FCO

MAY 2018 | golfcourseindustry.com

The fills are alive again

How superintendent grit and a group of determined homeowners gave an Alabama course a second life.



You see beautiful turf

We see beautiful soil

Since 1988

We believe that the health of the soil is imperative. Your life's work - producing vibrant, vigorous turf - depends on it. That's why it has always been our life's work to build you the highest quality carbon based solutions in the market.

Better soil, better roots, better turf.



A Deeper Respect

Contact us for more information

earthworksturf.com | 1(800) 732-TURF

VOL. 30 NO. 5

Thehills are alive again

COLUMNS

- 8 OUTSIDE THE ROPES Tim Moraghan: Moving on up
- 14 DESIGN CONCEPTS Jeff Brauer: Fairway contours as strategic hazards
- **22 GAME PLAN** Henry DeLozier: The equalizer
- **36 IRRIGATION ISSUES** Brian Vinchesi: 2-wire vs. conventional
- **50 PARTING SHOTS** Pat Jones: Golf's day in the spotlight

DEPARTMENTS

- **4 TEEING OFF:** Time after time
- 6 EDITORS NOTEBOOK: Tartan tales
- 46 TRAVELS WITH TERRY: Equipment ideas
- 49 CLASSIFIEDS
- 49 AD INDEX

10

FEATURES

Cover story

10 THE HILLS ARE ALIVE AGAIN How superintendent grit and a group of determined homeowners gave an Alabama course a second life.

Mauka to Makai

16 PART 2: 'OHANA

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

Condition, perform, recover 24 PLAN FOR THE WORST ... DELIVER THE BEST

How a Tennessee superintendent handles the haymakers thrown by Transition Zone weather.



Turfhead experience 28 A CHANCE TO RESTART A glimpse into one superintendent's ordeal with skin cancer. Case study **38 ON THE EDGE** Lignano Golf Club's turf leader finds a new solution to fix erosion woes on the course.

Pests and disease 42 WHAT AM I LOOKING AT?!? Nematodes may be the least obvious culprit behind spring turf damage, but don't discount them from the checklist of usual suspects.





GOLF COURSE INDUSTRY (ISN 1054-0644) is published monthly. Copyright 2018 GIE Media Inc., 5811 Canal Road, Valley View, OH 44125. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One-year subscription rate, \$33 in the United States, \$42 in Canada and Mexico, and \$88 in other foreign countries. One year foreign airmail rate: \$102. Two year subscription rate; \$55. Subscriptions and classified advertising should be addressed to the Valley View of fice. Postmaster: Sen addresse changes to GOLF COURSE INDUSTRY S811 Canal Road, Valley View, OH 44125. Canada Post: Publications Mail Agreement #40612608 Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2

TIME AFTER TIME

Probably just made you sneak a glance down at this issue's folio. No, don't worry. It's still May.

However, in the publishing world we started discussing some of the topics in this issue back in San Antonio during February's Golf Industry Show 2018. We began picking people's brains and gathering some expert insight on the big spring and early summer topics, and what's most appropriate to share in the issue. When you work that far in advance you try not to avoid the Chicken Little approach to journalism – stories like "Winterkill Will Ruin Your Life" or "Turf Maintenance With No Labor." Instead, we temper what we think we know with what our industry friends in the field are beginning to see or have seen in the past.



Mike Zawacki Editor

So, right now, we're finalizing late-summer and fall editorial topics and beginning to put some thought on the end of the year. Wait, did

someone just schedule a pre-GIS 2019 meeting?

I suspect many of you also approach your business year in sort of the same way. From a traditional turf and personnel management standpoint you carve up the year into bundles of months, organized from "brain melting" to "yeah, I could go on vacation then." And similarly, you do all you can to avoid the onslaught of stress by preplanning out at far as possible, allowing you to anticipate and react, dodge and weave, as judiciously as possible for when your job calls for it.

Unfortunately, when we look back – whether it's postseason or year-end – what we see is often less than satisfying. Instead of finding a linear start and finish, we're staring at a gelatinous blob of memories float around with no discernable cohesion or form and the thought: This is no way to gelatinous live.

It doesn't have to be that way. There are steps we can take to allow us to get more satisfaction out of our work and personal lives. It's OK to want to improve your overall quality of life and continue to be successful at the job you love. Bob Epperly is a former Exxon manager turned life coach who works with people to get their lives out of tailspins. Epperly offers some great insight on how to begin recognizing and correcting your lifestyle imbalance.

IT'S NEVER ENOUGH. While professional ambition is admirable, it can't run your life. If it does, no matter how much you accomplish it'll never be enough. Instead, your left with an unfulfilled life and feeling that you missed out.

COMMUNICATE. Make this a priority. Stop and really communicate with those around you. And, most importantly, just listen. Our relationships are what ground us in life, and these can improve exponentially via some one-on-one communication.

ACCEPT WHO YOU ARE. Is the world ready for you – the good, the bad and the ugly? Well, they won't if you haven't. Remember that it's OK to be you, and it's not to trade off your own self-worth to accommodate other.

Remember, at the end, no one ever wishes they had more time for work. It's good to have goals and to focus on a career that helps define you. However, don't get lost in it. GCI

GOLF COURSE

Serving the Business of Golf Course Management

Vol. 30 No. 4

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

EDITORIAL Pat Jones

Publisher/Editorial Director pjones@gie.net Mike Zawacki Editor mzawacki@gie.net Guy Cipriano Senior Editor gcipriano@gie.net Terry Buchen Technical Editor at-large Bruce Williams Senior Contributing Editor

> GRAPHICS / PRODUCTION Jim Blayney Creative Director

Caitlin McCoy Advertising Production Coordinator

ADVERTISING/PRODUCTION INQUIRIES Kate Pretzlav kpretzlav@gie.net • 216-393-0229

SALES

Russell Warner National Account Manager rwarner@gie.net • 216-393-0293

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

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

CORPORATE

Richard Foster Chairman Chris Foster President and CEO Dan Moreland Executive Vice President James R. Keefe Executive Vice President Christina Warner Audience Development Director Michelle Wisniewski Production Manager Maria Miller Conferences Manager Kelly Antal Accounting Director Irene Sweeney Marketing Director Kevin Gilbride Business Manager, GIE Ventures

Golf Course Industry is a member of: Golf Course Superintendents Association of America National Golf Foundation Golf Course Builders Association of America The Irrigation Association

Responsible Industry for a Sound Environment





GOBIG OR GOHOME.

Goliath[®] XP fungicide has the power to smash Brown Patch and Anthracnose.

A knockout combination of two powerful active ingredients provides golf course superintendents broad-spectrum disease control in one easy-to-use solution. Goliath XP fungicide controls most major turfgrass diseases, including brown patch, anthracnose and dollar spot. Effective and economical, Goliath XP won't take a chunk out of your maintenance budget. Play it smart and go big with Goliath XP. To learn more, contact your local UPI sales representative or distributor.



Always read and follow label directions and precautions. Goliath and UPI logo are trademarks of United Phosphorus, Inc. ©January, 2018. UPI, 630 Freedom Business Center, King of Prussia, PA 19406. www.upi-usa.com.

NOTEBOOK







Tartan tales

Three days of ingenuity and ample laughs, Guy Cipriano's visit to the ASGCA's annual meeting reveals the personalities behind modern design.

CREATIVE COMEDIC OPPORTUNISTS.

After spending three days in Houston for the 72nd annual American Society of Golf Course Architects meeting, I scribbled this three-word phrase into a notebook on the flight home.

The meeting included education, meals, receptions and, yes, golf. But, more important, a gathering of 70 architects offers insight into the personalities committed to a challenging profession.

Don't be fooled by the Ross tartan jackets. People who dress alike at industry functions don't think alike. An educational session moderated by Bill Bergin about fairway width and tree removal sparked a fluid hour-long conversation. The group of architects who volunteered their thoughts swelled to 15, with nobody duplicating a colleague's perspective. "We're fortunate to work in an industry and on property that has such great diversity," Bergin said.

Fairway width to an architect designing a new course on an expansive piece of Texas land could mean 50 to 80 yards. The same concept could mean 25 to 40 yards to an architect restoring a course in a leafy Northeast neighborhood. Like golf course maintenance, architecture is site specific. How to maximize enjoyment of the land requires a creative side.

For many architects, creativity started at early ages. Outside the rooms hosting educational sessions



and receptions, a "Where The Dream Began" display featured the early sketches of Nathan Crace, Steve Forrest, David Johnson, Stephen Kay and Forrest Richardson.

Youthful exuberance still exists – even in a leaner, post-recession golf market. Architects now spend more time using phones and tablets than sketch pads, yet a zest for designing, renovating, restoring, enhancing and tweaking golf courses remains.

Of all the people in the golf business, architects might have the best

NOTEBOOK



1. Forrest Richardson and Andy Staples; 2. Gary Linn, Doug Carrick and Michael Bebe; 3. Bill Bergin; 4. Jackie Burke Jr. and Brandon Johnson; 5. Tim Shantz, Kurt Huseman, John Maeder, John Lawrence, Ian Williams and Dr. Michael Hurdzan.

sense of humor. From Jerry Lemons retroactively laughing about an emergency landing he made while piloting an airplane to Todd Quitno's colleagues-to-politician roasting at the Donald Ross Award Dinner, architects prove success in a chosen field can be achieved without taking yourself too seriously. Needle somebody wearing the Ross tartan at your own peril. Their retaliation will be witty.

Spending four hours with an architect in a golf cart introduces playing angles you never thought you would observe. Yes, not all architects see the game from the middle of the fairway. You're also destined to hear a few oneliners you will want to save for a buddy trip. The mouth can be a creative tool.

Above all, golf course architects are about seizing opportunities. The dreamy sketches of their childhood have turned into adult-sized complexities. Landing a new project, especially one in their home country, has become an unobtainable goal for most architects. The ASGCA boasts 184 members and 15 1/2 new American courses opened in 2016, according to National Golf Foundation data.

To assist their members and perhaps cajole stagnant facilities to improve

their courses, the ASGCA published a Market Trend Watch survey with the Sports & Leisure Research Group. Key findings from the survey: labor presents enormous challenges for operators and golf course renovations lead operators' wish lists. Opportunities abound for architects willing to help courses reduce labor and offer fresh products.

Greg Martin epitomizes the opportunistic spirit. The Illinois-based Martin worked with 19 regulatory agencies to concoct a plan to provide flood control by redesigning a suburban Chicago golf course owned by The Forest Preserve District of DuPage County. Working with one regulatory agency can be numbing, so imagine the patience Martin needed to help create The Preserve of Oak Meadows, which reopened last year.

Martin has proudly discussed the project hundreds of times, including in Houston. By pursuing work where others might have run, Martin inspired colleagues to explore how golf courses can help surrounding communities solve complex issues. "This was so much fun," Martin said. "It was so complicated and so interesting that I learned something new every week."

Thinking different, developing the sense of humor to handle bureaucracy and finding golf-related work in a forest preservation. A creative comedic opportunist, indeed. **GCI**

Tartan Talks No. 22



Jeff Lawrence stood five feet from a cobra – and one of golf's legendary figures helped him handle the precarious situation.

Lawrence joined our "Tartan Talk" series during the ASGCA meeting to discuss his career and job as a senior



designer/vice president with Gary Player Design. Working alongside the worldly Player, a nine-time major champion, has introduced Lawrence to new environments, including ones where dangerous critters lurk. Before joining Gary Player Design, Lawrence worked with Jack Nicklaus and Tom Fazio. "It's amazing that I have had the experiences that I have had," Lawrence says.

Some experiences are scarier than others, so enter https://goo.gl/o9vC2W into your web browser

to learn how Lawrence's encounter with the cobra ended. Lawrence also shares in the podcast some of his ideas for expanding golf's reach.

MOVING ON UP



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

t always surprises me when a "big name" superintendent job comes open—and they do, despite what you might think—how clubs do a search. Too many times, top clubs act like teenage pop fans and seek style over substance, exposure over experience. The clubs tell themselves they want someone who'll provide them with better course conditions, but then they act as if they just want bragging rights.

Clubs typically get someone a little younger, full of energy and enthusiasm, and willing to put forth the effort. But that often means someone without experience in the more subtle skills, without what I'd call "seasoning."

Wouldn't it be better if they hired a superintendent experienced in all elements of course management? By that I mean the business of golf and the business of people. I've worked with many first assistants who know agronomy but don't know – and worse, haven't been mentored by their supervisor – the ways of the non-turf world: club politics, human resources, how to write a report and talk to a board.

All very important skills, as any boss will tell you.

Clubs should look for those who can handle the hot seat when things don't go as planned and can admit to, and handle, their own mistakes. They also should look for leaders who have, or can grow into, the skills to manage both down (a diverse staff) and up (members, boards and club executives).

As one of my mentors often said, "This job is 10 percent turfgrass and 90 percent people."

And where does the responsibility for training lie? With the guy in charge. If that's you, Mr. Director of Grounds and Agronomy, you owe it to your best people to prepare them for their next opportunities. If you want them to have a good shot at moving up, be sure to hold their feet to the fire, see how they take the heat and teach them to put out the flames. It will make them, you and our profession stronger.

If you're the guy in charge, teaching

assistants the ropes should not make you afraid for your own job. Guide, don't give all the answers. Challenge, don't do all the heavy lifting. Push, don't drag them along if the desire and discipline is not there.

For example:

- Involve your assistant in creating the operating and capital expenditures budget process.
- Is your assistant involved in

human resources and personnel disciplinary processes? Do they know how to handle today's sensitive work environment?

- Have you involved your assistant in presentations at green committee meetings? Or given them a small topic to deliver before a board or club audience? A small role goes a long way in breaking the ice.
- Speaking and dressing well are essential to becoming a leader and impressing those making hiring decisions. Articulately expressing opinions and knowledge is often difficult, but you've achieved your stature – help your assistant do the same.

If you're the assistant, gaining experience is something you should strive for, not wait for it to be dropped in your lap.

- Make the effort to try new things, learn the ropes and stretch outside your comfort zone. Remember, there's more to our profession than greenside up.
- Learn what you can about all things budget-related. It's all about the finances because you are managing someone else's money.
- Practice your presentation skills and your professional look. Speak-

I'VE WORKED

WITH MANY

FIRST

AGRONOMY BUT DON'T

KNOW – AND WORSE.

MENTORED BY THEIR

OF THE NON-TURF

SUPERVISOR - THE WAYS

WORLD: CLUB POLITICS,

HOW TO WRITE A REPORT

HUMAN RESOURCES.

AND TALK TO A BOARD.

ALL VERY IMPORTANT

SKILLS, AS ANY BOSS

WILL TELL YOU."

HAVEN'T BEEN

ASSISTANTS WHO KNOW

ing confidently and being able to explain clearly is key to gaining anyone's support. You can't sit behind your phone and hide. • And cut the slang, dude. It won't play well in the boardroom. Learn how to speak at the members' level and don't be afraid to ask questions.

You don't learn by being given "the answers." You learn by being given the space to discover the answers for yourself. **GCI**

In the **Pythium Zone**? Trust in **Terrazole***



110

Ó

ohp Partners with solutions

- Curative and Preventative
- New Liquid Formulation
- Effective on resistant strains



Terrazole is a registered trademark of MacDermid Agricultural Solutions, Inc..

After seven years of sitting idle, Heatherwood Hills Country Club held a soft reopening in October 2016.

Thehills are alive again

How superintendent grit and a group of determined homeowners gave an Alabama course a second life.

By Guy Cipriano

irmingham, Alabama. June 2016. Days above 90 degrees: 21. Average daily high temperature: 91.4. Employees working at Heatherwood Hills Country Club: one.

Chad Burke runs marathons. Reaching mile 26.2 means enduring grueling solitude. No shortcuts are involved in completing a marathon. Step after step. Mile after mile. Day after day. Blister after blister.

Perhaps somebody with a different background wilts when temperatures approach triple digits and the reopening of a golf course depends on your ability to handle solitude. The history is messy – yet not atypical for a course built around homes – and a group of determined members waded through a legal process to return Heatherwood Hills to a functioning amenity. A trim marathoner with Midwest roots, Burke arrived June 4, 2016 determined to give residents the views and lifestyle they envisioned. Here, in a hilly development with street names such as Oakmont Road, Greenbrier Way and Spyglass Lane inside the southern limits of Alabama's biggest city, Burke performed an instinctive act on his first day: he headed straight for the pump station. Turf, after all, can't become playable without an operating irrigation system.

Before agreeing to become the superintendent responsible for reopening Heatherwood Hills, Burke had worked as a service technician



© PHOTOS COURTESY OF CHAD BURKE

for Jeff Pate Turf & Irrigation, meaning he possessed the expertise and connections to return an irrigation system nobody operated for more than seven years into working condition. Heatherwood Hills' first incarnation as a private course ended in May 2009.

The condensed history ...

Based on public records, United States Steel started selling lots in the Heatherwood development in 1984, followed by the 1986 opening of Heatherwood Golf Club. Formed by homeowners and members. Heatherwood Golf Club, Inc. purchased the course from USX in 1999. HGC owned the course for less than a year. A deed transferred the golf course property from HGC to Heatherwood Holdings. Renovations, which included installing a double-row irrigation system, widening fairways, and constructing new greens and bunkers, commenced immediately after Heatherwood Holdings acquired the property. Heatherwood Holdings reopened the course in October 2001.

Court records showed the club reported a positive net income in 2001 because of an increase in membership income, but the financial situation turned gloomy as the Great Recession approached. Heatherwood Holdings ceased operating the course on Dec. 31, 2008 and filed for Chapter 11 bankruptcy protection on Jan. 6, 2009.

A group of homeowner members banded together to block the sale of the property for non-golf uses. A bankruptcy judge ruled in 2011 the property couldn't be sold for any reason other than to be kept as a golf course. The group's objective included returning the property to a golf course. However, obtaining the proper deed and securing the necessary funding represented a "long process," says board member Mary Anna Raburn. Relying on personal and business connections, the group worked with sub-contractors to prepare multiple parts of Heatherwood, including a clubhouse damaged by vandalism, for a reopening. The group hired Cypress Golf Management to operate the facility.

But those moves, Raburn says, only "represent part of the story." The group, which she describes as around 100 "core people," contributed funds to purchase the course out of bankruptcy and to reopen the club and course. For seven years, the tight-knit group maintained the empty course, preventing former and hopefully, they imagined, future - playing surfaces from becoming nuisance land. "We had people pitching in, getting work done where it needed to be done," Raburn says.

The purchase of the deed was completed in fall 2015, and the new owners started plotting a soft opening, which Raburn retroactively calls Grand Opening 1.0, for fall 2016. Seven years of dreaming and discussing started becoming real when homeowners looked outside their windows and noticed Burke examining and fixing irrigation heads by himself.

Burke graduated from Southern Illinois in 1998 and moved to Alabama to work for family friend Mark Langner, a widely respected superintendent who now works for AOUA-AID. Burke's first two jobs at Birmingham Country Club and Limestone Springs Golf Club introduced him to a variety of situations. At Limestone Springs, an upscale public course 30 minutes northeast of Birmingham that opened in 1999, Burke helped Langner with a tricky grow-in. Burke left Limestone Springs in 2008 for a landscape and grounds manager position at the University of Alabama. He was working for Jerry Pate Turf & Irrigation when he rekindled his zest for golf course maintenance.

Heatherwood presented a challenge few superintendents ever faced. For starters, the maintenance facility had been vandalized dozens of times during the closing. "It was turned into a skate park," Raburn says. The facility lacked air conditioning and running water, and Burke brought a cooler filled with ice and bottled water to the course each morning. Running also teaches the value of hydrating, something Burke did constantly as he inspected an irrigation system that included more than 100 heads zapped by lightning during the closing. At least Burke could easily find those heads. He needed a metal detector and pitchfork probe to locate 50 heads that grass had grown



over. Burke didn't receive his first co-worker until the club hired assistant superintendent Mike Sweatt on July 5, 2016.

Friends and industry peers visited Burke during his first month at Heatherwood. Their conversations ranged from technical – preparing greenside irrigation to provide uniformly distributed was Burke's first agronomic goal – to motivational. The list of superintendents who have attempted to reawaken a zombie course alone in stifling conditions is shorter than the list of college football teams capable of toppling the University of Alabama.

"I would equate it, in my mind, to a visual of being thrown in solitude or something to that extent," says Langner, who visited Burke multiple times. "Hot. No relief from it. Nobody to talk to but yourself. Nobody to bounce things off but yourself. I have never been in solitude. I think a lot of people would say, 'Being alone sucks.' Sometimes we desire that - but it's for short periods. For him to go through it, hours upon hours, day in, day out, week in, week out, month in, month out, had to be difficult."

In humble superintendent and runner fashion, Burke downplays the daunting scope of the project. He says he prioritized daily tasks and quickly realized one person can't fully tend to a golf property alone. He kept consistent hours, working 6:30 a.m. to 4:30 p.m. weekdays and 6:30 a.m. to 10:30 a.m. weekends. Seeing residents walking dogs or playing in their backyards energized him throughout the suffocating summer.

"I took a lot of pride in the fact that at the end of each day



The course reopened as a semi-private facility in October 2016, although Burke, Raburn and other stakeholders viewed last summer as the official reopening. Alabamans are distracted in the fall by other pursuits such as football, hunting and school-related activities, and the soft opening allowed them to assess where the course needed additional work. A soggy May pushed Grand Opening 2.0 to last June.

Greens were sprigged with TifEagle Bermudagrass; fairways are 419 and Celebration Bermudagrass. Burke and his small team – the crew includes Sweatt, a mechanic, three fulltime hourly employees and a part-time worker – trimmed trees and improved bunkers this past winter. The narrow course plays under 6,400 yards from the back tees and includes just 60 maintained acres. Expanding corridors is a major goal as the course, renamed Heatherwood Hills Country Club, begins its second life, albeit this time as one of Alabama's 148 facilities offering public access.

General manager Ben Osteen says Heatherwood Hills fills a gap in a Birmingham market that includes multiple pricey and budget public options, but a dearth of middle-tier courses. Heatherwood Hills charges \$30 Monday-Thursday and \$40 Friday-Sunday for 18 holes with a cart.

"We're hoping to take baby steps," Osteen says. "We're not expecting 60,000 to 70,000 rounds a year right off the bat. That's a goal of mine and that would be awesome. We obviously want to be profitable. Right now, our goals are pretty basic: having a full crew of people in the pro shop, in the kitchen, on the wait staff and on the maintenance team going in the same direction. We're proud of what we're doing." Once financial stability is established, Raburn envisions expanding services, thus creating an "active, vibrant country club and golf course." Burke simply wants to experience the morning hustle again. "I would be tickled if the tee sheet is covered and we can collectively show off what we have done," he says. "I want to have that greater sense of urgency to get out of the shop and stay ahead of play. I want that nervous anxiety back."

When the marathon of reopening a shuttered course becomes a daily maintenance sprint, there's little doubt Heatherwood Hills will have right person overseeing its agronomics.

"Even though he ventured away from being a golf course superintendent, Chad's heart really kept pulling him back to it," Langner says. "When he said, 'We're going to reopen Heatherwood Hills,' I never doubted that Chad could accomplish it. The one thing that concerned me was that it's a long road and you have to be patient to get there. If there's any one guy who could be patient, he's the one. His temperament is perfect for what he took on." GCI



FAIRWAY CONTOURS AS STRATEGIC HAZARDS



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

TV this year, I noticed there was ample architectural comment. Before the tournament, Augusta National chairman Fred Ridley commented on the 13th hole, which is one of the most iconic holes on the course, and indeed, in all of golf. Bobby Jones and Alister MacKenzie touted 13 (and 15) as requiring "momentous decisions" to go for the green in two shots. Ridley admitted that approaching those greens with mid and even short irons isn't particularly "momentous" now. The holes seemed to take offense, gobbling up more shots than usual. No. 15 embarrassed defending champion Sergio Garcia, and No. 13 saw Reed come up short without going in the creek and Rory going long, helping the groundskeepers trim a few Azaleas.

hile watching

the Masters on

Better than the (yawn) length discussion was hearing Ben Crenshaw provide insights on shot shapes required for certain holes at Augusta, and how contours affected shots. Later, an announcer's comment caught my attention: when one golfer hit a hook around the corner on 13, close to the creek, it gave him a shorter approach, more green depth to work with and a flatter lie, while those playing conservatively to the right, were left with longer approach shots from more difficult sidehill lies.

That comment reminded me that

fairway contours can be a strategic feature. Tom Watson once wrote that playing your tee shot to a flat lie is smart. Lee Trevino once opined that landing zones should have flat areas at varying distances, creating the need for distance control and target precision on tee shots vs. just hitting it as far as possible. Fairway contours have, in fact, influenced golf from the earliest courses in Scotland, often because not much could be done to change them.

Those nuanced fairway contours declined in post WWII American architecture. Bigger earthmoving equipment removed subtlety, and architects strove for "What you see is what you get" design. Subtle fairway contours were viewed as "invisible" (and thus "unfair") hazards by many. New irrigation systems dampened fairways and reduced roll, and architects decided that their hazards would largely be visible and attractive sand hazards and trees.

Fortunately, fairway contouring is making a comeback as a strategic element, in part due to better grasses and an emphasis on less irrigation, allowing fairways to roll firm and fast again. Firm and fast makes recreating fairway slopes like those on Augusta National 13 a tricky proposition. As fairways approach former Stimpmeter readings for greens, their cross slopes must be softened, too. On slopes over about 10 percent, balls on the high side will roll to the bottom. Depending on fairway roll, maximum slopes as low as 5 to 6 percent are required, which isn't as scary a sidehill lie. A solution might be adding a small ridge to keep balls from rolling down the hill.

There are many ways to use contours to affect the outcome of a tee shot, by creating:

- Flat preferred target zones, about 20-25 yards wide and 30-40 yards long, as espoused by Trevino, with more severe slopes elsewhere.
- Irregular surfaces throughout, giving unpredictable and different lies on every approach shot. Grading fairways at 4 to 6 percent, rather than the typical 2 to 3 percent improves shot variety (and drainage).
- Increased fairway irregularity starting 280-300 yards off the tee. Only 1 percent of players hit this far, so it isn't cost effective to invest in sand bunkers to rein in excessive length, while increasing fairway "wobble" is relatively inexpensive, and can/ should vary from hole to hole.
- Creating visual deception with natural or naturalistic earth forms.
- Crowned fairways, rarely seen now, but used by Charles Blair Macdonald at the National Golf Links and Donald Ross at Mid Pines and requiring shots to land on the correct side drop off right at the fairway edge.
- Collection slopes within a fairway, directing shots hitting these fairway areas into fairway bunkers or rough up to 30-40 yards from where the ball lands.
- Combine a green that accepts, for example, a fade, but contour the fairway with a draw lie.
- Speed slots, where hitting a specific narrow area propels the ball downhill and forward for extra length, while most of the fairway offers no distance advantage.

There are numerous variations on these themes, which should be inspired by the ground. Designing these types of holes with the natural contours provides endless, "let's play again" variety, and returns some ground game to golf. **GCI**

Now That's Sharp

JRM, Inc. DURANIUM-801[®] Fairway, Greensmower and High-cut Bedknives

Already known for making the finest aerification tines on the market, JRM, Inc. is now forging its reputation as a superior manufacturer of quality DURANIUM-801[®] Greensmower, Fairway and High-cut bedknives. Through thorough testing, JRM developed a new, patented technology to make the finest bedknife available. If you have never tried a JRM bedknife, call us today for a sample.

ORDER TODAYCONTACT JRM TOLL FREE AT 888-576-7007

What our customers are saying...

"They're fantastic" "much better, no comparison" "I'll never use any other" "lasts twice as long!"

- JRM offers a wide selection of DURANIUM-801[®] greensmower, fairway and high-cut bedknives
- JRM bedknives have the tightest tolerances in the industry
- New, patented manufacturing process delivers a far more durable product
- Holds an edge longer, requires less sharpening and is less likely to split or crack

To complement our quality line of DURANIUM-801® Bedknives, JRM, Inc. offers a screw tool to fit our replacement screws for Toro®, Jacobsen® & John Deere®. The JRM Socket Driver Tools feature a superior design and stronger steel and the tight tolerances and superior design also eliminate the need for hammering and punching the screw to ensure tightness.

R/VI Inc.

Innovative Turf Technology

888-576-7007 or 336-354-1243 www.jrmonline.com

Tests show that JRM bedknives require less sharpening and less backlapping so they last longer and reduce reel wear.



JOHN DEERE

'Ohana, the Hawaiian word for family, is a critical component of the worker experience on the Big Island.

S . 23 . 180 S

MAUKA

144

4

Part 2: 'Ohana /ə'ha nə/ (family)

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







omething was missing from Jake Lerback's soul. Nobody played golf at Kona Country Club for a

three-year stretch. A public facility offering rea-

A public facility offering feasonable rates for residents of Hawaii's "Big Island," Kona CC underwent a massive transformation from 2013-16, as ownership shuttered the Mountain Course and enhanced the Ocean Course. Lerback remained employed as a night irrigator through the transition.

Lerback left the car stereo installation business in 1997 to begin working the 4:30 p.m. to 1 a.m. irrigation shift. He manually operated the system on the Mountain Course, keeping Bermudagrass alive and maintaining his family's place on the Big Island golf scene. Lerback's father, Vern, a World War II veteran, worked as a marshal on the course. Vern died before Jake realized he could use his electrical talents to repair valve boxes instead of sound systems.

"What has kept me here?" Jake says. "It's all for my dad. This was his home playing field. He passed away a long time ago. I have always taken care of the course for Pops."

Jake, now a self-described "everything guy" on the Kona CC crew, describes his path to golf course maintenance as sun soaks the surrounding Keauhou Bay on a mid-March morning. The course also represents the home playing field – and place of employment – for his 21-year-old son Josiah Lerback, who's changing cups as Jake reaches the 18th green in his cart.

Golf arrived in the Keauhou Bay, a conglomeration of resort and residential development, shops and historic sites overlooking the Pacific Ocean, when Kona CC opened in 1966, two years after the famed Robert Trent Jones Sr.-designed course at Mauna Kea Resort debuted. Mauna Kea, 40 miles north of Kona CC, represents the patriarch of the Big Island's coastal courses.

Because golf is still a young industry on the Big Island, with the bulk of course development occurring in the last 20 years, generational employees tending to the same course over decades such as the Lerbacks are anomalies. Even without shared last names and Golden Age histories, a sense of family, or as Hawaiians call it 'ohana, defines the worker experience on Big Island golf courses.

Joey Kaeka and Brian Pay-

apaya are cogs in developing

'ohana at Kohanaiki, a private facility in the shadows of Kona International Airport. An oceanfront development that started and stalled during the Great Recession, Kohanaiki, the youngest of the Big Island's 18 golf facilities, needed workers in 2012 to complete the course for its 2013 unveiling. Kaeka and Payapaya needed jobs.

Kaeka, a tugboat industry veteran from Oahu, the most



populated of Hawaii's eight islands, moved to the Big Island in 2012. He arrived at Kona International Airport, drove to Kohanaiki's main gate, inquired about work and had a job on the course the following day. Payapaya, an island resident since the mid-1980s, installed tile and granite, delivered water, and performed residential maintenance. Work slowed during the recession, so he followed his brother-in-law's suggestion and applied for a construction job at Kohanaiki. Every construction position was filled, but he received a golf course maintenance job. Payapaya started three months after Kaeka, making them two of the longest-tenured employees on the Kohanaiki crew.

Their department, which also maintains common and home landscape areas, ponds, a public and private beach park and community garden, has swelled to 70 employees. A communal spirit exists on the job despite the large team needed to maintain the grounds of an 18-hole amenitylaced club. "Ohana is family," Payapaya says. "That's what the word means. 'Ohana is a real big thing for us." 'Ohana, surprisingly to outsiders, expands rapidly. "It's not just a blood thing," Kaeka adds. "It's a feeling that we're so close friends that we are like brothers. I think that's pretty unique because you are going to have people come and go."

Kohanaiki agronomy manager Joey Przygodzinski, a Big Island native, introduced a variety of Hawaiian terms and values to a visitor earlier this year. His primer begins with aloha, a welcoming spirit and

MORE OHANA NEVER ON AN ISLAND

Mowers, grinders, parts and 'ohana. A maintenance facility might be the ideal place to experience the family atmosphere at a Big Island golf operation. Head equipment technician Billy "Biggie" Quirit enthusiastically welcomes industry visitors to Nanea Golf Club, a stunning private course atop a hillside covered with lava rock and fountain grass. Quirit's connection to the 15-year-old course runs deep: his family chiseled and shifted the lava rock that once covered the land. "I started during the construction," he says. "Most of family worked here for the people who built the course. I would get off work and I would jump on machines, excavators and dump trucks, and helped build it." Quirit now leads a three-person team of

equipment technician responsible for ensuring the club's fleet of John Deere mowers handle the demands of year-round paspalum mowing. Shops with multiple technicians and equipment leases are common on the Big Island.

"We are fortunate enough to lease out equipment," Quirit says. "We're not dealing with equipment that's 10 or 11 years old, so having that is really nice. I have two guys with me that always show up to work and are alBilly "Biggie" Quirit is the head equipment technician at Nanea Golf Club.

ways on time. When they got here, they didn't know anything about golf, so I trained them to my way right away.

"It's been working. I get to take time off and not worry about if the cut out there is going to be perfect, because that's one of our goals is to make sure cut quality, the after-cut appearance, is at a high standard. I don't send anything out there that doesn't cut paper."

Considered a patriarch of the island's equipment technician community, Quirit worked at a pair of Big Island courses before landing the Nanea job. Quirit's relaxed, affable personality – he immediately invited a visitor to a lunchtime barbecue earlier this year – helps create a familial vibe among the island's equipment technicians. Their network includes representatives from multiple industry companies, including John Deere and distributor Pacific Golf & Turf, which sends a technician to Big Island customers each week. The corporate and distributor visits begin and end at maintenance facilities, and conversations extend beyond typical shop and business talk.

"It comes down to service, parts and relationships," says John Deere sales manager John O'Leary, whose territory includes Hawaii. "It's big for these guys to get to know somebody from corporate while also working with their dealer. It has been a good marriage."

For Quirit, the 'ohana reached the mainland last year, as he received an opportunity to visit the John Deere Turf Care Facility in Fuquay-Varina, N.C. The 5,000-mile trip further helped Quirit understand the process and people contributing to Nanea's success.

"It was nice to see the factory," he says. "I met a lot of good people and got to see the assembly line. That was a good trip, for sure."







term familiar to those who live outside Hawaii. He considers 'ohana the most important native concept when creating a successful work culture.

"It's the 'I will take care of you, if you take care of me," he says. "And 'ohana can mean friends, too. 'Ohana is always growing because you keep making new friends. It's just the feeling that we will go above and beyond for each other, because that's how we like to treat our family."

Four Seasons Resort Hualalai director of golf course maintenance Dan Husek, an Illinois native, moved to the Big Island in 2004. Experience has taught him employees "really look out for each other, not just at work but outside of work."

> Brozie Ambrose and Chance Lincoln are two of the leaders on the team Husek manages. The duo helped build the

resort's first 18-hole course in the mid-1990s and they carry an abundance of stories about hauling lava rock and donkeys destroying young turf. Ambrose and Lincoln, a pair of Big Island natives, demonstrate immense pride as they escort a visitor onto the 17th green, a photogenic hole wedged between lava rock and the Pacific Ocean. The par 3 receives significant attention when Golf Channel broadcasts the PGA Tour Champions Mitsubishi Electric Championship each January. The broadcast, though, never describes the effort it took to transform a punishing landscape into a pleasurable spot.

"A lot of labor," Ambrose says. "We had a deadline to get the golf course ready to build a hotel. I think we worked some weeks 10 hours, seven days a week. There was overtime. You could just make whatever you wanted. Labor was hard. We didn't have any carts with roofs at that time. We were always in the hot sun. We had to bring our own lunch. We had to bring our own water. Nothing was provided. You just had to survive. If you wanted to survive in the sun 10 hours a day, you had to make sure you brought enough food to eat and water. Some people didn't last two hours."

Ambrose and Lincoln have lasted more than 20 years. Enduring construction and learning the intricacies of golf course maintenance not only enhances their lives. The work also has expanded their network. Lincoln says the 'ohana created through a demanding job provides "a sense of security." Ambrose commutes more than 90 minutes each way, because of the relationships he has established with co-workers, the land and his supervisors.

Once natives sense 'ohana, thoughts of leaving for a more lucrative job often wane. "I think the majority of my staff – if you ask them why they like to work here – they are going to say because of the guys I work with," Husek says. "It's not going to be because I get X amount of dollars or I get a free lunch. It's not going to be the cafeteria. It's going to be I like the guys that I work with. That's always satisfying when you hear that."

Stories of courses on other islands, including neighboring Maui, offering higher wages to attract experienced foremen or greenskeepers reaches employees on the Big Island, through what Hawaiians call the "coconut wireless." But a family-driven work environment creates loyalty. "It's like, 'They pay this much!'" *(continues on page 48)*

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 enewsletters released at the end of the next four months. Enter https://www.golf-courseindustry.com/form/l/GCI/enewsletter into your web browser to subscribe to GCI's free enewsletters. The series will also include Hawaiian-themed Twitter tours. Follow along @GCIMagazine. MAUKA TO MAKAI APRIL: ALOHA | MAY: 'OHANA | JUNE: MALAMA 'AINA | JULY: KOKUA

▶ 19.5619962°N | -155.9597309°W <

Kona Country Club is on the island of Hawaii. But they're not on an island with John Deere.



Working in the 50th state as a golf course superintendent can be a challenge, especially where equipment is concerned. And yet, Derrick Watts, superintendent of Kona Country Club, Island of Hawaii, never feels that way, thanks to his John Deere Golf dealer. Says Derrick "Without their service and support, we wouldn't have a fleet." He also points to John Deere Financial. "The financial issue was the biggest challenge. And you guys helped us out dramatically."

No matter where you are, John Deere Golf has a solution for you. Call your John Deere Golf dealer today to see what can be done for your course.



JohnDeere.com/GOLF

Trusted by the Best

THE EQUALIZER



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.

t one point in Neil Simon's Tony Award-winning Biloxi Blues, Sgt. Merwin Toomey tells his young recruit, Eugene Morris Jerome, "If there were no such thing as problems, we could all go home at lunch."

As managers, regardless of title or type of facility, we're all problem solvers – or we better be. Not only do most of us face enough problems to keep us from going home at lunch, but solving them is also what is expected of us by our boards, general managers, owners and employees.

The best problem solvers share a number of characteristics:

- They plan for problems. Many managers develop sound and wellconceived plans. Then something unexpected happens. Effective planners develop back-up plans to deal with unforeseen or unintended outcomes.
- They use rigorous logic and progressive-step methods of analysis. They organize their work into constructive increments.
- They tap into substantial reserves of research and data to make factbase decisions. But they're also capable of learning on the fly. They can harness emerging information, and search for patterns from previous study and experience to extract the underlying essence of how things work.

- They are comfortable being uncomfortable. They often enjoy the challenge of unfamiliar problems.
- They continually expand their network of resources. They use professional and peer networks to learn how others have dealt with similar challenges.
- They research other business segments and disciplines for solutions to similar problems. They leave no stones unturned. If more research is needed, they dig back in to explore creative ideas, continually testing new theories and hunches.
- They are positive, determined and patient. They roll up their sleeves and get to work, knowing that problems seldom solve themselves and that a solution exists for every problem.
- And when the solution is found, they share so their fellow professionals can learn from the problem and the solution-finding process. Writing white papers for magazines or presenting your experience in peer-study programs expands everyone's knowledge and proves you to be a tireless learner and a genuine professional.

In contrast, unskilled problem solvers struggle to find new solutions in time-worn practices. They often miss the complexity of an issue and try to force-fit simplistic solutions.

Effective leaders and managers develop their problem-solving skills

through a variety of means: formal continuing education, trial-and-error and with the help of mentors. While there is no substitute for the experience of having faced a major problem and figured out a solution, you also can learn to be a more effective problem solver. Here are three strategies:

GET HELP

The golf business offers terrific resources, including associations, consultants and peers who have a shared interest in helping to find the best solution. Some people are too proud to ask for assistance, but their stubborn and prideful isolation not only compounds the original problem but deprives them of relationships with the many generous and knowledgeable people in our business.

WORK THE PROBLEM

One need not solve all problems or even every aspect of one. It's like the answer to the question, "How do you eat an elephant?" One bite at a time. The key is to break the problem into manageable chunks, solve that part of the problem and move on to the next step. If you have a strategic plan, prioritizing problems becomes easier because your plan tells you which problems are standing in the way of meeting your objectives.

REVERSE ENGINEER

Stephen Covey advised "begin with the end in mind," which is the approach of diligent problem solvers. What will success look like? What will it take – whether it's capital, labor or persuasion – to get there? Reverse engineering brings focus to the intended outcome. Use it as your magnetic north.

Our jobs surround us with problems, making problem solving the unwritten part of every job description. The better problem solver you become, the more valuable you will be in any position your career takes you. **GCI**

WHEN THE WAVE HITS THE WEEDS....

THEY DON'T STAND A CHANCE.



Surge[®] Broadleaf Herbicide for Turf hits listed weeds with multiple modes of action in a water-based formulation that won't wipe out your budget. The result is powerful control of the toughest broadleaf weeds in turfgrass, including knotweed, plantain, oxalis, clover, and dandelion. It even provides yellow nutsedge suppression. Surge works up to twice as fast as traditional 3-way amine products, and is ideal for late-spring and early-summer applications.

Weeds Can't Hold Back The Wave: Choose Surge!

PBIGordonTurf.com

and Surge® are registered trademarks of PBI-Gordon Corporation. 12/17 05023



PLAN FOR THE WORST...

How a Tennessee superintendent handles the haymakers thrown by Transition Zone weather.

By **Guy Cipriano**

Cash had composed a ballad about maintaining Nashville turf , it would undoubtedly possess a melancholic tone.

"That really is in the core of the Transition Zone," Syngenta senior technical representative Dr. Lane Tredway says. "Hot and humid summers that are really tough for growing coolseason grasses and then very cold winters that are difficult for growing warm-season grasses."

Ingram and his team maintain multiple varieties of grasses. The challenges are enormous, yet the rewards are immense.

CONDITION

Ultradwarf Bermudagrass greens are emerging in several Transition Zone markets, but conversions aren't occurring as rapidly in Nashville, Tredway says. Opened in 1951, Bluegrass Yacht & CC is typical of an older course: the greens are small (slightly over two acres for the entire course) and covered with bentgrass.

The A-1/A-4 greens are ideal during winters

like this past one when temperatures plunged into the single digits. But they can morph from tame to tricky when Nash-

yler Ingram knows tough growing environments.

DELIVER FOR THE BEST

Born and educated in Tennessee, where wacky weather swings are the norm, Ingram started his professional career at Big Spring Country Club in Louisville, Ky., before returning to his native state. Like stifling heat rising on pavement, Ingram experienced a quick rise, landing his first head superintendent job in 2014.

Looking back, Ingram was destined to work outdoors – his father and brother are Tennessee state park rangers. "I wouldn't know what to do if I tried working outside the golf industry," he says. "I love it."

It takes passion, along with grit, knowledge, industry support and a sense of humor, to handle the rigors of his job. Ingram is in his fifth season as the superintendent at Bluegrass Yacht & Country Club, a private facility with a Johnny Cash Parkway address in Hendersonville, 20 miles north of booming Nashville. If ville experiences runs of 90-degree days in June, July and August.

Bluegrass Yacht & CC's fairways are treelined and covered with a new variety of turfgrass. As part of a significant renovation in

2017, the club sprigged its fairways with Latitude 36 Bermudagrass. The project also included irrigation, bunker and drainage enhancements.

Playability sparked the decision to convert from Vamont to Latitude 36

Bermudagrass fairways. A denser surface with more leaf blade will allow the fairways to maintain satisfactory playability through winter, Ingram says. He adds he will maintain the fairways at around ½ inch for most of the summer.

Ingram

A new variety of fairway grass has led to changes in Ingram's chemical program. Spring

CONDITION. PERFORM. RECOVER. syngenta.

dead spot is a major disease concern on Bermudagrass fairways in the Transition Zone, and Ingram treated fairways with two applications of Velista this past fall. He's applying the broad-spectrum SDHI fungicide again this spring.

Tredway calls spring dead spot "the big" problem on Bermudagrass fairways in the Transition Zone and falling behind on control can create major issues. "The recovery is slow and it can negatively impact playability into summer in a severe case," he says. "Unfortunately, with spring dead spot, there's nothing you can do from a curative standpoint to speed up the recovery, so it's about preventative fungicide applications in the fall to protect that Bermudagrass during the winter dormancy period."

PERFORM

All surfaces must be prepared for year-round play. "Our members expect it to be the best it can be whether it be January or whether it be August," Ingram says. "My job is to exceed their expectations. It doesn't matter what day or month it is. We still have to put out a product that they feel justified paying a monthly membership for that's worth having them come out and play."

Lessons from a life in the Transition Zone guide Ingram's agronomic decisions. While he has kept journals since arriving at Bluegrass Yacht & CC, the data offers little insight into what a new year might bring because the annual weather isn't repetitious. Instead, he expects brutal and relishes benign.

"I always plan for the worst," he says. "I always plan for the hottest summer and plan for the coldest winter. You kind of balance it out in between. That's the way I go about it. I definitely stock up in case any problems arise in the summer. If we have an outbreak of disease, I always have something on hand, so I don't have to worry." Effective water management is key to producing high-quality greens bentgrass greens in the Transition Zone, and Ingram says his crew can be hand watering as early as April and as late as October in a challenging year. To control abiotic stresses, Ingram complements careful irrigation practices with a reliable fungicide rotation. In addition to Velista, staples include Appear, Briskway, Daconil Action and Heritage Action.

Velista, Ingram says, also offers large patch control. Bluegrass Yacht & CC features a mix of zoysiagrass and Bermudagrass tees, with the zoysiagrass offering the ability to provide quality tees in shaded spots. "Velista has worked really well on large patch," Ingram says, "and you're getting your spring dead spot control."

Ingram's pest management program includes a wall-to-wall spring application of Acelepryn to ensure grubs don't affect turf. "I try to get out early in the season to control that," he says. Ingram plans on conducting a nematode assay in May and will incorporate Divanem, which was released last year, into his program.

Bluegrass Yacht & CC supports close to 20,000 rounds per year. Implementing a solid preventative spray program allows surfaces to perform at consistent levels.

RECOVER

Daconil Action, which in-

cludes the active ingredient Acibenzolar-S-methyl, plays multiple roles in Ingram's program. For starters, the fungicide offers algae control when sultry temperatures follow a summer dousing, Ingram says. Acibenzolar-Smethyl also boosts the vigor of Bluegrass Yacht & CC's turf. Applying Heritage Action further infuses the plant with Acibenzolar-S-methyl.

"You get a great response from the Action products," Ingram says. "The response from Acibenzolar is something you definitely see. The plant just responds a whole lot better when you are spraying the Action products."

Acibenzolar-S-methyl, Tredway says, stimulates expression of a set of "different proteins in the plant." Some of those proteins protect cell components from multiple stresses, including heat and desiccation, while minimizing excessive evapotranspiration. "It's been an extremely valuable tool for those superintendents that are still trying to maintain creeping bentgrass in the Transition Zone," he says.

Early in his career, Ingram pointed to Aug. 15 as the key date for assessing the quality of turf. But as prolonged summer temperatures and humidity levels increase abiotic stresses, Ingram and his team often experience delayed gratification – and relaxation.

"It's mow and go and you're going from sun up to sundown," he says. "And when you finally get to that point where you make it through, it's definitely relieving and rewarding at the same time." GCI

Guy Cipriano is GCI's senior editor.



TARTANT TALKS

Join Superintendent Radio Network for its monthly "Tartan Talks" podcast series examining the work, ideas and careers of American Society of Golf Course Architects members. Podcasts are available through www.golfcourseindustry.com, iTunes and GCI's bi-weekly Fast & Firm enewsletters.





A Chance to Restart

A glimpse into one superintendent's ordeal with skin cancer.

By Chad Palicke, CGCS

early everyone knows of someone who has been affected by cancer.

At times, there's no rhyme or reason as to why it affects a person while other times it's the direct result of personal habits or environmental exposure. In the golf course profession, we can be subjected to an array of carcinogens; from simply inhaling topdressing silica dust to contact with the chemistry we so carefully apply to the turf. Fortunately, with augmented training and safety practices, we minimize these hazards. But one of the most commonly overlooked perils is the threat of ultraviolet radiation from sunlight, a known environmental human carcinogen.

The first sign of sun damage comes in the form of the precancerous cells of actinic keratosis (AK); when discovered there is seldom just one area of damage. If left untreated, it can advance into any of the forms of skin cancer: basal cell carcinoma, squamous cell carcinoma or even worse melanoma.

Now the purpose of the article isn't to get too comprehensive with regards to skin cancer symptoms and treatments. With a simple keystroke or Google search, all the information you'll need is



New Granular Solutions for your Turf Nutritional Needs

A Family of Unique Products Powered by Advanced Technologies Developed by an Iconic Industry Leader

Target Specialty Products[™] is proud to introduce two new lines of professional granular products that deliver customized solutions to the professional turf manager:

- **Turf Fuel G[™]:** advanced technologies that meet the most challenging requirements
- **TS Pro™:** quality products designed for everyday demands



fin

800-352-3870 target-specialty.com

TURFHEAD EXPERIENCE

Gowanie (Mich.) Golf Club superintendent Chad Palicke was diagnosed with widespread basal cell carcinoma, a common form of skin cancer.

at your fingertips. The point is to shed some light into my own experience with the treatment as I was diagnosed with widespread AK and basal cell carcinoma this past off-season.

Shortly after Christmas, I went to see my physician for my annual check-up when he noticed dry, flakey red areas on my face. Being the typical male, I thought nothing of it as I had been dealing with these spots for at least a couple of years. He suggested I see a derma-



tologist and within a few weeks I went in for a skin cancer examination. The doctor immediately identified extensive sun damage to my facial area. Essentially the majority of my face displayed actinic keratosis with areas that had progressed into basal cell carcinoma. I was prescribed a 30-day program of Fluorouracil (5-FU) which is a topical chemotherapy applied daily. At first, I thought nothing of it, although that quickly changed when the nurse shared

Improving Water Quality from Above and Below...

Otterbine AERATING FOUNTAINS

OFFERING BOTH FUNCTION AND BEAUTY these surface spray aerators are engineered to provide results, and are supported by a 5-year warranty and *Pattern Guarantee*. Widely used throughout the world, Otterbine's Aerating Fountains improve and maintain water quality in ponds and lakes by controlling algae and eliminating odors while providing attractive fountain-like displays. LED light systems are available!

To learn more call us at 1-800-237-8837 or visit us online at www.otterbine.com/aerating_fountains



🖬 🖸 🔠

Aerating Fountains by Otterbine®

FORE! FIRE ANTS

Fire ants are a big problem on golf courses. Extinguish[®] Plus Fire Ant Bait is a big solution.

Extinguish[®] Plus Fire Ant Bait combines the killing speed of an adulticide and the long-lasting control of an insect growth regulator (IGR). This two-way action destroys visible and hidden fire ant colonies.

- Long-lasting
- Low cost per acre
- Sterilizes the queen and kills problem worker ants



man 1



To learn more, visit www.CentralAntControl.com, call 800.248.7763 or contact your distributor.

with me images of what to anticipate.

Upon getting back home, I began my own research, scouring the internet and found a whole host of photos and blogs of patients' experiences with the treatment. Needless to say, I was less than thrilled to begin this whole endeavor. The mode of action with any topical chemotherapy is to destroy all mutated skin cells while leaving the healthy, normal skin cells unscathed. One's experience with this treatment will vary as it is dependent upon the level of sun damage.

After a week delay with our health insurance (due to being

prescribed chemotherapy), I began my daily applications. From the information I'd gathered, I knew there would be approximately two weeks before things would take a turn for the worse. During that time, I informed my club owners and employees of what to expect and the likely need for a couple of weeks once the treatment was effectively at work.

Just as the research indicated, the first couple of weeks were effortless; the only noticeable areas were blotchy, red areas afflicted by carcinoma. But as the 14th day arrived, the true level of sun damage became quite evident when all areas afflicted with actinic keratosis and carcinoma became red and discolored. After meeting with my dermatologist, he assured me that everything was proceeding as normal and to continue on with the treatment.

The schedule for the last two weeks involved applying the topical chemo in the evening; gently washing my face in the morning and applying Aquaphor (i.e., Vaseline) for the remainder of the day. The degree of misery became quite apparent by the 16th day as my skin started to burn and swell. I would best describe the experience as having the worst sun burn, times two.

As each day progressed,

the worst sections developed blisters and became ulcerated while any afflicted area became increasingly red and sore. It was at this point where I couldn't sleep, became extremely irritable and sought isolation. During the final week, the blisters and ulcerations began to excrete a fluid as the skin began "the weeping phase." Finally, as the 30th day arrived, the cancerous cells had hopefully been destroyed as my body began to heal and generate new, healthy skin cells. At this point, there was a sense of great relief realizing the treatment was over even though discomfort continued for a number of days following

1 in 6 children are malnourished. We Can Change That!

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

FEEDE

A full life feels good."

feedthehungry.org 877-769-9267



Family support helped Gowaine Golf Club superintendent Chad Palicke handle the emotions of battling skin cancer.

the last application.

Once finished, the dermatologist provided a topical antibiotic to help fend off infections and to diminish the chance for scarring. He also reiterated the importance of embracing the healing process. This not only includes utilizing antibiotics and moisturizers, but, more importantly, keeping your whole self healthy and minimizing stress levels. In our profession, this can be difficult as we often place work ahead of our own health.

If I could offer any advice, I would first recommend being proactive with protecting your skin from exposure and getting an annual skin cancer screening. Dermatologists truly are the only ones who can accurately define any potential concerns. Keep in mind actinic keratosis can evolve into carcinoma or melanoma; left untreated it can advance into a much greater variant.

Secondly, if your doctor suggests this treatment, it's a necessity to plan it in the off-season. Once the topical chemo begins to work, the skin becomes extremely sensitive to temperature, sunlight and wind, and exposure to containments such as dust or pollen should be avoided. Most importantly, this will permit you the necessary time away from work to reduce stress and ensure proper healing.

Finally, I would suggest preparing your family by showing them images of what to expect. This is especially important with young children as they'll have difficulty understanding the circumstances. Inform them you'll be tired and irritable or that they'll be unable to give you a kiss goodnight. Your loved ones will offer you help when in reality there's not much they can do but support you. At the height of the chemotherapy, you'll be less than willing to be out in the public eye. Not only do people tend to stare, but you'll constantly feel the need to explain your situation. In my own case, I was very uncomfortable attending my five-year-old's



"TRACTION IS THE GO-TO FUNGICIDE DURING SUMMER DISEASE PRESSURE FOR GREENS, TEES, AND FAIRWAYS."

– STEVE VINCENT T&O Sales Manager, Nufarm Americas



GAIN OPTIONS.

Traction FUNGICIDE

NEW Traction[™] Fungicide is labeled for every course area so you can use it when and where you need it. All-terrain Traction delivers premium performance for greens, tees and fairways, plus it promotes healthy turf growth – even in the summer.

GAIN MORE WITH TRACTION.

NUFARMINSIDER.COM/TRACTION ©2018 Nufarm. Important: Always read and follow label instructions. Traction™ is a trademark of Nufarm.



TURFHEAD EXPERIENCE

"Daddy Daughter Dance" in the midst of my procedure, although I was very proud she insisted we still attend.

In the end, I found this event enlightening and insightful. This procedure reversed 45 years of neglect and offered me a second chance at doing things right; it gave me a small perspective into what some individuals experience on a daily basis; it shattered my own invincibility; and, most importantly, it drew me to appreciate my family and life even more. **GCI**

Chad Palicke, CGCS, is the superintendent at Gowanie Golf Club in Harrison Charter Township, Mich.

From the MD Anderson Skin Care Center

The two most common kinds of skin cancer:

Basal cell carcinoma accounts for more than 90 percent of all skin cancers. It is a slow-growing cancer that seldom spreads to other parts of the body. However, if left untreated, it can spread to nearby areas and invade bone and other tissues under the skin.

Squamous cell carcinoma is much less common than basal cell carcinoma. It can be more aggressive than basal cell carcinoma and is also more likely to grow deep below the skin and spread to distant parts of the body.

These types of skin cancer are sometimes called nonmelanoma skin cancer. When they are found early, there is nearly a 100 percent chance for cure.

Another type of cancer that occurs in the skin is melanoma, which begins in the cells that produce pigment in the skin. It is less common than basal or squamous cell skin cancers, but it is more dangerous than either and can be deadly. If caught early, there is nearly a 97 percent chance for cure.

Symptoms of Skin Cancer

Symptoms of skin cancer vary from person to person and may include a:

- Change on the skin, such as a new spot or one that changes in size, shape or color
- · Sore that doesn't heal
- Spot or sore that changes in sensation, itchiness, tenderness or pain
- Small, smooth, shiny, pale or waxy lump
- Firm, red lump that may bleed or develop a crust
- · Flat, red spot that is rough, dry or scaly

Many of these symptoms are not cancer, but if you notice one or more of them for more than two weeks, see your doctor.



A better world starts with **CLEAN WATER.**

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

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

Contact an Air-O-Lato professional today

airolator.com 800-821-3177



TURF & SOIL DIAGNOSTICS

Accredited labs providing performance testing for greens, tees, bunkers and fairways

www.turfdiag.com 855-769-4231

- Testing of USGA, sand-based and native soil greens, modern bunker designs, fairway capping materials, and more!
- Our evaluations provide insight into material properties and course conditions.
- Our reports offer sound scientific data to aid renovation, maintenance and management decisions.

DON'T BE LATE!

Nivales

Control Anthracnose before it arrives.

Don't let the extended winter delay your timing. Nivales tank mixed with Echo chlorothalonil makes an excellent Anthracnose control program for high performance golf turf.

sipcamagrousa.com 1-877-898-9514



© 2018 Sipcam Agro USA, Inc. Nivales is a registered trademark of Sipcam Agro USA, Inc. Always read and follow label directions at for use. Product(s) referenced herein may not be registered in all states. Confirm your state's registration with your Sipcam Agro US

2-WIRE VS. CONVENTIONAL



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.

ccasionally, I feel compelled to revisit the controller-versus-decoder (2-wire) comparison because it is an ever-evolving issue. Why now? Well, in 2017 a significant milestone was reached in that more new/replacement golf course irrigations systems were installed utilizing 2-wire control systems than with conventional satellite/field controller control systems, according to the major manufacturers. The world of golf course irrigation control is changing.

Decoder systems have been around for many years, but the newer-style decoder systems, now referred to as 2-wire systems, started with the introduction of Rain Bird's Integrated Control Module (ICM) system in 2008. Two-wire systems operate on 2-wire paths for all the sprinklers, as opposed to a control and common wire for each sprinkler/solenoid. This saves considerable wire, however, the 2-wire communication cable cost per foot is much more expensive than the control and common wire costs are per foot. Much of that cost savings is also eaten up by the additional grounding requirements necessary in a 2-wire system. While conventional wired irrigation systems are relatively robust, 2-wire systems are much more sensitive to wire nicks, poor splicing and shoddy installation practices. So why the shift?

Two-wire systems have lots of advantages, the main one being technology. Two-wire technology allows for features not available with a system that just sends a signal down a wire. Twowire systems deal more with data type signals. The most obvious benefit of 2-wire technology is the ability to operate hundreds of sprinklers at the same time anywhere you want on the golf course, limited only by the irrigation systems pumping and piping capacity. Most conventional systems are limited to a maximum of 16 solenoids at the same time per controller. Twowire systems also have the ability to do a great deal of self-troubleshooting that is extremely accurate, pinpointing very closely the location of a problem. This is accomplished by monitoring voltage and, in the case of some manufacturers, amperage at each sprinkler/module.

Another advantage to a 2-wire system is there are no controllers sticking up out on the golf course, which is desirable on links-style courses or courses subject to vandalism or flooding. However, the 2-wire technology's biggest advantage is that it continues to evolve allowing the manufacturer to add additional features to your system in the future. This is not possible with a conventional signal type control system. Since you are making a long-term investment - 20-plus years - the ability to update your system without replacement should be very attractive. Some things that could be/are a pos-

sibility:

- Confirmation of whether the sprinkler popped up or down
- Pressure at the sprinkler
- Flow at the sprinkler
- Arc setting
- Arc adjustment
- Switching from part-circle to fullcircle

Of course, there are also disadvantages to the 2-wire system. For example, if you damage the communication cable, then the system is not operational downstream of the damage. Also, if you lose the computer, then you cannot operate. And 2-wire systems are very sensitive to lightning and power issues. Conventional systems have much more redundancy as there are field controllers/satellites which you can operate from if you lose the computer or communication signal. On a 2-wire system you can mitigate these issues somewhat, but it is expensive and reduces some of the advantages of having 2-wire in the first place.

The most important decision on which control system to purchase should be based on is your management style. If you are used to walking up to a controller and making changes, are uncomfortable with technology, or like lots of redundancy, then 2-wire is not for you. If you are used to operating your system only from the remote or central, don't know where your controllers are located or love apps, then 2-wire is probably what will work best for you.

Finally, keep in mind that at some point there will be another person in your position and what will they want. What is best for the course long term?

These are exciting times for golf course irrigation control systems. While 2-wire systems have the downsides of most technologies in terms of sensitivity and new things to learn, the ability to upgrade and improve your system over time without massive hardware changes and their associated costs is very appealing. **GCI**

A SWIFT KICK TO THE NUTSEDGE.

Quickly control yellow nutsedge, green kyllinga and broadleaf weeds with symptoms often visible within 24-48 hours. Surepyc[™] with sulfentrazone can be applied to both cool- and warm-season turfgrasses. And with dual modes of uptake through roots and leaves, you'll deliver a more effective strike every time. It's not just a fast-acting answer to add to your program. It's a glimpse of new, innovative products to come.



Important: Always read and follow label instructions. SUREPYC is EPA registered. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status.

©2018 AMVAC Chemical Corporation. All rights reserved. AMVAC and SUREPYC are trademarks owned by AMVAC Chemical Corporation. EIFG is a trademark of the Environmental Institute for Golf. www.amvac-chemical.com. A300-051119-8 2/18



GET THE SPECIMEN LABEL AT AMVACANSWERS.COM

Erosion around lake edges represented a major problem at Italy's Lignano Golf Club.



Lignano Golf Club's turf leader finds a new solution to fix erosion woes on the course.

By Rob Thomas

abrizio Bertoli had a major problem with his lake edges. The director of golf at Lignano Golf Club in

Italy was concerned about both water erosion and the collapse of the piles line set in front of the greens.

"Every year water wore away about 20-30 centimeters of the lake's edge and there was no way to stem this action," Bertoli says. "The ground is mainly composed of sand and every wave, every up and down movement of water, meant a bit less of edge."

The piles were set 25 years ago, according to Bertoli, and most of them leaned toward the lake, making the areas dangerous for both the ground's crew mowing and players.

Bertoli considered multiple options to address your problem, but none won him over. "I could have used stones, but Lignano is a golf course near a long sandy beach and stones don't suit well," he says. "Furthermore, I would have lost too many meters of rough to shape the slope. The inclination [requirement] was for each meter in height, three meters in width. Replacing the piles would have meant lots of money and covering all the areas which needed to be fixed would have been out of our possibilities."

Right before he was about to approve a proposal to rebuild all the edges with stones, Bertoli was flipping through an industry publication and saw an advertisement for AquaEdge. AquaEdge is a buffer where water meets grass ... a retaining wall comprised of horizontal layers of sand-filled synthetic grass.

"There was just a photo and a construction sketch. It looked simple, easy and it appeared really well-defined and natural," he says. "I immediately sent an email to Richard Allen, EcoBunker CEO, asking for more details and he contacted me forthwith. He clarified to me some doubts and we spoke about possible costs and we set up an appointment [on location]."

Two weeks later, Bertoli and the company performed a walk through, referring to the results as "love at first sight." He tested the product by replacing a 50-meter-long wood pole line in front of the 10th green. Having done that, Bertoli was sure AquaEdge was the right solution.

With so many options,





Lignano Golf Club rebuilt lake edges using the AquaEdge method. The project was split in two solutions based on the depth of the standard level of water near the edge.

what made Bertoli choose AquaEdge? "Lots of reasons," he says. "The innovative idea, how it looks, easy construction, the absence of heavy vehicles on the course, the speedy length of working process, and at least – but not less important – more cost effective." Allen, a civil engineering designer for nearly 30 years, says his company's focus is designing and getting the right solution for each site.

"The best designs always address all constraints and opportunities to deliver the most efficient and aesthetic solutions," Allen says. "All sites are different. At Lignano, the site review revealed that most significant design factors were the weak underlying soils, the steeply sloping lake margins (in some areas), the desire for 'sharp' aesthetics, plus, of course, construction budget. I responded by designing a stone filled gabion foundation under the permanent water line, and then built the AquaEdge along all visible elements of the lake edging. This meant that we could focus most of the construction budget on the aesthetics, delivering a great look, while less expensive, but robust foundation works support the AquaEdge walls."

The Lignano project was split in two solutions based on the depth of the standard level of water near the edge, according to Bertoli. In addition, the EcoBunker team also dug a small trench and laid 200-linear meters of the synthetic wall in the shallow zones.

"It's been absolutely more simple to do than to explain," Bertoli says. "We started working the first week of January and we finished 355 meters on the second of February."

A few months in, and Bertoli and his members are "fully satisfied" with the solution. He oversaw each step of the construction process and says there were no surprises along the way. "I really recommend this solution for a lot of reasons," Bertoli says. "The working process is very easy and it doesn't require destroying the course as many of other solutions [do]." **GCI**

Rob Thomas is a Cleveland-based writer and frequent GCI contributor.



New Granular Solutions for your Turf Nutritional Needs

A Family of Unique Products Powered by Advanced Technologies Developed by an Iconic Industry Leader

Target Specialty Products[™] is proud to introduce two new lines of professional granular products that deliver customized solutions to the professional turf manager:

- **Turf Fuel G™:** advanced technologies that meet the most challenging requirements
- **TS Pro™:** quality products designed for everyday demands



CASE STUDY OF TARGET CUSTOMER SPECIALTY PRODUCTS^M

Ron Furlong

here are many who believe great customer service is a thing of the past. An art lost long gone with the simpler times it was a part of.

However, although it is no doubt true that it is indeed much harder to find that great customer experience today than it was, say, 20 or 30 years ago, these experiences can still be found. There are companies operating today, and individuals within those companies, who still know how to provide that good oldfashioned customer experience. And not just want to provide it, but actually know what it takes to do the job.

One such company is Target Specialty Products, providing services and products to the golf industry (among others in the turf arena) for over 80 years. Target Specialty Products is a leading value added reseller of turf and ornamental products and solutions, application equipment, supplies, services, as well as education and training programs.

Target Specialty Products has 43 locations across the U.S. and Canada, and one of the very best examples of someone who epitomizes the Target Specialty Products customer service approach is Rudy Zazueta.

One thing that gives Rudy, who's been a sales rep with Target Specialty Products for over ten years now, an instant connection with Superintendents is that Rudy once was a super himself. He knows what these folks are dealing with. He's walked in their shoes.

"Anyone can come to their golf course and deliver a jug of this, or a pallet of that," he told me. "But I look at it differently. I'm not just the delivery man. I'm always thinking, 'What can I do to help this person be more successful?' That's my approach."

Rudy used the words honesty



RUDY (left) WITH WILLIE LOPEZ.

and integrity a few times during our discussion. These words are important to him. They get to not only his core values, but the core values of Target Specialty Products itself.

One Superintendent who appreciates Rudy's values is Willie Lopez, Superintendent at The Plantation Golf Club in Indio, California. The private club in the California desert opened in 1996 and was designed by Brian Curley, with consulting from Fred Couples.

"Target Specialty Products' customer service is awesome," Willie told me. "The best around. Rudy is always there when I need him."

One of the things Willie appreciates the most about Rudy's service is the quick turnaround when he places an order.

"The deliveries come three times a week from Target Specialty Products . If I place an order on Tuesday, I get my products on Wednesday. If I place it on Thursday, I get it on Friday."

Of all the services Rudy (and Target Specialty Products) provide for the Superintendents in this region of California, the most unique is undoubtedly the educational aspect, which is something Target Specialty Products prides itself on.

Rudy has taken this to a new level by hosting an educational seminar every two months.

"I set up the meetings," Rudy said. "We get thirty to fifty folks at each meeting. Usually I bring in multiple speakers, often from the chemical companies like Syngenta, Bayer, BASF, Dow. All of them. The speakers usually talk for a half hour each. It also allows the supers to network. And of course, California has very strict pesticide license laws. Superintendents have to earn 20 CE credits (Continuing Education) every two years. Simply by attending every other one of the Target Specialty Products seminars Superintendents can earn the credits required by the state."

Willie also mentioned to me an annual visit Target Specialty Products does on site at Plantation Golf Course.

"They come in once a year and conduct a safety training for my workers," he said. "Something we need to do to comply with California state regulations. It's invaluable."

It's safe to say that Target Specialty Products is simply providing a service other companies do not.

"Early on with when I started at Target Specialty Products," Rudy told me, "several Superintendents, including Willie Lopez, really helped me identify the needs to help keep them informed with the latest info in regards to new products, and also how to help them comply with California's state regulations."

This desire to help Superintendents is what Target Specialty Products does best. A company that still believes in good oldfashioned customer service.

"I like to think of that Benjamin Franklin line to describe my approach to customer service," Rudy said. "Well done is better than well said."

Nematodes may be the least obvious culprit behind spring turf damage, but don't discount them from the checklist of usual suspects.

By Kurt Kleinham

hile superintendents prepare for diseases like dollar spot or Pythium root rot, nematodes often go unnoticed as they making meals out of the vulnerable roots of turf recovering after winter. When turf starts underperforming all other possibilities are checked off, says Richard Buckley, director of the plant diagnostic lab and nematode detection service at Rutgers.

"Usually with nematodes, it's not uncommon for them to be the last thing the superintendents think about when the grass isn't performing well," he says. "They've got dry spots they have to hand water a lot more, or poor nutrient uptake."

Affected turf starts to thin and yellow in areas that otherwise seem healthy, and even when fertilizer is applied, the turf doesn't respond. "Very often in those situations, when they've exhausted every other possibility, that's when the sampling happens, and then maybe they count nematodes," Buckley says. "At that point, you're in a curative or reactionary mode, and there's not a lot you can do until you recover some root biomass."

Instead, it pays to be proactive, starting with regular sampling once temperatures start to warm up for the season, says Dr. Billy Crow, landscape nematologist for the University of Florida. Though each kind of nematode is different, most aren't too active below 50 degrees.

"Then, from soil temperatures of about 50-80 degrees, they're going to be more active," he says. Once temperatures move past about 80 degrees, nematode activity should fall back again.

The length and intensity of the winter plays a part in nematode activity as well, as a long, difficult winter potentially meaning fewer nematodes than a milder winter, he says.

GET COUNTED

If there's been a history of nematode issues on a course, a superintendent should sample occasionally, possibly about once each year, says Crow. For courses without a history of heavy nematode pressure, it can be helpful to track totals, but less necessary to do an annual check-in. With or without, if turf is showing root loss without a direct cause, that's a signal that nematodes might be the culprit.

If superintendents have never made an accurate count of nematodes before, it's a good way to establish a baseline, says Dr. Lane Tredway, Syngenta senior technical representative. "It's the first step, and really one of the most important," he says.

Buckley prefers sampling before the season starts, as the turf is growing most vigorously and the nematode counts will be highest. "I like to know what you have coming out of winter," he says. "Then you can use the nematicide that's most effective. You can knock the stress off the grass, and it's one thing you can put to bed before you go into the heat of the summer."

Getting a head start on nematodes might help control turf stress later in the season with a more proactive approach, says Tredway.

"You used to be able to wait until the nematodes got out of control, then go throw out the Nemacur and walk away for a year," he says. "Those days are gone. To me, treating a nematode now is a lot like managing a fungal disease. You want to be preventive. You want to have a program that controls them before they get out of control."

Nematodes become more active when soil temperatures reach 50-80 degrees.

Don't rely on eyesight to see nematode populations on the turf itself. Nematodes won't be visible on the turf's roots, at least without a powerful hand lens or a microscope, says Crow.

"Samples are the only way you'll really know you've got an issue. You have to get those to a lab," he says. "The biggest thing that sampling is going to do for you is let you know what kind of nematodes you're dealing with."

When taking samples for analysis, don't pull only from a single area in affected turf, and try to avoid just taking a cup cutter, Buckley says.

"I had a guy send me 10 cup cutters from a single green, and we did every sample individually. The variability from plug to plug was remarkable," he says. "Literally from samples two feet apart, one will be well above threshold, the other won't."

Using plugs, if a superintendent sent samples to Buckley's and other labs, they're likely to come back with varied counts, he says.

Buckley recommends using a 1-inch soil probe and taking about 25 cores from around the affected area and collecting them in a bucket and using the composite for testing instead.

"If you have a composite, [results from different labs] should all be relatively similar. We all came out of the same bucket, so there's less of a margin of error," he says.

Superintendents can focus on problem greens or send samples from around the course if they're looking for a broader baseline to start with, says Buckley.

"Nematodes on a golf course are going to be present across





Leader of the Pack

When it comes to being the king of the course, **Trojan golf batteries** lead the pack.

For over 90 years, Trojan Battery's time-tested, Made in the USA



line of extraordinary batteries have enhanced the way people live, work and play around the world.



+1-562-236-3000 | trojanbattery.com | 800-423-6569







PESTS AND DISEASE

the entire property, really," Tredway says. "But you can have hot spots where the populations are particularly high. You're going to see symptoms of the issue where there are other stresses being imposed on the turf, whether that's drought, shade or traffic."

IT'S JUST A NUMBER

The results will give a superintendent a rough idea of whether particular nematode populations are potentially causing a problem on the course, says Tredway. Each population total can be compared to threshold totals, established for a course's particular region and turf species. But those numbers aren't a definitive ruling on whether nematodes are to blame for turf damage. "Comparing to the threshold really isn't the final answer for a lot of reasons," he says.

One major reason is that the thresholds only consider individual nematodes, but in most cases, in reality, "you've got a combination of four or five or six different nematodes all present at the same time," Tredway adds. "If all four of them are below threshold values, they could still be acting together to cause a significant issue."

Buckley uses thresholds from "The Turfgrass Disease Handbook" by Houston Couch because they have peer review behind them.

"If you search for nematode thresholds, you'll find that everyone's got different numbers," he says. "If you're in the northern climate, my numbers are probably too low. If you're in the southern climate, they're probably too high. But I would take all the thresholds and treatment recommendations with a grain of salt. They're guidelines."

Even with high numbers of nematodes, they might not be actually doing damage to the turf itself, says Crow.

"One thing I've been trying to get people to focus on, is they get so caught up in nematode counts," he says. "You're not trying to manage nematode numbers. You manage the health of your grass. That should really be your focus. You want to take samples to get an idea



If turf is showing root loss without a direct cause, that's a signal that nematodes might be the culprit.

of what you're dealing with, but guys get obsessed with these counts."

If a superintendent has a high lance nematode count, but the turf looks healthy and the roots look strong, those nematodes aren't something to worry about right now, Crow says. Once the turf starts fading, then it might be time to consider those high counts.

"You're not going to kill all these nematodes," he says. "They're a component, but they're not the whole story."

CULTURE FIRST

Once nematodes are identified, superintendents should do everything possible culturally to help turf rebuild root biomass.

"Always the first thing we recommend is changes to the culture: Raise your height of cut, do whatever you can to grow new roots. Fertilize, water more," Buckley says. "Which, all this may be contrary to what you want to do to maintain playability. In some cases, if you do that

SABRINA TIRPAK/RUTGERS PLANT AGNOSTIC LABORATORY

and become permanently proactive that way, that might be all you need to do.

"I always tell guys to look in the mirror and ask themselves, 'What do my clients want from this golf turf?' If it doesn't have to Stimp well every day, then what are you doing? Find your sweet spot with your clientele, and maybe that's all it takes."

As a superintendent gets a nematicide program started, look for products that cover the types of nematodes that seem to be the most prevalent on the turf, says Buckley. He looks to Bayer's Indemnify, Syngenta's Divanem or Ouali-Pro's Nimitz Pro G. For each, the label's recommendations are for preventive applications, so he recommends getting a count in spring and then using the products according to the label.

Though there aren't any cases of true resistance in root-feeding nematodes, the possibility definitely exists, says Tredway.

"For example, intestinal worms in animals: Those are nematodes. And they're known to become resistant to dewormers that are used in agriculture and in companion animals as well," he says. "That's another great reason to use a program approach incorporating multiple products during the season to hopefully prevent or at least delay resistance." GCI

MAUKA TO MAKAI

SHARING ISN'T A RULE OF OURS.



Tell your colleagues to get their own subscriptions at golfcourseindustry.com/subscribe



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.

EQUIPMENT MANAGER'S VEHICLE

his Jacobsen Truckster XD Technical Response Vehicle (TRV) has factory optional glass doors and a pivoting windshield along with a roof-mounted Red Dot Air Conditioner. An Ingersoll Rand 2475-175 PSI Air Compressor, with a 25-foot retractable air hose, operates the power tools and fills tires. The 2,000-watt generator operates the MIG Welder and electric power tools. A swing-out lift arm has a 400-pound capacity with an electrically operated Foley United Winch. Other useful items include a toolbox, tailgate mounted vice, gasoline/diesel cans, hydraulic jack, tow straps and hitch, and battery jump starter. The permanently mounted items were added with varying minimal labor hours with



varying competitive pricing. Shane Barnett, equipment manager, and Tim Hiers, CGCS, director of agronomy, at The Club at Mediterra in Naples, Fla., are a formidable team.

FAIRWAY AERIFIER PLUG REMOVAL

he Club at Mediterra in Naples, Fla., quickly and easily removes fairway aerifier plugs with a new Jacobsen Core Harvester mounted on a 2014 Toro Workman. The Workman's hydraulic pump operates the conveyor belt that was acquired from a TYCROP fairway topdressing machine. Nylon tie-down straps hold the conveyor belt in place and bags of sand are placed on the right side of the dump body to balance the weight properly. Two rental electric-hydraulic dump trailers, with low sides, measuring approximately 6 feet by 16 feet, are used to collect the aerifier plugs, which have a much higher load capacity compared to using a turf vehicle dump body. It took less than three hours to mount everything, and the equipment and parts were in inventory. Shane Barnett is the equipment manager and Tim Hiers, CGCS, is the director of agronomy.







GCI supports the initiatives that matter to you because they matter to us too! We'll continue to raise money and awareness for Wee One Foundation and other non-profits that make a difference in the lives of turfheads. We champion causes that matter.

GIVING BACK

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





(continued from page 20)

Payapaya says while stretching both hands past his shoulders. "Maui is one thing. It's good. But if I go there, am I going to be as happy as I am now? I was pretty much raised with Kohaniki. I have seen it grow. It's hard to leave a place."

Mauna Kea director of golf Josh Silliman says the resort boasts multiple employees "who have had one job their entire life." The staff includes an irrigation technician hired by legendary developer Laurance S. Rockefeller approaching his 55th anniversary at the resort.

Outside of work, natives often live in the same neighborhoods where they spent their childhood. Jake Lerback lives in a hillside community lined with small farms. Some people in the neighborhood farm; others hunt and fish. "There's always something there," Lerback says. "We will call people up and go, 'Hey, do you have some fish? Or do you have some pig?' And then when you have something, you call people up and tell them."

'Ohana helps newcomers handle the isolation and expenses associated with life on the Big Island. Kaeka realized the island contrasted Oahu, which he describes as a "hustle," when five people offered to help him fix a flat tire he received shortly after moving. Whenever one of his children get sick and neither Kaeka nor his wife can miss work, somebody he trusts will volunteer to help. "You know how they say, 'It takes a village to raise a kid?" he says. "That's how it is here."

Nanea Golf Club director of golf course maintenance Scott Main, an Ohio native who has worked in multiple states, moved to the Big Island in 2014. Three weeks after moving to the island, Main and his wife told a fellow parent at a youth soccer about their daughter's interest in trying the ukulele. The Mains were undecided on whether to invest in a new, and unfamiliar, musical instrument. When they arrived at the field the following week, the same parent handed them a ukulele, urging their daughter to try it without reservations. "The culture is very giving," Main says. "People want to hear stories. They want to hear your story and they want to tell their story."

Sharing stories makes the workday more interesting. And knowing more about the person mowing the adjacent green or fairway contributes to the island's splendid golf landscapes. "Having that family feeling makes the job more enjoyable," Kaeka says. **GCI**

Guy Cipriano is GCI's senior editor.



VC60 VERTI-CUTTER

The VC60 is designed for use on golf course fairways, tees and all types of sports fields. Unique swing hitch allows operator to turn while using. New "optional " double roller gauge system is now available, which allows for 1.5" spacing. Skid shoes are still available.



Were You Featured In This Issue?

Reprints enable you to reuse your article and simply place it into the hands of your target audience. Having been featured in a well-respected publication adds the credibility of a third-party endorsement to your message.

Give yourself a competitive advantage with reprints.

800-456-0707 reprints@gie.net

products

AD INDEX

ADVERTISER	WEBSITE	PAGE
Air-O-Lator	airolator.com	34
AMVAC	amvac-chemical.com	37
Central Life Sciences	centralantcontrol.com	31
John Deere	johndeere.com/golf	21
Earthworks	earthworksturf.com	2
First Products, Inc.	1stproducts.com	48
Jacobsen	jacobsen.com	52
JRM, Inc.	jrmonline.com	15
Lebanon Turf Products	lebanonturf.com	51
Nufarm	nufarminsider.com	33
ОНР	ohp.com	9
"Otterbine Barebo, Inc."	otterbine.com	30
PBI-Gordon Corp.	pbigordonturf.com	23
Residex	target-specialty.com	29, 40-41
Sipcam Rotam, LLC	sipcamrotam.com	35
Syngenta	syngenta.com	COVER
Trojan Battery Company	trojanbattery.com	44
Turf & Soil Diagnostics	turfdiag.com	34
United Phosphorus, Inc.	upi-usa.com	5

CLASSIFIEDS

BUSINESS FOR SALE

FOR SALE IN PEORIA, IL WeaverRidge Golf Club Golf Digest Top 100 Courses #37 Zaget #1 in Illinois 4 years in a row. +33,000 sq. ft. Clubhouse, 220 acres +/- 18 holes, 5 tee boxes most holes. Contact Jerry Weaver 309-696-7521 or jerry@weaverridge.com

BUSINESS OPPORTUNITY

BRANCH ENTREPRENEUR - Natural Lawn Care Partnership

Interested in partnering with an established Natural Lawn Care Company to provide clients in your city with Natural Lawn and Landscape Care? Contact Alec McClennan today to start the conversation Alec@whygoodnature.com or 216-570-5346 (cell).

FOR SALE

Seat Warehouse Quality Replacement Seats

Call 855-700-SEAT (7328) www.seat-warehouse.com



FOR SALE

Discount Small Engines & Parts

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

Also, look up your own parts and buy online at www.smallenginepartssuppliers.com

MERGERS & ACQUISITIONS

MILLER MANAGEMENT ASSOCIATES

The Carolinas and TN brokerage leader WE NEED GOLF COURSES FOR SALE & HAVE QUALIFIED BUYERS www.mmagolf.com brett@mmagolf.com 828-775-7765



SEEDS

NATIVE SEEDS

Largest producer of native seeds in the Eastern U.S. Hundreds of species of grass and wildflower seeds for upland to wetland sites. Bioengineering material for riparian areas and erosion control. Contact **ERNST SEEDS** today. **www.ernstseed.com – 800/873-3321**

PARTING SHOTS

GOLF'S DAY IN THE SPOTLIGHT



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

or manty of us inside the business, the best day of the year is that Thursday in April when Jim Nantz says "Hello Friends..." and the old legends hit those ceremonial shots at Augusta National Golf Club. Most years that marks the beginning of the traditional golf season and sets the cash registers ringing around the country. Obviously, this has not been one of those years so far as spring has simply not arrived as of May 1. Which sucks ... but that's not the purpose of this column.

This column instead celebrates another important day in the larger, longer-term scheme of golf's success: National Golf Day. It's the day when our industry tells its story to the folks who can help make or break our future through legislation, taxation, regulation, frustration, vexation and enough dumb ideas to drive you to inebriation. I speak, of course, of the federal government.

I finally managed last month to make it to National Golf Day in D.C. Overall, I was pretty damned impressed. Yet, we have plenty of work still left to do. Here are my thoughts ...

This was the 11th of these "day on the hill" events. Pretty much every industry does these (the lawn care folks have been doing them for years) and it was apparent that at any given time there are a dozen or so associations or trade groups descending on America's real seat of power: the Rayburn Office Building where many legislators and committees are officed.

If you saw any pictures, you'll note that golf's leadings organizations under the We Are Golf umbrella – set up a bit of a sideshow at Rayburn to attract the attention of senators, congress members, and an endless stream of impossibly young aides and interns who wandered by. There was a putting contest, a golf simulator and little displays right there under the watchful marble eyes of a statue of the late Rep. Sam Rayburn, the longtime Speaker of the House. Trivia: Rayburn famously said during a budget debate in the 1950s, "A billion here, a billion there and pretty soon you're talking about real money."

Also, along for the sideshow were about 200 folks. The vast majority of them were superintendents from around the United States and top staff from GCSAA (which was awesome and we'll return to that in a minute). Also attending were Steve Mona, my old boss and the very capable leader of We Are Golf, and a handful of executives and leaders from other associations, including our good friend Justin Apel of the GCBAA. There were also about a dozen golf course owners and maybe eight to 10 PGA professionals, including current president Paul Levy.

I have to say I'm torn between being impressed at how effectively GCSAA and the superintendents have taken this event over and being flabbergasted by how little support it gets from other major golf associations, particularly the PGA of America. On one hand, it's just a great opportunity for superintendents to take their skills and their profiles up to a new level, so I'm thrilled to see so many rising to the challenge and coming to D.C. to talk intelligently with their elected representatives. On the other hand, I'm appalled that other professional associations seem to view this event as unworthy of their time. That's bogus.

The superintendents - many of the top national and local association leaders from around the country but also those who signed up simply because they are passionate about their profession - were magnificent. They took the event seriously and attended the online briefings in advance. They studied their briefing books and met in small groups prior to heading off to multiple meetings with their elected officials from their states. They showed up early to volunteer to help spiff up America's front lawn - the National Mall. In short, they stole the spotlight and had fun doing it.

As I reflected on the event (which, by the way, was a superb networking opportunity), what I felt most was pride that turfheads are leading the way when it comes to stewarding our future as an industry. I think back 30 years ago to when I was managing government affairs for GCSAA and how difficult it was to get anyone to come to D.C. to help defend our practices. Now, we've had hundreds who've not only made the trip but contributed mightily to keeping the larger golf business healthy and properly regulated. Amazing.

I suspect many of you reading this are just as passionate and just as committed as the hundreds of superintendents who participated in past National Golf Days. If you are, start planning now for #NGD19. You'll be glad you did. **GCI**



5

PR

G

AM

R

G

RAS

R

WE'VE STUDIED THE SCIENCE AND DONE OUR HOMEWORK

A unique putting green management program based on independent university research that effectively manages stress and delivers nutrients, featuring Country Club MD granular and Emerald Isle liquid products.



10% rebate on the total purchase price of the program

Visit LebanonTurf.com



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



SHIFT YOUR APPROACH.

Cover more ground with the TR Series.

Built to tackle hard-to-reach areas, the TR Series pairs superior slope capabilities and maneuverability with the unique ability to cut every blade of grass before driving over it.

The TR330's AdaptiShift[™] technology allows operators to effortlessly shift all three cutting reels to either side of the machine, creating up to 18-inches of offset and the option to create varying tire track patterns. The TR Series' versatility enables you to cover more ground while maximizing Jacobsen's legendary quality of cut.







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

TEXTRONGOLF © 2018 Textron Specialized Vehicles Inc