agriculture and turf markets — something unusual because most new actives get their start on the farm before ever moving to golf. The basic active ingredient, called Revysol, has been developed in two turf formulations: Maxtima, a stand-alone version of the AI, and Navi-

con, a premix combination of Maxtima and Insignia. The active in Revysol and Maxtima is mefentrifluconazole, an entirely new compound that offers both disease control and significant resistance management qualities.

So let's rewind the tape and look back at how these new tools started as an idea on a chalkboard somewhere and eventually turned into field-ready tools for turf managers. To do that, we talked with both Kyle Miller and Dr. Renee Keese, BASF's R&D Project Leader, to get a look at the remarkable process of bringing new products to life in 2019.

Q: Describe your overall role in the process.

KEESE: My role is to begin characterizing the active ingredient specifically for turf or ornamental uses. We typically have some understanding of how it could work in corn, soybeans or wheat, and now we need to focus on our pathogens, application rates and timings for a superintendent. I help figure out what the directions for use will look like and put together the data package for EPA and state registrations, if they are needed.

MILLER: As products are submitted to the EPA for registration, our group gets involved to help try to answer additional questions turf managers may have about a new product with research trials focused on practical use. We are also instrumental in training our sales reps, distributor reps and end-use customers.

Q: What do end-users – particularly superintendents – need to understand



Dr. Renee Keese



Kyle Miller

about how a new product comes to life?

KEESE: Sometimes it's serendipity, sometimes it's a lot of work for a chemist to create what we are seeking. Revysol took several years and focused research to achieve this active ingredient and formulation.

MILLER: They also need to know that the process takes nearly a decade from start to finish and a lot of steps have to be completed and gain approval before continuing. It's also very costly.

Q: Can you characterize the size of the investment in the total process in terms of time, money and focus?

KEESE: Over the course of eight to 10 years, we spend an average of \$286 million to develop a new active ingredient. These two new turf products fit into this scenario. This chemistry has been my focus for the past six seasons!

MILLER: Right. Superintendents are often amazed to find out a new product will cost in the range of \$300 million to bring to the market. That's not only a lot of money, but a lot of resources inside our company and in the field to make it all happen.

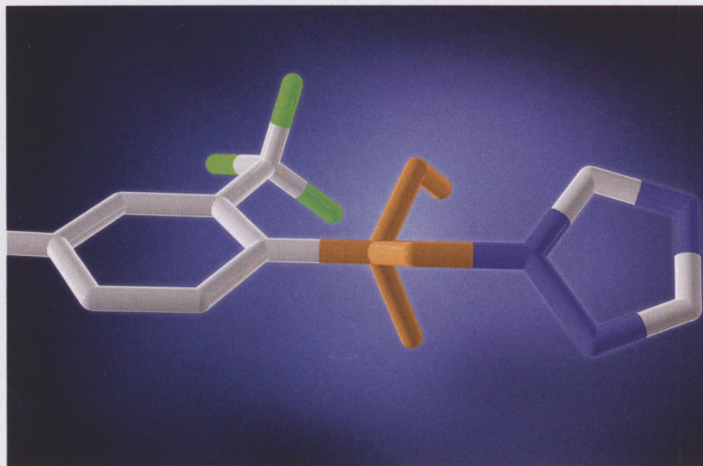
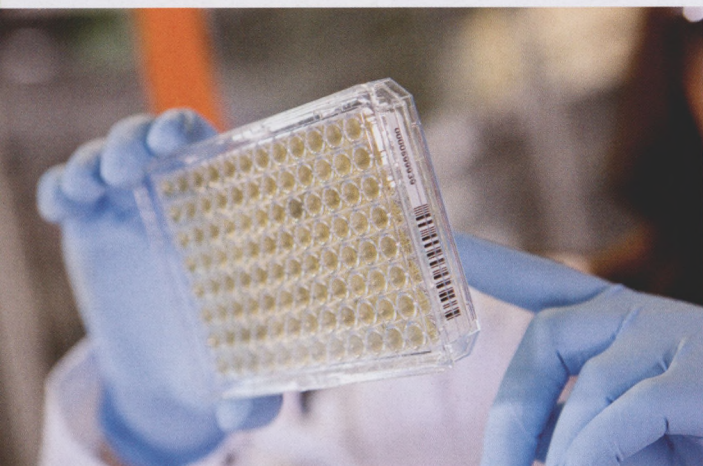
Q: What kinds of exercises or processes do you use to identify the need for potential new products?

KEESE: We do have specific gaps in our portfolio that we try to fill, and then we hear from customers and sales reps with their "wish list" ideas and input. In this case the Revysol/mefentrifluconazole was specifically created to be a different DMI – keeping efficacy and turf tolerance top of mind. BASF was trying to make a good class of chemistry even better.

MILLER: We really do a little bit of everything: focus groups, informal feedback from customers and field sales people, collaboration with the ag team ... plus having an experienced T&O group that helps identify needs based on years of experience.

Q: When you think about Maxtima, what was that moment?





KEESE: After early screens with Maxtima I knew we had a good fit for turfgrass. The efficacy on Anthracnose was a big moment for me.

MILLER: One of the issues with DMIs is their limitation for use during the summer months because of phytotoxicity. As we evaluated Maxtima, even at elevated rates we saw that during the summer, it had no negative effects on the turf. This is quite unique for this class of chemistry.

We decided to take it a step further and look at combining it with a strobi. Given the diseases Maxtima controls and its other attributes, particularly, summer safety, we knew that a premix of Insignia + Maxtima was a natural to provide the increased disease spectrum and plant health benefits.

Q: *How did you gain internal consensus that these new concepts were worth looking at?*

KEESE: Often we need to see how it is performing in early stage testing, to then piece together where we see the fit for a superintendent. If I can show marketing colleagues that we can control

some of the key pathogens, at a low use rate, while providing excellent safety, they quickly become interested.

With the Revysol chemistry, strong anthracnose and dollar spot control were key identifiers for our discussions. The ability to rotate chemistry for resistance management was also important, with so many SDHI and QoI chemistries available.

MILLER: Ultimately we felt like these products could fill an unfilled need for superintendents. Excellent control of key diseases like dollar spot, anthracnose and spring dead spot with excellent summer safety.

Q: *What things have to happen before you ever put a drop of experimental product on a turf plant in the lab?*

MILLER: Sometimes what we do is initially driven by our crop counterparts so when they give it a thumbs up, we are eager to test it. In this case we were actually involved in the early screens, at least to know it wasn't harmful to turf, and we were included in the first wave submissions to EPA. That gets us to market quicker.

Q: *What barriers have historically stopped new concepts from coming to market?*

MILLER: Registration problems like an adverse environmental profile or mammalian toxicity can stop a product before it starts. But we also have to look at the cost of production, limited scope of control on the

disease spectrum or just being just a "me too" product. There are lots of hurdles to overcome!

Q: *What was important about each of these products that made them worth developing?*

KEESE: for me it was the high degree of efficacy and the safety to turfgrass species all season long. We saw this early on and it was really intriguing to us. On top of that, we didn't see any phytotoxicity issues with ultradwarf bermudagrass, even when applied in the middle of the summer. The comparisons to standard DMIs were pretty telling.

Q: *Final thoughts on why these products had such good potential they were worth the investment?*

MILLER: With many new SDHI's on the market and no new DMI's being introduced in over 15 years, these products will have excellent utility as part as an overall disease control program. Fundamentally we're running out of DMIs and this gives that class new life. We think superintendents will love that. ■

■ BASF

We create chemistry

NEXT UP:

Part 2 of our series will focus on taking a concept from the laboratory to the field, including university testing and trials with superintendents. How does a new compound survive the rigors of real-world testing? Look for the next chapter soon.

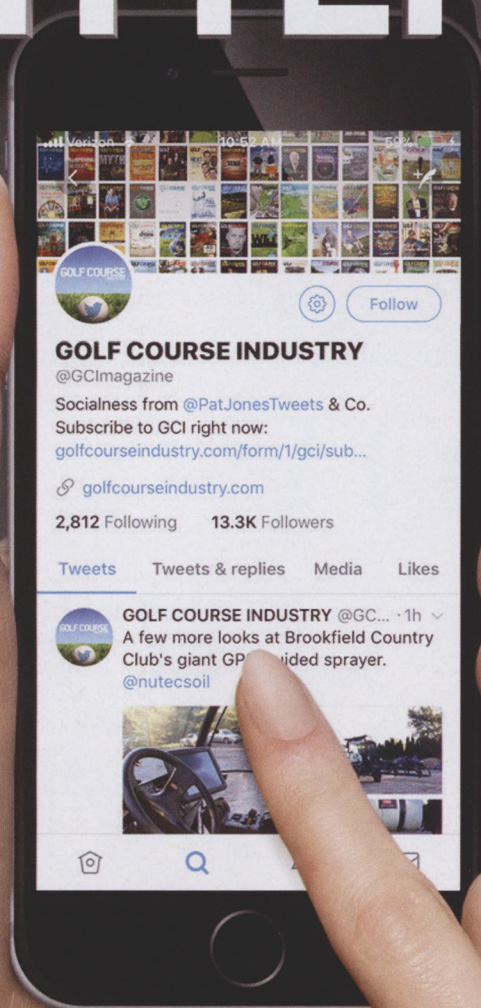
■ Revysol at a Glance

- Proposed tradename for turf is Maxtima
- Active ingredient is mefentrifluconazole
- Class of chemistry is new chemistry class Isopropanol Azole
- Strong potential as a resistance management tool
- Primary diseases controlled: anthracnose, dollar spot, summer patch
- Targeted registration: 2019
- A second proposed turf product, Navicon, includes Insignia (pyraclostrobin)

GOLF COURSE INDUSTRY

GCI has the largest Twitter following of any industry publication. Why? Because we're committed to providing the breaking news, great agronomic content and business and industry update you need.

#TWITTERIFIC



GCI is THE independent voice for superintendents in print, on the web
and on social media.

WANTED

DEAD AND ALIVE



OUR FAVORITE VILLAIN

NO MATTER WHAT SUPERINTENDENTS
THROW AT IT, *POA ANNUA* JUST KEEPS
FIGHTING BACK. BUT OPINIONS ON IT, LIKE
THE PLANT ITSELF, MIGHT BE EVOLVING.



“

IT'S THE PERFECT PLANT. YOU JUST
HAVE TO FIGURE OUT A WAY TO MAKE
THE MANAGEMENT A LITTLE MORE
ECONOMICALLY AND
ENVIRONMENTALLY SUSTAINABLE.”

— Dr. Alec Kowalewski, Oregon State



By Kurt Kleinham

Golf course turf managers could not ask for a better antagonist than *Poa annua*. Annual bluegrass is, at times, just another weed or the ideal putting surface, depending on climate. In terms of hardiness, it can come close to Terminator-levels of coming back, each time seemingly with a new resistance to whatever came closest to taking it out.



The superintendents treating it like a common weed are constantly looking for a better mousetrap, and those encouraging it on the course are always in need of support.

Superintendents are often eager to ask turf researchers about the newest mode of action to manage *Poa*, but approaches to working with one of turf's best-known villains have started to shift. Turf researchers shared their origin stories about *Poa*, and how their views have evolved.

“

FROM A BIOLOGY PERSPECTIVE, I DON'T THINK WE'VE UNLOCKED IT. I DON'T THINK WE HAVE A GREAT UNDERSTANDING OF IT, WHICH IS WHY IT CONTINUES TO BE AN AREA OF ACTIVE RESEARCH. THE VAST MAJORITY OF WORK STILL GOES INTO 'WHO CARES WHY IT'S ADAPTING? LET'S JUST CONTROL IT.' I THINK THERE'S LOTS OF QUESTIONS TO BE ANSWERED, AND I DON'T THINK A LOT HAVE.”

— Dr. Scott McElroy, Auburn University

UNLOCKING SECRETS

Dr. Scott McElroy, professor at Auburn University, got his master's degree working on *Poa*, but he didn't go out of his way to seek it out as an undergrad. His advisor at the time told him that he would be working on it, and that was that.

“I really didn't have

any opinion. I thought, ‘This is a weed, this is research, this professor says he'll pay me a stipend to work on this project,’” McElroy says. “It was really no more than that. And it's come to really kind of define my career in many ways.”

When McElroy started studying one of most widely distributed plant species on the planet, he found a wealth of interesting sources of study, he says.

“My interests more reside in the diversity and genomics of it as a species, and why is it so prolific? What makes this species special that it can grow in Antarctica and then Orlando?” he says. “As a researcher you look for problems, and it's a constant problem.”

McElroy still thinks of annual bluegrass as a weed, as there's still a lot of call for control methods, but he's also trying to convince those in

the biology and research fields that *Poa* is worth taking notice of, not only in how it adapts to change, but also in how it has evolved over time.

Even with the amount of time he's spent with *Poa*, McElroy thinks research hasn't even started to really understand the plant.

“From a biology perspective, I don't think we've unlocked it. I don't think we have a great understanding of it, which is why it continues to be an area of active research,” he says. “The vast majority of work still goes into ‘Who cares why it's adapting? Let's just control it.’ I think there's lots of questions to be answered, and I don't think a lot have.

“It obviously has the ability to adapt and survive, either in managed or unmanaged ecosystems. So the question arises, why is that occurring? Is there something special about its species that allows it to adapt? And can we manipulate that in some way to stop it from invading?”

McElroy has lots of plans for



McElroy



Poa annua is the dominant grass varieties on greens in multiple regions, including the Pacific Northwest.



INNOVATIVE TURF TECHNOLOGY

Quality Matters



**Worldwide Manufacturer of
Turfgrass Maintenance Products:
Bedknives • Tines • INFINITY Reels
Bedknife Grinding Wheels**

**Come see us in
San Diego at the 2019 GIS Show
Booth 4307**



**Toll Free: 888.576.7007 • International 336.354.1243 • Fax: 336-764-8311
Email: sales@jrmonline.com • www.jrmonline.com**

future research, but one particular area he finds interesting is dealing with *Poa* via cultivation techniques. For example, using fraze mowing to remove the weed seedbank could help control its growth.

Another angle is looking at how resistance in *Poa* begins, whether it moves from different locations or starts fresh in each place, he says.

"If it's jumping around, we can correlate these populations, and that tells us what that what we need to do is a better identification and containment type of management across a broader swath of geography," he says. "Whereas if it's arising de novo (anew) in each of these individual sites, then our emphasis should be on continued training of people to prevent the rise of new herbicide resistance in individual locations."

CHANGING MINDS

Dr. Jim Brosnan, associate professor at the University of Tennessee, was surrounded by *Poa* when he went to Penn State for his undergrad work. At the time, he just thought of it as another type of turf. But he was intrigued when, during his first job as a faculty member at the University of Hawaii, he found *Poa* out on the islands.



Brosnan

"It was surprising to me. It wasn't everywhere, but in different microclimates on different islands, particularly at elevation, you could see *Poa* in fairways," he says. "That was kind of an eye-opener for me."

But things really kicked up when he was on a 2010 USGA extension visit to a golf course in Tennessee, and a superintendent mentioned in passing that his *Poa* just wouldn't die until the high heat of the summer kicked in.

"We turned around, went out there, I got cup cutters and sampled some plants, and went through the

confirmation process of confirming that it was glyphosate-resistant," he says. "At the time, that was only the second case of glyphosate resistance in turf."

He began talking about the resistance in extension settings, and more and more superintendents came forward to ask him to check out their *Poa* for the same issue. And that has spurred almost a decade of research for him.

"It's so multifaceted from a biology standpoint," he says. "It's just amazing, the adaptability of this species. Not only its adaptability to different microclimates, but also what we do management-wise, its ability to resist different modes of action and strategies."

But what *Poa* has done most for Brosnan is offer a window into what turf programs miss as educators, he says. "We see this adaptability, and the solution that everyone wants to deal with that is something that comes out of a jug," he adds. "We have enough data to know and indicators from other crops to know that that's not the solution."

The plant's adaptability challenges educators to approach it from a human psychology perspective: Researchers know that if turf managers don't diversify, treatment is just selecting for resistant populations, but that can sometimes mean passing over a quick herbicide fix.

For Brosnan, the best turf managers working with *Poa* are planning out two to three years, developing a program that bakes diversity of mode and active ingredients before resistance ever becomes a problem.

"We need to do more to change our approach as educators to help superintendents solve this problem, because the standard stuff we're doing is clearly not working,"



Kowalewski

he says. "I'm giving talks about sitting down and building a plan to approach how you're going to handle this weed, because it's so adaptable. That is so far removed from our standard approach of, 'Here's this weed and here are the seven herbicides that

work well on it.'"

To help build these plans, researchers just need more data on the biology of the weed to build effective, sustainable programs.

"Can we better model *Poa* germination, and have models of soil temperature, soil moisture and daylight, and daily light integral and day length? All of these meteorological parameters that are out there," he says. "Can we use that to build a model to predict what this weed is going to do, so we can use the tools we have in the most effective way possible, by understanding the biology of the target?"

JOINING IN

When Dr. Alec Kowalewski, associate professor at Oregon State, started grad school at Michigan State University, annual bluegrass was considered a weed. That is, until a researcher called Joe Vargas helped start a change in how people thought about annual bluegrass in Michigan, he says.

Later moving to Oregon, Kowalewski saw the vast majority of the people living in the western half of the state treating annual bluegrass as the dominant putting green surface, he says. That climate gets enough precipitation without heavy snow in the winter, making an ideal environment for annual bluegrass to thrive. Annual bluegrass cuts a swath all the way down the Pacific Northwest coast to Monterey Bay in California.

"In the classroom, I was taught

THE EASY CHOICE

WHEN POWER, PERFORMANCE,
VERSATILITY AND COMFORT MATTER.



We harnessed the speed of our motorcycles, the power of our WaveRunners®, the durability of our outboard motors, the pure grit of our Side-by-Side, and the skillfully engineered quietness of our golf cars to create UMAX,™ our brand new line-up of Yamaha utility vehicles. With six color options, luxurious bucket seats, under hood storage compartment, and large 20" tires, you can see the difference when power, performance, versatility and comfort matter.

SEE IT IN ACTION

@ 2019 Golf Industry Show

San Diego, CA: February 6 - 7, 2019 (Booth #4523)

the All New
UMAX



| www.UMAXutility.com | (866) 747-4027



McCurdy

it was a weed, but then the first golf course I worked on (in East Lansing, Mich.) was predominantly annual bluegrass putting greens," he says. "I learned very quickly that there are things we learn in the textbooks and classrooms, but then as soon as we go out in the real world, it all changes and goes out the window."

Annual bluegrass takes about 90 percent of his research, as a perennial biotype that is most susceptible to disease like microdochium patch for about six months of the year, he says. As one of the fewer researchers working toward building healthy stands of annual bluegrass, it's changed his perspective on approaching it.

For instance, using lighter, more frequent irrigation helps annual bluegrass stay strong, and Kowalewski has taken that principle on to research home lawns, resulting in collective less use of water.

He's also looking for ways to use pH to manage pathogens in annual bluegrass without using fungicides, as several West Coast regions have tight restrictions on pesticide use. One issue is that bringing the pH to a level that reduces disease activity can make conditions more favorable to creeping bentgrass, putting *Poa* in a vulnerable position that it's typically not used to.

"So we're trying to figure out the perfect balance of pH where it reduces disease activity but not promote creeping bentgrass," Kowalewski says. "There's tons of social pressure in the far western states to reduce pesticides. We've got golf courses in California that have to manage with no pesticides at all."

But it's a great plant for the environment of the western states, and golf course superintendents can turn its adaptability into a benefit by just

keeping it happy, he says.

"It's the perfect plant. You just have to figure out a way to make the management a little more economically and environmentally sustainable," he says.

One downside to trying to work with *Poa* rather than against it is that it's not commercially available, he says. Growing annual bluegrass on a course means planting a fine fescue or creeping bentgrass, and then cranking up the fertilizer to push it toward annual bluegrass. "And then in about five years, you've converted it over to annual bluegrass," Kowalewski says.

Seed companies say that the West Coast market is too much of a niche to make annual bluegrass seed sales worthwhile, not to mention that as an annual, *Poa*'s genetic diversity is very high, Kowalewski says. If a superintendent wants to get aggressive about building an annual bluegrass stand, collecting cores from another golf course might be the easiest way to go. But its trouble finding a place in the market doesn't change his opinion of its usefulness on the golf course. "I think because you can't go buy a bag of annual bluegrass, that's the biggest deterrent to it," he says.

SHARING KNOWLEDGE

Dr. Jay McCurdy, assistant professor at Mississippi State University, looks at annual bluegrass from a global perspective. "It's one of the most cosmopolitan grass weeds in the world," he says. "It's on every continent, including Antarctica."

Growing up in west Tennessee, dealing with *Poa* was an ever-changing, moving target. His first experiences with it were just as a problem to be solved, and as resistance began to rise, he had to start putting his education to use to find new ways to approach it. But the root of the problem with *Poa* was something a little tougher to grasp, he says. "It's existential to the way we think about weed control, because it's a weed we

can – I wouldn't say 'tolerate' – but we can mow and play on it. It sucks, but we can do it," McCurdy says.

But even working with other researchers and superintendents, there don't seem to be any easy solutions to the problem, at least not without creating even more problems that take up more bandwidth, he adds.

"A lot of places, your entire year revolves around what applications you're putting out for *Poa*," McCurdy adds. "It is vertically integrated to the point that we put out a pre-emergent and a post, and then you're putting out a growth regulator to manage seedhead production. There's nothing else I deal with that's like that."

McCurdy is committing to spending even more time on annual bluegrass, working with a *Poa* project through a USDA specialty crops research initiative project bringing together about 16 universities to collect samples of annual bluegrass for study. The project (which can be found on Twitter @ResistPoa) shares those samples from states including Alabama, Tennessee, North and South Carolina, Virginia, and Texas to find new ways to manage *Poa* in new, sustainable ways, he says.

"That's where this project is really headed," McCurdy says. "It's not about resistance, it's about how we can best manipulate the environmental situation so that we can minimize the amount of *Poa*, then clean it up with herbicides if necessary."

The project blends backgrounds and approaches in looking for solutions, going past an approach of chemistry alone, he says. But the project won't make much headway without support from superintendents who supply samples. "We need people who are volunteering annual bluegrass populations that are resistant," he says. "If they have them, we need them to get in contact with us." **GCI**

Kurt Kleinham is a contributing editor from Akron, Ohio.



What Superintendents Are Saying About the AIR2G2 Air Injection Process



"After one application the Air2G2 was able to accomplish what has taken aerification years to get to. It's pretty amazing."

- Timothy Strano, CPAg, Brae Burn Country Club in West Newton, Massachusetts

"Using this tool it has given us a chance to provide some mid-summer relief with minimal invasion so the members don't even know we've been out there."

- Jesse Trcka, Wayzata Country Club, Wayzata, Minnesota



"With the addition of the AIR2G2 324 into our agronomic program, our I.S.T.R.C. test results show an average 42% increase in infiltration in the 0-4" zone. While a single sample in the 8-12" zone showed a 96% increase in infiltration."

- Mark Semm, former Director of Agronomy at Cordillera Ranch Golf Club, Boerne, Texas

"When you're religiously using the Air2G2, you don't really have any problems. You don't have problems that crop up that you need to spot treat specifically because you've got the AIR2G2 in regular use."

- Brian Benedict, The Seawane Club in Long Island, New York



RELIEVE COMPACTION • INCREASE DRAINAGE • FORCE GAS EXCHANGE • GROW LONGER ROOTS



VISIT BOOTH 3816 & 3817
at the Golf Industry Show in San Diego
to see the full line of AIR2G2 equipment
and ask about our special GIS offer!



FIVE IMPORTANT things I learned from other superintendents

Anthony Williams, CGCS, reveals enduring career lessons from interactions with colleagues.



I

n the early years of golf course management, it was common that young, aspiring assistant golf course superintendents apprenticed under veteran and more established superintendents. It was also common that superintendents in the same area gathered together to play golf or attend education, or to have lunch and talk about greenkeeping, weather forecasts, and how to solve the issues of the day.

Even now, in the Google era, it is still an important part of our profession to learn from and edify each other. Here are five important things I have learned from other superintendents over the years that have helped me find sustained success in the golf course management industry.

DO THE JOB, AND THEN SOME

This is advice I will never forget. You see when we are at our best as superintendents, we aspire to

exceed expectations, so when we deliver clean, beautiful and challenging golf course experiences at or below budget projections, we stand

out having achieved our highest calling. It is like sports turf legend George Toma said to me many years ago as I interviewed him for a

TASK EFFICIENCIES | EQUIPMENT DIAGNOSTICS | LABOR MANAGEMENT

REAL-TIME, REMOTE DIAGNOSTICS & REPORTING

"We now know exactly how much time it takes to complete tasks. FAIRWAYIQ monitors our mowers and other equipment, allowing us to plan ahead and have a tighter window of operation with the potential to free up additional time to get more work done."

Sean Tully
Superintendent
Meadow Club

Jeff Martins

Greensmaster 3120 #4
ASSET

Greens Mowing
TASK

Hole 6
LOCATION

00:02:19
TIME IN AREA

-00:05:31
BENCHMARK



FAIRWAYiQ

www.fairwayiq.com



taskTracker

www.advancedscoreboard.com

GIS Booth #1411
From Break Room to Board Room

CAREER

green industry profile, "Do the job, AND THEN SOME. It distinguishes the mediocre from the great!" Great advice from a great man. This advice applies to every part of the golf/turf operation or life for that matter.

Every detail is important, and every staff member has a role to play. It is our job as the superintendent to be the conductor of this complex orchestra of excellence and ensure that we exceed the expectations of stakeholders (owners, management, guests, members, peers and staff). The tasks are many and they range from agronomic programs to xeriscapes, but when you have a great golf experience, it transcends mere physical assets and

the feelings and memories are directly related to those of the superintendent and their team. To be a successful superintendent, you must embrace all the responsibilities and learn a lesson from the legends and do the job enthusiastically – AND THEN SOME.

YOU CANNOT DO EVERYTHING YOURSELF

There comes a time in every superintendent's career they realize you cannot do everything yourself. In my case, I learned this lesson early in my career (thankfully) and it came courtesy of a much wiser superintendent, Frank Siple, CGCS, retired. Frank was a

veteran superintendent in our area and he opened my eyes to the potential of delegation and training, and how the two are infinitely connected.

At first, I thought I could work 100 hours a week and be physically involved in every part of our operation every day, including weekends and holidays. Through Frank's example and advice, I realized that if I hire good people, train them properly and delegate effectively, I could simply inspect what I expected and confirm a strong set of standard operating procedures. This put me in the critical areas more often, and the operation and I became exponentially more successful.

The change in philosophy and application made for happier golfers and happier staff, giving me a much better work/life balance.

The successful superintendent realizes they cannot do everything themselves and manages their resources accordingly. Thanks Frank for telling me this truth over and over until I finally heard you!

NEVER STOP LEARNING AND TEACHING

I have experienced 30-plus years as a successful superintendent and I am fond of reminding my team that we should learn, do, teach and repeat. But legendary golf course superin-

Time Machine: WideSpin™ 1550 Broadcast Topdresser

Giving hours back to your day.

Turfco redefines how maintenance equipment can save time while improving results. With edge-to-edge coverage, the WideSpin Topdresser could save up to 720 greens passes per year. Plus, the savable presets ensure your preferred application every time.

WideSpin 1550 BROADCAST TOPDRESSER



It's worth your time to see the difference.
Schedule your demo today at
www.turfco.com or call 800.679.8201



The Original and Most Powerful Turbine Blower



CYCLONE SQUARED

CYCLONE EFI

(716) 592-2700
VISIT OUR WEBSITE
BuffaloTurbine.com

DON'T SETTLE FOR **KNOCKOFFS!**



Research Driven,
Proven Results™

USED BY THE WORLD'S MOST CELEBRATED GOLF COURSES AND STADIUMS

Visit Us at the Golf Industry Show, Booth #5336

Since 1992, GRIGG has been committed to bringing new high quality, science-based nutrition products to the golf and sports turf markets. GRIGG products are backed by university research and field testing, and customers are supported by seasoned GRIGG agronomists and turfgrass professionals. These are a few of the reasons GRIGG products are used and trusted by some of the most notable golf courses and sports stadiums in the world - including The Rose Bowl® Stadium.

For more information, call or visit:
800 300 6559 or www.grigg.co



tendent Bruce Williams, CGCS, introduced me to the need for lifelong learning via formal and informal classes, certifications, reading/writing articles and books, webinars, and regional and national conferences, and the role that teaching plays in the process.

A past president (1996) of the GCSAA, Bruce taught one of the first big-time educational seminars that I attended as a rookie superintendent. He was articulate, well-informed and passionate about the need for superintendents to commit to lifelong learning. He said, "to truly demonstrate mastery of a subject, you should be able to pass on the subject lessons and

skills to others." I embraced the idea and for many years I have been both a student and teacher (GCSAA faculty member) at the Golf Industry Show and GCSAA Education Conference.

Being skilled at a craft is one thing, being so immersed as to teach those skills to others is a higher level of mastery. Think about how much better your legacy as a superintendent will be when you have excelled as both a student and a teacher.

MAKE DECISIONS LIKE YOU WILL BE EMPLOYED AT THAT PROPERTY FOREVER

The Iroquois have a saying: "The impact of every decision should be thought through to

the seventh generation." That is roughly 200 years. This is to ensure that even beyond our personal involvement, we should make good decisions that will benefit others and the property in perpetuity.

My enlightenment to this truth in golf course management was due to my relationship with Dr. Eddie Seagle and Palmer Maples Jr., CGCS, retired (GCSAA president 1975). Our connection is Abraham Baldwin Agricultural College in Tifton, Ga. Dr. Seagle was the longtime professor of ABAC's golf turf and environmental horticulture program and Palmer was (by personal invitation of Dr. Glen Burton) part of the

first ABAC turf graduation class of 1953. I was part of the ABAC class of 1984.

These men taught me to have strong character, not to take shortcuts and above all make the best decisions possible for the property not just for the day but for the future as well. I have been surprised at how in the last 33 years the 99-year philosophy has been received by the ownership of the clubs I have served and the industry. I have been rewarded many times for taking the higher road and seeing a bigger picture to solve problems rather than cover them up. These actions lead to a shared legacy between a superintendent and their property.



1 in 6 children are malnourished.

We Can Change That!

You can give lifesaving food to the world's hungriest children.
They can experience the joy of a full life. And a full life feels good.

feedthehungry.org 877-769-9267

LeSEA Global
FEED THE HUNGRY
 A full life feels good.

BOOTH
#3316

Drop By at GIS 2019 and See What's New

BOOTH
#3316



New 3rd-generation POGO is smarter, easier to use and more powerful.

Bluetooth, infrared surface temperature sensor, USB charging, soil depth sensor, and more!

New App

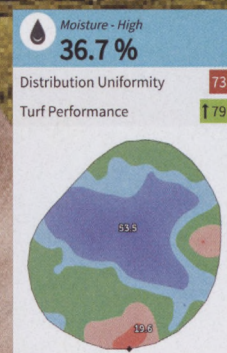
Completely redesigned with feedback from thousands of users!

Integrated live satellite mapping and positioning: locate features and see POGO analytics in real time, and so much more!



2X larger booth this year!

Booth #3316, right inside main entrance

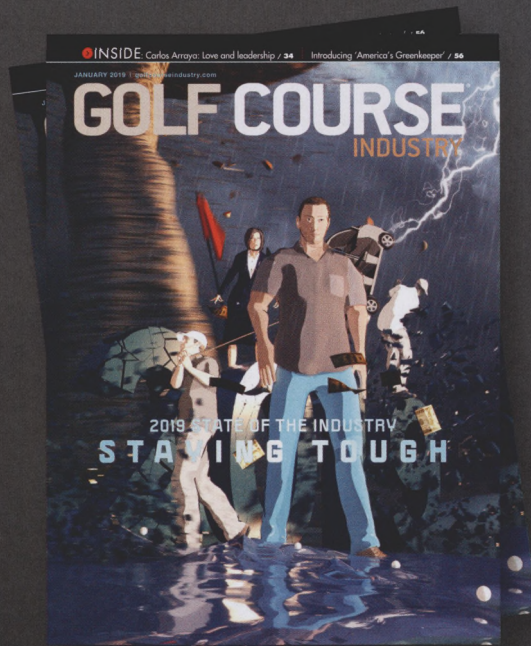


Superior insight | Better decisions | Healthier turf

www.pogoturfpro.com

info@pogoturfpro.com

1.800.452.5272



SUBSCRIPTION ASSISTANCE IS JUST AN EMAIL AWAY.



Reach us any time at
subscriptions@golfcourseindustry.com

CAREER

There is no substitute for being committed long-term to a cause or property, and even though we know that sometimes tenures are much shorter in total years, the level of thought engaged to make property decisions should remain connected to a higher, deeper purpose. The goal of every superintendent is to be successful during their tenure and establish such a cornerstone of excellence that their successors will speak positively of the work and decisions they made years after they have moved on.

SERVE THE INDUSTRY, AND THEN SERVE OTHERS

The 80/20 rule states that 80 percent of all the work within an organization is completed by 20 percent of the membership – the most committed ones. The best and most innovative superintendents have embraced this call to serve.

This piece of advice came to me over and over in my career and from successful names in the golf course management industry. Superintendents such as Darren Davis (current GCSAA president), Rafael Barajas (GCSAA vice president), Randy Nichols (GCSAA president, 1993), Ken Mangum, Buck Workman, Mike Crawford, Charlie and Chuck Underwood, David Phipps, Kevin Breen, Johnny Walker (my Texas and FFA brother), Keith Ihms (GCSAA president, 2014), Brian Cloud, Jorge Croda, Mike Epps, Kirt Phillips, and the list goes on and on.

All encouraged me to join them and serve our industry. It has become clear to me

that to protect our traditions and to continue to be innovative, we need superintendents who are willing to volunteer to host events, serve on committees or board of directors, donate time/money/resources, and organize these essential efforts for our greater good. I have been blessed to serve in many ways in Georgia, Texas and across the country for the GCSAA. It makes a difference.

Inspired by other superintendents, I have also donated my time and talents to a variety of other causes that have impacted our community.

It is becoming harder and harder to find people who are willing to serve. Now more than ever, we need to raise our shared vision and our level of service to include things like advocacy, research and scholarships.

I was not the first to serve, and I will not be the last, but I aspire to be a bridge connecting those who laid the foundations of our industry to those who will add the next story. We owe a debt to each superintendent who has served and encouraged others to serve.

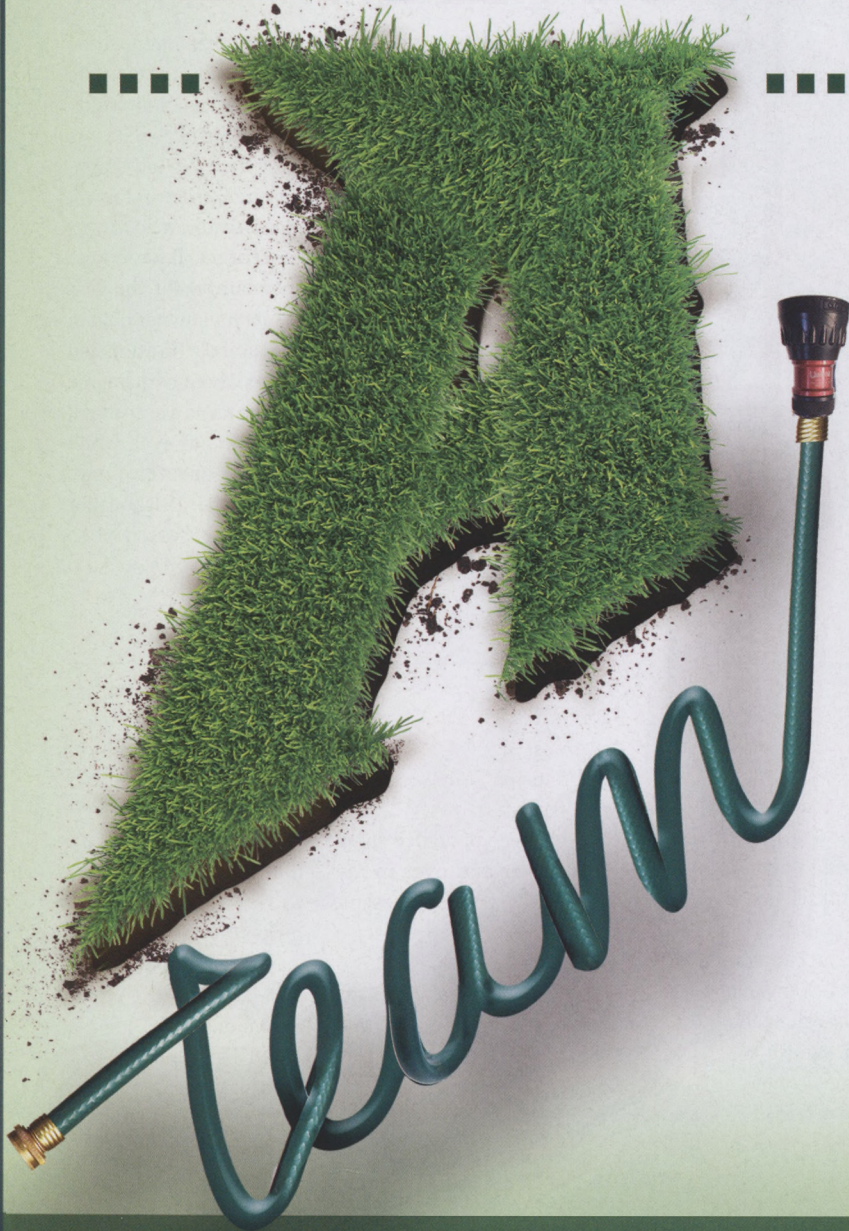
If I have found any measure of success in the golf course management industry, it is due in large part to the advice and support I have received from other superintendents. Their skills and character have left an incredible mark on our industry and on me. **GCI**

Anthony Williams, CGCS, is the director of golf course maintenance and landscaping at the Four Seasons Resort Club Dallas at Las Colinas in Irving, Texas. He's a frequent GCI contributor.

PUT WATER IN ITS PLACE WITH THE

.....

.....



Aquiflo™ Plus
a.k.a. “the penetrator”

Punches water through soil with ease so it doesn't pool and reaches the roots faster



Aquicare™
a.k.a. “the retainer”

Saves turf from embarrassing dry spots and soft playing surfaces




Aquisync™
a.k.a. “the dual force”

Infiltrates and hydrates to reduce water requirements and chemicals needed in spray tanks.

**Take control of the water
on your turf**

— put WinField® United's A-Team to work today.

 @winfieldpro

Winfieldunitedpro.com/WettingAgents

**WINFIELD
UNITED**
Professional

TRAVELS WITH TERRY

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.



TEE MAKER VENTILATION

The five sets of decorative aluminum tee markers at the Westlake Golf and Country Club in Jackson, N.J., are moved daily throughout the season. Black, blue, white, yellow and red colors are used. There are two spare sets for each color. They are manufactured by National Golf Graphics and cost approximately \$77 each. Anthony Johnson, superintendent, noticed there was quite a bit of heat generated onto the turf causing a yellow appearance even when they are moved daily. Johnson had his staff drill one 1/2-inch diameter hole in each one using a titanium drill bit. He estimated the tee markers generated about a 20-degree cooler temperature after the holes were drilled, thus they did not yellow the turf even when moved less frequently. It took about two days on and off labor time using one drill. The labor was completed during the winter off-season when the course was closed.

RECYCLED PALLET

A North America standard size 48 inch by 40 inch by 6 inch used wooden pallet is conveniently storing a new Lely L1250 three-point hitch PTO operated fertilizer spreader, which has a capacity of up to 930 pounds. Four Shepard rubber swivel casters were installed at all four corners at \$15 each in about 10 minutes labor time. The used wooden pallet was left at the club from a recent delivery. The fertilizer spreader was moved with ease when storing and when mounting and dismounting from the tractor. Jesse Metcalf, superintendent, and Doug Meir, equipment manager, makeup the creative team at the Bonita National Golf Club in Bonita Springs, Fla.



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 terrybuchen@earthlink.net.

GOLF COURSE INDUSTRY

Get two weeks' worth of the industry news that matters, cutting-edge and plenty of opinions when you sign up for our Fast & Firm e-newsletter. Everything you need to know in one quick scan on your phone, PC or tablet.

FAST, FIRM AND FREE!



GCI is THE independent voice for superintendents in print, on the web and on social media.

these days.

I've interviewed three supers with MBAs in the past couple of years. That really grabs the imagination of successful business leaders on search committees. A turf manager who thinks like a businessperson!

How should a candidate talk about compensation?

A lot of clubs have survey information about average salaries for superintendents in their area via the

CMAA or whatever, so that's going to be par. The market is the market. If you think you're worth X and the market doesn't agree, the market wins. That said, superior candidates will always get a second look.

Super salaries

are definitely starting to climb and they'll be climbing quite a bit more. We're starting to see some big increases and the market is very competitive.

What do you tell assistants who are looking to build their careers?

I don't tell, I ask. What are your aspirations? What do you want to do? Where do you want to be? They get enamored with having big-name clubs on their resume, but that isn't all that important in searches run by firms like ours. It might help you with clubs that aren't using a search firm, but we try to educate clubs about what's important and not important.

We're getting back to the point where they're coming out of school and they're going to get assistant's jobs right away. The questions is, "What kind of training are you going to have before that?" I was spraying

greens when I was 14 and making chemical plans when I was 18. How much time do they spend on their tech know-how? A ton. How much on careers? Hardly any. That's why I encourage mentorship for these AITs and assistants within the club to learn about the other aspects of the organization.

You mentioned Twitter earlier and I obviously agree it can be a great tool if you're savvy. Does your firm check old Facebook pages or Tweets to see if candidates have said stupid things?

We check open sources. We also have a company that does background checks and occasionally they turn up something that's a problem. You have to be responsible about what you post. It's not a reason not to do social media, it's a reason to do it wisely. One other thing for all searches: not having a particular degree or certification might not disqualify you but lying about it will.

Tell me the single most important thing that search committees from Top 100 courses really want.

They have to feel good about you and you have to feel good about them. It's gotta go both ways. They have to believe that you can take them to the promised land.

What's most underrated by superintendents approaching a job search?

Probably their mentoring and leadership skills. How did they go about the process of developing people? Give specific examples of how you've done certain things. Don't just say, "I'm a great mentor." Instead say, "Let me describe my program and how this works."

How about presentations and portfolios and pictures of your current course?

Everybody knows that every golf course looks great when you take

the pictures well. Pretty pictures don't matter. If you're going to do it, make sure it's good information and it's going to educate them. This is all for the pre-interview, too. The interview is about a conversation and for the committee to get to know you and to understand what it would be like to work with you

Towards the end of the process, the follow-up interview might include a 20- to 30-minute presentation on a specific topic. We'll ask them to prepare a white paper or presentation on one topic that's important to the club. After last year, one topic might be: "What would you do to prepare for a difficult summer?" Could be a soft topic or hard topic. Whatever the committee thinks is relevant.

What are some critical things about the relationship between supers and GMs you've observed in your recruiting role?

Again, it's so important to have a global vision. They are part of the success of the club, but it takes a team to make it work. Cross-department exposure and training is very, very important. For example, an assistant pro shadowing a super for the morning and learning what life is like for the maintenance crew and vice versa. It creates one team going forward.

If a young ambitious turf professional is reading this right now, what's the ONE thing you'd scream at them to do in order to move up the ladder?

It's not a thing they need to do. It's a trait they need to establish. They must be CURIOUS. Joe Duich told us never to just drive by anything you think is interesting. Not just on the golf course, but anywhere. I'm inherently curious, but hearing that come from Joe was profound. I preach that all the time. Never stop being curious! GCI

Pat Jones is GCI's editorial director.

“

Remember that, ultimately, they hire you because of the person you are. You have to tell them why you're the right person for them.”

ADVERTISER	WEBSITE	PAGE
Air-O-Lator	airolator.com	38
AMVAC	amvac-chemical.com	9
Aqua Aid	aquaaid.com	33
BASF Corporation	basf.com	58-60
Belchim Crop Protection	belchim.com	51
Billy Goat Industries	billygoat.com	38
Buffalo Turbine LLC	buffaloturbine.com	72
Earthworks	earthworksturf.com	2
FAIRWAYIQ	fairwayiq.com	71
Feed The Hungry	feedthehungry.org	74
FMC	fmc.com	45
Grigg Brothers	brandt.co	73
GT Airinject Inc.	airzg2.com	69
Jacobsen	jacobsen.com	23, 31, 84
JRM, Inc.	jrmonline.com	65
Koch Turf & Ornamental	kochturf.com/green	47
Lebanon Turf Products	lebanonturf.com	83
Nufarm	nufarminsider.com	19, 29
PBI-Gordon Corp.	pbigordonturf.com	79*
Penn State University	worldcampus.psu.edu/gci	12
Pennington Seed	pennington.com	10
POGO	pogoturfpro.com	75
Pond Hawk	linneindustries.com/ pondhawk-overview	5
Progressive Turf Equipment, Inc.	progressiveturfequip.com	39
Pure Seed	pureseed.com	53
Residex	target-specialty.com	43
SePro Corporation	stewardsofturf.com/poa	COVER
Standard Golf Company	standardgolf.com	55
Toro Company	toro.com/rm501oh	13
Trojan Battery Company	trojanbattery.com	11
Turfco MFG, Inc.	turfco.com	57
U.S. Battery Manufacturing Co.	usbattery.com	37
United Phosphorus, Inc.	upi-usa.com	49
Winfield Soullions	winfieldunited.com	77
Yamaha Golf-Car Company	yamahagolfcar.com	67

BUSINESS OPPORTUNITY

BRANCH ENTREPRENEUR - Natural Lawn Care Partnership

Interested in partnering with an established Natural Lawn Care Company to provide clients in your city with Natural Lawn and Landscape Care?

Contact Alec McClennan today to start the conversation
Alec@whygoodnature.com or
216-570-5346 (cell).

FOR SALE

Discount Small Engines & Parts

Small engines & parts from Briggs & Stratton, Kohler, Tecumseh, Robin and more.

www.smallenginesuppliers.com

Also, look up your own parts and buy online at

www.smallenginepartssuppliers.com



MAXIMIZE YOUR ADVERTISING DOLLARS

Place a GCI Classified Ad
Contact Bonnie Velikonya
at 800-456-0707
bvelikonya@gie.net.

GOLF COURSE
INDUSTRY

MERGERS & ACQUISITIONS

BUYING OR SELLING A GOLF COURSE OR GOLF RESORT?

We are the Leaders in
Golf Course/Resort Disposition

NATIONAL
GOLF & MARINA
PROPERTIES GROUP™

Eddy A. Dingman

Real Estate/Golf Business Broker
eddy@nationalgolfandmarina.com

847-987-6626



MILLER MANAGEMENT ASSOCIATES

We work with buyers and sellers of

GOLF COURSES IN
THE SOUTH EAST REGION

www.mmagolf.com

brett@mmagolf.com

828-775-7765

SEEDS

NATIVE SEEDS

Largest producer of native seeds in the Eastern U.S. Hundreds of species of grass and wildflower seeds for upland to wetland sites. Bioengineering material for riparian areas and erosion control.

Contact **ERNST SEEDS** today.

www.ernstseed.com - 800/873-3321

READ THE
DIGITAL
EDITION
OF GCI
TODAY!



magazine.golfcourseindustry.com



Futurama

As 2019 dawns and we examine the state of the industry, it seems like a good time to shine up the old crystal ball for a glimpse of the future. (Be advised this is the same crystal ball that said East Coast private clubs were recession-proof in 2008 so all predictions should be taken with a large grain of salt.)

That said, Jonesy's Magic Crystal Futurama Ball Reveals ...

The golf market will continue to shrink. There's no reason to think the current slow deflation of the supply of U.S. courses will stop. Sure, we're still building a few fabulous new courses every year, but we're annually closing or converting 200 or so that just can't compete because of overbuilding, debt, bad management or failure to invest in good conditions.

The current remodeling trend will further reshape our industry. Smart facilities – mostly private clubs and high-value resorts and semi-privates – are investing now to ensure they can compete in 10, 20 or even 50 years. Golf still has strong appeal and experts like our friend, Henry DeLozier, believe the future is bright for private clubs. But you must offer today's customers something fresh, appealing and fun. A zillion trees, worn-out practice areas, and stupid rules about collared shirts and music on the course ain't gonna cut it. As we've said before, the future belongs to those who adapt and change. Jeez, even the blue blazers at the stodgy old USGA simplified a bunch of rules in the past year. Can't we all evolve a little?

The fixer-upper boom that's being driven by bunkers, regrassing and full or partial renovations is about halfway over. Builders and architects (particularly regional folks doing master plans) are still extremely busy, but in another seven or eight years, the courses that are going to invest will have done so. At that point, we'll settle into the next new golf market.

The new market will be smaller but healthier and more hospitality

driven. A decade from now we'll have about 13,000 courses (vs. about 15,000 today). The winners in 2029 will be clubs and facilities offering a fresh new golf product combined with fitness, classes, and other activities that attract more women and families. You simply cannot expect to succeed in the future by offering the same crap. What's the average age of your member or customer? Is it over 50? If so, you're screwed if you don't act soon to attract a new, younger and more diverse customer base.

From a supplier standpoint, the market 10 years from now will be even more stratified than we see today. Currently, the top 20 percent of courses account for about 60 percent of all spending. I think it will feel more like 75 percent in future as labor costs grow and make it even more difficult for facilities in the bottom half of the market to maintain current spending levels or invest in infrastructure. That said, the profitability we're seeing today at top clubs and high-end daily fees suggests the overall golf market will continue modest growth despite closures at the low-end.

A lot of amenity courses built in the '80s and '90s as housing anchors will struggle and fail in the next decade. It's a bad business model because they don't have enough play within the development to support the course and few ever attract much outside public play because the perception is they are private and expensive. Homeowners around these courses are starting to reject the idea of paying exorbitant HOA fees

to maintain a course they don't use. Hard to blame them.

The result of that will be a mini-boom in the business of shutting down failed courses and turning them into greenspace, hiking trails or other recreation areas. There's an entire industry waiting for smart people who figure out how to repurpose these courses that simply can't be turned into more housing.

Maintenance will be reshaped by labor costs. Again, this will be a story of haves and have-nots. The haves – 5,000 or so top facilities – will solve problems by hiring the appropriate number of people and employing the lion's share of the shrinking number of kids coming out of traditional four-year turf programs. The have-nots will struggle, discount green fees and further reduce investments in the property. Not good.

Yes, there will be more robotic mowers (and probably "bunker roombas" that rake sand). It's inevitable. Again, we're not replacing workers with robots, we're focusing trained humans on important stuff and letting the machines do simple, repeatable tasks.

Lastly, I'm not saying that superintendents will rule the world in 2029, but in a future that demands sustainable urban greenspaces, supers will be pretty damned important. After all, you manage the asset that matters – the big, living, breathing green thing that attracts and inspires so many people. Because of that, your future looks very bright indeed. **GCI**



PAT JONES is editorial director and publisher of *Golf Course Industry*. He can be reached at pjones@gie.net or 216-393-0253.

Turf (micro)management

Just got a whole lot easier.



TRUE PERFORMANCE

TURFGRASS PROGRAM

No two greens are created equal. Staying on top of your game means knowing every condition. Country Club MD granular with Emerald Isle liquid products offer proven results customized to your course. Backed by independent university research to manage stress, this unique putting green management program delivers the nutrients your greens need—for all microclimates and conditions.

Now you can create your custom turfgrass program and **save up to 10%***

*learn more at LebanonTurf.com



Best of all Worlds®
www.LebanonTurf.com 1-800-233-0628





SHIFT YOUR APPROACH.

Cover more ground with the AR and TR Series.

New AR and TR Series trim mowers bring the legendary Jacobsen® cut to hard-to-reach areas. They're loaded with versatile features like AdaptiShift™* technology which moves all three cutting units from side to side, offering 12 inches (AR Series) or 18 inches (TR Series) of offset and the option to create varying tire track patterns. Their versatility enables you to deliver contour-hugging precision and unrivaled hill-climbing capabilities, providing a superior quality of cut and heightened productivity.

*AdaptiShift technology available on AR331 and TR330.

Get more details at www.jacobsen.com
or call 1.888.922.TURF



TEXTRON GOLF

© 2019 Textron Specialized Vehicles Inc.