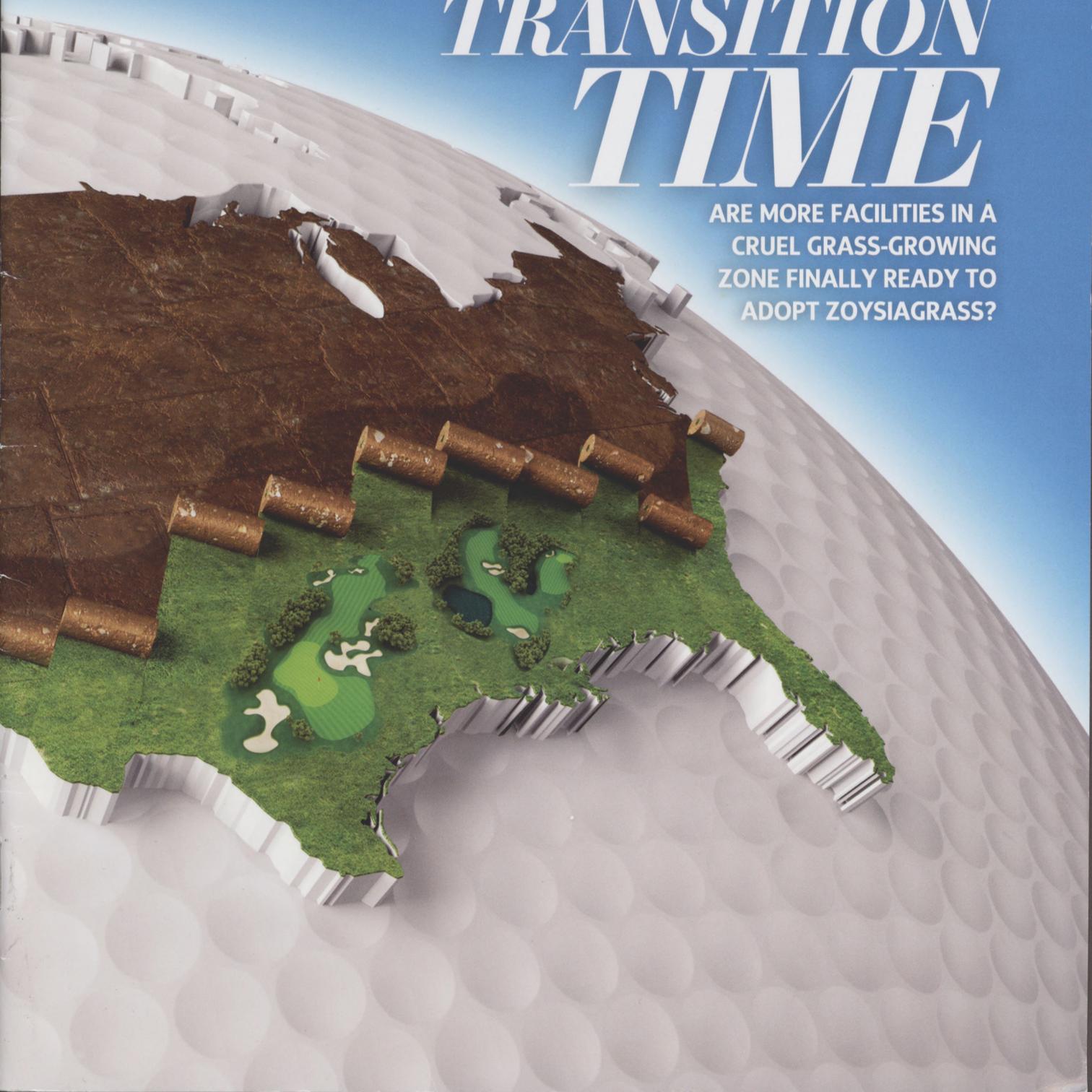


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TRANSITION TIME

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TRANSITION TIME

ARE MORE FACILITIES IN A CRUEL GRASS-GROWING ZONE FINALLY READY TO ADOPT ZOYSIAGRASS?

12



COLUMNS

- 10 GAME PLAN**
Henry DeLozier: All eyes on you
- 18 DESIGN CONCEPTS**
Jeff Brauer: Death of the par-5 hole
- 32 IRRIGATION ISSUES**
Brian Vinchesi: HDPE again
- 43 OUTSIDE THE ROPES**
Tim Moraghan: Get to the point!
- 50 PARTING SHOTS**
Pat Jones: Déjà vu all over again: A few thoughts about the U.S. Open at Shinnecock Hills

DEPARTMENTS

- 4 TEEING OFF:** Add a little aloha to the workplace
- 6 EDITORS NOTEBOOK:** Symbolic renovation
- 48 TRAVELS WITH TERRY:** Equipment ideas
- 49 CLASSIFIEDS**
- 49 AD INDEX**

FEATURES

Cover story

12 TRANSITION TIME

Are more facilities in a cruel grass-growing zone finally ready to adopt zoysiagrass?

Pests & disease

26 SUMMER IS HERE ... NOW WHAT?

Resorting to basics is often the best practice when your turf faces heat-induced stress.



Equipment

34 A CUT ABOVE

Experts weigh in with tips to keep your cutting reels and blades nice and sharp.

Condition, perform, recover

40 A NEW CONTEND(ER) FOR SNOW MOLD? YOU BETCHA!

Minnesota's StoneRidge Golf Club proved to be the ideal testing ground to put a new fungicide through its paces.

7



34

MAUKA TO MAKAI



Mauka to Makai

20 PART 4: KŌKUA

The fourth installment of a four-part series looking at the people, practices and partnerships behind the stunning golf on Hawaii's Big Island.



ADD A LITTLE ALOHA TO THE WORKPLACE

Aloha! 'Ohana! Malama 'aina! Kokua!

Yes, we still have Hawaiian fever. For the past four months, we have revealed the people, practices and partnerships on Hawaii's Big Island, a region where most of our audience will never work a golf course maintenance shift. Why did we do it?

A partner who understands the value of telling quality stories to the industry always help. Like it did last year, when it supported our "When the creek rises" series about the devastating flood and inspiring recovery at The Greenbrier, John Deere committed to a people-focused project.

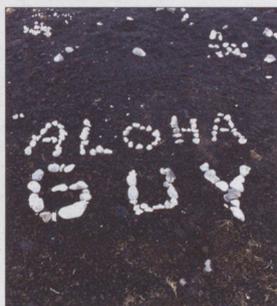
The people responsible for maintaining golf courses in Kailua-Kona are different than people holding similar jobs in Rye, New York, or Scottsdale, Arizona. Any industry, especially a challenging one dependent on disposable income, suffers if everybody thinks and acts alike.

GCI strays from homogeneity, thus the reason for edgy columns, newsletters and social media feeds. As much as we admire and ardently support major championship superintendents and association leaders, we dig deeper for cover concepts and story topics. The names of terrific columnists and writers are the only thing we hope a reader can predict when opening these pages or visiting our website. Golf is a conservative business. It doesn't need another publication producing predictable content.

And a magazine doesn't need to introduce readers to people in the same places, brining us to the reason behind our "Mauka to Makai" series, which concludes this month. Here's a theme-by-theme look at how studying golf course maintenance on the Big Island can help somebody on the mainland.

Aloha (welcome). Golf is – or at least should be – a customer-centric business. Smiles and waves are common when Big Island workers

encounter golfers. Similar enthusiasm exists when superintendents and course employees interact with industry peers. Anybody know of a business that failed because its employees were too friendly? We can all benefit from incorporating a "Sense of Aloha" into our daily interactions.



Guy Cipriano
Senior Editor

'Ohana (family). I started my tour of Big Island courses on a Monday. The week commenced with more conversations about surfing and weekend barbecues than turf. Big Island workers know their colleagues on personal levels. The conditioning doesn't suffer because of personal relationships. Kailua-Kona boasts some of the world's best maintained golf courses

thanks to loyal crews. Multiple workers told me they turned down higher-paying jobs positions – within and outside the golf industry – because they value the family atmosphere at their current job. Remember this whenever you think you're too busy to hear a brief description of a co-worker's fishing trip.

Malama 'aina (To care for the land). Superintendents everywhere are wonderful at protecting what separates golf from other activities. Signage explaining the cultural and physical significance of wildlife, careful pesticide and fertilizer applications, integration of hybrid technology into mower fleets, efficient irrigation and comprehensive recycling programs help golf courses navigate operational perils in an environmentally sensitive state.

Kokua (help). High labor and supply costs, cultural differences among managers and employees, poor soil, salinity issues, intense sunlight and customers with enormous expectations make maintaining a Big Island golf course a tricky assignment. Asking co-workers, competitors and suppliers for help isn't a sign of weakness. It's a sign of savvy strength. **GCI**

GOLF COURSE INDUSTRY

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Long Cove Club is currently undergoing a renovation led by Bobby Weed, who helped Pete Dye with the original design.

SYMBOLIC RENOVATION

BOBBY WEED GOLF DESIGN has started a renovation at Love Cove Club, in Hilton Head Island, S.C. The course, designed by Pete Dye, opened in 1981. The project is especially significant to Bobby Weed Golf Design.

“Long Cove was my first assignment with Pete and the genesis of Bobby Weed Golf Design,” Weed says. “After having met him at Amelia Island Plantation in the mid ’70s, Long Cove was the

beginning of my career in design and construction and of my nearly 40 years relationship with Pete. To be back at Long Cove is very special for Bobby Weed Golf Design and to me personally.”

The renovation work, which will be executed by MacCurrach Golf, is scheduled for completion in late August, with the course to reopen in early October. The scope of work includes refurbishing all bunkers and native areas with new drain

lines, sand and coquina shell material; regrassing greens and fairways; replacing corroded metal lake connectors and drain lines; reconstructing original bulkheads; repairing overlay of cart paths; and select tree removal.

Weed and Dye assembled a crew of college graduates, interns and low-handicap golfers for the memorable original construction. Many Long Cove alumni later embarked on their own careers in the golf design business,

including Weed, Tom Doak, PB Dye, Scott Pool and Ron Farris.

“For me,” Weed says, “returning to Long Cove conjures up fond memories of insane hours of construction, working alongside Pete Dye every day and fashioning a course out of the Lowcountry with a passionate team of golf junkies. And doing all of this while covered in sunscreen, no-see-ums and chiggers, and loving every minute!”



Dr. Michael Hurdzan with Jan Hauger, Norm Lambert and Jesse Boyd of Chapter 45 of the Special Forces Association before the Keepers of the Green outing.

AN EXACTA IN DUBLIN

A trip to Dublin last month produced a double dose of industry fun and outreach.

No, we didn't travel to Ireland. But Dublin, an expanding city in suburban Columbus, Ohio, served as the site for a GCBA Regional Meeting and Keepers of the Green golf outing.

The meeting featured an educational element, including sessions about backfilling and compaction and Dr. Michael Hurdzan's presentation on Erin Hills,

an Ireland-inspired Wisconsin course that hosted the 2017 U.S. Open. Another Ireland-inspired course designed by Hurdzan and former partner Dana Fry, The Golf Club of Dublin, then hosted the KOTG charity event.

Founded in St. Andrews, Scotland, KOTG raises funds to buy wheelchairs for those in need. The 18th annual tournament hosted by Hurdzan and fellow architect David Whelchel attracted 29 industry sponsors, including GCI.

INDUSTRY buzz



A Hurricane Irma impact report on clubs has been released by the Florida Chapter of CMAA in conjunction with **Club Benchmarking** and the **National Club Association**. Key findings from the 79 surveyed clubs include insurance claims for **damages in excess of \$27.5 million** — including **\$9.5 million in damages to golf courses** — and **5,855 impacted employees**.

AQUA-AID announced it has rebranded with a modernized look and name, **AQUA-AID Solutions**. The rebrand reflects more than 30 years of delivering high-value solutions to turf managers, while looking into the future with the growth incurred over the past five years within the business. Along with a new name and logo, AQUA-AID Solutions launched a new website, aquaaidsolutions.com.

Dr. Chris Williamson joined **PBI-Gordon's** research team. Williamson will be responsible for coordinating all research protocols, technical assistance to cooperators and product support for end-users in a 16-state region. Williamson spent 20 years as a professor at University of Wisconsin-Madison before joining PBI-Gordon.

Tartan Talks No. 24



We celebrated a Tartan Talks milestone by reuniting with the series' first

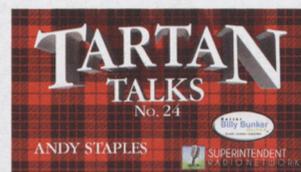
guest.

Andy Staples returned to our airwaves to discuss a variety of subjects, including how an architect views *Poa annua*, why he takes risks in designs, environmental golf and choosing a profession where rejection is the norm.

Tartan Talks launched in 2016 following a tour of the Staples-led renovation at Meadowbrook Country Club in suburban Detroit. Staples has returned to Meadowbrook, site of the 1955 PGA Championship, multiple times since it reopened last year.

"One of the joys of our job is to go back to a course on an annual basis," he says.

And one of the joys of podcasting is furthering the conversation with entertaining guests. Enter <https://goo.gl/oPxTYU> into your web browser to hear the episode.



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01 THE CHALLENGE

Shinnecock Hills is a one-of-a-kind course that sits near the northeast tip of Long Island. In a climate where volatile winds and marine layer fog can be everyday occurrences, this location creates a challenge for the agronomy team—especially when pristine championship conditions are a must.

JON JENNINGS, SUPERINTENDENT SHINNECOCK HILLS GOLF CLUB

02 RESTORATION

On top of dealing with tough conditions, the team at Shinnecock Hills had been busy restoring the course back to the design created by the legendary William Flynn in 1931. This meant carving out more open space, growing grassland areas that extend to the property lines and creating expansive vistas throughout the entire course.



03 PREPPING

According to the superintendent of Shinnecock Hills Golf Club, Jon Jennings, BASF Turf Solutions were able to “improve plant health exponentially” on the course. The team used products like Emerald® fungicide, Honor® Intrinsic® brand fungicide and Pendulum® Aquacap herbicide to get rid of problematic dollar spot and produce an impressive final result.

04 SHOWTIME

Shinnecock Hills is one of golf’s most challenging courses. BASF is honored to partner with the Shinnecock Hills agronomy team in delivering world class conditions.



ALL EYES ON YOU



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

Sooner or later – you can hope for later, but there's no guarantee – you're going to be asked to get on your feet and address a group of people whose opinion of what you say and how you say it will directly impact your career. Immediately, research confirms, you'll be struck with a trepidation (known as glossophobia) that outranks even the fear of death. Both are inevitable.

Maybe that moment has already come. Maybe your boss put you on the club's agenda for a meeting of club members, or your communications person signed you up for a speech in front of a local civic group. Maybe your reputation as an expert in your field earned you a place at the podium or on a panel at an industry conference. And maybe, if you're a natural, like President Obama, Jimmy Valvano or Oprah, you knocked it out of the park. But few of us are in that league.

Knowing the day of reckoning is coming, here are a few things to consider. Because as someone who has been there knows, you don't want to look out into your audience and wish you had started preparing a little sooner.

Audience. Who will fill the seats in front of you? What do they already know about your topic? You can skip that part. What do they need to know? This is the information that helps them make an informed

decision or encourages them to think about your subject in a way that's favorable to your organization. What will entertain them? Make no mistake, for those few minutes that you're trying to hold their attention, you're also in the entertainment.

Purpose. You're taking the valuable time of people who don't have any to spare. So don't waste it or the opportunity. What do you want to accomplish? Do you want to educate? Change opinions? Rally support? Everything you say should be aimed at this goal.

Message. What's the one thing – not the two or three things – you want people to remember? Condense this to a single sentence, write it on a notecard and tape it to your computer so you're reminded of it as you develop your content. Drive this one idea home throughout your talk. If you do it often enough and well enough, when audience members are asked afterwards what you said, they'll know what you want them to know.

Structure. Deciding on the talk's structure – think of it as a home's framework and the rest of your content the joists and flooring – makes the actual writing much easier. A simplistic but effective way to organize a talk is one you've probably heard before: (introduction) tell them what you're going to tell them, (body) tell them and (summary) tell them what you've told them. Novices and pros

alike use this approach with great success.

Content. What you actually say should be a combination of the research (not too dry and not too much) that makes the logical case for your argument, the examples that make your points relatable and the stories that make your talk memorable. If a picture is worth a thousand words, a good story is equally valuable to speakers and their audiences.

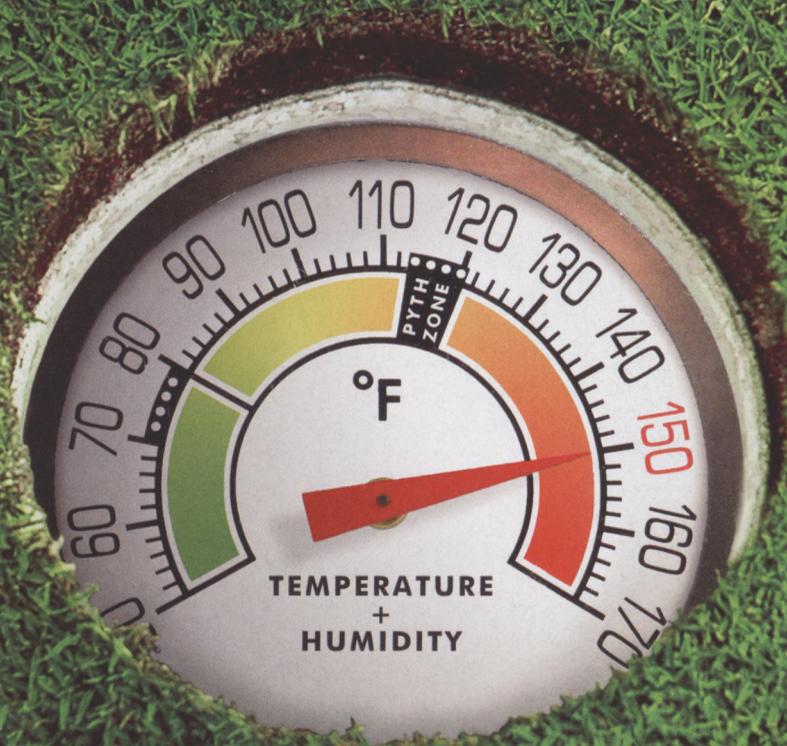
Statistics and logic lead an audience to a certain point, but story makes them want to believe. A story also breaks up the pace and gives your audience a chance to relax from all of the logical stuff. The elements for a good story within a speech are the same as those you grew up listening to and the same as those that fill a movie theatre: a beginning, a crisis or key event, a resolution and a lesson. Choose stories that reinforce your key points and tell them as if you're in the backyard with friends.

Authenticity. Let your passion for your work, your course and your team shine through. Don't be afraid to get personal. You're not being boastful when you tell people what influences have shaped your life and formed your values. Be brave in revealing your own motivations for your profession. A smile, a wink, a grimace and a self-effacing laugh add warmth and credibility.

PowerPoint. Some of the most compelling and effective talks were delivered by a man or woman standing in front of a group of people, looking them in the eye and saying what he or she really believed. And they did it without the clutter and distraction of PowerPoint. But if you feel you need it – and some subjects do because of their complexity – make sure you use it sparingly. Use BIG type and BOLD images. Think of your slides as electronic wallpaper – there to illustrate a point and to give the audience visual relief, not as a crutch for the speaker. **GC**

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TRANSITION TIME

ARE MORE FACILITIES IN A CRUEL GRASS-GROWING ZONE FINALLY READY TO ADOPT ZOYSIAGRASS?

By Guy Cipriano

In summary, an ever-increasing number of golf course superintendents in the Transition Zone are turning to zoysiagrass for fairways and tees ... It offers a solution to an old problem.

Stan Zontek, USGA Green Second Record,
July-August 1983

Zoysiagrass continues to be an option for fairways in the Transition Zone. Recently, the use of this grass has declined, rightly or wrongly.

Stan Zontek, USGA Green Section Record,
January-February 2002

I imagine it will increase in popularity as they get these new varieties better and better.

David Stone, Phone Interview,
June 12, 2018

Stan Zontek and David Stone. A pair of turfgrass and golf advocates willing to share information with anybody willing to listen.

Zontek, an enthusiastic USGA Green Section agronomist, died in 2012. He was 63. His writings about the cruel climatic stretch known as the Transition Zone endure.

ILLUSTRATION: GRAHAM HUTCHINGS SINELAB

Stone retired as the superintendent of The Honors Course in 2016. He oversaw the maintenance of the famed Tennessee course for 34 years. His messages resonate with colleagues at all levels, including hundreds of superintendents who have approached him about establishing and maintaining zoysiagrass.

On a sweltering day last month, Stone is driving a golf cart near his Tennessee home. His dog barks while he fields impromptu turf questions. Thirty-three years after The Honors Course converted from Bermudagrass to zoysiagrass fairways via intricate sodding, Stone is still discussing zoysiagrass. "I have learned a bunch," he says. "Initially, I didn't know much about it when I came to The Honors Course."

Stone describes the origins of zoysiagrass at The Honors Course; Pete Dye wanted to sprig fairways with it from the beginning but was forced to wait until winter damage to Bermudagrass convinced ownership to adopt zoysiagrass. He describes the mechanics of the grass; fewer trees and ample drainage create an ideal growing environment. He reveals he follows the research and breeding efforts conducted by land-grant institutions; varieties with improved cold and wear tolerance might click with superintendents, owners and members, he says.

Today's Transition Zone superintendents resemble Stone in the 1980s: curious whether zoysiagrass can make a tough job a bit easier. But the difference of tone in Zontek's writings from 1983 to 2002 suggest no guarantees exist when it



comes to widespread adoption.

Labeled a grass of the future in the region numerous times since superintendent Mel Anderson installed Meyer zoysiagrass, a *Z. japonica* cultivar named after USDA plan explorer Frank N. Meyer, at Kansas' Alvamar Golf Club (since renamed The Jayhawk Club) in 1968, zoysiagrass remains an anomaly in the Transition Zone. The region, according to the GCCSA's Golf Course Environmental Profile, had a nation-high 20,101 acres of zoysiagrass on golf courses in 2015, an increase of 62 percent from 2005. But the region also had 119,200 acres of Bermudagrass and 111,176 acres of cool-season grasses, meaning zoysiagrass accounted for just 8 percent of total golf turf.



THE QUEEN CITY OF ZOYSIAGRASS?

The majority of zoysiagrass in the Transition Zone is found on fairways. Meyer is the predominant variety. And most superintendents responsible for maintaining zoysiagrass praise its performance.

"It's to our advantage from a competitive standpoint," says Pat O'Brien, the superintendent at Hyde Park Golf and Country Club in Cincinnati, Ohio, a market with little zoysiagrass. "It gives us an opportunity to shift inputs from 22

acres to other surfaces."

O'Brien arrived at Hyde Park in 2004 after serving as an assistant superintendent at nearby Camargo Club. Besides working with it on a pair of bunker faces at Camargo, he knew little about zoysiagrass, so he called numerous colleagues, including Stone. "Good dude," O'Brien says.

Fortunately, one of his Hyde Park predecessors, Tom Brehop, worked with the membership to establish zoysiagrass fairways via sprigging. Establishment cost \$21,000 (\$954 per acre), but instant success proved elusive.

"It was really cutting edge," says O'Brien, who inherited extensive project records. "It hadn't been in the area. It was a painful process, no question



◀ Bellerive Country Club was one of the first prominent courses to install zoysiagrass on fairways and tees.

‘Where did you get it? Where did you get?’”

Cost and availability of sod, O’Brien says, are the two biggest deterrents from Transition Zone facilities installing zoysiagrass.



GATEWAY TO ZOYSIAGRASS?

The impetus for Hyde Park’s zoysiagrass stems from St. Louis, the largest Transition Zone market with widespread usage. In fact, Zontek’s 1983 article is titled, “The St. Louis Solution – Zoysiagrass for Fairways!”

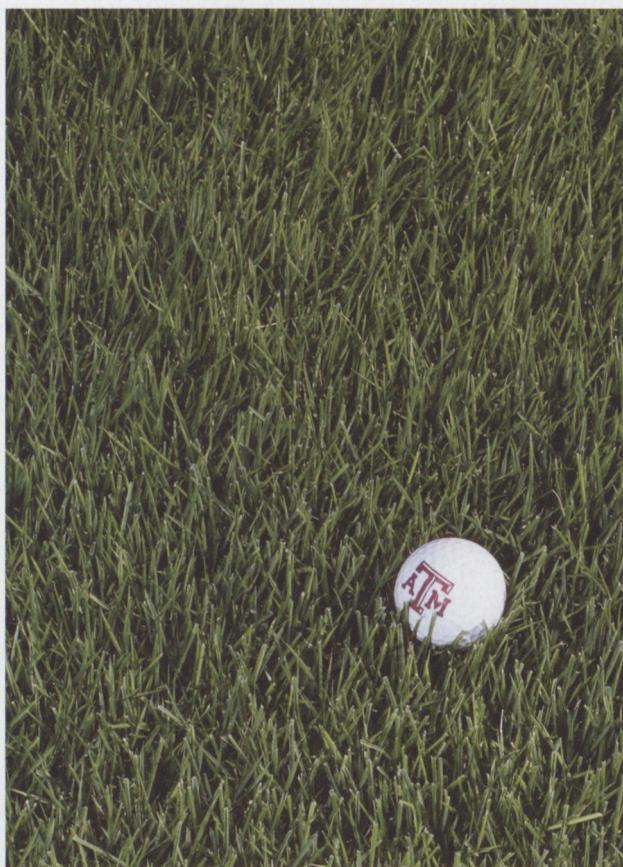
Like Stone and O’Brien, Carlos Arraya possessed scant zoysiagrass knowledge before settling into his current job. A Floridian, Arraya arrived at St. Louis’ Bellerive Country Club in 2016 and became head superintendent last year.

Bellerive is perhaps the most prominent Transition Zone course with zoysiagrass. The club hosts the 100th PGA Championship in August. The club also hosted the event in 1992.

Bellerive opened at its current location in 1960 with Bermudagrass fairways. Conditions were less than ideal for the 1965 U.S. Open following a cool spring, so the club experimented with zoysiagrass. A conversion to Meyer was completed before the course reached its 10th anniversary. When the PGA Championship

about it. I saw some of the pictures and slides from it. I was like, ‘Oh my gosh. Thank you, Tom, for doing it.’ I don’t know how I would have sprigged zoysiagrass on a golf course.”

Because it’s slow to establish, zoysiagrass is primarily installed in the Transition Zone via sod these days. Hyde Park embarked on a practice range expansion this year and the project included adding 35,000 square feet of zoysiagrass. Finding sod proved difficult, with the club eventually securing the desired amount from a producer on the Missouri-Arkansas border. O’Brien created a stir when he posted a picture on Twitter of sod-carrying trucks arriving at the course. “People saw the trucks on Twitter,” he says, “and they started asking,



▲ Innovation zoysiagrass was developed by breeders and researchers at Texas A&M and Kansas State.

What’s next?

Meyer’s 50-year reign as the predominant zoysiagrass cultivar on Transition Zone golf courses might be in its final stages.

A USGA-funded project facilitated by researchers at Texas A&M, Kansas State and Purdue involves developing a cultivar with a finer leaf texture than Meyer possessing improved cold tolerance and large patch resistance. Meyer, a cultivar released in 1951, has been used as a Transition Zone playing surface since 1968. In their quest to find an alternative, breeders started examining more than 3,000 hybrids, with the total being trimmed to the top 10 earlier this year.

“Working with that in the next two, three years, there will be material that sod growers will be able to look at from a production standpoint that would have those characteristics in the Transition Zone,” says Dr. Ambika Chandra, who leads the Texas A&M Agrilife Research turfgrass breeding program in Dallas. “We’re real excited about that project and there’s some good material in it.”

While the USGA-funded researcher continues, Sod Solutions is expected to release a supply of Innovation later this year. Developed by Texas A&M and Kansas State breeders and researchers, Innovation features a finer leaf texture than Meyer, Chandra says.

“We’re going to start seeing some options for zoysiagrass in the Transition Zone,” Chandra adds. “I fully predict that as breeders like myself and those at other schools work to develop more cold-tolerant material that uses zoysiagrass, its usage will increase in the Transition Zone.”

begins Aug. 9, players will be competing on the same zoysiagrass installed in the late 1960s. The tournament coincides with the period when zoysiagrass offers peak performance and aesthetics in St. Louis. “From late July to the middle of August, we get about six weeks of absolute purity,” Arraya says. St. Louis temperatures can exceed 100 degrees in early August.

As Arraya discusses zoysiagrass on a mid-June afternoon,

“ZOYSIAGRASS DOES LIKE WATER. I HAVE HEARD PEOPLE SAY BEFORE, ‘YOU DON’T HAVE TO WATER THAT STUFF.’ WELL, IF YOU PUT 30,000 ROUNDS A YEAR ON IT, IT DOES NEED WATER ON IT. IT NEEDS SOMETHING TO KEEP IT GOING.”

— RON FREKING,
DEVOU GOLF & EVENT
CENTER

he checks the temperature. It’s 98 degrees. “We never had spring this year, so you’re looking at grass that sees summer conditions in July at the end of May, early June,” he says. “But the grass has the ability to adapt.”

Steamy weather also leads to less mowing, an adjustment Arraya has learned to

make as he becomes more familiar with the grass. “Say we are mowing three or four times a week when it’s 85, 90 degrees, well, when it gets 95 to 100, we only mow it two or three times a week,” he says. “You can create a lot of stress despite it being a warm-season grass. You can’t be out there mowing it in extreme heat. You shouldn’t be – at least on our property we don’t.”

Winter management has proved more enlightening. Arraya calls Bellerive’s Meyer “pretty hardy,” although winter desiccation on low- and high-sitting parts of the course remains a concern. Shorter days as winter approaches results in raising heights of cut, drying the turf and preventative fungicide applications for large patch control. A five-decade history with zoysiagrass means Bellerive members understand the straw-like appearance associated with dormancy.

“I think it’s one of the best playing surfaces,” Arraya says. “You just have to deal with the visual aspect. Not everyone is OK with seeing something brown or strawing. Our members are used to it and it’s great. If you’re converting from something that’s overseeded or a bentgrass fairway, you have to understand that there will be a distinct difference in the visual aspect of the grass.”



CITY OF BROTHERLY ZOYSIAGRASS?

Across the Transition Zone, Philadelphia Cricket Club director of grounds Dan Meersman has watched a membership quickly embrace zoysiagrass. Yes, Meersman considers Philadelphia, which sits at the 40th parallel north, a Transition Zone growing environment. Bermudagrass practice tees are common in the region. “You can definitely grow warm-season turf here if you want to and if you feel like it matches the function of what you are trying to achieve at your facility,” Meersman says.

Philadelphia Cricket Club has 45 holes, including the St. Martins Course, a nine-hole layout opened in 1895. The course expanded to 18 holes and hosted the 1907 and 1910 U.S. Opens before the club moved its golf operations to suburban Flourtown, where the famed A.W. Tillinghast-designed Wissahickon Course opened in 1922. St. Martins was reduced to a nine-hole course and the club continued its suburban expansion by adding the Militia Hill Course in Plymouth Meeting in 2002.

Restoration plans for Wissahickon sparked dialogue about the future of St. Martins, which had received little capital investment – think no fairway irrigation – for nearly 100 years. A past superintendent placed zoysiagrass and Bermudagrass trials on the course and Meersman noted how the grass fared

each season. Meyer’s breeding history – the cultivar was developed in Beltsville, Md., 130 miles from Philadelphia – and its presence in the yards of Philadelphia row homes intrigued Meersman enough to pitch expanding the scope of zoysiagrass experimentation to half of the first fairway. The fairway faces south toward the clubhouse, making it among the hottest spots on the course.

“I would get to the point of, ‘Why don’t I see more of it around here?’” Meersman says. “The final straw that told me that it was perfectly fine to do here was driving through the row homes in Philadelphia. They didn’t have expensive lawn care companies taking care of their yard and they were probably spending nothing on them. And sure enough, come August and September, their lawns looked the best. I started to think this winterkill thing that people are trying to scare me about wasn’t that big of a factor (in Philadelphia).”

With no fairway irrigation, the zoysiagrass flourished during the 2011 trial, convincing the club to allow Meersman to work with architect Keith Foster, who led the Wissahickon restoration, on a St. Martins renovation that included sodding fairways with Meyer. The renovation also involved expanding greens, reconstructing bunkers and installing a new irrigation system. The 2,681-yard course supported 1,600 rounds in 2010, according to Meersman. That total has more than quintupled, with the course now supporting 10,000 annual rounds. St. Martins hosted the World Hickory Championship in 2016, followed by the Na-



A major moment

Zoysiagrass zest should increase in August when Bellerive Country Club hosts the 100th PGA Championship. The St. Louis club made turfgrass history in 1992, becoming the first venue to host a major championship on Meyer zoysiagrass fairways and tees.

Only one other major championship, the 2011 PGA Championship at Atlanta Athletic Club's Highlands Course, has been staged on zoysiagrass surfaces. The

tournament, contested on Diamond, a fairway variety developed by Dr. Milt Engelke, increased interest in zoysiagrass, says Dr. Ambika Chandra, who succeeded Engelke as the leader of the Texas A&M AgriLife Research turfgrass breeding program.

"Major tournaments just bring that extra attention," Chandra says. "When my predecessor developed Diamond zoysiagrass as a fairway-type grass and it was planted on

Atlanta Athletic Club and Tiger Woods made that comment, 'It's the best grass he has ever played on' my phone would not stop ringing. People were asking where they could find it and if they can come look at it. That really intrigued me."

As a golf course architect, Woods installed zoysiagrass on Bluejack National, his first United States design. The suburban Houston course uses two varieties from tee to green: Zeon and L1F.

tional Hickory Championship in 2017.

"The tournament director of the World and National Hickory Championships calls it the, Augusta National of Hickory Golf!" Meersman says. "He laughs about that, with how good the zoysia is in the summer and how you get those flier lies. When you play with those old clubs, you appreciate those flier lies even more."

Meersman, a third-generation superintendent, contacted numerous colleagues during his research, including Stone. He also studied and placed Zeon zoysiagrass, a *Z. matrella* released by Texas-based Bladerunner Farms in 1996, on a range tee. Neither Meyer nor Zeon has experienced winterkill at Philadel-

phia Cricket Club, Meersman says. Availability at the time of the renovation led to the club selecting Meyer.

"I think one of the reasons we don't see a lot of it up here is that there's not a lot inventory of it and the inventory that does exist people would rather stamp out their field and send it FedEx to homeowners and

splendid cool-season surfaces. But what if Meersman had to recommend a grass variety for a Philadelphia facility with just one 18-hole course?

"I ask myself this a lot, 'Would I put Meyer on a championship golf course here,'" Meersman says. "I think you could do it because you could take your maintenance up

Major championships contested on zoysiagrass are still rare events in televised tournament golf.

get a higher price per square foot," Meersman adds. "The golf course superintendent is pretty picky about the quality and you have these big rolls they need that ruin fields for a longer period of time."

Philadelphia Cricket Club is in a fortuitous position to try zoysiagrass on nine holes because it has two high-caliber, 18-hole courses with

to another level on it. Obviously, cool-season works, as well.

Most clubs want to play their golf course whenever they can get on it if there's no snow. I think there's something to be said for cool-season grass. But the average golfer likes zoysiagrass more than they like a low-mow bentgrass. The average 18-handicap loves that zoysiagrass."



ZOYSIAGRASS IN THE BLUEGRASS STATE?

Establishing zoysiagrass via sprigging takes too long – at least two and likely three years to receive adequate coverage – for most Transition Zone facilities. Establishment via solid sodding is too expensive. Estimate costs of fairway-quality sod, according to research by Purdue University's Dr. Aaron Patton, exceeds \$15,000 per acre – and that's if

(continues on page 44)

"I THINK IT'S ONE OF THE BEST PLAYING SURFACES. YOU JUST HAVE TO DEAL WITH THE VISUAL ASPECT. NOT EVERYONE IS OK WITH SEEING SOMETHING BROWN OR STRAWING. OUR MEMBERS ARE USED TO IT AND IT'S GREAT. IF YOU'RE CONVERTING FROM SOMETHING THAT'S OVERSEEDDED OR A BENTGRASS FAIRWAY, YOU HAVE TO UNDERSTAND THAT THERE WILL BE A DISTINCT DIFFERENCE IN THE VISUAL ASPECT OF THE GRASS."

—CARLOS ARRAYA, BELLERIVE COUNTRY CLUB

DEATH OF THE PAR-5 HOLE



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

They are nearly obsolete for today's longest hitters, who only like them when they play like par-4 holes. Average golfers often dislike fairway wood shots. Owners want to reduce construction cost, and the simplest way to reduce acres and budgets is to swap a few par-5 holes for shorter ones, accepting par of 70 or even 69. Land use planners, water managers and environmentalists rail against the par 5, bemoaning the required extra irrigated golf acreage. And the USGA prefers reducing par on short par-5 holes at the U.S. Open.

The par 4 is the best expression of strategic golf, creating a relationship to success in the minimum two shots, with a successful tee shot raising the odds of the success on the approach shot, if placed in the fairway, and even on the "better" side of the fairway. The accurate approach shot raises chances for birdie or par.

The origin of the three-shot hole is mysterious. If early golf courses were built on featureless ground, or with better earthmoving, golf might have all par-4 holes. I suspect the three-shot (and one-shot) holes came about because:

- Somewhere they fit the land better
- Someone made a conscious decision to create variety, which might also be true of doglegs and par-3 holes
- A semi-conscious decision was

made by a tipsy Scottish designer

- An early architect couldn't get the routing back to the clubhouse (also the root cause of the par 6 and 19th betting hole)

For whatever reason, par-5 holes were built and became accepted as part of the mix, even if par-4 holes rightfully remained the predominant hole type. Also suggesting par-5 holes are less ideal than par 4s, when Cornish and Graves wrote "Classic Golf Holes" only three of 20 were par 5s. Chris Millard's 100 toughest holes had only 16 par-5 holes, with another dozen being long par-4 holes that were formally par 5s.

Architects will tell you that designing strong par-5 holes is one of their harder – and unappreciated tasks. Conceptually, the middle shot on a par 5 is the most boring shot in golf, other than the second (or third) extra shots we typically ask women and seniors to hit take those honors, but I digress. I try to make the best of the situation, emphasizing their original function of variety, starting with length.

I recall a 1960s article on golf architecture quoting Gary Player as recommending a mix of par-5 lengths, with one reachable by all, two "tweeners" and a true, three-shot hole. On par-5 holes, I space tees 50 yards or more to allow average players a chance to play them as designed.

Length variety was reinforced when working with shorter (by PGA Tour

standard) hitters like Notah Begay III and Larry Nelson. Their tee shots of 290 and second shots of 260 (not far off PGA Tour distance averages, even today) meant that only par-5 holes under 550 to 560 yards were "reachable." They wanted those holes designed with at least a narrow roll an option, where their accuracy could compete with longer hitters.

Par-5 holes also offer potential variety in double doglegs, including the "fish hook" bending twice the same direction, or a zig zag with each bending opposite directions. Others may bend only at the first or second landing zones, or the hole can be straight.

The theory of "smaller greens for short approach shots" suggests all par-5 holes have small greens (requiring extreme accuracy to reach in two shots). However, my preference is to create a variety of green sizes, shapes and contours among the par-5 holes. Large greens can be split into several sections, requiring accuracy while spreading ball marks, and often working well on the shorter two par-5 holes. On longer par 5s, average players will still have a long approach, and we favor larger greens, keeping medium greens on the two "tweener" par-5 holes.

On my first design, Brookstone near Atlanta, with Larry Nelson, the 18th was a reachable par 5 with a four-tier green. We joked that you had to hit the green in two to assure a three-putt par.

Play "spreads out" more on par-5 holes, making them terrific opportunities for attractive "staggered" bunkering, especially on gently uphill holes where the pattern of sand bunkers will be visible, and bunkers can offer strategy to those who can hit it point to point.

Shorter par-5 holes are also preferred locations for deeper (including Royal St. George fourth hole deep) fairway bunkers, because the greater reward of hitting a green in two should be balanced with more fearsome risk. And, even when found – two short iron shots will still get home in regula-



The par-5 15th hole at Muirfield Village Golf Club played to a stroke average of 4.74 during the 2018 Memorial Tournament.

tion – there is no real penalty.

I also like a variety of fairway widths on par-5 holes. But, where do we place the widest fairway? Should it be on:

- The longest par 5 to compensate for length with easier challenge?
- The shortest par 5 to encourage full tee shots, making it the most reachable by all?
- One of the tweener par 5s, where tee shot length is needed, perhaps combined with a hard (i.e., water carry) approach shot to reach the green in two shots?

Conversely, should the narrowest fairway be on:

- A true three-shot hole, making it a series of precision shots?
- The shortest par 5, requiring extreme off the tee accuracy for any chance of reaching the green in two?

- Or, a tweener par 5, perhaps combined with an easier approach shot to reach the green in two shots?

To combat potential boredom for the second landing zone on a true (for most) three-shot hole, I consider “concept” shots for either that are inherently more interesting just by themselves, and by varying the challenges/hazards in the second landing zone from:

- A no hazard landing zone
- An RTJ styled pinched landing zone
- Distance cut off/limiting hazards
- A cape style second shot, sometimes combined with an opposite cape carry on the tee shot
- A centerline hazard combined with a wide green, which provide left, right, carry or layup options, all affecting the third shot
- Using slopes as hazards, whether:
 - Cross slopes requiring aim to

high side of the fairway

- Speed slots, where hitting a small portion of the fairway yields extra roll
- Rumpled areas to avoid for the third shot.

Architects vary, but I tend to lean to an easy (usually the shortest) and hard (usually the longest) rather than trying to balance all par-5 holes out with similar difficulty. Your golfers will appreciate a few true birdie holes, including a short par 5 almost anyone can reach in two shots.

Obviously, there is room for all types of holes, even if there aren't many “high fives” for par 5s these days. Golf may evolve, and the par-5 holes may be going the way of the dodo bird. Until it does, I will continue designing par-5 holes to be as interesting and exciting as they can be. **GCI**



MAUKA TO MAKAI

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MAUKA TO MAKAI

Part 4: Kōkua (help)

By **Guy Cipriano**

The fourth installment of a four-part series looking at the people, practices and partnerships behind the stunning golf on Hawaii's Big Island.



PHOTO COURTESY OF JOHN DEERE



Plenty goes awry throughout the days, weeks and months maintaining a golf course. Normalcy, in most cases, re-emerges without deep thought. On the mainland, distributors, suppliers, researchers and colleagues hustle to help superintendents endure tenuous stretches. Proximity allows golf to march along.

On land surrounded by water, such as Hawaii's Big Island, the industry hustle requires careful coordination, constant communication and enough advanced plotting to make professional wedding planners envious. *Kokua*, the Hawaiian term for help, isn't just a soothing concept offering speakers pleasant prose at industry conferences. It's a multi-faceted necessity to keep golf viable.

Think about the equipment and supplies needed to separate golf from other recreational pursuits. Mowers, grinders, reels, rollers, rakes, sand, trimmers, chainsaws, blowers, chemicals, fertilizer, growth regulators, course accessories. Good luck finding any of the above materials manufactured in Hawaii.

The only homegrown resource on the Big Island are people. Even the most determined natives can't provide conditions justifying three-figure green fees and five- and six-figure club initiations without *kokua*. Kailua-Kona, the epicenter of the golf activity on the Big Island, is one, two and sometimes three plane rides – and multiple train and boat stops – from industry hubs.

“Logistically there are always going to be problems living on

Aggressive grasses result in thorough equipment maintenance on the Big Island.

“That was one thing for me coming out here, trying to anticipate what the challenges would be. Service and suppliers are a big part of this business, and I was very pleased with the amount of support that we have out here.”

— Luke Bennett

an island,” says Dan Husek, the director of golf course maintenance at Four Seasons Resorts Hualalai. “Things aren't going to show up the next day, but you learn to live with it, you learn to adapt, you learn to take the answer four to six weeks and think, ‘OK, we might have

to change plans, or we might have to adapt if the product is not going to be here.”

Husek, who oversees the maintenance of two high-end golf courses, including one that hosts the PGA Tour Champions Mitsubishi Electric Championship at Hualalai, has a

large color-coded, single-sided calendar resting behind his desk. The calendar titled, “Golf Maintenance Projects – 2018,” is a scripted agronomic plan. Before a year begins, Husek's team knows the exact weeks it will be applying fertilizer or executing cultural practices.

Scott Main, the director of golf course maintenance at neighboring Nanea Golf Club, tries to think “a year to 18 months” ahead when plotting agronomic programs and projects. But completing a year according to a script represents agronomic utopia. Odd stuff happens on golf courses, including ones situated in paradise.

Some solutions are closer than others. Warehouses on the island might store a common pesticide, a same-day convenience to help a course when a spray falls a few gallons short of full coverage. A warehouse might also have a few bags of fertilizer and ir-





MORE KŌKUA: NEVER ON AN ISLAND

rigation parts.

“We have an extremely strong relationship with all of the key vendors,” Kohanaiki superintendent Luke Bennett says. “I can go right across the street and our irrigation vendor is there, our fertilizer supplier is there. In fact, we have three irrigation suppliers across the street.”

Still, the warehousing and shipping hub of Hawaii is Oahu, the most populated of the state’s eight islands. Nearly every product used on a Big Island golf course will stop in Oahu during the distribution cycle.

Shipping challenges are the reason Kona Country Club superintendent Derrick Watts refers to sand as “white gold.” Enacted in 1920, 39 years before Hawaii became the 50th state, the Jones Act requires all goods shipped between U.S. ports to be U.S. vessels operated by at least 75 percent Americans. Less than 100 vessels comply with the act, according to the Grassroot Institute of Hawaii.

The act limits sand options for golf courses to varieties originating from South Pacific shipped via Oahu, where it is stockpiled, Main says. Costs exceed \$200 per ton. Strong winds make it difficult – and expensive – for coastal courses to keep bunkers at playable depths. “If you’re spilling it,” Watts says, “you’re spilling \$5 worth every spill.”

Main, who spent three years at Mauna Kea Resort, a 36-hole facility along the Pacific Ocean before arriving at Nanea last December, stuns mainland colleagues when describing the sand situation. Hawaii has no naturally produced silica sand and shipping costs have increased by around \$100 in the last decade.

“When I was at the Golf Industry Show, people were like, ‘You have beaches everywhere. Sand must be easy,’” Main says. “But all of our sand comes from Vietnam. At Mauna Kea, if I wanted sand, I needed at least two weeks lead time. There’s no (golf) sand on this island. It’s all shipped from Oahu. They ship it in containers and you only get 20 to 22 tons at a time and it comes dried.

“We’re paying about, on average, \$230 a ton for sand. That’s a lot different than most guys who are paying \$60 to \$80 a ton. When you aerify and bring in three or four loads, it’s \$20,000 just to aerify. When I was

A warehouse above Nanea Golf Club’s back nine provides a glimpse into the level of industry support on the Big Island.

Through distributor Pacific Golf & Turf, John Deere has established a loaner equipment program in the warehouse. The program is designed to help courses by making a spare triplex, fairway mower and rough mower available whenever fleet issues arise. Pacific Golf & Turf services Hawaii from a location in Oahu, 150 nautical miles from the Big Island golf hub of Kailua-Kona.

“If something went down, you were down,” Nanea director of golf course maintenance Scott Main says. “John Deere has made a good presence on the island and that’s one of the things we were asking for – just to have a few backups here.”

How can access to a spare mower help a course?

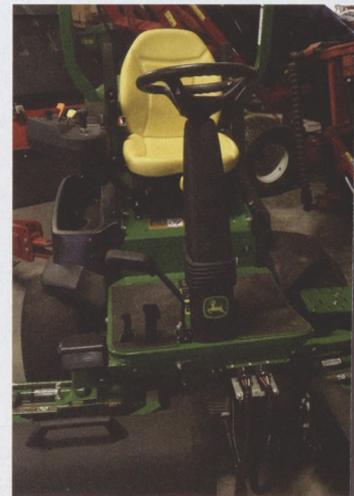
“It’s the difference between mowing fairways by 10 a.m. or mowing fairways by 2 p.m.,” Main says. “That just kind of snowballs every job after that. It is big. We have used it twice since I have been here for just small stuff. Stuff breaks down on equipment and some of those parts you

don’t keep in stock.”

Shipping golf maintenance equipment and parts to a Big Island course is a dizzying process. Let John Deere sales manager John O’Leary, whose territory includes Hawaii, explain.

“When you order equipment on the mainland, depending on the time of the year, it can be two weeks to about six weeks to get your equipment,” he says. “On the Big Island, it’s a three- to four-month deal to get your equipment. From the time it’s ordered, it leaves our factory in North Carolina, goes to the port in Los Angeles, sits there until they get the cargo ship loaded up, comes into Oahu, towing must be arranged to get it to the dealer, the dealer then puts it into service and then they have to get towing to get it back to the port. If it’s going off (Oahu), then it goes back down to the port, gets loaded onto a ship, gets brought to the other island and you have to arrange towing. It’s then picked up and delivered to the customer.

“It’s the most challenging of the areas that I cover. Parts are the same way. That’s what separates us the most – our parts distribution, not only from the ag side, but the golf side.



They can order it on a Monday and it will be here Wednesday. From what we understand, that’s been pretty rare for anybody.”

Despite the challenges, general manager Steve Cotton says Pacific Golf & Turf treats the Big Island with the same level of attention as other territories.

“We cover a large geography in the Pacific Northwest, so the time between customers isn’t really that dissimilar,” Cotton says. “To respond to a customer in Missoula, Montana, it would take you five or six hours to get there. In Hawaii, to respond to a customer, would take five or six hours. You just have to jump onto an airplane instead of jumping into your car.”

at Mauna Kea, it's a wind tunnel out there. We would have weeks of 30- to 70-plus mile per hour winds and it would cost you \$80,000 to \$100,000 just to get sand back in the bunkers."

Equipment presents another conundrum. Abundant sun and comfortable temperatures produce a year-round growing environment. Aggressive turf-grasses such as Bermudagrass and paspalum and high salinity levels further tax mowers.

Mowers are used nearly every day to maintain Kona Country Club's Bermudagrass surfaces. The hours add up so fast that Watts, according to his calculations, says three years of operating a mower – the length of the typical equipment lease on the Big Island – is akin to putting more than 280,000 miles on a car. "Would you want to keep that car?" Watts says. "Or would you want to trade in your Mercedes-Benz for a new car?"

Kokua, though, isn't as far as it geographically appears. Watts says the equipment distributors who cover the island employee "really good mechanics." Kona Country Club acquired a John Deere fleet before it reopened in 2016 following a major renovation. A mechanic from Pacific Golf & Turf, which has an Oahu location, visits Kona Country Club and other customers each week.

To provide additional *kokua* as its Big Island presence expands, John Deere has implemented a parts onsite program. High-moving parts such as bedknives, filters and tires are stored in onsite lockers and facilities are billed for what they use. The program prevents courses from putting a mower out of operation for multiple days while a part is shipped.

Parts that aren't stored on-



A year-round growing environment means the golf course maintenance equipment used by Big Island facilities accumulate hours and miles at rapid rates.

site can reach the island as fast as two days, says sales manager John O'Leary, whose territory includes Hawaii. Technology, including the OnEquip system, which integrates fleet data into John Deere's OnLink platform, has the potential to expedite the diagnosis and recovery process, O'Leary adds.

Significant support networks and investments by industry companies comfort superintendents working in a remote location for the first time. "That was one thing for me coming out here, trying to anticipate what the challenges would be," Bennett says. "Service and suppliers are a big part of this business, and I was very pleased

with the amount of support that we have out here."

A welcoming culture among superintendents supplements the support. The Big Island Golf Course Superintendents Association has shifted its focus from providing education to bringing all segments of the industry together for laidback events that establish personal relationships, says Bennett, the group's vice president. Rounds of golf, fishing expeditions and meals create camaraderie among superintendents, assistants, technicians and foremen.

The relationships are invaluable when the turf doesn't look right – and the needed researcher or product is an ocean away.

"The Big Island is unique," says Husek, an Illinois native who also has worked on Guam. "I feel extraordinary about calling any of the fellow superintendents and asking, 'What are you doing about this? What are you doing about that? Hey, would you come down and look at my greens?' Let's go play some golf. Let's talk about what you're doing vs. what I'm doing.' There's not a sense of competition as much as support."

The help extends away from the course. "It's not just the professional side," he adds. "If somebody needed to move homes, I guarantee people would say, 'I got a truck. I'll come up and help you out.'" **GCI**

ABOUT THIS SERIES

GCI is partnering with John Deere to tell the story of the people, practices and partnerships that make golf on Hawaii's Big Island special. As part of the project, video tours of the courses will be available via newsletters released at the end of the next four months. Enter <https://www.golfcourseindustry.com/form/1/GCI/newsletter> into your web browser to subscribe to GCI's free newsletters. The series will also include Hawaiian-themed Twitter tours. Follow along @GCIMagazine.

MAUKA TO MAKAI APRIL: ALOHA | MAY: 'OHANA | JUNE: MALAMA 'AINA | JULY: KOKUA



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NOW WHAT?

**RESORTING TO BASICS IS OFTEN THE
BEST PRACTICE WHEN YOUR TURF
FACES HEAT-INDUCED STRESS.**

By **Rick Woelfel**

The summer is a difficult time for golf course superintendents who often find themselves managing turf under maximum stress from extreme heat and humidity increased amounts of play or, perhaps, disease. But turf managers can take steps to minimize the impact of stress while stimulating the plant's own defense mechanisms.

The wet weather the Northeast experienced for much of what passed for spring put the region's superintendents on alert, says Dr. Michael Agnew, a Syngenta technical manager. "To me that is a precursor to bad things happening later," he says. "Because if the soil has been saturated, and the roots are unable to develop properly because there is no oxygen in the roots, that could set up for some pretty severe injury due to environmental stresses."

Many in the Northeast and Mid-Atlantic, including the Transition Zone, are tending to *Poa annua*. There are certain signs a superintendent can look for that indicate their *Poa* is under stress, Agnew says. "If they start to see yellowing of the leaf tissue," he says. "If they're seeing

unwarranted thinning, those are symptoms that are indicative of heat stress."

Excessive heat and humidity makes turf more vulnerable to disease pressures, as well. "Diseases like summer patch and anthracnose, those two in particular, are biproducts of stresses," Agnew says. "They are more prevalent when you have stresses occurring on the turfgrass. Summer patch, for example, will be more prevalent if you have a really wet spring during the period of time when the disease is starting to manifest itself in the soil.

"When you get into the heat of the summer, you'll see (turf) dying a lot quicker because the plant has been set up for the progression of that particular disease. And with anthracnose, it's the same thing if you have a really wet spring and a wet June and you're not keeping the fungicides on it. It's hard to grow annual bluegrass when the roots are already compromised before the heat of the season."

Warm-season grasses, with the exception of Bahiagrass, are also vulnerable to stress issues, says Dr. Raymond Snyder, Harrell's research and development manager. "Warm-season turf is most susceptible in moist, hot and cool

PESTS & DISEASE



weather, especially when light is low as a result of repeated cloud-cover," he adds. "Warm-season turf is also very susceptible as a result of nematode pressure."

Snyder explains that stress from heat, disease or some other cause will trigger the plant's hypersensitive defenses. "Temperature, heat, pathogens and UV light are among several of the triggers that elicit plant defenses against stress," he says. "Turf managers can prime the plant defense mechanisms using biostimulants, fungicides and proper nutri-

ents prior to and during stress."

Snyder stresses that one key to minimizing stress issues is providing turf with a solid nutritional foundation. "Avoid 'lean' practices," he says. "Utilize products with known plant health benefits such as seaweed extract, fulvic acid, organic extracts, amino acids and fungicides."

Joel Simmons is the President of EarthWorks Natural Organic Products and a proponent of biological soil management, the practice of stimulating microbial activity in the soil which in turn enhances the health of the turf and improve its resistance to disease and other sources of stress. "That's the foundation of

Green speeds vs. stress

Superintendents often find themselves looking for increased green speeds during the summer months at the request of their members. This can be and often is achieved by lowering mowing heights. But reduced mowing heights make the plant more vulnerable to biotic and abiotic stress.

"It is desirable to maintain mowing heights that provide for maximum photosynthetic capability," says Dr. Raymond Snyder, Harrell's research and development manager. "Extremely low mowing heights during stress will result in loss of canopy and algae/moss encroachment."

Agnew works with superintendents who mow their greens down to a tenth-of-an-inch but says that height is not sustainable long term because of stress issues.

"(A tenth-of-an-inch) is not an optimal mowing range for many of our *Poa* and bentgrass greens," he says. "And a lot of our guys are going way below that. You can do that for a certain period of time, but, in reality, it's typically not sustainable for long periods of time, especially if you have a lot of heavy traffic. If you raise the heights of grass just a very little bit, oftentimes you create more cushion for the traffic that occurs on top of it. It's heat stress and drought stress that create the injury. Its stress upon stress upon stress."



PHOTO: GÜNTER MENZL

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all plant health, specifically turf health,” he says. “If we can get the soil equation to play a part in this, the inherent resilience of those plants are going to be significantly stronger. Biological soil management basically directs us to look at the overall health of the soil starting with soil chemistry, so the soil opens up physically.”

Simmons cites the so-called “three-legged stool,” striking a balance between chemistry, physics and biology within the soil. “That’s what biological soil management directs,” he says, “And it focuses its attention primarily on the biological leg.

“But you can’t focus on biology unless you’ve got soil chem-

istry working which means starting with a good quality soil test, getting the core chemistries correct, like calcium, magnesium and potassium ratios, and keeping sodium and bicarbonates at bay by managing them appropriately. As you get chemistry correct, you will also have the soil opening up physically which means more water and air will move through, soil will drain better ... and what all of that does is create a better environment for the proliferation of soil biology.”

The soil biology Simmons refers to is essentially bacteria. “Research shows that turf soils are predominately dominated by very simple biological life

– in a word, bacteria,” he says. “The same research shows the bacteria need ample amounts of highly available and predigested carbon sources like composts, simple sugars, fish and kelp meal so they can quickly reproduce to do their job of digesting roots. When there is available carbon in the soil, microbes proliferate, releasing ammonium nitrogen and producing even levels of fertility.”

Simmons notes superintendents should have a fertility program that integrates the soil and turf, as opposed to regarding them as separate entities.

“It really is a situation where we have to work both soil and the plant together,” he says.

“Not one at the exclusion of the other. And not forgetting that soil piece is imperative. It’s a little bit more challenging. But when you’ve got the soil working for you and you’ve got a carbon-based fertility program that feeds microbial populations, which is what carbon-based fertility is about, and is the foundation of BSM, that’s going to start to take away the highs and lows of all fertility so you don’t have these peaks and valleys. You don’t walk in one day and find out, ‘Oh my gosh, there’s no food left in the pantry.’ What this does is assure the survivability of that plant material over a long sustainable period.” **GCI**

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CONSISTENCY IS KEY

While Target Specialty Products' **Turf Fuel** product line offers many product choices to consider, what superintendents can count on are nutritionals that get turf through the extremes.

Ron Furlong

One word rings out when turf professionals talk about the Turf Fuel™ line of products – consistency.

One turf pro who couldn't help but mention the C-word several times in a recent interview was Target Specialty Products' Territorial Sales Rep, Gary Morgan. "I don't sell the Turf Fuel line of products because I'm told to sell it," says Morgan, who is based on Florida. "I sell the products because they work and I believe in them. In all my years in the business, I've never seen more reliable, consistent results."

And Morgan's professional turf career includes more than 20 years as a golf course superintendent, and another 20 on the sales side, serving golf course superintendents up and down Florida's east coast, from Palm Bay northward to the first exit across Georgia's state line.

"Safe to say I've used a lot of products over the years," Morgan says. "And I've sold a lot of products, as well. But I've never seen anything perform like this."

Turf Fuel offers many choices for superintendents to consider, Morgan says. Some of these choices fall into the nutritional category, others into specialty items. With assistance from a local Target Specialty Products' rep, turf managers can find the best mixture of Turf Fuel products right for them and their course needs.

Nate Maurer has been taking advantage of several Turf Fuel products for some time now. "I consider them great building block products," says the



GARY MORGAN



NATE MAURER

superintendent at Jacksonville Golf and Country Club. "Consistency, of course," he adds, "but best of all, low-input usage with a quality return for what you're putting in."

Maurer is referring to the low amount of nitrogen (N) in the Turf Fuel line. His favorite product is Element 6, which is a carbon-rich fertilizer enhanced with Nutrifense and high levels of silica. This popular product has been proven to help plants with resiliency and significantly increase root production.

Quickgreen, a 14-20-0 high phosphate, is another Turf Fuel product Maurer uses at Jacksonville G&C. Quickgreen includes a biostimulant that promotes lateral growth. It's also a great choice for coming out of aerification.

"It's the first thing in the tank after every aerification," Maurer adds.

The third Turf Fuel product in Maurer's rotation at the Jacksonville private club is Photo Fuel. Photo Fuel produces incredible turf color, and includes Nutrifense to trigger the plants natural defense systems to fight against multiple stresses. Maurer first came across Turf

Fuel when he took over for a superintendent who retired after 25 years. "He'd been using the Turf Fuel products and I loved what was happening," he says. "It was clear he was on to something. I've just kept the program going."

Working together with Morgan, his Target Specialty Products rep, Maurer has been able to utilize the right products for his operation at Jacksonville Golf and Country Club. And

having products that can help you get through the bad times, as well as the good, are what turf managers like Maurer are looking for.

"We just had a two-week period here where we got almost eleven inches of rain," he says. "And that was followed by a sunny period of about 20 straight days. You have to have nutritional products that get you through *extremes* like that."

Morgan sums up the Turf Fuel line: "All of the Turf Fuel nutritionals are based on the simple premise of helping the plant out. What I've really found, being out in the field, talking to superintendents, is that when they're using our products, their greens just don't go into the peaks and valleys that can cause so much concern."

Again, consistency comes to mind. Although Morgan made the conversion from superintendent to sales rep 20-some years ago, he couldn't help but add, "These Turf Fuel products almost make me wish I was a superintendent again."

Ron Furlong is a golf writer and a frequent GCI contributor

HDPE AGAIN



Brian Vinchesi, the 2015 Irrigation Association Industry Achievement Award winner, is President of Irrigation Consulting, Inc., a golf course irrigation design and consulting firm with offices in Pepperell, Massachusetts and Huntersville, North Carolina that designs golf course irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978-433-8972 or followed on twitter @bvinchesi.

A few months ago I revisited the discussion of 2-wire (decoder) versus conventional control systems because there had been some changes/improvements to 2-wire technology. Along those same lines, it's time to revisit the dreaded (for some) HDPE vs. PVC conversation.

HDPE has come a long way since the "polygate" debacle earlier this decade. Designers and suppliers, not to mention manufacturers, know much more about the characteristics and limitations of HDPE and its fittings. We still do not know as much as we do about PVC, but we have come a long way since 2010.

First, we have learned you do not use HDPE pipe with low-pressure ratings; it doesn't have much strength;

and it does not match up to the fittings correctly.

Second, we know you don't use HDPE in highly chlorinated systems and high-temperature environments.

Third, we know the fitting rating and the pipe rating need to be pretty close to the same. And the fittings need to be machined to where the wall thickness's match up so they are the same. Sounds like common sense, but back in the day that wasn't necessarily being done.

Few systems today are installed with all PVC pipe. Many are installed with all HDPE pipe and many are installed with PVC mainlines and HDPE laterals. Depending on who you talk to, PVC mainlines and HDPE laterals may be the most common scenario.

With HDPE laterals, you get rid of the solvent weld-cemented (glued)

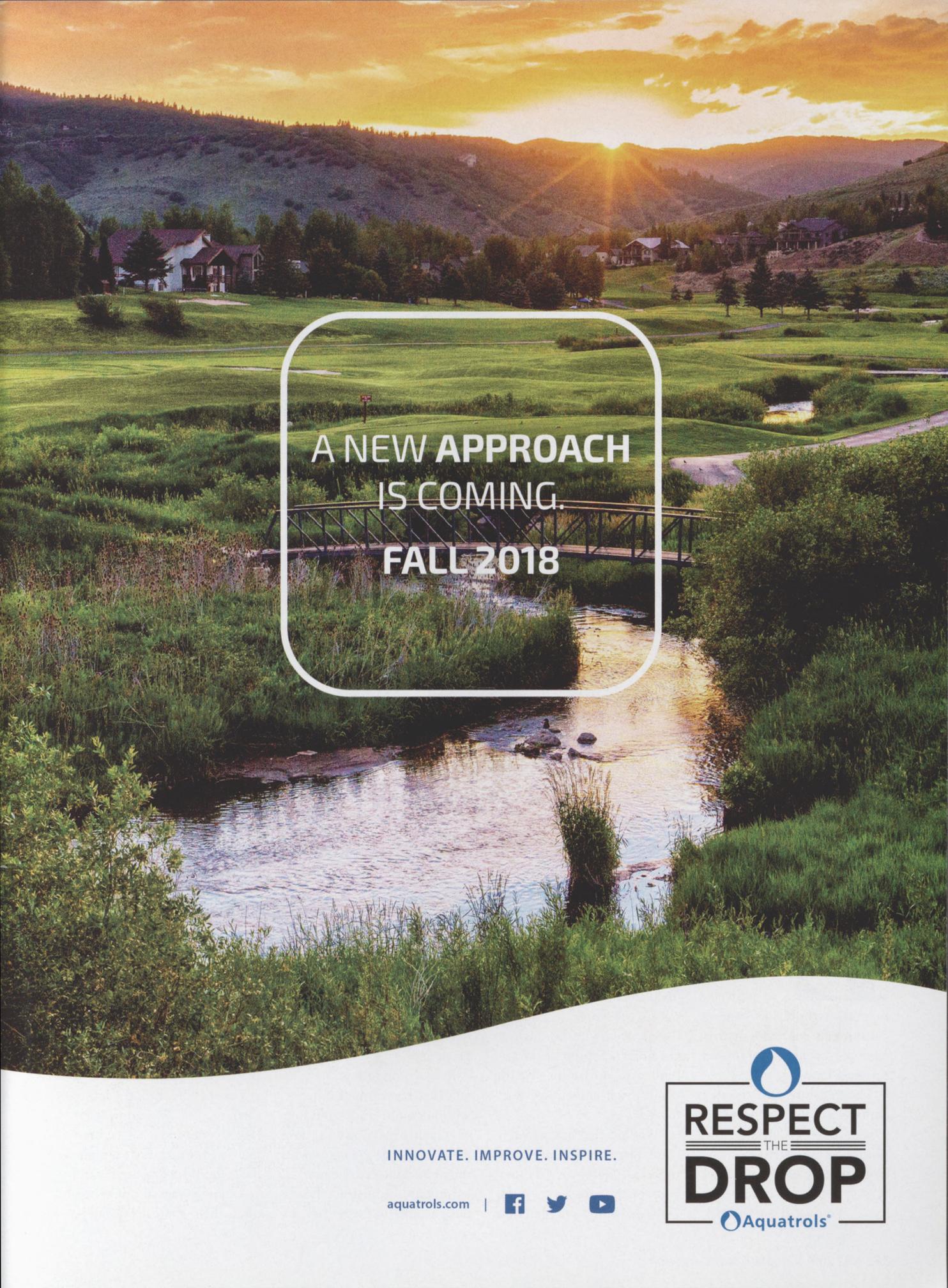
joints, which is a good thing as they start to fail 10 to 25 years after installation. With PVC mainlines, you get a nice price point versus an all HDPE system. There are golf courses that should be all HDPE pipe, as well as golf courses that don't need to be all HDPE. But not everyone agrees. There are designers out there who think you always use HDPE pipe regardless of the soil or course conditions!

Fittings have improved in strength and variety, a big reason why HDPE laterals are the norm today. No longer does everything have to be a saddle. Many, if not most, installations now use compression couplings on the laterals. Compression couplings had their issues a few years ago but are now very reliable. There are a variety of different saddles from different manufacturers available for the mainlines and laterals. People continue to try and innovate, not necessarily with success. For example, take the brief use of "side-fusion" fittings for attaching the swing joint to the lateral pipe on HDPE laterals. Other changes with HDPE have been allowing coiled pipe for smaller sizes. Coiled pipe requires less fusing (every 300 feet vs. every 40 or 50 feet) and less labor, but the contractor does need to use a straightener to take the inherent bend out of the pipe before installing it.

PVC pipe continues to be a strong choice for mainline piping. Besides its lower cost, people are familiar with it, it can be repaired by golf course staff and there are a wide variety of well-proven fittings available. Unless you put a backhoe bucket through it, a mainline very rarely breaks these days.

Every golf course is different and every irrigation system should be different to match the golf course. As a result, base the decision on pipe type on the golf course and the available budget for capital improvements and maintenance. When properly engineered (pressure rating and velocity), either PVC or HDPE, or a combination of the two, will serve the irrigation system and you well. **GCI**





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ACUTTA

EXPERTS WEIGH IN WITH TIPS TO KEEP YOUR CUTTING REELS AND BLADES NICE AND SHARP.

By **John Torsiello**

Every good superintendent and golf course equipment manager knows keeping cutting reels and blades sharp is an important aspect for proper turfgrass mowing.

The reason? Dull blades damage leaf tissue, and when you damage leaf tissue, the plants respond in a physiological sense, says Van Kline, former senior agronomist at Toro. "You get more dieback

on the leaf, which results in browning and it takes longer to recover. Sharper blades give you greener turf. Continually mowing with dull cutting units or dull blades will cause the turf to thin out more."

But, even with so much on the line, keeping reels and blades in optimum cutting condition is sometimes overlooked.

"We find that many technicians learn 'maintenance by tradition,'" says Greg Turner, global sales manager for Foley United. "Many people come

from an automotive or agriculture background where the basic concepts of engines are similar, hydraulic systems are similar, but the reel cutting unit adds a whole new level of knowledge and expertise that makes their jobs more complicated."

Some individuals may, in fact, learn reel maintenance without a full understanding of why they're doing what they do, Turner says. "This is why the more educated the market is on why the manufacturers design units the way they do

and the benefits of maintaining reels the way they bought them, the less potential for issues," he adds.

A daily inspection by equipment managers and/or superintendents of each mowing unit's quality of cut is not out of the question, says Scott Bjortomt, equipment manager at Crooked Stick Golf Club in Carmel, Ind. So, know your height of cut and what has been put on your turf. For example, if you topdressed yesterday and you mow greens at one-tenth-of-an-inch, then it's going to



have an effect. If your mowing at one inch and you topdressed yesterday, it probably won't have an impact.

"You need communication with the operators, because chances are if they hit something, they would hear it or know it," Bjortomt says. "That can help everyone, so it doesn't get hit again the next time it goes out." Also, pay attention to the after appearance of the cut. It can help find issues that may not be obvious in the shop. "And, grind and back lap, do it when it's needed," he says.

"When you consider investing \$60,000 on a fairway mower, you quickly realize you've spent a tremendous amount of money to make five cutting heads cut grass, Turner says.

"When it comes down to it, it's the cutting head that does all the work and performs the cut, so the maintenance of these cutting units is critical," he says.

Turner believes the keys to keeping mowers in proper cutting condition are grinding, adjustment, backlapping, and facing bedknives. "All of the factors noted above are 'tools in the tool bag' that maximize quality-of-cut and performance," he says.

Marvin Doerksen, turf equipment manager at Breezy Bend Golf Club in Manitoba, Canada, believes reel cutting units should be "checked for square" and have a fresh grind, spin or relief/spin at the start of the season. "Each cutting unit needs to be set up so the

distance between the reel and bedknife is at its maximum distance but still cuts .005-inch paper clean with no jagged edges," he says. "Grind as often as needed, your check is with .005-inch paper, if it doesn't cut clean, it's time to grind."

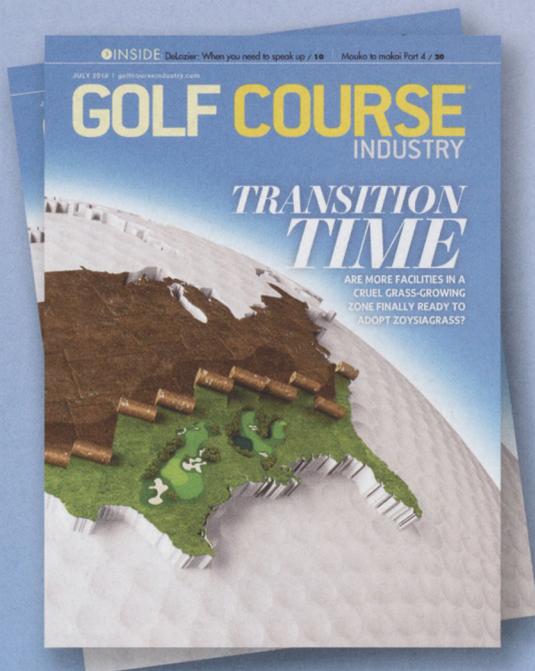
It's imperative the cutting units get "verified" daily for their function, Doerksen says. This also allows the superintendent — or foreman in charge of mowing — the opportunity to give the front/rear rollers, reel bearings and all swivel joints a shot of grease to purge any water or debris after the clean and wash.

"To ensure the accuracy of both your height of cut and quality of cut, a prism gauge can be used immediately after

the turf is cut, daily, to see both the quality of cut and the effective height of cut," Doerksen says. "Take a picture of the prism placed on all surfaces being cut and then download it onto your computer. You can generally blow up the picture to have a good look to see how many stragglers didn't get cut. The effective height of cut can be confirmed to within a couple thousands-of-an-inch."

When grinding reels and bedknives, stick to the guidelines set forth by the manufacturers. Remember, these are guidelines. "Experience and good communication with the superintendent will dictate any deviations from that guideline. "Don't think you're saving a lot of money by using aftermarket

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replacement parts, you're not," Doerksen says. "Negotiate better pricing from your OEM. When you have any type of issue with your equipment or quality of cut, go to your OEM. They will help you with all your problems and help find solutions. Also, ensure that at day's end all equipment is properly blown/washed and cleaned. All the checks and adjustments that are required can be made in a timely fashion."

Rotary blades are normally ground at a 30- to 35-degree angle and should be balanced after each grind or there may be premature bearing failures. The edge of the cutting surface should have a .010 to .015 finish. This can be attained with a side grinder. The same applies to all rotary cutting mowers; each time they go out to cut, touch up the cutting surface.

"First and foremost, keep the cutting units clean," says Wade Borthwick, equipment technician at Uplands Golf Club in British Columbia, Canada. "Washing a mower after use will remove grass clippings and residue. Grass is acidic in nature, along with fertilizers, which are almost all salts, and will add to the corrosion of the mower."

For reel mowers, it is important to pay attention to both the reel and bedknife, says Bill Stone, John Deere Golf territory customer support manager. The reel can contain between five to 14 blades arranged in a helix and spins next to the bedknife, which is stationary, but together they work in a scissor type motion to create a precise, consistent cut. Proper maintenance is crucial, he says.

To ensure mower blades

are kept in top cutting condition, Stone recommends before performing any maintenance on a reel blade or bedknife, it is important to clean the cutting unit, removing any "crud" or debris that has built up over time. This ensures any damage can be clearly seen.

Likewise, when performing routine maintenance on the mower reel, Stone recommends inspecting the reel blades and bedknife for visible damage. If there is any, the reel and bedknife may need to be reground or replaced.

Stone suggests greasing bearings with a quality waterproof lubricant but cautions not to overgrease. Any grease that is purged should be cleaned off the cutting unit to prevent damage to the turf. By properly maintaining bearings, equipment managers can ensure that there is minimal play in the reels, resulting in longer life of the cutting unit and its parts.

Both backlapping and grinding can sharpen the reel and bedknife. While grinding removes more material from the blades or bedknife, backlapping is more subtle and ideal for restoring an edge that isn't too far gone. A decent relief grind needs to exist for backlapping to be effective. The relief grind is a secondary grind that creates a "shelf" to hold the grit or backlapping compound for backlapping to be effective. While backlapping may be more cost effective on some courses that don't have grinders readily available or lack manpower, grinding will "true up" a reel and bedknife more accurately, Stone says.

Due to the helix nature of a

EQUIPMENT

reel-type cutting units, technicians are urged to monitor for cone of the reel. This helix nature means that processed grass spins from one side of the reel to the other and can be processed many more times between the reel and bedknife (right to left), so one end of the reel gets smaller in a quicker time span than the other. Cone is corrected by proper grinding. If cone is not properly corrected, then achieving the scissor effect between reel and bedknife becomes nearly impossible, which leads to poor cut quality.

"If using a rotary mower, blade maintenance requires

the equipment manager to monitor the unit, ensuring the blade is sharp and balanced," Stone says. "If needed, the blade should be sharpened or replaced to maintain a high-quality cut, and the balance should be checked each time it is sharpened."

As a general rule, rotary blades can be used to 60 percent of their original dimension, Borthwick says. "If the sail is excessively worn or any other parts appear close to breakage, the blade should be replaced if there is a difference in the length from center to end between the two sides," he says.

Keep a spare sharp blade or two on hand so staff is not using productive time to sharpen blades, Borthwick adds. All reel mowers have a specific wear limit for the cylinder as well as the bedknife and these can be obtained from the manufacturer. Exceeding these wear limits will result in poor after cut appearance or other quality of cut issues.

"The damage and cost associated with improperly maintained cutting heads runs a full gambit, from using more fuel because of requiring more horsepower, more wear and tear on the engine and hydraulic systems, and extra money spent on chemicals and water," Turner says. "It will add up in short order." **GCI**

John Torsiello is a turf writer based in Torrington, Conn., and a frequent GCI contributor.



»»» QUICK TIPS

Wade Borthwick, equipment technician at Uplands Golf Club in British Columbia, Canada, offers some additional tips.

- **Maintain proper adjustment.** Reel mowers should be checked after each use to ensure that correct bedknife/reel alignment and gap are at manufacturer specifications.
- **Keep blades sharp.** A quick touch up will keep a blade cutting well and increase the time between grinds. This will increase the quality cut life of the blade.
- **Keep it free and clean.** Ensure the area being mowed has no objects, such as rocks or large sticks. These will greatly reduce the life span of a rotary blade and can jam a reel mower or damage the blades.
- **Use the mower for what it is intended.** Above a one-inch cut a rotary mower is recommended and below one inch a reel mower will produce a better after cut appearance.

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STRAIGHT AND TRUE

With an emphasis on quality and innovation, JRM Inc. produces turf maintenance products that are a cut above the competition.

By Ron Furlong

Golf course superintendents demand a level of quality from the companies they do business with to purchase everything from plant protectants to topdressing sand to the cup cutter used to locate the morning's new cups.

They're looking for companies that don't stand still with the same old products year in and year out. Superintendents are looking to raise the bar. Thus, innovation and technology are two words closely associated with cutting edge golf course maintenance. Companies that are constantly raising their game to provide superintendents with newer and better solutions are the ones that tend to stand out. Stand out and succeed.

One company that lives by those two words — innovation and technology — is JRM Inc., a manufacturer of turfgrass maintenance products since 1992. JRM, founded by Jim Merritt, a former superintendent, is one of the true leaders in the industry for bedknives, tines and many other products. JRM's revolutionary Dillennium® tip, made available in 1997, set a new standard for the industry.

Angelo Nutter is the maintenance tech at Pine Forest Country Club, a 27-hole track in Houston. Having spent nearly

three decades at Pine Forest, Angelo knows what works and what doesn't. After giving JRM bedknives a shot, he knew right away that they needed to be part of his operation.

"Guess I can't say it any better than to say they are great," he says. "Both the bedknives and tines. It was an easy decision to switch."

Nutter is particularly impressed with the JRM bedknife he uses on his Toro® walkmowers.

"I find we never get that drag on the bottom that you get with some others," he says. "And they allow us to go as low (cutting height) as we need to. The bedknives always come so straight and true."

Leon DuBose, a rep for Turfgrass Solutions in Houston, has been using and selling JRM products for many years. Leon first introduced Angelo to the JRM bedknives, and he can attest to the legendary trueness of the JRM bedknife.

"You won't find a straighter bedknife on the market," DuBose says. "A lot of my customers don't have grinders. The JRM knives simply last longer for them, which is a huge deal. Jim, the owner, is very meticu-



DUBOSE



NUTTER

lous about what comes out of the JRM factory. What separates JRM is the coining process. This tightens up the steel at the leading edge."

JRM uses a machine press to stamp the groove into their bedknives, which is the coining process DuBose is referring to. This strengthens the bedknife at the 'strike point', making it last longer than traditional knives. Combine this with the fact that JRM uses only high-quality steel and it makes for an amazingly reliable product.

JRM's tines impress Nutter, and he uses an assortment of Dillennium® tines on his Toro®

ProCore 648, anywhere from 3/8" to 1/2".

"They hold up extremely well," he said. "Never had a single issue with them. As reliable as can be."

Come this fall, JRM will have 13 new bedknives to fit machines such as the Toro® 1600/2600, 3100/7000, and the John Deere® 260. JRM is also coming out with a new line of reels that will, like the bedknives and tines before them, no doubt become the new standard in the industry. It's just what they do.

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FOR SNOW
MOLD?
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**MINNESOTA'S STONERIDGE GOLF CLUB
PROVED TO BE THE IDEAL TESTING
GROUND TO PUT A NEW FUNGICIDE
THROUGH ITS PACES.**

By **Ron Furlong**

Even if you've never been to Minnesota in the winter, nearly everyone has that image of snow-covered tundra. A state frozen forever like in a scene from the movie "Fargo" – miles upon miles of snow-covered fields.

Most residents will tell you this is a bit of an exaggeration. However, it does get cold, it does get its share of snow and it often feels by March – and sometimes even into April – like winter will never end.

Safe to say superintendents at golf courses in the Upper Midwest rely heavily upon a late fall snow mold application to get them through long winters of snow and cold.

Jeff Girard is the superintendent at StoneRidge Golf Club, in Stillwater, Minn., which sits nestled east of St. Paul near the Wisconsin border. Girard has been at the links course since 2007, and knows the importance of that late fall snow mold app.

"It's the biggest disease issue we have in this part of the country," Girard says. "Other

◀ Avoiding snow mold is a key element in providing quality conditions at StoneRidge Golf Club.

**CONDITION.
PERFORM.
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than dealing with dollar spot in-season.”

Late in 2016, Girard learned of a new Syngenta fungicide just coming onto the market, Contend. Labeled only for snow mold and only for use on golf courses, he gave it a limited shot. It’s not always easy to be the first in the area to try something new, but Girard had good reason to put his trust into the new Syngenta product.

“I trust companies like Syngenta,” he says, “and like to use them. I like to support the companies that I’ve built a relationship up with over the years, and also companies that invest back



▲ Girard

into their products. You know the testing they do for a new product like this is extensive. You just have a different level of trust with companies like this, and the new products they release.”

Girard was happy with the results of that limited 2016 application and decided in the fall of 2017 to give Contend a full shot on all his bentgrass fairways and approaches. StoneRidge was experiencing heavy disease pressure last fall, especially some fairly severe snow mold in the rough. Girard knew he was asking a lot of this new product.

Syngenta couldn’t have asked for a better test customer than StoneRidge. Minnesota was about to have one of its longest and snowiest winters in years, which would be capped off by a late blizzard well into spring.

“We got dumped on in mid-April this year,” Girard says. “It didn’t melt until April 24th. On top of the long winter, we had sprayed the Contend early, on November 1st. We were basically under snow for that entire period.”

Safe to say, StoneRidge Golf Club came out clean and looking great when that snow finally melted late April. Girard couldn’t be happier with the product.

Great results notwithstanding, the long control is Contend’s best asset, Girard says. “Being able to have trust in a product for that long period, it’s hard to put a price on

that,” he says. “In the past, you had to try and get your snow mold protection out right before the first snow, which is always hard to do. With a product that is going to last a long time like Contend, you don’t have to sweat this out like in years past. You can spray two to three weeks before that first snow and not worry about the product not lasting.”

Another thing Girard liked was the relatively low amount of Contend he has to apply compared to other products used in years past. “Really like those low use rates,” he says. “We’re spraying a lot of acres when you add up all the fairways and approaches. In years past we had to spray hundreds of gallons of fungicide. With Contend (and other new products being released), the lower

rates are very appealing. You just feel better using significantly less chemical.”

Girard also likes Contend’s ease of use. “It’s so easy to put out,” he says. “Mixes great. The math is easy. A case gives us three acres.”

Contend is a combination of the separately registered products Contend A and Contend B. The two products should be mixed together. The fungicide has four active ingredients (azoxystrobin, propiconazole, difenoconazole and Solatenol). Solatenol is Syngenta’s newest active ingredient and strongly binds to the plant using translaminar activity to move throughout the leaf.

As with other courses in the northern states, dollar spot is another disease problem for StoneRidge, and Girard uses Daconil Action every two weeks throughout the season for control.

“Of course, at this point, it’s hard to quantify how well it works because of our continued use of it,” he says. “But I just love the results. I point to the plant health aspect of Daconil Action, not just the curative or preventative aspects. The grass just looks healthy. Looks great.”

And then there is Syngenta’s Secure. Secure’s active ingredient is Fluazinam, and it’s in the FRAC group 29. “It has a strong place in our rotation,” Girard says. “We use it twice a year. There is a definite curative aspect to Secure. If you have a little dollar spot brewing, it will knock it down.”

Secure, a multi-site contact fungicide, also offers low-use rates (.5 ounces per thousand) and has no known resistance.

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We know it’s summer. But because we’re discussing snow mold, here are five tips to protect yourself and employees when working through the winter.

1. Understand symptoms of frostbite, including reddened skin developing gray/white patches, numbness, hardening of affected area and blisters.
2. Stay hydrated. Warm sweet drinks are preferred on frigid days.



3. Understand the warning signs of hypothermia, including slurred speech, confusion, shivering, fatigue and muscle stiffness.
4. Layer up. Wear at least three layers of loose-fitting clothing, including a wool, silk or synthetic inner layer, and avoid tight-fitting clothing while working in extreme cold.
5. Provide proper training on snow removal equipment.

is extremely important for superintendents like Girard. And companies like Syngenta, providing smart new products like Contend, make things just a little less stressful. And in this day and age, that’s definitely a good thing. **GCI**

GET TO THE POINT!



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

Verbose: *using or expressed in more words than are needed.*

"much academic language is obscure and verbose"

synonyms: *wordy, loquacious, garrulous, talkative, voluble*

And in the dictionary, next to the word "verbose," is a picture of a golf course superintendent.

Get my point? If not, try this: I've concluded that, as a rule, we superintendents:

- Overthink
- Overexplain
- Talk too much
- Offer too many details
- Use too much science when talking to laymen
- Like showing off our knowledge

As a result, we lose our audience — and with them, our credibility.

Let's not get too dramatic about what we do. After all, it's just grass, right? Certainly, many of our constituents — golfers, members, committees, other staff — feel that way, and while I generally hate that attitude from the uninitiated, sometimes they are right. We open our mouths and in a matter of seconds you can see that they don't care, can't follow and can't tolerate the abundance of information that comes across as being smug.

How do we earn their respect? By learning to explain the basics of agronomics (turf care, course conditioning, irrigation, pest control ... whatever!) in terms that anyone can understand. But that doesn't only

mean being clear and succinct: It also means telling them things that mean something to them and apply to them. (Self-interest, by definition, is someone's golf course. If you haven't learned that yet, get out of the business.)

Because we're often seen as being at the bottom of the golf club totem pole — we're just the guys who mow the lawn and have dirt under our fingernails, after all—we feel the need to prove to others that we're just as smart, if not smarter. Not to get petty here, but I'd match our degrees against almost any member. Still, they're the ones with the glamour jobs. So, we feel, not incorrectly, underappreciated and unloved. Which leads to showing off, overdoing the explanations to prove ourselves and our worth. Then people's eyes glaze over, they lose whatever interest they might have had, and, at the end of the day, they still never quite understand what it is that we do.

Then again, they don't have the education or experience that we do. The secret is to use that education to figure out how best to talk to them the right way. Just because our industry has become more scientific, more technical and more strategic about how we do our jobs doesn't mean you

need to share every last detail about why you did or did not do something on the third green.

I get it: Superintendents are evenly balanced ... we have chips on BOTH shoulders. That's not a good enough reason to be a know-it-all.

Instead, learn to get to the point, quickly and clearly. Here's how:

- Reduce "tech speak"
- Use unpretentious analogies
- Listen to what others say and use this information to your advantage
- Don't oververbalize. This holds true when you're speaking, writing (even e-mails), on the phone, any and everywhere. Live by the "KISS" rule: Keep it simple/short, sweet!
- Don't waste your time in minutiae. Stick to the basics.
- Be professional, but don't overpolish your appearance or delivery
- Keep it real

There are a few guys who have been in the limelight and are experienced at dealing with media and high-profile private clubs. These guys — Jon Jennings (Shinnecock Hills), Shawn Emerson (Desert Mountain) and Chris Tritabaugh (Hazeltine National) foremost among them — have a great deal of experience in front of the camera or boards of directors. But trust me, it didn't come naturally. They had to work at it and learn. Now they know when to start, how to give a sound bite and, most importantly, when to stop.

And here's an admission: Sometimes you even lose me — your most ardent advocate — when you send voluminous emails or leave lengthy voicemails. I want to help, but I'm less likely to get involved if don't get to the point. Save the long-form version for when I'm in front of you and ask for it. Then we break bread.

My point? Get to the point! Be brief, be real, be honest, stay on point, and you'll stay out of your own way. **GCI**



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COVER STORY

(continued from page 17)

a golf facility can find it.

"I have yet to find a grower where zoysiagrass is the predominant grass at their farm in the Transition Zone," says Dr. Ambika Chandra, who leads the Texas A&M AgriLife Research turfgrass breeding program in Dallas and collaborates with Transition Zone colleagues at Kansas State and Purdue on cultivar development. "Most of these growers will have some acreage of Meyer and more recently Innovation, but they are still doing cool-season grasses and they are still doing Bermudagrasses. It's limited at this point in time, but that's because we only have limited varieties that are available for these growers to grow."

One daring Transition Zone superintendent managing a tight capital improvement budget found a way to avoid the outside production cycle.

Ron Freking was raised within walking distance of Devou Golf & Event Center in Covington, Ky. He played the course, a nine-holer in its first 73 years of existence, frequently as a child. Freking made golf course maintenance his career and became Devou's superintendent in 1989. The course Freking played as a child included hilly terrain, a quick-coupler irrigation system and meager maintenance budget. Nobody said maintaining the fairways of your childhood is easy.

Devou added nine holes in the mid-1990s, but fairways remained problematic. A past superintendent had experimented with zoysiagrass in a wayward area on the first hole. At the urging of a previous course operator, Ralph Landrum, a former PGA Tour player who relished competing on zoysiagrass, Freking created a one-acre nursery. Lacking funds to solid sod the course, Freking and his team started strip sodding fairways in checkerboard patterns.

"Once we did that to a fairway, even though there wasn't that much zoysiagrass out there, we treated that fairway as a zoysiagrass fairway from then on," Freking says. "We didn't do anything to encourage the cool-season

turf.”

The process proved methodical. The in-house crew squeezed in conversion work between regular maintenance and supply never exceeded what their nursery could produce. In a good year, they could strip sod as many as six fairways. Freking learned plenty about growing conditions along the way. “Some fairways were more difficult to establish than others,” he says. “But as a rule of thumb, the worst the soil was, the better the zoysiagrass did.”

Finally, in 2011, Devou had full zoysiagrass coverage on 16 acres of fairways, ending an era of what Freking calls a “Heinz 57” mix of cool-season grasses. Now owned by the City of Covington, Devou has summer fairway conditions to match park surroundings within skyline shadows. Views of Cincinnati and the Ohio River lurk behind multiple greens.

“It has helped us tremendously because now we actually have turf in our fairways,” Freking says. “It’s important to have a good stand of turf in the fairway just to keep the golf ball from rolling down the slope a lot of times. The golfers love it. I won’t say the golfers really understand it. They just know that we have good grass. They don’t really care what it is or know what it is. They just know that it’s good and they like to play off it.”

“They will show up in August when summer has been tough and bentgrass courses are struggling a little bit and they’re like, ‘What are your fairways? These are incredible.’ That’s been a great marketing tool for us.”



A methodical sodding process has resulted in zoysiagrass fairways at Devou Golf & Event Center.

Devou mows fairways at least twice, and sometimes three times per week, and Freking says zoysiagrass can be “tough” on equipment. But he adds maintenance requirements are more advantageous than anything he experienced with cool-season turf. Freking doesn’t spray fungicides on fairways; insecticide applications are limited to billbug and grub control. While it’s not as thirsty as cool-season varieties, Devou’s zoysiagrass requires regular irrigation. “Zoysiagrass does like water,” Freking says. “I have heard people say before, ‘You don’t have to water that stuff.’ Well, if you put 30,000 rounds a year on it, it does need water on it. It needs something to keep it going.”

Regular customers understand how zoysiagrass looks in the winter, although Facebook posts from infrequent visitors shocked by dormant turf are inevitable. Freking prepares zoysiagrass for winter by applying potash in late summer, raising late-season mowing heights and pursuing in-house drainage projects.

Converting to zoysiagrass, Freking says, represented a “100 percent home run,” for Devou, because it has provided a competitive advantage in a crowded public golf market. But he’s unsure if an abundance of Transition Zone courses in similar situations will pursue zoysiagrass conversions. “I have a feeling people have been struggling with this for forever,” he says.

The writings of a turfgrass legend prove how the struggles evolves. **GCI**

Guy Cipriano is GCI’s senior editor.



‘What golf is screaming for’

A golf course opened in 1895 at a club established in 1854 might be presenting a futuristic product to its membership.

The Philadelphia Cricket Club’s nine-hole St. Martins Course is one of the northernmost facilities in the United States using zoysiagrass fairways. Besides offering a widely lauded playing surface, the significant maintenance period coincides with months the junior and higher-handicap friendly course receives its most use. The zoysiagrass requires a “smidge” more summer grooming but far less irrigation than the bentgrass fairways on the club’s two 18-hole courses, according to director of grounds Dan Meersman.

“We are here in June and it’s green now, but it’s not like it’s thriving,” Meersman says. “I don’t need to beat it up and do a lot to it, because it’s still not at its peak. July, August and September are the three months where it’s wanting to thrive. Think of a business where you really only have to invest in it very much three months out of the year and the other nine months you aren’t doing anything, but you still get the benefits of rounds and everything that comes with that.”

The course has been transformed from a forgotten amenity to a popular attraction since reopening in 2013 following the first major renovation in its lengthy history. The par-35 course includes eight par-4s but plays just 2,681. Yardage is reduced to 2,304 yards for juniors, with par ranging from 41 to 67 for girls ages 4 to 14 and 40 to 59 for boys. Avid golfers, including area college teams, also use the course. “The saying I have with St. Martins is that we already have what golf is screaming for,” Meersman says. “Golf is screaming for faster rounds of golf and shorter golf courses.”

Before the renovation, the course supported less than 2,000 annual rounds. That total has swelled to 10,000, a figure Meersman partially attributes to the summer conditions zoysiagrass provides.

“The zoysiagrass has made it a beautiful property and the beauty with the renovation work has attracted more players,” he says. “The zoysiagrass is definitely a primary feature of the golf course and kind of what the course is known for now as far as the conditioning level. The rounds of golf speak louder than I can about it.”

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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.



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.

SPACE-SAVING EFFICIENCIES

Attachments for the Toro Workman, such as the Vicon Fertilizer Spreader, Toro 1800 Topdresser and bed-mounted sprayer, are hung from the ceiling of the maintenance building equipment storage area when not in use to improve space with ease. Two Dayton H3 Electric Chain Hoists, with a 2,000-pound lifting capacity, have a single speed 20-foot hoist lift rated at 16 feet per second using 115-volt power. Grainger sells them for approximately \$2,563 each. A third CM Valustar 1 Ton Hoist is also used with a similar cost. The hoists are hung from 4 inch by 12 inch separate wooden beams with “U” shaped bolts holding them in place. Each hoist has a separate male plug-in into a 115-volt junction box. The implements are attached to the hoists using industrial chains with hooks. Ryan Knapp is the superintendent at the Stock Farm Club in Hamilton, Mont.



STORAGE BIN COVERS

Waterproof canvas, manufactured by a local wall tent maker, is used to keep the green's topdressing and other materials dry on the four soil storage bins at the Stock Farm Club in Hamilton, Mont. They can be rolled up and down in a matter of seconds with a long handle using both hands that moves clockwise or counter-clockwise that raises two bin covers at the same time. They do a great job of keeping the materials dry and clean from debris. A separate 2-inch diameter pipe stretches across each bin, which adds support for the covers when the bins are covered, are easily removed prior to a front-end loader tractor or skid loader being used. The total cost was about \$3,500 and they are easily attached using strong metal snaps similarly used on boat covers. Ryan Knapp is the golf course superintendent.



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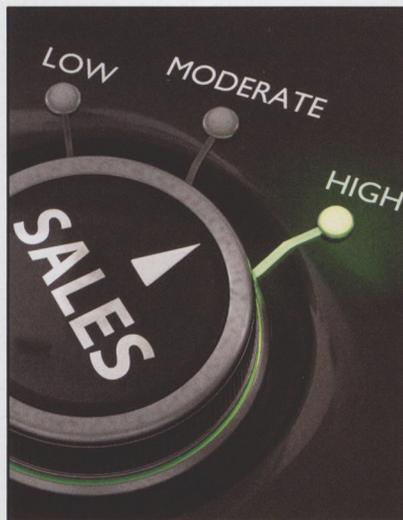
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DÉJÀ VU ALL OVER AGAIN: A FEW THOUGHTS ABOUT THE U.S. OPEN AT SHINNECOCK HILLS



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

So I had a few thoughts about the 2018 United States Open Championship...

1. Coverage: FOX continues to suck at golf and everyone needs to learn to ignore Brandel Chamblee. He doesn't respect or understand superintendents. Nothing is going to change that.

2. Final Prep: I was onsite Monday-Wednesday. I couldn't have been more impressed with Jon Jennings' setup and the relaxed, professional tone he set for nearly 200 staff and volunteers. Smiles all around and less exhaustion than usual because there was no huge storm or other major problem to wear everyone out. It was great to be in that tent and feel the outstanding vibe put out by young folks looking to learn and a bunch of awesome old farts from all over the country. Jon has a ton of great friends from Chicago and elsewhere who were there to support him and make sure things got done right.

3. Early Reviews: Everyone from the USGA I spoke with – including Mike Davis himself – raved about the condition of the course as it was “turned over” to the USGA on Monday morning. All of the key folks said the same thing: “It’s perfect.” There were smiles all around the maintenance compound and I allowed myself to briefly think, “Maybe this time it will be

different and everyone can leave here Sunday night feeling great about what they’ve accomplished.” If only ...

4. One note about television. TV cameras – particularly when shooting down on turf – tend to make the mottled brown, purple and green of stressed-out *Poa*/bent greens look awful. Even some in our business suggested they were “dead” on Saturday. They weren't dead ... but they were obviously stressed beyond anything I thought possible when I walked out the gates Wednesday afternoon. I'm just gobsmacked by how fast it happened.

5. That queasy feeling. As an amateur turfhead watching at home on Saturday, the appearance didn't bother me. But greens that have been taken right to the edge combined with pin positions that were clearly a stretch for the conditions are a recipe for trouble. Which is exactly what happened on Saturday. As I sat at home and watched balls roll off greens and no putts being made, my feeling was not, “It's awesome to see great golf played on a really challenging golf course.” Instead, I had this queasy sensation in my stomach about how it was all playing out. Honestly, it was hard to watch knowing how amazing the greens were just a few days earlier.

6. The men in the middle. Other than some careless comments by play-

ers and a handful of dumbasses in the media, no one pointed a finger at the Shinnecock Hills team. The criticism was universally aimed at Mike Davis and the USGA. Which was appropriate, but small consolation.

7. WWJD? I saw a lot of social media comments from a bunch of superintendents saying, “They should have just let Jon set the course up since he knows it way better than the USGA.” Nice idea, but not reality. Yes, the process of preparing the course is collaborative for years leading up to the event and intensively so in the weeks immediately beforehand. Yes, they had meetings daily to compare notes about the setup, weather, pins and conditions. But ultimately when a club signs on to host a U.S. Open, they also basically agree to cede authority for all decisions about playing conditions over to the USGA. That's the deal ... or the Faustian bargain, if you prefer.

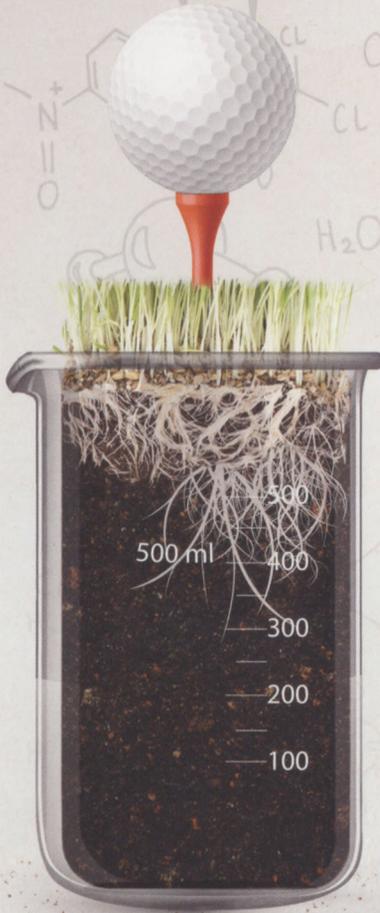
8. Aftermath: Jon Jennings, his staff, his volunteers and all of the partners who came together to support the agronomy program should be incredibly proud of what they accomplished. They did EXACTLY what was required by delivering a perfect course into the hands of the USGA. They also did what was asked during the week by keeping conditions right on the edge to create an incredibly challenging championship site. It's supposed to be hard and they lived up to their end of the bargain.

9. Takeaway: All that said, once again, here we are after one of the greatest events in sports was played at one of the greatest courses in the world feeling baffled, cheated and kind of irritated that we went down the rabbit hole again. It was supposed to be a classic event at a classic site ... an old-school U.S. Open for the ages. Instead, it was déjà vu all over again. **GCI**

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