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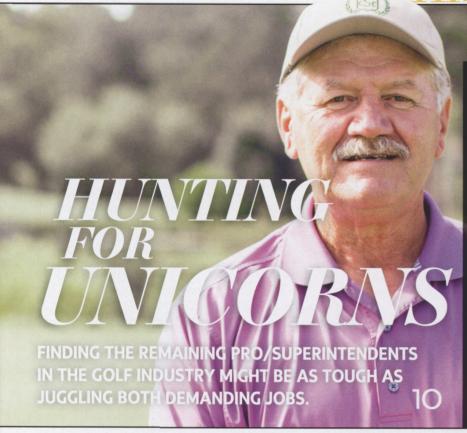
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A Deeper Respect



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ANALYZING THE ASTROS

llling divots during last month's A Military Tribute at The Greenbrier evening maintenance shifts offered glimpses into how the PGA Tour uses data.

When my eyes wandered toward greens, I noticed industry professionals hand watering greens based on soil moisture meter readers. Besides moisture, teams collected speed and

firmness readings, allowing agronomists to provide PGA Tour members with desirable playing conditions.

The data enhancing competitive aspects of a tournament is more impressive than anything on the agronomic end. Omnipresent ShotLink cameras track every shot, giving fans, players and officials hole, tournament and season statistics. Numbers

are crunched instantly, providing PGA Tour devotees with access to millions of data points. ShotLink information adds to a fan's enjoyment and allows players to refine their games by assessing strengths and weaknesses.

A few weeks after returning from The Greenbrier, I read Ben Reiter's "Astroball," which examines how the Houston Astros mix data with traditional baseball philosophies. Astros general manager Jeff Luhnow's rebuilding efforts included hiring data analysts to supplement the organization's scouts and advisors. Everything I read somehow links to golf. Go figure. While studying a chapter titled "Growth Mindset" on a bench alongside a fairway of a former private golf club turned public park, I started pondering how a golf facility operates compared to the Astros.

Leadership positions fit into an industrywide template: superintendent, general manager, golf professional, and food and beverage director. There's little deviation in these titles. Baseball also operated the same way, with organizations employing a general manager, major-league manager, scouting director and farm director. "Moneyball," Michael Lewis' 2003 book about the underfunded Oakland A's success, led to the emergence of advanced metrics and philosophical changes in baseball decisions. The Astros, though, accomplished something last fall the A's "Moneyball" teams failed to achieve: they won a World Series.

Everybody knows data can boost the operational and competitive sides of golf. But how many general managers, superintendents,

> pros and chefs understand how to interpret and incorporate data into their decisions? So much potential data. So many possibilities. So little time. Superintendents are moving toward integrating data into various practices such as irrigation, although this month's story, "Life by the drop," suggests commitment levels waver. Data conundrums also reside inside



Guy Cipriano Senior Editor

clubhouses and pro shops.

Innovative and well-funded facilities should consider adopting the "Astroball" model and add a data analyst to their leadership teams. A trained analyst can review departmental data traditional managers are too busy or tepid to study, thus creating efficiencies in labor, purchasing habits, resource usage, customer relations and marketing. Good data analysts pay for themselves - and boost revenue. They also complement industry lifers.

Systems blending data and instinct put modern businesses in positions to succeed. Employees with growth mindsets view data as a tool to boost job performance, not a threat to job security. Managers ultimately make key operational and personnel decisions. Data will help golf facilities remain viable in a fastevolving entertainment marketplace.

Collecting and coordinating data requires a commitment lacking in most segments of the industry. Proactive tactics - beyond ShotLink - will demonstrate the industry understands how data can boost facilities. The Houston Astros aren't just a championship baseball organization. They offer a structural model worth emulating. GCI

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NOTEBOOK



SOLE SEARCHING

Joint study between University of Arkansas, Michigan State examines damage to greens caused by modern golf shoes.

IT MAY SEEM a bit esoteric, but with U.S. golf courses averaging more than \$900,000 a year in maintenance, according to GCI's State of the Industry research, knowing what types of soles are best for the turf is no small thing.

In response to superintendent concerns about damage caused to putting surfaces by modern shoes, the University of Arkansas' Dr. Doug Karcher and Michigan State's Dr. Thomas Nikolai, started

a project in spring 2016 looking at the issue with support from the USGA.

Karcher and Nikolai formulated two major objectives: look at a variety of different golf shoes to see if they were as bad as metal shoes and see if there are agronomic practices that could cause more or less damage by a given shoe. Shoes examined included those with very aggressive treads and cleats and those resembling a teaching shoe

a club pro would wear all day. As far as management practices, Karcher and Nikolai studied topdressing, irrigation, grooming and fertilizer rates on four different greens at Michigan State and in Arkansas on Bermudagrass, bentgrass and annual bluegrass.

For objective one, the two simulated foot traffic on turf plots with different putting green heights at more than a dozen sites across Arkansas, Michigan, Naples, Fla., and

Carnoustie and St. Andrews.

"Our data is basically showing there are differences among the grasses and there are differences among the shoes," Nikolai says. "The big meat and potatoes is how the putting surfaces are maintained. We're doing research on how to best take care of the putting surface so it minimizes the impact of any shoe."

Karcher says, "today's shoes do not do as much damage as the metal spikes.



It's just a perception."

"Today's superintendents do such a good job, the grasses are so improved,

better groomed and close to perfect that any imperfection caused by a shoe is more noticeable today," Karcher adds. "It's as if the supers are victims of their own success."

"Ironically, golf course superintendents have created such smooth putting surfaces that some golf cleat/sole designs have become too aggressive," Nikolai says. "Case in point, almost no one complained about spike marks prior to the 1990s."

Another finding is that the shoes many golfers and superintendents complained about the most had flatter soles and fewer cleats.

"They only had seven vs. nine or 11 for other shoe models," Karcher says. "With fewer cleats, there were more pounds per square inch per cleat - making them more aggressive on the turf."

The researchers looked at wear on the turf, simulating 30 rounds of golf on a

putting green. "We had golfers grade the surfaces, A, B, C, D or F. An 'A' would show no sign of being walked on. 'B'

has some signs,

but won't affect

the putt," Karcher says.

In Arkansas, ultradwarf Bermudagrass can survive with much more aggressive shoes without having too much damage. There was also no key difference between annual bluegrass and bentgrass. Both showed a fair amount of damage, but bentgrass showed slightly more damage perhaps because of its stolons sideway stems, which annual bluegrass lacks.

Irrigation and drainage also had a role in damage. More moisture meant more

Where play is heavy, the turf may need more irrigation for general wear tolerance and recovery, but the turf must also be dry enough to play.

"It's a fine balance," Karcher says. "Most superintendents are using portable meters to use just the right amount of water."

Tartan Talks No. 25



Todd Quitno tells his family those involved with golf course architecture

are "saving the world one golf course at a time." Using that logic, Quitno has spent his entire career solving worldly matters.

The affable, enthusiastic and often comical Quitno discussed a variety of subjects, including why having fun allows him to handle the perils of a tricky profession, on a recent Tartan Talks episode.

"I have a lot of faith in people," he says. "What we do is not rocket science, it's not brain surgery. I enjoy people and the variety of work that we do."

Quitno started working for Bob Lohmann after graduating from Ball State in 1996. Earlier this year, Quinto was elevated to senior vice president of design with the newly named Lohmann-Quitno Golf Course Architects. Enter https://goo.gl/c4euDR into your web browser to hear Quitno explain his relationship with Lohmann, why viewing golf from a consumer's perspective is beneficial, and the differences between design and project management.



INDUSTRY **buzz**



Greenworks launched its latest in battery-powered equipment with its line of Lithium Ion zero-turn mowers during an event at Mooresville Golf Club, near the company's North American headquarters in Mooresville, N.C. The two newest pieces of Greenworks equipment, the Lithium Z 82V GZ 60R Ride-On Mower and the 82V GZ 48S Stand-On Mower, were developed to be true gas replacements, said Kevin Gillis, vice president of product development at Greenworks.

Florida Governor Rick Scott toured the Air2G2 factory at GT AirInject, in Jacksonville, Fla. Scott was greeted by GT AirInject President Glen Back, who described to Scott the turf industry's economic impact in Florida.

The Biltmore Hotel, a national historic landmark established in 1926 and luxury hotel in Coral Gables, Fla., announced plans to restore its 18-hole, 71-par Donald Ross-designed course. Brian Silva will oversee the \$2.5 million project which will add new Bermudagrass on tees, fairways and greens, incorporate new bunkers, enhance practice areas, and extend course length to more than 7,100 yards.

MAKE GRIT A HABIT



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.

n the 2010 remake of True Grit, Arkansas farm girl Mattie Ross sets out on a quest to track down her father's murderer. Knowing her journey will take her over tough terrain and across the paths of some ornery dudes, the feisty 14-year-old enlists the help of a boozy, trigger-happy lawman named Rooster Cogburn.

"They tell me you're a man with true grit," Mattie says to Cogburn, whom she somehow figures is just the man for the job, despite outward appearances. Later joined by a Texas Ranger on the trail of the same outlaw, Mattie, Cogburn and the Ranger each has his or her grit tested in different ways.

Similarly, our own grit (call it perseverance, resolve or steadfastness, if you like) is tested on a regular basis. Dr. Angela Duckworth, professor of psychology at the University of Pennsylvania and the founder and CEO of Character Lab, is well-respected on the topic of grit and how to build more of it. In her book "Grit: The Power and Passion of Perseverance," she writes: "Where talent counts once, effort counts twice." In fact, she has reduced her research findings to the following formula:

Talent x Effort = Skill Skill x Effort = Achievement

So, how do superintendents and other managers of golf courses and clubs develop more grit to achieve more of their goals? Here are seven suggestions:

1. START BY DOING WHAT INTERESTS YOU. If grit is a result of passionate commitment, it is wise to choose a field or projects that matter to you. Choose a field and pursue accomplishments worthy of your best efforts. You know the old saying: Make your job your hobby, and you'll never work a day in your life.

2. SURROUND YOURSELF WITH GRITTY, DETERMINED PEOPLE. In his story of incredible survival against the ravages of the Antarctic sea, Earnest Shackleton noted that it was the dogged determination of key crew members that made the difference in living and surviving. Likewise, acclaimed management guru Jim Collins advises managers to get the right people on the bus with you and see that they are in the right seats.

3. ESTABLISH A CLEAR-CUT PLAN
OF ACTION. Managing others requires that all involved fully understand and support the plan. Educate, inform and paint the picture of the successful outcome. Reiterate goals and objectives continually. Commit the plan to writing and support it with visual cues wherever appropriate and possible. One finds his or her way home when remembering clearly what "home" means to them.

4. DARE TO SUCCEED. Fear of failure is called atychiphobia in the scientific community. The antidote is courage, which can be learned and developed. Push beyond your comfort zone. Eleanor Roosevelt said, "Do something that scares you every day." Some managers are afraid of failing or appearing to be a "failure." Be brave and strive for higher, bigger and better goals. These goals should be a core part of your plan.

5. BE CONSCIENTIOUS. Pursue goals in a consistent and resolute manner. Do the right things right and help those around you to do the same. Learn from small losses along the way; celebrate wins in their time. Revisit your goals daily and remind people why they're important to the bigger picture.

6. PREPARE FOR AND EMBRACE DIFFICULTY. Peyton Manning practiced throwing wet footballs, knowing there would be rainy Sundays. Golfers at Oklahoma State University are taught to relish bad weather with the certainty that they will be better prepared than their competition. Bad weather or poor conditions become a competitive advantage to that mindset. OSU's longtime golf coach, Labron Harris, taught his players that one must put his hands close to the fire if you want to get warm.

7. PURSUE EXCELLENCE. Perfection is often unattainable, while excellence is an attitude that rewards the determined few. Faithfully pursuing excellence enables successful results and an emboldened team. It was Aristotle who wrote, "We are what we repeatedly do. Excellence, then, is not an act but a habit."

Similarly, grit is not an act as much as it is a habit, an attribute that can be more fully developed with careful thought and advance planning. About you, would they say: "They tell me you're someone with true grit?" GCI



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Tommy Burns, Selma Country Club

(150)

By Nathan Crace, ASGCA



In June of 1977, Sam Dunning interviewed for the golf professional's position at Cleveland (Miss.) Country Club. Just 25 years old at the time and already a member of the PGA of America, the club offered him the job with one caveat: he had to be both the golf professional and the golf course superintendent. Eager to further his career - and with past experience working as a member of the maintenance crew at another club when he was younger - he accepted the offer at the then nine-hole private club located in the flat fertile soil of the Delta region in Northwest Mississippi. July 11, 1977 was his first day on the job. He celebrated his 41st anniversary at the club last month.



"When I interviewed, they took me out on the course for a look around," Dunning says. "The greens were overseeded and they looked immaculate because each year they kept the overseed for an annual event in June. By my first day a few weeks later, the ryegrass was dead and there was hardly any Bermudagrass on the greens. Holy cow! What a way to get started."

It was baptism by fire. Early in his career, he spent most of his time on the golf course handling superintendent duties.

"We had one other employee

and quick couplers," Dunning

sure, I recommended Dunning in 2013 when I was hired by the Grammys (yes, those Grammys) to design four new holes for the Delta State University Golf Course, a nine-hole course adjacent to Cleveland CC. Why would the Grammys need a golf course architect? The university was donating land to

the Grammys for a new museum (at the time, only the second Grammy museum in the world) and that land was the piece of the DSU golf course that had highway frontage. Although I had not

personally met Dunning at that time, I knew of his reputation. I also knew the university did not have a superintendent and would soon be growing-in four new holes and had no one with the experience to get it done.



▲ Sam Dunning has worked as the golf professional and superintendent at Cleveland (Miss.) Country Club since the summer of 1977.

I convinced the university to hire Dunning to help oversee grow-in and it went off without a hitch. I shudder to think what might have happened had he not been involved. Then again, Dunning has been involved with DSU for a long time — as the head golf coach.

Somehow, Dunning squeezed in the time to coach DSU's NCAA Division II golf team from 1989-2015. DSU

standing, I asked Dunning what I thought would be a straightforward question: What's the biggest advantage of being a pro/super today? Dunning deadpans his reply, "Both of us seem to get along OK and we work great together when it's time to coordinate events with course work." Then he smiles and laughs.

Times have changed since Dunning first took over at and giving lessons in the afternoons. Today, finding a true pro/super is rare and finding one who is young and new to the industry is akin to hunting for unicorns. They simply don't exist. Most pro/supers have either retired or, sadly, passed away. It is a shame because I can name five financially challenged clubs right now that could benefit greatly from an experienced pro/super someone who could handle the outside operations, whip a course back into shape and manage the golf shop. You can likely think of at least one such course right now.

That started me thinking: Could a return of the pro/super save some of the smaller clubs that are still struggling? With that question in mind, I set out on a nationwide search for the elusive pro/super to find out why they are on the brink of extinction and what (if anything) could be done to reverse the trend. What I discovered was revealing, intriguing and a little disheartening.

I began by asking Darren Davis, the current president of the Golf Course Superintendents Association of America and superintendent at Olde

Florida Golf Club in Naples, his thoughts on pro/supers, what happened to them and if he thought the return of the pro/super could save some smaller clubs that were struggling financially. His an-

swer was blunt and to the point: "I just can't wrap my head around one person filling both positions." Fair enough. It is daunting to think of the time required to do both jobs, but Davis' reasoning is both realis-

Both of us seem to get along OK and we work great together when it's time to coordinate events with course work."

- Sam Dunning

was ranked No. 1 nationally in 2004 and '05, won 35 team championship titles, and Dunning was named to the DSU Hall of Fame when he retired.

His concurrent career as a college golf coach notwithCleveland CC, but his story was not that unique 40 years ago when pro/supers were more readily found at golf courses and smaller clubs - mowing greens in the mornings, meeting with members at lunch tic and rational. "I believe that both the golf professional and the golf course superintendent serve a vital role at a facility," he adds. "Both professions have certainly advanced with the times, in part because technology in both professions has advanced. This has required enhanced skills in both.'

Davis' response resembles the answer I received from Mississippi State University's Jeff Adkerson, the director of that school's PGA Golf Management Program. Founded in 1985, the program at Mississippi State is the PGA's secondoldest program. "The expectations of the consumer and employers are greater now than ever before," Adkerson says. "To meet these expectations, individuals have to specialize in one of the areas - either golf professional or superintendent. The technical aspects of both jobs require greater knowledge and with the rapid pace in which technology changes, it would be challenging to be an expert in both fields."

I've known Adkerson for more than 25 years and I graduated from the PGM program at Mississippi State many ... many ... many years ago. I worked for a bit as an assistant club professional before starting my career as a golf course architect, but I wanted to know more about his take on the pro/super from the perspective of a PGA member whose experience is much more than being a club professional. Adkerson is in charge of grooming a few hundred young men and women for careers as club professionals and general managers. In my day, part of that curriculum involved two classes in the turf management program, alongside students

Personal reflections

I would be remiss if I did not mention one particular pro/ super I am proud to have called a close friend. Jay Dill was another Mississippi-based pro/super who literally worked right up until his untimely death at age 58, when he lost a short battle with cancer in

I was honored to be asked to speak at Jay's funeral and the church was standing room only. That capacity crowd was indicative of the impact he had on so many people during his career — not only as a father and active member of his church, but also as a superintendent and as a golf professional teaching juniors and older golfers alike. Jay gave much more than he took from the game of golf and from life, even going so far as to donate his body to science



upon his death. Originally hailing from Texas, Jay was an accomplished player, but he loved to get to the course early and mow greens at sunrise. I imagine the others in this story have lost count of the number of times they have found themselves mowing grass in the pre-dawn hours.

-Nathan Crace

who would be going on to start careers as golf course superintendents. Those were some of my favorite classes in college along with "Design of the Golf Environment" and "Golf Course Architecture I," a pair of classes no longer offered.

What I discovered was that the curriculum has changed to adapt to the demands of the current marketplace. "The specialized university programs for turf management and PGA Golf Management offer little overlap as currently designed," Adkerson says. "In order for a student to complete degree requirements in both

programs and become a pro/ super, the student would be enrolled at the university for six to seven years. The financial cost at that point becomes an obstacle, as the cost to attend college continues to increase."

Like so many things in life, time and cost may be two of the biggest obstacles in recruiting young pro/supers. Of course, not all superintendents or golf professionals graduated from college with degrees in PGA Golf Management or sports and turf management. Many of them honed their skills with on-the-job training.



A FAMILY AFFAIR

Much like Dunning, Tommy Burns got his start in the golf business at a young age. He was hired as the assistant golf professional at Selma (Ala.) Country Club in December of 1974. His introduction to the business, however, was a family affair. "My father, Bud Burns, was the pro/super here before me," Burns recalls. "If I had known I was going to follow in his footsteps, I would have studied turf management instead of history and sports



What would it take

Jeff Adkerson, the director of Mississippi State's PGA Golf Management Program, says three factors must exist for a pro/super to succeed in today's golf market:

- A quality assistant superintendent and assistant golf professional
- 2. Updated policy and procedure manuals that include staff training protocols
- 3. Efficient and effective communication within the facility

management."

After 44 years on the job at Selma CC, Burns has obviously found the secret to longevity as a pro/ super. But I wanted to know what he felt were the biggest rewards?

"You're able to see the fruits of your labor on the golf course and there's the respect of the grounds crew," Burns says. "The members appreciate the hard work, too." While he admits that being a pro/super can be a strain on demands for his time, he also takes pride in the fact that filling both positions at Selma CC "saves the club money."

At 67 years old, Burns is a longtime member of the both

the GCSAA and the PGA. He says more young men and women should consider looking into a career as a pro/super to help fill the void that smaller clubs will have as longtime pro/ supers retire. "It absolutely makes sense for smaller clubs," he adds. "As more golf courses struggle to stay open, it might make sense to pay one employee as opposed to two." And it is helpful to have a pro who understands agronomy and a superintendent who understands the golf shop.

With 44 years behind him, how much longer does Burns think he will continue to work as Selma CC's pro/super before he hangs it up for good? "I have no plans to retire." His response is quick and unwavering.

The cost of education would likely prove to be an impediment to a younger person going through both programs for two degrees at a university. For pro/ supers from Burns' generation, however, it was usually a career choice for a different reason. "The pro/super seems to be passed down from one generation to the next," he laughs.

Burns is not alone in that line of thinking. Currently, there is a petition circulating in the State of Mississippi to add a former pro/super to the Mississippi Sports Hall of Fame. For those outside of the Magnolia State, it might not sound like a big deal. However, simply getting someone's name on the ballot to be added to the Mississippi Sports Hall of Fame may be more difficult than finding an 18-year-old who his actively planning his or her college choices based on

plans to pursue a career as a pro/super. Why such a high bar just to get on a ballot? For a state with a relatively small population relative to its landmass, Mississippi is home to some memorable athletes - especially when considering football. In the NFL alone, three of the best of all time to play their positions hail from Mississippi: running back Walter

Deerfield Country Club owner/developer J.D. Rankin. Robbie Webb, Byron Nelson and Joe Finger examine sprigs during construction in the early 1980s.

Payton, receiver Jerry Rice, and quarterback Brett Favre - and Favre was just inducted into the Mississippi Sports Hall of Fame in 2015!

All of this is germane to the conversation because the previously-mentioned petition is to posthumously induct Robbie Webb to the Mississippi Sports Hall of Fame. Webb was a pro/super of the highest order and a man whose name is synonymous with golf in the Magnolia State. The man leading the charge for that Hall of Fame induction is Robbie's son, Rob, himself a GCSAA member who in 1996 became only the 10th Certified Golf Course Superintendent in Mississippi. For Rob and many others (myself included), the belief that Robbie Webb deserves his spot in the Mississippi Sports Hall of Fame is grounded in all that he did for the game of golf throughout the state during his career, including growing the game through junior golf.

"He did so much for the game of golf," Rob says. "But even more than that, he was instrumental in getting so many juniors involved in a game that they've gone on to play for a lifetime. Many of dad's young students in the 1970s through the early 2000s have gone on to become top players competing at the highest levels both as amateurs and professionals. He had a huge impact on the game of golf statewide."

One former president of the PGA of America could not agree

6 6 It absolutely makes sense for smaller clubs. As more golf courses struggle to stay open, it might make sense to pay one employee as opposed to two."

—Tommy Burns



more. "Robbie was the dean of pro/supers in my mind," says Ken Lindsay, who served as the 30th President of the PGA from 1997-98 and worked as a pro/ super from 1975-79 at Colonial Country Club in Jackson, Miss. "He was always willing to share his experience and knowledge with everyone and was just as comfortable on a tractor as he was in a golf cart."

Ironically, like Burns, Robbie Webb got his start in the business working for his father (Rob's grandfather) Charles "Red" Webb when Red was the pro/super at the oldest golf course in Mississippi the Broadwater Hotel's Great Southern Golf Course in Gulfport. Young Robbie got his start caddying, working in the grill and getting his reps as a lifeguard at the club pool. "The same things my sisters and I did when we were young and dad was the pro/super at Canton Country Club and Deerfield Country Club," Rob recalls fondly.

Robbie attended the University of Southern Mississippi on a golf scholarship before returning to Great Southern to work for his father as the assistant pro/super. That's when his career as a pro/super became, well, let's call it "active." After two years at Great Southern,

he accepted the assistant pro/ super position at Vicksburg (Miss.) Country Club, where he stayed briefly before returning to Hattiesburg. He moved to Hattiesburg to become the superintendent at Hattiesburg Country Club from November 1960 until June 1961, when he left to accept the pro/super position at USM's golf course literally down the street from Hattiesburg CC. While there, he dabbled in golf course architecture and designed a ninehole course in Lucedale, Miss.,

In the spring of 1963, Webb moved to Canton, Miss., to become the pro/super at the

then nine-hole Canton Country Club for 15 years, designing and building the back nine there in 1967. In 1978, he left Canton CC to spend the next 10 years as the pro/super at a then soonto-be-built course called Deerfield Country Club in nearby Madison, Miss. At Deerfield, he helped to build and grow-in the new course for architect Joe Finger and World Golf Hall of Famer Byron Nelson — one of a relatively few courses credited to Nelson as a designer. In May of 1988, Webb returned to Canton CC to work as the pro/ super until his retirement in December of 2006. He passed away in the fall of 2012, just shy of his 73rd birthday.

"Each field has become so specialized that one person can't be both the pro and the superintendent and keep up with the competition," Webb's son Rob explains. "As a result, colleges started catering to students wanting to be pros and superintendents by offering degrees in their respective fields. Personally, I went the superintendent route because I didn't want to spend 120 hours at the course every week like I saw my dad work his entire life."

While working 120 hours a week may sound like hyperbole to some outside the industry, Webb says there was a very shrewd way the club ensured that his father was always nearby. "Back in those days, the norm was to provide a house for the golf pro," he says. "It seemed like a great incentive, but I think it was designed to keep him and his family on the property to keep up the course, the swimming pool, the tennis courts, you name it."

"That said," Webb adds, "my sisters and I have fond memories of riding the course with dad late at night watering the greens with quick couplers. We learned to help out early on with cooking in the grill, running carts, working as forecaddies and lifeguards, and obviously mowing the course."



HEADED TOWARD EXTINCTION

There's a common theme among the pro/supers featured here: dedication to the game, lifelong service, work ethic and having a big impact on junior golf. If you noticed another theme here of pro/ supers being more prevalent in the Deep South, you are not alone. While researching this story, I had a difficult time finding any pro/supers working in other parts of the country. Lindsay thinks that being a pro/super in the northern part of the country may have been

more difficult with cool-season grasses and extreme weather changes, which would require a different type of turf education. Likewise, as Davis stresses, the superintendent's career has become too specialized to find young people with the time to handle both jobs at a course.

"I was with four other golf course superintendents yesterday afternoon who wanted to play my golf course," Davis says in a follow-up email he sent me after our interview. "So, I joined them for a few holes. Afterwards, we had a talk and I asked them your question about pro/supers. None of them knew anyone who had done it."

So, my original question



Plenty of help - and laughs

Sam Dunning and Tommy Burns quickly mention their respective support staffs, including great memberships, have allowed them work 40-plus years as the pro/super at the same club. Both said the dual responsibilities have produced too many funny stories to remember, although a few memorable ones exist:

Burns: "Once we had a big flood on the golf course and it was unplayable. One of the members came in and told me he was sick of the flood and I needed to find a way to stop it."

Dunning: "I had been at the club for about eight years and had a ruling during the club championship that was not favorable to one of my favorite members. He looked at me and said, 'Don't you think you've been the pro here long enough?' and turned and walked away. Another time. on Christmas Day, I got a call at 9 a.m. from a member who said Sam, this year my family can't celebrate Christmas today and we want to go play. Can you come mow the greens? Needless to say, the greens did not get mowed that day."

remains: Could the reemergence of the pro/super help save smaller courses and clubs still struggling in the wake of the Great Recession? While Burns and Dunning are living proof that it can be done (each for more than 40 years at their respective clubs), it would appear that the pool of willing applicants has all but run dry.

As pro/supers left, clubs were forced to replace them with two people: a superintendent and a golf professional. With programs like the PGA's Golf Management program (now available at 18 universities across the United States) and specialized turf management programs at universities

(and some two-year programs) nationwide, the two career tracks of the pro/super quickly diverged. And as those tracks diverged and each became more specialized, the salaries for both increased over the last three decades.

Like rotary phones, balata balls and methyl bromide, the pro/super career track seems lost in the rearview mirror. I doubt we will see a return to the days when pro/supers are increasing — or even static in number.

Given this story began as a look into a unique type of golf course superintendent, it seems ironic that a former president of the PGA of America -





▲ GCSAA President and Olde Florida Golf Club superintendent Darren Davis

and one of its most decorated members - actually began his career as a pro/super. "You're correct that the position of pro/super is disappearing rapidly," Lindsay adds. "And for many of us, we began our careers doing both jobs."

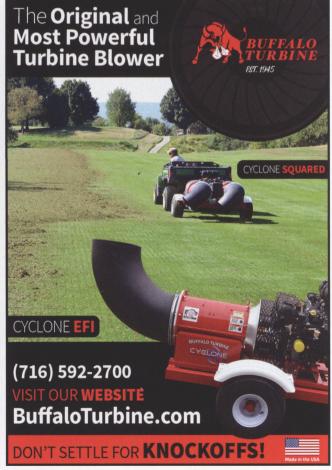
Of course, that was a different time. But since his start in the golf industry, Lindsay was the PGA Professional of the Year in 1983, the 1987 Horton Smith Award recipient, and he served on the National Rules Committee for 32 years, including as chairman from 1984-89. Additionally, he spent eight years as a rules official on the Champions Tour before retiring in 2008. It's likely the industry will never see somebody like Lindsay again. As the few pro/supers who are still working retire from their positions, the extinction of the pro/ super may well be unavoidable.

The game of golf continues to evolve in an attempt to attract more players and retain existing ones. Likewise, as the industry changes to meet those same challenges and with more demands on time, quality, and resources, I am amazed that the men featured here have been at it for this long. Forty years is a long time to stay at any club or course in one position — not to mention working as both the superintendent and the golf professional. They each deserve

a tip of the cap and more than just a watch when they retire. They are emblematic of a simpler time when these men did things because they were not given a choice. It had to be done and they had to do it. Dunning accepted the title of pro/super to be awarded the golf professional job. Burns inherited his title from his father after training under him. Webb was also handed the baton from his father — but he ran a gauntlet rather than a marathon.

With fewer and fewer pro/ supers in the industry today and no college curriculum for such a career, the only route left seems to be handed down from generation to genera-





tion. However, like Rob Webb proves, that route fades more each year as the next generation elects to specialize in one field of the other for a multitude of reasons such as time, money, and family - if they even stay in the industry at all. Fifty years ago, the multiple generations of pro/supers like those that Rob Webb's father and grandfather passed down to him was not out of the ordinary. Now it would be the exception and well outside the norm. That said, I did discover that sometimes it comes full circle.

Even if they never met, the pro/supers in this story will forever be connected by a career choice that may be unrealistic by today's standards. As it turns out, they are also connected in another way. Just before emailing my finished story to the editor, I received a text from Lindsay. As noted earlier, Lindsay is a past President of the PGA of America and was a pro/super for a stretch of time early in his career; but I did not know he is originally from Gadsden, Ala. He sent me the text to let me to know that he not only knew Burns' father Bud Burns at Selma CC, but he was also friends with Dunning in high school. Small world.

And Dunning? I failed to mention how he got his start in the golf business. He was hired to work on the grounds

crew while still in high school and college at Canton Country Club ... by Robbie Webb. His exact quote to me, "I was fortunate to work for a legend pro/ super, Robbie Webb, during my summers in high school and college." Dunning's praise was unsolicited — he did not know that I had already interviewed Webb's son for this story.

I also asked Dunning the same question I asked Tommy Burns about his retirement plans (by the time this story is published, Dunning will have celebrated his 67th birthday in late July).

"I think about retirement every day," Dunning laughs. "We're a very busy club these days and I'm not getting any younger. Then yesterday I gave a lesson to a four-year-old boy who has had five heart surgeries! Five heart surgeries! Watching him get excited to get the ball in the air and turn to smile at me ... how can anyone walk away from that?"

How indeed, Sam? How indeed? GCI

Nathan Crace, ASGCA, is a member of the Golf Writers Association of America. He appears in this publication by special arrangement. You can find him on Twitter @lipouts and online via www.nathancrace. com. Additional notes from the interview with Sam Dunning can be found at blog.lipouts.com.



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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

very once in a while, a Tour player says something not only smart but that I agree with. My current hero is Rickie Fowler, who, prior to playing in July's Scottish Open, said he enjoys the challenge of putting on slower greens and that they expose bad strokes and mishits better than fast surfaces do.

"You have to use your imagination as far as creativity and trying to judge how much the wind will affect it," said Fowler, explaining that greens in the 10 to 11 range on the Stimpmeter are just fine, especially when the wind blows.

"Slower greens may accentuate a mishit putt more," he added. "Whereas if you have a downhill putt in the States, you kind of just have to hit it to get it going. Here [in the UK], you mishit it a little bit uphill, into the wind, and it can be a pretty big difference. At the end of the day, you just have to hit solid putts."

Amen, Brother Fowler! I couldn't agree more. For years, my mantra has been "slow it down." There is not place in golf - regular or championship - for unreasonably fast greens. Note the word "unreasonably," because that's key: greens that are super slick for no reason other than to embarrass golfers are a disservice to the game.

We all know "how" to make greens extra-fast; it's the "why" I'm questioning. Who wants to three- or four-putt? What's the fun in that? Isn't the goal to complete your round in the fewest strokes possible? Why artificially inflate that number - and aggravate your customers at the same time?

If you are pushing your greens to their speed limit, stop for a moment and consider why. I'm willing to bet it's a few of the more vocal (or testosterone-fueled) members who think fast greens indicate a good, tough course. Or because the course across the street keeps its greens in the teens, they're applying pressure on you to do the same. There's no sense in that: You should be doing what is best for your course and those who play it, not someone's ego - yours or a few of your members'. Yes, yes, I know, easier said than done, but ...

Maybe the most important reason not to make greens too fast is that it can be a surefire way to lose the grass. We all know that nothing happens faster than crop failure. Push the turf at the wrong time of the year and it may not only be the grass that's lost. Your job could be next.

If your players with little agronomic and architectural understanding want to know why you're keeping the greens slower, here's a list of common-sense explanations:

- · Slower greens increase the challenge because they are harder to read, figure the break and determine how hard they should be struck.
- Slower greens encourage a more

- aggressive, offensive putting style rather than the more defensive (scared) approach faster greens require.
- · Slower greens allow the golfer to be more aggressive with incoming shots, as well. That's not just me saying that. PGA Tour player Pat Perez has said it, too.
- Fast greens = slow play.
- Courses originally built more than 50 years ago were never meant to have fast greens. Everything we consider "classic" - mounds, rolls, pitches, sloping green surrounds were put there for strategic reasons. The artistry and creativity of course architecture are lost when speeds become excessive and the character is removed from the design.
- · The need for speed has created modern greens that are little more than pool tables - flat, smooth, and predictable.
- · Fast greens limit shot options.
- · Just because you see something on TV doesn't make it right for your course, either agronomically or in relation to the abilities of your regular players. And here's a little secret: When the Tour leaves town, those greens are allowed to grow back, making them slower and healthier.
- Slow grass is better than fast dirt.
- · You like your job and want to keep it, while keeping the course in its best possible condition.

The magic of golf is thinking your way around the course, seeing what the architecture, agronomy and conditions give you, and choosing the best shots to handle the situation. Making greens too fast eliminates many of those options and frustrates players. Has anyone ever complimented you on making a green so fast that he putted off it?

Or look at it this way: Do you think fast greens will help grow the game?

When one of your members or regulars complains about the slow green speeds, I offer this bit of advice: "Hit it harder." GCI



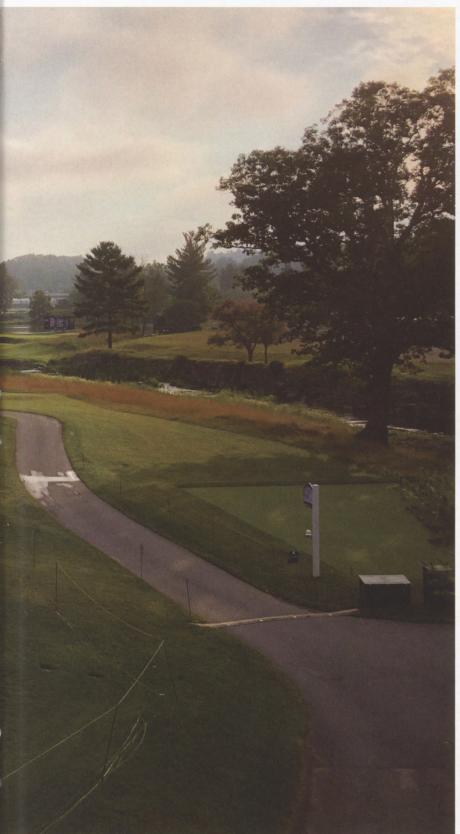
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t started with unexpected terror. It has produced the two most terrific weeks of my professional career.

Knowing I needed to cover the 2017 Greenbrier Classic for a series of stories about the historic West Virginia flood and The Greenbrier's inspiring golf rebuild, then-Old White TPC superintendent Josh Pope asked me where I planned on staying during tournament week.

"Beckley," I told him.

"Do you really want to stay in Beckley?" Pope replied.

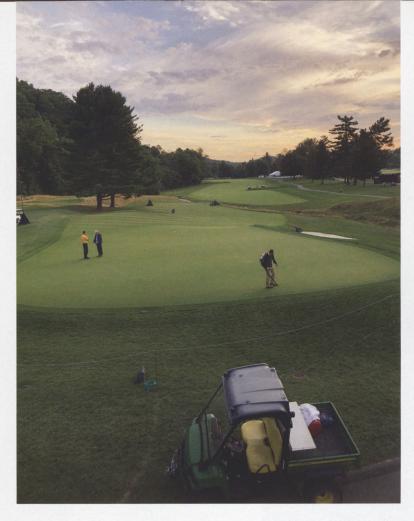
Let's get this out of the way. There's nothing wrong with Beckley. The city, population 16,972, is the largest metropolitan area in southern West Virginia. In fact, it's the only metropolitan area in the region. But it's 59 miles from The Greenbrier.

Josh asked if I wanted to stay in the same Lewisburg, W.Va., hotel housing turf management volunteers. I had never been so overjoyed to ditch a week's worth of Hilton points. Lewisburg is nine miles from The Greenbrier.

I arrived the Sunday evening before the tournament with other volunteers. We toured the heroically restored course and were told to report at 5 a.m. the following morning.

Starting before sunrise? No big deal, I thought. I can handle it for a day or two. I stood in the corner of the maintenance tent as Pope and director of agronomy Kelly Shumate opened the first morning by praising their determined crew and enthusiastically welcoming volunteers. Pope then read assignments and I started trembling like somebody visiting their first haunted house.

"Greens ... Jeff and Mikey, mowing. Blake and Guy, boards. 12-6, 3-9," Pope



▲ A sunrise above The Old White TPC 12th

hole during A Mili-

tary Tribute at The

maintenance shift.

Greenbrier morning



said in his southern drawl.

Ummm. Yeah. OK. Sure. Whatever

boss. But I haven't worked on a golf course in five years. But I have never turned boards. But I don't want to damage your new V-8 bentgrass greens. But I'm really here to take notes, snap pictures, provide social media updates and conduct interviews. But the dew might cause moisture to seep through my shoes.

I knew The Greenbrier team needed bodies. Fourth of July week is PGA Tour purgatory for securing volunteers. I looked at Pope - who was grinning - followed the crew outside and dropped my slender derrière into the passenger seat of a Gator. I concocted a plan on the nearly 10-minute drive from the turf care facility to the 10th green: I would fake it.

My anxiety level increased when we reached the green and Jeff Church, a West Virginia native and longtime Greenbrier employee, told us he fired his last two tournament board men. Intimidation? Or an odd form of Appalachian hospitality?

Following the lead of Church and his gracious co-workers, I faked it for 13 shifts. Terror turned into tremendous excitement and fulfillment. Somebody who caddied as a teenager and worked a part-time golf course maintenance job around a full-time sports writing

gig in his early 30s received a PGA Tour agronomy pin from the legendary Cal Roth. A week inside the PGA Tour ropes represented the unexpected highlight of a career fulfilled with surreal moments.

And I couldn't wait to replicate it.

With support from my bosses, I returned to The Greenbrier last month to help the crew. I reunited with dozens of friends, although Pope accepted a job as the superintendent at The Olde Farm, a private Virginia facility designed by Bobby Weed, less than two months before the tournament. Chris Anderson and Nate Bryant, two prominent subjects in last year's recovery, are now responsible for overseeing The Old White TPC's agronomics.

Fortunately, Church still works at The Greenbrier. He celebrated his 30th anniversary at the resort last winter. We remained in contact over the past year, increasing my anticipation for the 2018 tournament, renamed A Military Tribute at The Greenbrier. I arrived in White Sulphur Springs

with job security and confidence.

Church warned me in a pre-tournament phone conversation a pleasant mountain cli▲ The Old White TPC first hole was filled with workers and calculated activity at the start of evening maintenance shifts.

mate had become uncomfortable. "A lot of man hours working in the heat," Church said. "A lot of man hours ... we're tired." The conversation foreshadowed a steamy week.

I pulled into the turf care facility shortly before a 5 p.m. volunteer meeting Sunday, July 1. I checked the temperature on my dashboard: 90. I walked outside and immediately wiped my brow. I greeted longtime equipment technicians Roy Young, Curtis Persinger and Ray Bonds on my way to the maintenance tent. "Welcome to tournament week," Young said with his dry sense of humor.



"We have had Derecho and we have had the flood. We might as well have a wildfire."

I certainly didn't want to drink to that statement. But after greeting the trio, I beelined to the large cooler in the corner of the air-conditioned maintenance tent and grabbed two 16.9-ounce bottles of water. I repeated the reach into the cooler dozens of times during the week, consuming 50 bottles (845 ounces) of water while on the grounds. Besides the meeting, the work week included morning and evening shifts Monday-Saturday and a morning shift before the final round.

The importance of hydrating represented a theme of Shumate's Sunday night address to volunteers. His team took multiple proactive steps to protect workers and volunteers, including keeping the cooler stocked with water and sports drinks, noting locations of ice chests, and deploying an employee to deliver cold water to workers during evening shifts. Every drop of liquid was needed. Humidity levels exceeded 90 percent on the first five mornings; tempera-

Seize the opportunity

GCI's Guy Cipriano offers 10 tips to maximize a tournament volunteer experience.

1. Remember who you serve

Volunteering isn't a hall pass to spend a week away from the wife and kids. It's not a college party. It's not a chance to prove Greenbrur. 2018 1 rodexcup you're the smartest person in the shop. You're working a tournament to assist the host superintendent and crew. Let that responsibility guide your every decision. And never second-guess the host superintendent.

2. Watch some golf

Your volunteer pass gets you on the grounds of an event spectators drop serious money to attend. How cool is that? Renew your zest for the game, especially when competition rounds begin. Pick a group to follow between shifts or lounge at a hole, preferably under a tree (if any are available). Observe how players manage the course. Following elite players can be enlightening, humbling and relaxing.

3. Avoid cliques

Tournaments represent wonderful opportunities to expand your professional network, so arrive determined to assimilate. Introduce yourself to other volunteers and the host crew early in the week and spend time with members of both groups. Avoid eating meals at the same table with the same people. Seek conversations with strangers. It's OK to know one or two people on Monday. It's unacceptable by Sunday.

4. Take care of yourself

Rising early and working late isn't easy. Hydrate. Exercise. Stretch. Return to the room following evening shifts. Establish somewhat of a routine. Business travelers, including this one, will tell you proper nutrition is a major road challenge. Sponsored and catered meals can be gluttonous. You don't need to eat everything on the buffet table. Keep a supply of nuts, fruit and energy bars in your room. Find a local business selling smoothies, a healthy way to tame cravings between tournament-provided meals. The Wild Bean in Lewisburg, W.Va., appreciates at least one turf management volunteer's daily business last month.

5. Resist the room

I know, I know. I told you to return to the room and now I'm telling you to resist the room. Damn those hypocritical people in the media! But there's a big difference between the period following morning and evening shifts. Returning to the room following an evening shift should ensure anywhere between five and seven hours of sleep. Shouldn't that be enough to avoid napland? Use daylight hours to watch golf, network, explore the area, complete computer-related work or, preferably, a combination of the above. Do



You will be working alongside people responsible for maintaining a high-level golf course.

Introduce yourself to them and learn what makes the course they maintain special. Ask about their maintenance practices and work environment. Show an interest in their region and lives outside of work. Once they feel comfortable around you, the stories could start flying like commercial jets on a busy runway. Stories from other regions will leave you LOL. I smirk whenever thinking about the bear hunting tales I heard in West Virginia.

7. See more

Gaps exist between tournament shifts. If you're working an event contested at a multi-course facility, tour the other golf offerings. Note similarities and differences between the course/s and the tournament venue. Working an event at a single-course facility? Bring the sticks, grab a few other volunteers and play a quick nine or 18 at a local course. Studying multiple courses enhances a trip.

8. Photos and posts

Make sure your phone is fully charged. For starters, you're going to see a golf course in spectacular condition. You're also going to observe different maintenance practices. Take dozens of pictures and videos, and study them like a football coach watches film. Something you see will likely help you. Social media is an awesome way to share the splendor, but keep posts positive. Use social media following the tournament to connect with people you met during the week.

9. Demonstrate gratitude

Like making a sports team, you were picked to help a squad team performing before a large audience. Not everybody who applies for tournaments, especially major championships, gets selected to volunteer. Some events cover your entire travel, lodging and dining expenses. Verbally reiterate to the host superintendent and sponsors how much you appreciate the opportunity. Want to ensure the host superintendent remembers your name? Send him or her a hand-written note a few weeks after the even.

10. Go back

Positive experiences are almost always better the second time. Why? Familiarity leads to focus. Bypass major-championship temptation and think about returning to an event. You will notice details you missed the first time and strengthen bonds.

lay dormant und again. hundreds eds can uting. produce seeds when you cut it short. But with the right product, you can gain an edge over Poa annua. It steals water, nutrients and sunlight from your perennial grass species, and if it goes unchecked, it can take over the turf. One of the most common grassy weeds in the world, Poa annua loves cool weather. It germinates in the fall, grows through the winter, and rops seeds in the spring that lay dormant Il cool weather comes around again. Poa annua plant can produce hundreds ds every season, and those seeds can ant for years before sprouting. Poa known as annual bluegrass, can and discolor golf courses, orts fields. It steals water, nlight from your perennial if it goes unchecked, it turf. One of the most ds in the world. Poa er. It germinates in the winter, and e seeds can lay outing, grows eeds in the

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ture reached 90 degrees in four of the six evening shifts.

One positive associated with sweatinducing weather: the course played ultra-firm, tournament conditions agronomists and PGA Tour players relish. Original architects C.B. Macdonald and Seth Raynor would have been astounded by the awesomeness in the Alleghenies. Two years after serving as a search-and-rescue site following a natural disaster, a coordinated team of mowers, board flippers,

rakers, hand waterers, data collectors, divot fillers, cut cuppers, pin setters and reel checkers prepared a photogenic and fi-

tablished stars, rising stars, stalwarts, journeymen and regional dreamers. The field in a summer PGA ▲ Meals offer a chance Tour event wedged to refuel and debetween two mavelop relationships jor championships when volunteering at might be as eclectic a tournament. as the tasks required to polish a charming

> As part of a team of four, my morn-

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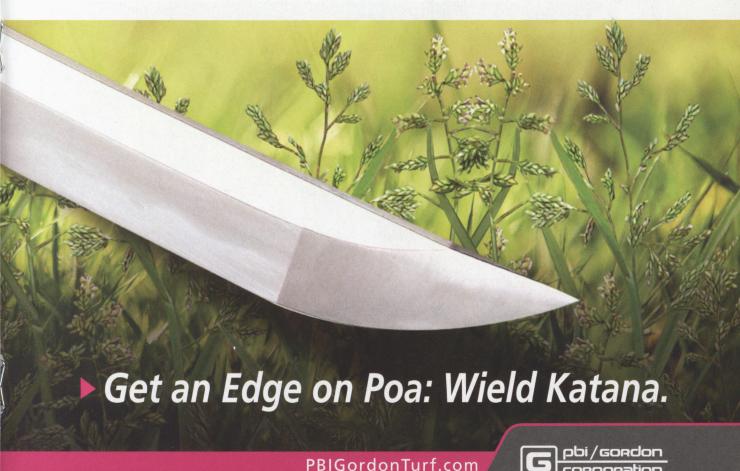
for

ings included flipping boards and blowing debris for the duo mowing the 10th, 12th, 14th and 16th greens. Mornings proved a

course.

hustle and our group, which also included determined local teenagers Korin Cole and Matthew Sams, became more efficient as the week progressed. We understood each other's tendencies by Thursday and shared abundant laughs, which I expected after working alongside Church last year. Chemistry amongst volunteers and crew members makes a special week even more enjoyable.

Evenings provided an all-encompassing glimpse at the course and maintenance efforts. I was on a team responsible for finding, gathering and filling divots. As we reached the landing zone on the first fairway Monday evening, the scope of PGA Tour maintenance finally hit me. The shift started with 32 people working on the 449yard hole, including six volunteers hand watering dry spots. Do the math, and it equates to one worker for every 14 yards.





▲ The team of workers and turf management volunteers who prepared The Old White TPC for A Military Tribute at The Greenbrier.

Divots ranged from misdirected pelts created by Wednesday pro-am participants to slender, 5-inch professional excavation jobs. Studying six straight nights of divots illustrated the power and precision found on the PGA Tour. Elite players know exactly where to launch drives and how to hit cunning approach shots. Filing divots

with a green sand/seed mix helps a course improve television aesthetics and expedites the post-tournament recovery. Plus, there's nothing terrifying about the work.



The final evening shifted turned into a photopalooza. The humidity level dipped below 60 percent, the sun gloriously faded below the mountains and the number of divots needing repaired by an 11-person team decreased because of the 36-hole cut.

Fall-like temperatures defined the final morning. October in July never felt – or looked – so pleasant. Later weekend tee times eliminated the need for mowing in the dark. Fog rose as tree shadows and a red sky reflected off Swan

Lake at 5:43 a.m. Less than two hours later, the rising sun framed the 15th hole, a scenic par 3 known as "Eden."

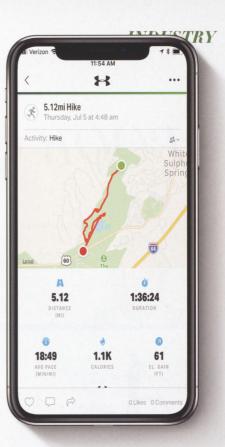
Eden is a template hole found at various courses designed by Macdonald and Raynor. In biblical terms, Eden is the garden where Adam and Even first lived. Eden also means paradise.

Once the shock of receiving a PGA Tour maintenance assignment subsided, I discovered my working Eden. Returning to it a year later amplified the surreal nature of the experience. GCI

A fitness

Curious about the effort required to turn boards for somebody mowing greens, I decided to track my activity during A Military Tribute at The Greenbrier maintenance shifts using the MapMvHike app. Here are stats from a typical morning shift of double mowing four greens:

- Distance: 5.12 miles
- Duration: 1:36:24
- Average pace: 18:49
- Calories burned: 1,100 Note: Totals include only activity on greens.







POOR QUALITY



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.

s most of us know the golf course restoration and irrigation business is booming. It is hard to find a qualified builder or irrigation contractor that has room in their schedule to do small projects, let alone large scale 18-hole renovations or irrigation systems. One down side of these "good times," however, seems to be a "downturn in" or a "lack of" product quality.

Unfortunately, of late, while reviewing irrigation materials for projects or watching systems operate after installation, I have noticed many more product issues than I usually do or have in the past. I have always seen isolated problems, but lately it seems to be across the board along a wide variety of products, including pipe, wire, sprinklers, controls and manufactured assemblies. It has ranged from sprinklers not staying in adjustment to the wrong breaker being installed in a manufactured electrical assembly to pipe not being properly cut into lengths at the factory to a used (bad) circuit board being installed on a new controller.

Poor quality equipment has a number of downsides, but the one I find most troubling is the time it takes for someone – usually the superintendent – to figure out there is a quality issue and the frustration that occurs in the meantime because of it. I recently watched a superintendent and his two assistants waste a day-and-a-half

chasing down a control gremlin that was finally diagnosed as a manufactur-

er known product defect, but none of the distributor or applica-

ble man-

Rely on distributor personnel and colleagues who have similar systems to determine if they have seen the same issues and how did they find them."

ufacturer field and service personnel knew anything about it. Many times, you don't know there is an issue until there is a large dry spot or dead turf. In other instances, something just plain doesn't work and you cannot water at all. It's always worse in the summer to get help because people are on vacation or shorthanded or would rather be doing something else than dealing with your problems.

The easiest way to circumvent product issues is to catch them before they are installed. Take a good look at the products when they arrive on site and look for gouges, scratches, nicks and that things such as pressure settings are correct.

The real issues show up once the equipment is in the ground and working. Now that things are buried, troubleshooting is more difficult. Rely on distributor personnel and colleagues who have similar systems to determine if they have seen the same issues and how did they find them. Also rely on them to fix the issues because manu-

facturers are not always upfront about announcing their product issues.

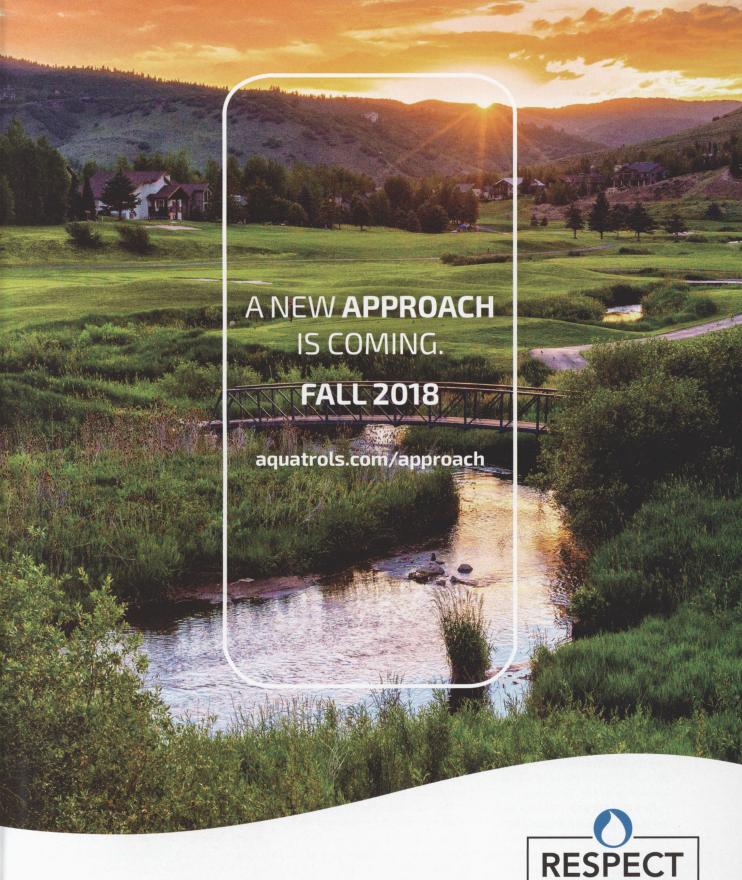
Quality issues should also be compensated for whether it be you or the contractor making the fix. This includes both the material and labor costs. If it is really bad, assess a dollar amount to the responsible party for pain and suffering. When you buy a product, you expect it to perform the way it was promised to and designed for. When it doesn't, hold those who made that promise responsible, otherwise product problems continue to occur.

I have also seen a definite quality downturn in product shipping. It

> seems that everything used to be shipped on a truck inside a

contained trailer. Now a lot of things are being shipped on an open trailer pulled by a large ton pickup truck. Product is more difficult to move and not as well protected. No one likes to communicate bad news, either. Recently we had a pump station that was supposed to be delivered on a Monday and the trucker broke down on Friday, but he didn't let anyone know until he was tracked down that Monday afternoon – crane, contractor and electrician all waiting around costing money.

Product and installation quality issues are a problem for everyone involved in a project – manufacturer, distributor, contractor, end user and even the designer. Fewer issues, the better, but there are most likely going to be an issue or two in any significant project. When you have an issue you think is installation or product oriented, let the responsible party or parties know immediately. The more eyes on a problem, the sooner it gets rectified. You may also save one of your colleagues the same heartache. **GCI**



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INSIDE YOUR PERSONAL BRAND

Jason VanBuskirk has a bachelor's degree from the University of Rhode Island and was a golf course superintendent from January 2008 until December 2015. In January 2016, he and business partner Steve Ohlson launched Turf Cloud, which assists and educates turf/small business professionals on everything related to turf and technology. Contact him at jvb@turfcloud.com, 774/244-2630, or on Twitter @turfcloud or @uriturf.

ichard and Maurice McDonald had a simple story. They wanted to be known as not just a hamburger stand, but one with a distinct image capturing a different burger joint that would become a franchising giant. When Ray Kroc partnered with and eventually purchased McDonald's in 1955, he had every opportunity to completely change the "Mc-Donald's" brand. However, maintaining the established image allowed the brand to flourish and become the empire it is today.

Think of any brand, especially good ones, and phrases like credible, valuable, unique, different and distinct come to mind. It starts with a story of adversity, obstacles, and disappointments. The story explains the true character and the face of the brand more than just the "logo" itself. It usually starts out with a solitary passion. Whether it's the Mc-Donald's brand or the local tire shop celebrating its 50th anniversary, every brand starts with a story. If we spend enough time evaluating, we realize the immense amount of work, commitment and dedication this passion needed to grow. And if we really give it the true attention it deserves, we'll learn it takes even more to maintain this distinct image.

The same holds true when build-

ing your own personal brand. Does your résumé tell a story? Is it an exciting one that speaks of obstacles

and successes? Is it low-key, but loyal? If your résumé doesn't offer these events without narration, what types of things can be accomplished to achieve this story? The McDonald brothers never considered building their own personal brands. Instead, they were always focused on the final image being created using grit, experience and concise/repetitive operational behavior. Think of yourself as a McDonald's - a successful empire focused on the customer's experience not varying from credibility, value and distinct image. Traditionally, we focus on a "brand" being directly related to a company. If we consider ourselves as a business, our names as the business's names and our stories



as the startup "brand," then our discussions become a bit more serious, concise and personal.

We have some nice advantages in 2018 that were not available 80 years ago. Technology propels your brand at a much faster rate than Ray Kroc or the McDonald brothers could ever imagine. Let's focus on some of the technologies available to help build a personal brand. Social media, websites, ePortfolios and available industry technologies will add varying contributions to your overall value. To improve your personal brand and image, focus on networking capabilities. Allowing your network to act as your franchise (otherwise known as your social web), your name and im-

age will grow substantially.

Your network must no longer stay locally connected. In the last two decades, we have the opportunity to utilize social media platforms such as Twitter, Facebook, Instagram, LinkedIn and others to connect with industry peers and future employers. If you're logged onto one of these platforms or all of these platforms, that's great, keep up the good work. Using these social media platforms will build your credibility and value. If you haven't jumped into the social revolution, consider it heavily. It's not a fad. It's becoming our way communicating with not only messages, but also with important news updates.

Websites, ePortfolios and Prezi can be other tremendous tools assisting you in building your personal brand. You work hard at what you do. Allowing others to see this will create a distinct "brand" image. Add your paper résumé to the cloud or embed it on a personal website you can attach to your email signature. This can immediately amplify your differentiation from others in your market bringing value to anyone you do business with. If you start a business, launching a website is a necessity. Likewise, make it a necessity while improving your personal brand. Add things like articles published, videos captured, YouTube channels that peers can subscribe to, but most of all get creative. Publish material to a personal website you wouldn't normally be able to add to a résumé.

It's vitally important to stay current with industry trends and use industry technologies, even if branding yourself as a "techie" isn't your end goal. Educating yourself with available resources can ultimately bring you closer to your end goal of being awarded more contacts, a larger network or better exposure to the whole industry. These trends and technologies offer better insight on analytics and different methods to manage your property. In the end, these addi-

INSIGHTS



Even though every platform is beneficial, Twitter is the most used in our industry. Posting at least once a week to start will add to your branding.



Start an ePortfolio today and keep it up-to-date so you're always ready to submit when the next opportunity becomes available.

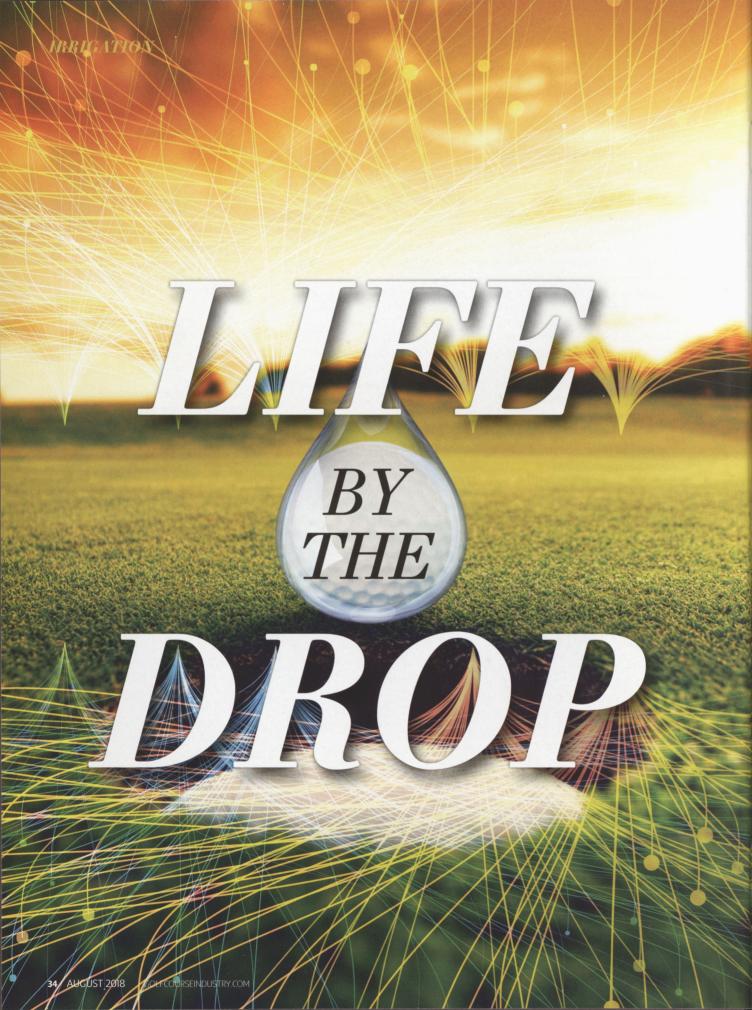


Digital data platforms, drones and moisture sensing are all changing the management landscape in our industry.

ADOBE STOCK

tions will add to your credibility.

Had technologies like social media been available in 1940, Richard and Maurice McDonald could have expedited their branding and business development. However, their story would have been vastly different. A key point is their processes. From their failures they learned what they were truly good at and applied it to build their end goal. After the purchase of McDonald's, Ray Kroc used available technologies to improve the brand, but focused on the final image. Even though we have many tools available today, they might not all apply to you and your benefit. Figure out what speaks to your goal and make it your best image in any facet applied. GCI





OBTAINING AND MAINTAINING AN OPTIMAL PLAYING SURFACE IS MORE ABOUT HARD DATA THAN GOING WITH YOUR GUT.

By Rob Thomas

here are bound to be extremes when it comes to golf course irrigation. While one superintendent may track every drop of water and measure the system's efficiency, another may just flip the switch and allow the water to fall where it may. The majority, though, fall somewhere in between.

Most superintendents know that optimal moisture levels lead to better turf conditions, but many don't know what the "optimal" level is, says Carmen Magro, CGCS, vice president, business development/chief agronomist at Stevens Water Monitoring Systems. Magro has been a superintendent in the Mid-Atlantic region and the director of the Golf Course Turfgrass Management Program at Penn State University. He later founded Agronomy Management Solutions - an international agronomy consulting firm - that eventually merged with Stevens Water Monitoring Systems.

"At the very least, we use our eyes and fingers to see and feel what kind of moisture is in the turf," Magro says. "Over time, we learn that when we have a certain feel of moisture, we can anticipate a certain turf condition. Moisture, however, impacts not only turf health, but its performance at the surface for the game of golf and player satisfaction." Magro stresses "touch and feel" should not be the minimum standard for today's superintendent.

Ian H. Williams, national specification manager for Rain Bird's Golf

Division, has seen both extremes from golf course maintenance crews. In fact, he's known superintendents who chose not to use any data and simply irrigate their courses for a certain amount of time.

"In my experience, that almost always leads to overwatering, which not only affects water bills and budgets, but can also lead to unhealthy turf," he says.

On the flip side, Williams also knows superintendents who keep a close eye on irrigation data, and who monitor soil temperature and volumet-

> ric water content and analyze those trends over six-to 12-hour periods.

"Simply by measuring and evaluating that data, these (dataminded) individuals are able to make proactive decisions," he says. "That information helps them understand how their turf is going to react based on the forecast and the trending sensor data."

And the misperception that "healthy" means "high performance" is one mistake Magro sees a lot of superintendents make. For example, the more a turf looks "off" or stressed, the better it performs for the game. This is a difficult concept

to understand for trained superintendents and players alike.

"The only way one can understand what the limitations and impacts of water are on the turf's performance is through precision monitoring," he says. "Only when monitoring is in place to measure moisture as the turf sees it can one understand the short- and long-term impacts of moisture changes. Otherwise, we are responding to what we see and that often is a little too late."

Consider three-day blocks when dealing with extreme water situations, Magro says. Turfgrass tends to respond to shortages or excessive amounts of water in cycles of about 72 hours. While a superintendent can see a drought impact fairly quickly by way of footprints or discolored, laid over turf, the setback from that drought condition will last a few days.

"If the turf is holding too much water, the impacts on air exchange and disruption of plant cell division will also last a few days," Magro says. "Further, there is now evidence that maintaining a consistent moisture level will reduce the appearance of certain disease symptoms like fairy ring, where managing moisture with high and low levels without consistent moisture levels will lead to more fairy ring appearance on the same turf plot."

If you're not monitoring water usage on our course then you should begin to do so, says Brian Vinchesi, President of Irrigation Consulting, with offices in Massachusetts, North Carolina and New Jersey. At a minimum, Vinchesi says superintendents should meter and track all of their water use, including any wells, potable water, pump station and pumping flows

"If you do not measure water use, you cannot manage your water use," Vinchesi says. "If your state requires a water-withdrawal permit, then you probably already meter your water as it has to be reported. If your state doesn't, it is a good idea to measure, so when permitting becomes a reality, then it is better to be able to tell the state how much water you use as opposed to the state telling you how much you can use."

Begin by investigating how colleagues in your market use water and what their minimum standard of gauging water use is, says Williams. Start by asking how they are irrigating and what the results have been, then talk to your local golf irrigation distributor. Distributor personnel have years of experience and are a resource when

it comes to watering trends and maximizing the equipment you already own and operate. "Distributor personnel are also familiar with other courses in the area and what has been successful and not successful," Williams says.

Eric Bauer, director of agronomy at Bluejack National in Montgomery, Texas, tracks irrigation and watering trends monthly and verifies their actual usage compared to the projected irrigation flow. "Today's irrigation software has more than enough reporting information for any turfgrass manager to fully understand any trends that are being done with watering," Bauer says. "It just takes commitment from the superintendent to review and adjust watering that need to be adjusted."

Minimally, superintendents

should employ the use of a portable precision monitoring system that not only gives information of real-time moisture and other key variables that impact, not only moisture, but the availability of nutrients and the need for cultural practices, Magro says.

"The cost of this investment is minimal compared to the impacts of lost play, unhappy players, lost turf, lost sleep and wasted resources including water, power, nutrients and labor," he says. "The thought that touch-and-feel is 'old school' is a non-argument, as this is naturally what every superintendent and turf manager should be doing anyway.

"Even with monitoring, we still have to correlate what we see and feel with what the monitoring tells us," Magro adds. "The big difference is to visualize and predict how the turf will respond before we ever see symptoms ... bad or good. That is what monitoring brings to the game ... pertinent information, better decisions, better responsibility."

Conversely, irrigation monitoring is not merely about collecting data, Magro says. Many tools provide a number quickly without any thought to how that number was ascertained or what it means. "Beyond the minimum of collecting information is doing something with it," he says. "Visualizing it to understand how one part of one green needs different attention than another part of the same green. Or how one green needs different management compared to another green on the same property. Making 'global' or course-wide decisions has now become a poor way of making decisions.

And Magro balks at the term

"extreme," which he says makes collecting copious amounts of data sound like T.M.I. ... too much information. "Nothing is over the top when it comes to collecting key data properly and using it wisely to make decisions," he says. "In my travels as a consultant to operations around the world, I cannot tell you how many times I have come to a facility to find binders full of data from soil and water analysis labs, nutrient analyses and physical evaluations of turf systems, yet the management of the facilities does not follow a lick of information out of those reports."

And the availability of turf data – in addition to irrigation – is only becoming more prevalent for turf managers. Williams says the industry is already getting a glimpse at what's ahead.

"Soil sensors are available today and provide detailed data directly from turf root zones," he says. "Following trends in the soil over 12 hours of time and understanding the plant's relationship to certain soil conditions, including high temperature, can help superintendents be more proactive when managing irrigation.

"It sounds very futuristic, but drones are now able to map plant moisture levels and health using hyperspectral imagery," Williams adds. "This same technology will be available from satellites with the same level of detail. While a drone fly-over provides a once-a-day snapshot of conditions, permanently installed soil sensors can offer around-the-clock data that superintendents and their staff can easily compile into meaningful trends at any minute."

Many still consider monitoring a luxury or high-budget

Garbage in. Garbage out on the course.

Collecting data is easy and there are a lot of tools that allow superintendents to do it quickly. That said, poor data will always lead to poor decisions.

Collecting data properly, scientifically and appropriately is far more important than just collecting data, says Carmen Magro, vice president, business development/chief agronomist at Stevens Water Monitoring Systems. "So, what a lot of users do is utilize technology that requires calibration, yet they never calibrate their tool," he says. "These tools require calibration every time they are put in the ground. Without doing that, it is like saying 'I'm OK if the data is not perfect."

If using poor information is the kiss of death, Magro questions why some superintendents are willing to accept this non-representative data collection that leads to decisions that may or may not be correct?

"Collecting data properly is key to making the best decisions from that data," he says. "Far too often, users forget this and look past the fact that if you do not collect data in a representative and random pattern, you can't possibly make your best decisions from that data ... Period!"

product or tool, however, this could not be farther from the truth about using advanced monitoring technology, Magro says. In fact, he's witnessed more average or lowbudget properties using the system in regions of the world that one would have originally thought would never use such a technology. In other words, there is no direct correlation between budget and those using this technology.

"This is a direct sign that using technology is fast becoming a staple application," Magro says. "Staple ... meaning it will be very hard to find a property without it sooner rather than later. Technology has proven that, on average, even the best, most successful turf managers have room to reduce water, nutrients, power and related applications on their properties. Even those users that still tend to use technology to only justify what they are already doing will soon learn, if not already, that they are not making the best decisions all of the time."

Increased availability and use of technology may be the future of irrigation data management, but there are steps all superintendents can take right away. That said, it's not a quick fix.

"Changing conditions and tolerance levels in turf and throughout your property takes time," Magro says. "It is not like a switch where it is either right or wrong. It is more about transitioning to levels the turf can adapt to over time and resulting in using the least amount of water, power and nutritional inputs as possible. It is about making the right decisions for labor-

While you're

When evaluating irrigation management, consider going beyond the turf and include tracking pond and well water levels, too.

"To the extreme they should measure inflows and outflows from ponds that are irrigation water sources," says Brian Vinchesi, President of Irrigation Consulting. "Water use should be tracked at least monthly, but ideally weekly or even daily so you can look for trends. Tracking water use will indicate potential problems and leaks.

"Compare the central controller program water use to the pump station water use for the same cycle," he adds. "The difference in the two will be due to leaks, poor database information, lower pressure than anticipated, wrong nuzzling, etc. Work on your system and database to bring the two numbers closer together over time. Make sure your water meters are calibrated every few years, especially paddle wheel types."

intensive cultural practices on areas that need it, when they need it, to avoid going over the edge or limiting key performance indicators in turf performance. It is about predicting what will happen if we push the turf one way or another. The only way one can know these things is by proper monitoring routinely and appropriately using the proper equipment, methods and analysis for better decisions." GCI

Rob Thomas is a Clevelandbased writer and frequent GCI contributor.



GREATEST HITS



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.

or modern golf architects there is one clear divide in our timelines and history - pre-computer and post-computer-generated plans. After many false starts, we drew our first complete set of plans on computer in 1998. One of the biggest advantages of CAD is that drawings require minimal storage space. I have some on CDs, some on thumb drives and all offsite in the cloud.

However, that still left 15 years' worth of paper plans to store. I'm never happy to throw out plans. However, it frees up attic space, which makes my wife happy. The fire marshal and insurance company are happy, too. Most likely, someone filing a future lawsuit against me would want to see them, so my lawyer is happy.

And so, every year, I use the Christmas holidays (although the schedule sometimes slips) to wean my collection of old plans from attic storage. As the cost of scanning comes down, my rate of scanning goes up. I started weaning out my contracts and specifications long ago. I then threw out any unused preliminary plans made prior to the final routing, followed by the full construction sets, keeping only 100 scale grading and drainage plans, which show the design, and the old green detail plans. This year, I finally tackled scanning those.

I hadn't looked at those in quite a while and got nostalgic about all the

hand drawn green details. We took pride in drawing plans that worked. Most did, and the best ones were also works of art.

Each staff member felt compelled to add their own flair to my initial sketches when I wasn't looking. And, each had their own drawing tendencies, that somehow missed the artistic mark, with various associates:

- · Using circle templates to draw contours, resulting in unnatural conical mounds
- Setting sand bunkers perpendicular to natural contours
- · Setting greens too low to seem overly fixated on saving fill and expense
- · Drawing domed greens or sand box depth bunkers because they didn't truly think in 3D

There are a hundred things you can solve on a green detail plan and luckily, if you don't, minor (and sometimes major) details can be fixed by field direction or a talented shaper. In fact, one of the best arguments for detailed green plans is that design requires many iterations to get just right, and it helps if the first one (or two) iterations are done before construction to save time and expense of making repeated changes with bulldozers.

It was a pleasure to relive those plans and the many good greens built from them. I wanted a mulligan on some, because they look worthy of building again. Or are they?

Theoretically, most architects take

pride in being original on every design. However, the busiest architects have been known to and derided by critics for reusing designs from the drawer.

Some architects justify it because clients tend to hire based on liking your previous work and want something similar. It minimizes risk. Others justify it in the name of "their brand" or standardization caused by regulations like ADA green entrances or good maintenance practices.

I think it's justified in restorations. I have copied and pasted the best of an architect's sand bunkers to other holes to replicate his look. On new work and renovations, I have experimented with reusing green plans, but it is hard to drop them in new locations without plan changes due to grades, specimen tree locations, sunlight or circulation needs.

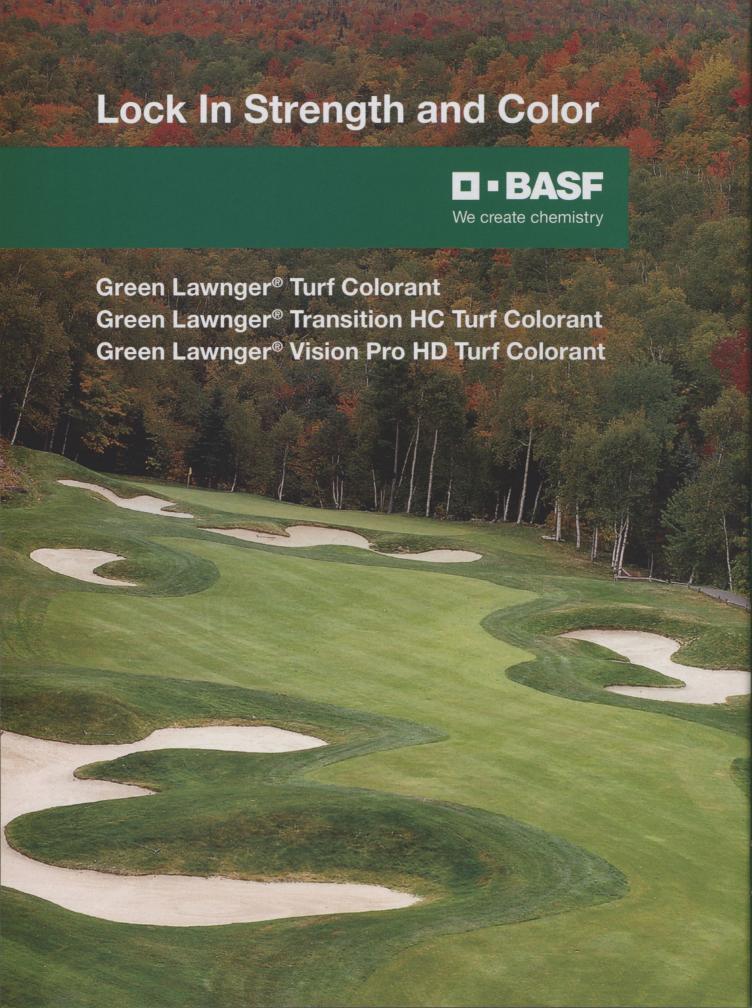
But some of those old green plans seemed "so cool" that I was immediately tempted to use some version of them on current projects. However, even my favorite old green designs would require "tweaking" today to reflect modern course needs and my long-held but occasionally demoted in importance design philosophy of preventing maintenance and speed of play problems before they begin by design. Typical changes to my old green plans would include:

- · General flattening due to faster green speeds
- · Reducing bunker number, shape and size because sand bunkering was too large in the "awards" era
- · Making sure bunkers don't:
 - · Extend too far in front of the green
 - · Narrow the frontal approaches
- · Reducing the amount of drainage flowing on the green surface

You would think a veteran architect with more than 1,000 golf hole designs to his credit could do his next project as a collection of his greatest holes like a band's "greatest hit" albums. But music and golf courses are different, and I think my next design will have to be another original. GCI



Colorants 2018 Forever Green



Prevent winter injury and restore natural color.

Harsh winter weather and freezing temperatures can affect turfgrass appearance and delay spring transition. For both warm- and cool-season turfgrasses, BASF colorant solutions provide a protective surface barrier, restore green color, and accelerate green-up in spring. Our exclusive ColorLock technology provides more natural green color that resists fading from UV light exposure. As a result, your golf course will look great, extend its viability during winter, and be ready sooner for spring play.

Long-lasting color during dormant periods.

Green Lawnger® turf colorant with ColorLock technology restores the natural green color to turf during dormant periods, providing an excellent playing surface during the colder months. It is also used for touch-up to turf areas damaged by chemicals, hydraulic oil and pests. Green Lawnger turf colorant is a long-lasting green pigment that provides color for 12-14 weeks.

A protective barrier of dark turf.

Transition HC high dark turf colorant with ColorLock technology adds a natural green color to turf and extends transitional play in the late fall and winter months. An ideal part of a winterizing program, it provides a surface barrier to desiccation and accelerates spring thaw, helping turf to emerge from dormancy.

Make UV-resistance a part of your fungicide program.

Vision Pro HD high definition turf colorant with ColorLock technology adds a natural green color to all chemical applications. This UV light-resistant pigment product is tank mixable with many fertilizers and other pesticides. Resistant to adverse effects of rainfall, it's also used as an application aid that improves coverage.







Green With Envy

Superintendents are tapping into the world of colorants to not only green up turf but as an important resource and labor-saving tool.

Colorants continue to prove their value and remain a vital agronomic tool to those superintendents who are using them and continue to influence those who aren't of their value. Turf colorants have become a vital tool in the golf course superintendent's ever-

expanding toolbox. And beyond better defined playing surfaces, when you consider the other advantages they bring to the table, it's easy to see why there's been an uptick in use over recent years.

Turf colorants have been a hot topic this year as courses experiment with "liquid overseeding" or try to present more consistent color in the off-season. Please let us know if you're using

colorants at all and, if so, your opinions about the products that are out there and how you use them.

In addition, university research points to seasonal benefits to adopting colorant use in addition to rapid green up. Some studies point to colorants' ability to reduce light stress as beneficial to alleviating summer stress, while their ability to warm turf may ward off some winter damage.

In a continuing partnership with BASF, GCI editors surveyed readers on this topic. The 2018 research was very similar to research conducted a few years prior in 2014. The

> goal was to track and determine whether the recent findings would continue to support the data we collected in 2014.

When, where and how to apply colorants is a topic of conversation among superintendents and researchers.

Sea of green

BASF senior project manager Jeff Vannoy weighs in on establishing a successful colorant program for turf, as well as strategies for getting the most out of the agronomic product. GCI: IT'S INTERESTING TO COMPARE THE RECENT COLORANT RESEARCH WE CONDUCTED TOGETHER WITH THE STUDY WE COMPLETED IN 2014. THE DATA POINTS TO AN INCREASE IN COLORANT USE AND SPENDING AMONG GOLF COURSE SUPERINTENDENTS. WHAT ARE SOME FACTORS THAT MAY ACCOUNT FOR THIS TREND?

Jeff Vannoy: I think it's a couple of things. One, the cost of water and the movement of sustainability in golf is creating a force in which a lot of clubs don't want to spend the time and the money for the water involved in growing in new seed each fall for over-

seeding. The other factor is in the springtime transitioning out of overseeding can be a nightmare. If the timing is not right, your ryegrass can be dead or your Bermudagrass hasn't greened up. There's just a general worry among superintendents with the spring green-up. It can be pretty cost effective to utilize paint for fairways, so I think when you do the math between the two, the clubs look at it and say, 'We can have nice looking fairways and tees and at the same time, we can maybe save ourselves some money over overseeding."

TURF AESTHETICS CONTINUE TO BE THE TOP REASON TO INCORPORATE



COLORANTS INTO YOUR TURF MANAGEMENT STRATEGY – WHETHER IT'S TO MASK DISCOLORATION OR BOOST APPEARANCES FOR EVENTS AND TOURNAMENTS. HOWEVER, HAVE THE PLANT HEALTH BENEFITS OF INCORPORATING COLORANTS BEGUN TO GAIN MOMENTUM WITH TURF MANAGERS?

JV: I think the jury is still out on that. There are certainly bodies of research about colorant materials and plant health. But I would say from a BASF standpoint our focus on plant health is more in the area of specific fungicide research and not with colorants. I can't say that we have pursued that ourselves, so I can't comment beyond that. I think amongst our family of Intrinsic brand fungicides there's definitely been a recognition based on a lot of research that we have done that they have plant health effects. Colorants ... I think the jury is still out on that one.

THE MAJORITY OF TURF MANAGERS INDICATE FALL IS THE SEASON WHEN THEY ARE MOST LIKELY TO APPLY COLORANTS. HOWEVER, 15 PERCENT INDICATE THEY APPLY ON AN ASNEEDED BASIS. IS ONE STRATEGY MORE SOUND OVER THE OTHER?

JV: You have two basic camps. One camp is that you put out some colorant ahead of the first frost and early enough where you can start building up that pigment on the turf. That's one camp. The other camp, which is becoming increasingly popular, is treating after the first frost when they're deeper into dormancy. Colorants are a lot of art and science, but a lot of art. So, every superintendent finds the unique approach for his course with the timing and why things work a certain way. As far as when they are actually going to apply, you are going to see more or less time between applications depending on how the winter has been. That's going to affect when you need to reapply colorants.

SUPERINTENDENTS SAY A PRODUCT'S ABILITY TO HOLD ITS COLOR FOR A LONG TIME IS WHAT'S MOST IMPORTANT WHEN THEY PURCHASE COLORANTS. CAN YOU OFFER

ANY TIPS ON HOW THEY CAN GET BETTER PERFORMANCE FROM THEIR COLORANTS, PERHAPS DURING APPLICATION?

JV: Some of the basics still apply. Use fullrate applications. What we find is that if you get those full rates out early, you tend to get ahead of the season and the winter a little bit better. Make sure that your calibration is correct and you're getting the right rates out when you put out those colorants. Beyond that make sure you understand the different pigment combinations with whatever product you are using because not all products are created equal.

AN INTERESTING TIDBIT FROM THE RESEARCH, SUPERINTENDENTS RANKED PRODUCT PACKAGING VERY LOW WITH REGARD TO IMPORTANCE. HOWEVER, WHEN ASKED HOW COLORANTS COULD BE IMPROVED, MANY WEIGHED IN THAT THEY WISHED THERE WAS A BETTER, LESS MESSY WAY TO MIX AND LOAD THE PRODUCTS INTO A SPRAYER. ANY TIPS YOU CAN OFFER ON HOW THEY CAN BETTER UTILIZE THE EXISTING PACKAGING DESIGN TO MORE EFFICIENTLY USE THE PRODUCT?

JV: We have packaging anywhere from a quart and now we're introducing 250-gallon totes for the very big users. One of the things that we are aware of - and we're doing some packaging research right now - is the concept of being able to meter-out the colorant in a less messy away. Whatever these colorants are going to touch are going to be there for a little while, especially clothing, shoes, things like that. We would agree that there's a lot of packaging innovation that can come the next few years in the colorant area. I don't have any strong solution for the challenge today, but I think it's an area where things are going to be evolving as time goes on.

WHAT'S IN THE PIPELINE FOR TURF COLORANTS? WHAT TYPES OF INNOVATIONS CAN TURF MANAGERS EXPECT IN THE COMING YEARS?

JV: The beauty is all in the eye of the beholder. If you line up 10 people looking at a fairway, depending where the light is

at, where they are standing and the time of day, you are going to see a different color. It's very subjective. We are always going to be paying attention to the color ratio and mix ratio in a formulation. But I think more important than that is going to be the residual control of a colorant. We would like to see a day when you can put an application out in October and it holds to March. I think if you look at across the aisle to home paints and industrial type paints ... we paint things on non-living surfaces. We paint bridges and now they last 30 to 40 years. We think the technology is out there to provide a longer residual control. Our efforts are going to be in that area. With the cost of labor and the complexity of finding good labor to be able to do things such as spraying, which is a high-level skill on the golf course, we think the future is going to be the superintendent finding things that are going to require less labor. So, if we can innovate the residuality of the colorant, we think that's going to be a winning combination.

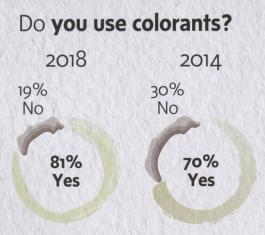
WHAT RECOMMENDATIONS CAN YOU MAKE TO GET THE MOST OUT OF YOUR COLORANT USE?

JV: The biggest thing to watch out for is going at too low rates. Once you get behind it and once the dormancy hits, it gets harder and harder to catch up. To start the season, make sure to use high enough rates of the product of choice and ask questions about what the pigment concentration is in the product that you are using. Different concentrations cost more to make, so you might be putting out a product that's a higher cost per gallon but you don't have to put as much out because the concentration is such. Watch those rates. It's kind of a wait-and-see thing after you put it out to see how long it will last. And don't let the color fade out too much before you get to the next application."



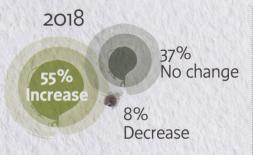
BUDGET AND

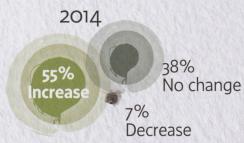
Compare the data and it's evident that superintendents are relying more on colorants as a key instrument in their agronomic tool chest. According to recent GCI research data, colorant use has increased nearly 10 percent since 2014, and spending has increased by more than half since 2014.





Budget Change (over last 3 years)





Top Purchasing Month

August 14%

September 25%



November 25%

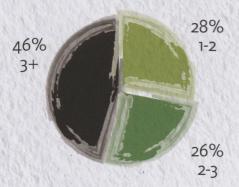
Swiss Army Green Traditionally, colorants have been vital to conceal and cover up course blomish.

and cover up course blemishes and maintain player expectations and course satisfaction. However, in recent years, colorants have proven to bring additional benefits and uses when overseeding, managing water/irrigation restriction and as a significant labor-saving tool.

Treated areas include

86%	60%	59%	22%	20%	8%
Greens	Tees	Fairways	Surrounds	Divot Mix	Non-Golf Areas

Average number of apps over a year's time



Timing

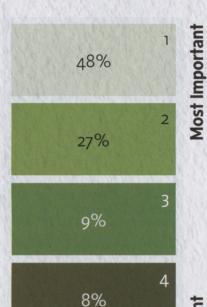
65%	20%	15%
Fall	Spring	All Year / As Needed
Fall Timing		

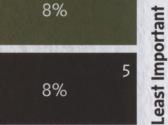
48%	23%	29%
October	November	December



Sought After Product Criteria

Holds color for a long period of time





Easy to apply formulation

Most Important Least Important				
1	2	3	4	5
10%	30%	25%	27%	8%

Convenient packaging size/configuration

Most Ir	nportan	tl	east lm	portant
1	2	3	4	5
10%	7%	17%	21%	45%

Color matches my desired look for my members

Most In	nportan	ا ہے ا	Least Important		
1	2	3	4	5	
23%	20%	20%	20%	17%	

Price point fits my budget best

Most Important Least Importan				
1	2	3	4	5
12%	18%	30%	22%	18%

: Sider i estince diller



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.

TORO 648 **AERIFIER TRAILER**

wo recycled Toro Workman HDX-D 4WD dump beds were transformed into this green's aerifier trailer. The full bed measures 64 inches by 55 inches and then a 21-inch by 55-inch extension was bolted and welded to the full bed. The existing mounting brackets from

the bed had 2-inch blocks welded and bolted to them and the recycled green's fan trailer underneath. A 60-inch by 51-inch ramp, made from 2 1/2-inch angle iron and heavy duty expanded wire mesh, is mounted to the bed with industrial hinges. The Toro 648 Green's Aerifier fits perfectly onto the modified Workman bed. It cost about \$200 using mostly recycled equipment and it took about 12 hours to build/modify.

Brian Goleski, superintendent; JR Wilson, equipment manager; Chris Briggs, first assistant; Jim Geiger, second assistant; and Stan Ryder, course setup person, make up the great golf management team at the Noyac Golf Club in Sag Harbor, Long Island, N.Y.



SPACE SAVING **EFFICIENCY**

hree Backyard Buddy Automotive Model "Workforce" Lifts (\$5,245 each) are installed in the equipment storage building to greatly expand the storage capacity. Sprayers, tractors and green's aerifiers are raised and other equipment is conveniently stored underneath each lift. Lifts measure approximately 200 inches by 116 inches with a 7,000-pound capacity. Equipment is raised 6 feet, 5 inches off the ground and an industrial steel plate (\$800) is placed onto each lift so there is a solid floor throughout. The lifts have a 1 horsepower motor, and it takes about 45 seconds to raise and 30 seconds to lower the 110-volt electric/hydraulic lift mechanism. There is an optional wheel kit (\$400) that is used on one of the lifts. Lifts are intentionally not bolted to the concrete floor so they can be relocated with ease, taking two employees about 10 minutes to move each one. The team at

Noyac Golf Club created this great idea. GCI



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THE RED BALLOON



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

hose of you who've heard me speechify about the state of the industry may recall that I often describe the golf market as a big red toy balloon.

The red balloon got waaaaay overinflated in the 1990s to the point where we had 16,200 or so facilities in 2001. Frankly, it's amazing our balloon didn't just pop the way other boom industries have over the years. But, in 2001, the balloon was so tight and shiny that the banks and the giant real estate developers figured out that the jig was up. We'd built way too many "anchor" courses, resorts and upscale daily fees. New course openings quickly scaled down and the golf recession began.

So, the balloon slowly deflated. About 100 to 200 courses have closed annually since that high-water mark at the turn of the millennium. In all, we've shut down about 1,200 more courses than we've opened over the past 17 years and we're now at about 14,950 courses. If you're a math person, you'll recognize that means we've reduced our supply over time by about 7.5 percent.

And, I have no reason to believe that trend won't continue. The balloon will get slightly smaller every year for at least the next five - maybe 10 – years until we reach a sustainable supply that roughly matches rounds and available revenues. An educated

guestimate might be that we'll have 13.500 courses in 2025.

So, we're seeing all sort of changes in the market as supply and demand both continue to evolve. Let's examine a few ...

First, we have become a business of "haves and have nots." The "haves" are generally well-funded, command a strong customer/member base and have the resources to invest in the future. The "haves" are currently leading the robust remodeling and renovation boom because they recognize they need to offer a better, fresher product to attract and retain a gradually shrinking group of customers. And, frankly, they're in that position because they've had decades of solid financial management and leadership that understands investment isn't optional if you want to be around 50 or 100 years from now.

The "have nots" either don't have the resources or don't recognize that they, too, need to offer a better product. Instead, they are "waiting for the market to come back." Newsflash: The old boom market never really existed and it ain't coming back.

Second, within the "haves" are a thousand or so 800-pound gorilla clubs. These are historically high-level facilities who are not just investing and surviving, they are thriving. By all accounts, America's elite private golf clubs have never been more profitable. They got smart about marketing,

attracted the biggest weddings, the most important galas and the best corporate outings and events ... and they are making serious bucks. Don't believe me? Check out Guidestar.org, a site that tracks revenues, salaries and lots of financial stuff about nonprofit organizations like private clubs and even national associations like GCSAA.

Third, within the "have nots" are facilities that are flatly doomed (wrong location, terrible management, too much debt, legal/ zoning issues, etc.), those that are just sitting around hoping for a buyer, and those that are trying hard despite the limitations. I wrote something about this topic recently and I admittedly dissed small-budget courses and a few of y'all lit me up for doing so. Sorry! There are tremendously innovative small-budget courses out there with superintendents and managers who are working their asses off trying to defy the odds. Frankly, we can learn a lot from them because necessity is the mother of invention. (Look for us to do more coverage of small-budget solutions next year.)

Finally, and most importantly, we're all being forced to get smarter. The golf recession taught us to look at other businesses (and MCO operations) and see what they do well. It pushed us to address sometimes awful customer service issues. It made us realize that marketing wasn't a dirty word. And, to no small extent, it made facilities - particularly the "haves" - recognize they can't win without a great golf course superintendent.

So, here we are clinging to a slightly saggy but shockingly resilient red balloon. Yes, it's getting a little smaller every year and it's sad to see courses close and people lose jobs. But, every time that happens the rest of the industry gets a little breathing room and can focus a little more time, attention and resources on securing a better future. GCI





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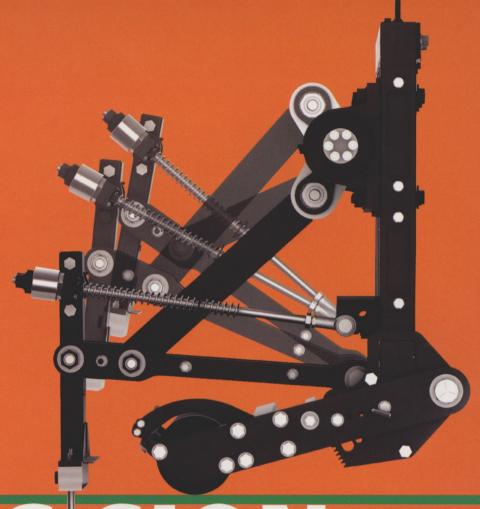
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