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BUILD A DIFFERENT WAY OF THINKING

he bulk of this issue is about construction and renovation. So, let's open it with wisdom from somebody who has guided dozens of prolific projects. Legendary architect Bill Coore's message to superintendents looking to elevate their careers: Get in the dirt!

His reasons are different than what you might think. Construction experience isn't solely about boosting a résumé. Experiencing a few big digs can turn a superintendent into a lateral thinker.

"To me, one of the greatest attributes of a superintendent being involved in construction is that there has to be a different mindset," Coore says. "It's so easy for people in the golf course maintenance end of things to get locked into such a routine where every day almost becomes the same. But in construction you can throw most of that out because Mother Nature intervenes dramatically and all sorts of other things intervene. I'm prejudiced to construction, but the ability to think in different ways, encounter different circumstances, different situations, is a wonderful attribute to have."

We spoke with Coore for our story about River Oaks Country Club in Houston (page 26). Coore is the stepfather of veteran River Oaks director of golf course operations Morris Johnson. Instead of joining Coore and his partner, Ben Crenshaw, to design glamorous courses, Johnson forged his own path and landed an elite job at River Oaks.

Johnson epitomizes a lateral thinker. His run at River Oaks has included working with big-name architects such as Tom Fazio and Rees Jones and coping with small pests such as nematodes. His ability to deftly drift from the routine to find creative solutions has led to a nearly two-decade run at a forward-thinking club.

Besides working on dreamy sites, Coore receives opportunities to work with some of the best contractors, shapers, irrigation consultants and, yes, superintendents in the world. Coore can relate to superintendents because he begrudgingly spent time as one. With golf course construction stalled in the late 1970s because of oil volatility, Coore accepted a superintendent job at Pete- and Roy Dye-designed Waterwood National in Huntsville, Texas.

"I can honestly say I wasn't too happy about it at the time," Coore says. "I wanted to be in the golf course design business and I thought I was being set off on a sidetrack."

"Hindsight being what it is, it's one of the very best things to ever happen to me," he adds. "It forced me into learning how to actually take care of a golf course and how you actually got from construction to the preparation and presentation of a golf course for everyday and competitive play. It was one of the greatest things to happen to me in my career and, quite frankly, it wasn't totally planned."

Pragmatism. It's a wonderful thing.

When Kelly Shumate designed The Ashford Short Course at The Greenbrier (page 44), he thought like a superintendent. Now with multiple designs to his credit, Shumate's fulltime job involves directing the golf maintenance efforts of The Greenbrier's resort courses and private facility. The Ashford blends Golden Age concepts with modern realities. Shumate understands overbunkered courses with excessively contoured greens can drain golfer enthusiasm and maintenance resources.

From designing and constructing NFL-caliber practice fields on short notice to guiding a crew through the rapid rebuild of two golf courses following a horrific flood in 2016, Shumate shuffles between projects and finds viable ways to enhance The Greenbrier. His job forces him to think beyond daily maintenance — a challenge he willingly accepts.

Coore, Johnson and Shumate are comfortable straying from their respective routines. Spending time in the dirt helped them reached the top of a demanding industry. GCI



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WALK, TALK AND LISTEN

▲ Woodbridge Golf and Country Club superintendent Kurtis Wolford shares the whats, whys and hows of course maintenance on Wednesday morning course walks.

A California superintendent with a zest for fitness finds an active way to connect with members.

By Lee Carr

oodbridge Golf and Country Club in Woodbridge,
California, was ready to open its new fitness facility when
COVID-19 emerged and the ensuing restrictions kept it shuttered. Kurtis Wolford, superintendent and self-professed fitness nut and triathlete, collaborated with the general manager and the fitness director about how to keep members active, engaged and spending time with one another.

"We have a lot of walkers at our club and we felt guided golf course walks were worth trying," Wolford says. "They are great for exercise and even better for communication."

Led by Wolford, the walks start at 7 a.m. every Wednesday and last about an hour. Tee times start at 8 a.m. Woodbridge is a 27-hole facility and the members choose which nine they would like to explore, or the nines are rotated. Wolford has been with Woodbridge for about 18 months (following the 32-year tenure of Jim Husting) and the walks represent a nice way to become more familiar with the members.

"I see the walks as a really good opportunity," Wolford says. "Where there is verbal

communication and people can also see what you're talking about, that's the most effective communication." Members can bring guests on the walks. The numbers started small but have grown to almost 20. Attendance can reflect the weather as there have been some extremely hot days, very humid days and days with poor air quality due to nearby fires. After two months, there is a steady crowd.

The walkers are usually playing members. "It's my opportunity to talk agronomy with the group and have them see what we are doing before they play," Wolford says. "I am communicating our philosophy, how we do things agronomically and things we are going to do. These walks give members firsthand knowledge and the opportunity to understand it all."

Every walk addresses a variety of topics, including renovation projects. Woodbridge is creating some new tee complexes, renovating others and removing several trees. "Trees are a regular topic," Wolford says. "I have an arborist background and this is an Auduboncertified course, so conversation includes covotes, red-tailed hawks and other wildlife." Other topics include horticulture, the environment, club events, golf rules or recent news inspired by local and professional tours. "My father was an agriculture teacher for 35-plus years and my wife is a teacher," Wolford says. "I'm comfortable teaching."

Wolford has good experience with grow-ins, being part of course construction crews and working with shapers and architects. He understands what architects are trying to accomplish with the placement of bunkers and mounds, right and wrong places to put trees and more. "It's morphed into more of an educational experience for members," Wolford says. "I've always learned a lot by asking questions. It's the best way to learn and these walks give members that chance."

Whatever is discussed, it's important to dispel ill-conceived notions and cultivate good information. Members often share what they have learned with those they play with, which has a positive effect. Another benefit to the walks is that Wolford has learned to communicate more effectively with groups and as a manager.

"A tool that is underutilized in our trade is a laser pointer," Wolford says. It's essential during walks to point specifically to what he's referring to and it makes it easier for the group to concentrate. For instance, to discuss a specific tree branch, the laser can bring everyone's focus to the same place in an instant without a lengthy description.

The only drawback is securing Wolford's time. Mornings are normally a challenge. "I had to thoughtfully determine what is worth more, my ability to communicate effectively with the membership or me losing 90 minutes once a week," he says. "The communication far outweighs the loss of the hour and a half."

Another popular form of communication with agronomy is Twitter. Wolford (@KurtisWolford) has picked up turf tricks from Twitter users and he doesn't hesitate to share his own good ideas. Wolford sent a single tweet about the walks that has 20,565 views and counting. From that exposure, Wolford received calls from superintendents and general managers wanting to know more.

The power of direct communication can't be underestimated and face-to-face communication is even more appreciated due to the pandemic. Walking with members and enjoying the course together "is worth its weight in gold to communicate why we are doing what we are doing," Wolford says. "We get to answer their questions and members become advocates when we empower them with information."

Lee Carr is a Northeast Ohio-based writer, and frequent Golf Course Industry contributor.





Tartan Talks No. 51

No living golf course architect has spent more time in the South Carolina Lowcountry than Clyde Johnston.



Before an influx of northerners

▲ .lohnston

seeking sun-filled lifestyles discovered the region, Johnston established a firm on Hilton Head Island in 1987. Consider it a savvy decision with numerous professional and personal perks.

Johnston has guided more than 60 projects, including new courses in every Carolinas coastal golf hotbed, and met his wife while working on Oak Point (originally called Hope Plantation Golf Club) at Kiawah Island Resort.

A member of the Lowcountry Golf Hall of Fame, Johnston joined the Tartan Talks podcast to describe living and working in a region where golf helps define the tourist and snowbird experience. He moved to Hilton Head in the 1970s while working as an associate to Willard Byrd. Lowcountry life proved so pleasant he declined an opportunity to join the firm Rees Jones was establishing in New Jersey.

"This is home," he says, and designing and renovating golf courses near home means finding a balance between playability and sustainability, which Johnston addresses in the podcast. He also explains how his career was shaped by his father, C.B. "Johnny" Johnston, a PGA pro who also designed courses.

Enter bitly.com/ClydeJohnston into your web browser to hear the podcast.

USGA establishing southern home

he USGA announced it will establish "Golf House Pinehurst" in North Carolina, to include a new equipment-testing facility, innovation hub, museum/visitor center and offices by 2023, and host five U.S. Open Championships in the golf-rich state by 2047.

The announcement adds four U.S. Open Championships to be contested on Pinehurst No. 2 — in 2029, 2035, 2041 and 2047 — to the already-scheduled 2024 event. Pinehurst Resort & Country Club will serve as the USGA's first anchor site

for the U.S. Open.

The plan came to fruition through a comprehensive economic development effort that involved representatives from the North Carolina General Assembly, the Office of the Governor, the Department of Commerce, Moore County, the Village of Pinehurst and economic development experts. The total \$25 million investment includes the construction of two buildings to be located near the clubhouse on the historic Pinehurst Resort



property, housing 50 fulltime USGA staff members.

The campus will feature the USGA's Equipment Standards Test Center — a laboratory dedicated to testing golf balls and clubs for conformance to the Rules of Golf. It will replace the current facility on the USGA's Liberty Corner campus and enable new investment in advanced tech required to

perform global governance.

Pinehurst will also serve as the USGA's base for its work to advance the game through innovation, research and science, in collaboration with some of the state's leading universities. USGA staffers based in Pinehurst will include members of the championship operations, Research and Test Center and Green Section teams.

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INDUSTRY buzz

The Carolinas GCSA has solidified plans for its "Conference Comes to You" online education program. Nearly three dozen golf course superintendent associations across the United States and the British International Golf Greenkeepers Association are partnering in the event beginning Nov. 2. The online conference, which has a week off over Thanksgiving, replaces the Carolinas GCSA's annual conference and trade show in Myrtle Beach, South Carolina. As official partners in Conference Comes to You, participating chapters earn discounted pricing for members — a break from \$70 per seminar to \$40 — and will receive a share of each member registration fee. Visit www.conferencecomestoyou.org to register.

Textron Specialized Vehicles announced it will relocate all manufacturing of **Jacobsen** professional turf equipment to its facility in Ipswich, United Kingdom. The move will begin this fall and be completed in stages over the next

several months. The plant, which currently builds Jacobsen and Ransomes mowers, is the oldest manufacturer of motorized lawn mowers in the world, in operation for more than 187 years. The facility will produce mowers for all regions, including North America. Jacobsen will maintain its sales, parts, and customer care teams in North America, and its network of North American distributors, to serve its customers in the United States and Canada.

Prime Source has announced the registration of Azoxy D Select and AzProp G Select fungicides and Flumioxazin 51 WDG Select herbicide. Azoxy D Select contains the active ingredients azoxystrobin and difenconazole, with two modes of action to provide broad-spectrum disease control in golf course turf. AzProp G Select granular fungicide contains the two active ingredients azoxystrobin and propiconazole, and is recommended for the control of certain pathogens causing foliar,

stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds and rusts of turfgrass plants. Flumioxazin 51 WDG Select contains the active ingredient flumioxazin and provides both pre-emergent and early post-emergent control of more than 100 weeds.

Graze — a new start-up bringing intelligence, automation and sustainable solutions to commercial landscaping — introduced a new autonomous, electric mower model set to hit markets by 2021. Graze introduced an initial prototype model to address challenges, applying artificial intelligence and robotics to create a fully autonomous commercial lawn mower. The early design proved to attract investor interest from major operators and also individual investors on the crowdfunding platform SeedInvest. The new model will expand the design with new optimized features and incorporate in-the-field feedback from industry leaders.





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PLAYING THE LONG GAME

ow do you plan for the future when the ground is shifting beneath your feet? When every day seems to bring a new forecast about the health of our fellow citizens, our economy and our environment?

The answer is simple for some. They'll simply turn away from long-term opportunities and challenges while taking refuge in what seems slightly less murky: tomorrow, next week or next month.

That approach may feel safe, but it's not what your board or your ownership expect. They hired you to be the long-term caretaker of their clubs and facilities and the guardian of their relationships with loyal members and customers. So, what are those kinds of leaders doing to prepare? Our observations suggest five things at the top of their lists.

1. THEY'RE LOOKING AHEAD ... **WAY AHEAD**. Some economists predict that the U.S. economy will not return to pre-pandemic levels until 2023. That means visionary facility managers and club leaders of every description should be looking not only around the corner, but also over the horizon to get ready for a post-pandemic world. Those leaders see things differently.

They see opportunity rising out of increasing golfer participation, as families and friends view golf courses as a primary platform for socialization and outdoor exercise. They see increasing outdoor dining options. With high unemployment levels, they see opportunities to upgrade their staff's performance and service levels.

2. THEY'RE TAKING CARE OF THEIR PEOPLE. In several recent national polls, including Gallup and Harris, a strong majority of

employees say they feel their employer is looking out for their best interests. (Similarly, a survey of private club members in the U.S. and Canada conducted by our firm found that members feel highly positive about the performance of their clubs throughout the COVID-19 crisis.)

It's easy to show your team members that you care for their well-being and that you respect their dedication during difficult times. You can write a personal note of thanks and invite them into your office for a conversation and remind them of their importance. You can encourage them to bring their family to the course as part of "family day." Your best people are your most important asset. You'll need them prepared and energized to lead your business into the future.

3. THEY'RE AWARE OF SHIFTING MARKET CONDI-

TIONS. External influences are changing our views on leisure activities and disposable income. It's critical that club leaders understand the unbiased and unvarnished trends influencing golf. In the GGA Partners' survey, roughly four in five members reported either an increase in importance or no change in the club's importance in their lives. However, survey respondents were not optimistic about their club's financial position. Seventy-one percent expect a decline in the financial health of their club. Fifty percent cited current economic conditions and 42 percent said a decline

in member spending would lead to the decline, which 20 percent predicted would be "significant." A surge in golfer participation that many courses have enjoyed in the past several months should not be construed as a guarantee of future success.

4. THEY'RE REALISTIC AND PREEMPTIVE. For superintendents, club managers and other leaders, realistic planning requires careful review of revenue capabilities and overhead arising from on-going operational costs. Here are some steps to take in preparing for 2021:

Review your staffing model and search for efficiencies. Now may be time to update and refine your organization of management.

Rethink your plan of work model. Perhaps mowing in the afternoons opens up desirable morning tee times and makes your work on less crowded fairways more efficient. Likewise, evaluate work such as tree trimming and bulk clean-up and consider outsourcing or moving such projects to the off-season.

Monitor inventory levels. There is no need for a full fuel storage tank during the off-season, for example. Procure what you will use more efficiently.

5. THEY'RE PLANNING ON

SUCCESS. Imagine your facility on its best day ever. You and your team make those days happen when you dream big and work toward a future that delivers the best of your talents and imagination. Don't be shy. **GCI**



HENRY DELOZIER is a partner at GGA Partners, trusted advisors and thought leaders. He is currently Chairman of the Board of Directors of Audubon International.



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THE THREE Rs

here's a reality show on TV called "Botched" that documents the repair work that must be done when plastic surgery goes awry. And every time I watch it (which, I hasten to add, isn't that often), I think about golf course renovations that were done badly or for the wrong reasons.

Whether it's a bad nose job or an ill-conceived course project, the results aren't pretty. Which is especially dumbfounding because in both cases, the work should have been done right the first time — if it should have been done at all.

So, I think it's time to go back to school and take a look at golf's three Rs: rebuild, redesign and renovate. What are they? What are the differences? And, most important, when do you know your course needs any one of them?

At some point, every golf course will need to be renovated or otherwise updated. Because just like us, features age or just wear out. Whether these features are natural or manmade, visible or underground, they all have finite life spans, from irrigation systems to bunker sand, drainage pipe to greens infrastructure.

The key to making any of these upgrades successful — and also likely the hardest part of the process — is planning. Here's a rough checklist that will help you get started when your course is due.

Start with this key question: Is a rebuild, renovation or restoration in order? Yes, if the reasons are right. Here are a few:

- Keep the course current or playable in accordance with advances in golf equipment technology
- · Favorable economic climate
- · Failing playing features
- · Membership drives
- · Tournament aspirations

But having the reasons is only half the battle; now you have to convince the club's decision-makers to invest in the project. And the costs can be high and the "reasons" not visible or apparent to the untrained eye. Infrastructure isn't sexy, but it's vital to the course's health and well-being. And if Average Joe Golfer or Mr. Big Shot Committeeman can't see the problem and doesn't understand why it's crucial to operations, your job just got a lot harder.

Here are some important features that will need a hard sell:

- Drainage
- · Cart paths
- · Bridges
- Pump station (with or without irrigation system)
- · Roads and parking areas
- · Practice facilities
- · Did I mention drainage?

Before going on, let's draw some distinctions among the three kinds of projects. Using the right language will help everyone better understand what's happening.

REBUILD

These are smaller, more limited projects, such as rebuilding greens, teeing grounds or bunkers. When are they necessary?

Greens

- Older, classic golf courses with soil greens may desire a transition to modern, USGA construction technology
- Need to change or re-grass surfaces.
- Install internal drainage systems (do you prefer a shortor long-term result?)
- · Repositioning, enlarging the

surfaces or softening surface contours for play

Bunkers

- The original design intent is lost and/or out of style
- Re-position, enlarge or shrink bunkers for ease of maintenance
- Place bunkers to challenge today's equipment technology
- Replace sand, install various bunker floor materials
- Reduce the penalty to the golfer
- Replace aging sand to improve quality of play

RENOVATE

A little more serious, this is when playing features are about to fall apart and become obsolete.

- · Putting greens failure
- Teeing ground size and positions
- · Need to re-grass fairway turf
- Declining or contaminated bunker sand
- · Poor drainage

REDESIGN

Now we're talking a big project, one that will take time and money. How bad do things have to be?

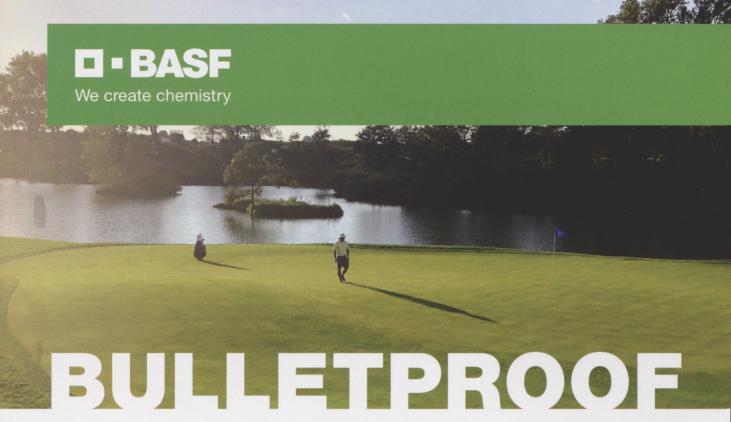
- Features are worn out and tired (mostly aesthetics)
- Advances in equipment have made the course obsolete
- Membership desires a different look or type of course
- · Adding the "wow" factor
- Desire to attract tournaments

No matter which R you're suggesting, make your case with

MORAGHAN continues page 56



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



The data is in and Maxtima® fungicide and Navicon® Intrinsic® brand fungicide have earned rave reviews from superintendents and enthusiastic recommendations from salespeople.



by Pat Jones

About two years ago, I was on the phone with Dr. Jim Kerns, Dr. Bruce Clarke and other legends of plant pathology, digging into the testing and trials of two new BASF products: **Maxtima** fungicide and **Navicon Intrinsic** brand fungicide.

They were excited about the promise of the new DMI chemistry, but obviously the proof would be in how it performed in the field. The article I wrote then explained why the new products held some promise for superintendents looking for an effective dollar spot solution that didn't have the risks that some DMIs can present.

Now here we are in 2020, the craziest of years, and I can add one more unusual thing to the list of stuff that's happened: The reviews of **Maxtima** fungicide and **Navicon Intrinsic** brand fungicide have actually exceeded the high expectations.

In July, I fielded my own independent study to find out if superintendents actually liked the products or not. The results were remarkable, particularly considering how cautious turf pros are about committing to new products. Here's what we learned:

- An amazing 85% of the superintendents surveyed who have used the products said they were "likely" or "highly likely" to recommend them to their colleagues.
- Dollar spot is an important target, but many users (38%) embraced it as an effective broad spectrum rotation tool.
- Nearly 93% of users were pleased with the products thus far. A quarter of all users surveyed said they already consider it an important part of their disease control program.
- When asked to rate the value of Maxtima fungicide and Navicon Intrinsic brand fungicide overall, supers gave it 4.1 stars out of 5.

I've never seen numbers like this for a new chemical in our business. I think the launch was successful because of the extent of the testing and the reputation of the turf scientists who conducted the trials. Local distributor reps were involved in research from early on, quickly gaining confidence in the product and recommending it because they saw the need for a new DMI. And, as indicated in my study, the products performed as advertised from the get-go. The bottom line is, everyone is jazzed about the longer spray intervals and, of course, the ability to use it safely with PGRs.

To drill down on the results of my study, I reached out to experienced superintendents and distributors for specifics about how the products are performing.

I asked Lance Rogers of the venerable Colonia Country Club to describe his experience with the product in one word:

66

Clean. When I say clean, I mean one hundred percent clean. I put **Navicon** [Intrinsic brand fungicide] out about July 6. 17 days later, I sprayed again. My fairways were still clean. No brown patch, no dollar spot. It's healthier than it was previous to the spray. And that's with nearly 4 inches of rain, high dew points and humidity. The fairways were incredible. I probably could have even gone longer, but I wanted to stick with my rotation.

"It's been five years since I used a DMI in the summer and I'm sold on it. I spray it with PGRs every time and it's been perfect. I was also losing efficacy from SDHIs, so **Maxtima** [fungicide] makes those products more valuable. It's going to be part of our program for a long time.



Lance Rogers Colonia Country Club "

Alan Corbin of Corbin Turf in the Carolinas said it got his attention two years ago when so many great turf researchers were giving it a thumbs up.

"When PhDs like Bruce Martin, Jim Kerns, Bruce Clarke and Rick Latin all say the product is great, you have to sit up and pay attention. Plus, it's obviously a very rare thing to have a DMI you can use in the summer. I was so impressed that all those professors said **Maxtima** [fungicide] had zero problem[s] with growth regulation.

"I'm pretty cautious about new products, but I have zero hesitancy recommending this one. Overall, everybody who tried it anywhere this year has loved it. And the price is right, so it works for a lot of people as a broad spectrum control. Even courses with tighter budgets who were only spraying tees and greens can now afford to also spray maybe 10 acres for spring dead spot control in fairways. We also highly recommended it for fairy ring. The biggest thing overall for us down here is we have a new active we can trust in the heat."

When I talked to him in August, Paul Dotti of the great old Arcola Country Club had just hosted the New Jersey state amateur — in the middle of a pandemic and a hurricane. It was crazy, but the one thing he didn't have to worry about was disease.

"For a long time, my go-to summer sprays have been BASF products. This year we added **Maxtima** [fungicide] to the mix as we prepared to host the amateur. We finally sprayed at day 22, right before the event. We probably could have pushed it longer, but I didn't want to spray during play. It was 90 [degrees] and humid, but it was still doing great. **Maxtima** [fungicide] was just bulletproof for 21 days during the toughest conditions you could imagine.

"Everybody has products that I like and it's really amazing that we have so many good products in our arsenal today. But I am excited to have an effective fungicide like **Maxtima** [fungicide] that I can use with one hundred percent confidence during any kind of weather."

"

According to Noble Turf's Brian Bontemps, it's all about having a summertime weapon. "The biggest thing **Maxtima** [fungicide] offers is the ability to have a DMI in the summer. The efficacy and spectrum of it gives [you] a great summer patch product, as well as anthracnose control. And I've had no reports of problems, which is amazing considering my supers are saying these are the worst summer conditions they've faced in a long time.

"The fact that we can use the products at high rates and still get high efficacy and extended control with zero impact is such a big deal. And it's hard to imagine they'd come up with something better on [a] cost-per-acre basis. I see it continuing to be a core product for years to come and I can't wait until it's approved in New York."

Jeff Gregos of Pennsylvania's E.H. Griffith, a rep with extensive experience in testing new products in the turf market, put the products through their paces before he ever recommended them to supers.

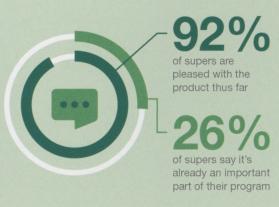
66

I got the product pretty early, and because I have a background running trials, I tested it pretty thoroughly. I know everyone is shy about DMIs during the summer, so we had to prove turf safety and beyond for [users] to be comfortable [with] it through the summer. I went up to the $7x^1$ rate at one site last summer. Temps were in the 90s and we still saw phenomenal results.

"There are so many examples where Maxtima [fungicide] is helping. Two of my customers have had anthracnose issues year in and year out — neither one saw it this year. We've seen the same thing with summer patch and obviously dollar spot too. What we haven't seen is any growth regulation, and I'm really impressed with the [turf] safety and efficacy. Most of my customers opted in right off the bat. It's definitely going to be a strong performer for years.

Jeff Gregos E.H. Griffith





Ryan Snowden, a second-generation super, said the convenience and labor-saving factor interested him right away. "When you see a new DMI come to the market, you obviously pay attention. When you can also spray it with growth regulators and it's safe [for the turf], that really gets your attention. I hate to spray when I can't put Primo in the tank because it's expensive and a hassle to do a second spray. We have 30 acres of fairways and it's essentially a two-day job to do a spray. That's why I want to put as much in a tank as I can."

Snowden, who works with his famed father, Buddy, at North Carolina's Burlingame Country Club, hit his fairways with **Navicon Intrinsic** brand fungicide in early March to "clean things up a little" and got 30 days of control [over] brown patch and other early diseases. In summer he's targeting anthracnose and brown patch and getting the results he'd hoped for. "You pay for what you get. Some of the less expensive products work sometimes, and



sometimes they don't. One of our goals on fairways is to get 21 days of control and we're getting it. It gives you more time between applications, more tank-mixing flexibility and BASF makes good products. I just feel like you get a lot of bang for the buck."

Josh Kopera, the Harrell's rep for one of the "ground zero" disease regions in the northeast, is a believer.

"Maxtima [fungicide] delivers as promised and the price is really competitive considering the longer intervals. It's been a very trusted product for us. [Users] won't have to worry about a rescue and it has zero growth regulation effects.

"I also like it because it's a 'softer' chemistry. It does its job but doesn't get angry with the turf. You can't overlook that. Finally, the price point is amazing and BASF is a trusted name. It's going to be a valuable product for a lot of years to come."

Jim Evans of The Cliffs of Keowee Falls in the mountains of South Carolina caught me off guard when I asked him if **Maxtima** [fungicide] met his expectations for the regional scourge of spring dead spot.

"No," he says, pausing, "It did far better than I thought possible. The truth is I've had crappy results from every program I've tried to fix spring dead spot. It's absolutely not the biggest disease out there, but it's absolutely my biggest problem. I did my own research and I put **Maxtima** [fungicide] side by side with Posterity® [fungicide] on my worst fairway and compared them. There was zero spring dead spot on the **Maxtima** side — zero. I honestly didn't believe [it], so I repeated it and it happened again. My sole objective was to control this one disease and I feel kind of like I found a cure with the two products in combination.

"We're not shooting from the hip anymore. I know I can use **Maxtima** [fungicide] and Posterity [fungicide]. Best of all, I don't have the stress of trying to fight through spring dead spot as we come out of spring into big May and June. It's a win for us."

Another leader who literally grew up in the turf business, Keith Kubik of New Jersey's Grass Roots, Inc., was impressed from day one.

"First, BASF set the gold standard for how to launch a product. They had the right researchers answering the right questions for us early on. And we got to see it in action in trials. When you see a turf picture and someone tells you it's safe to use in summer at high rates with a PGR, that's one thing. But when you're out on the plots and it's 95 degrees and you're sweating and the grass is still just smiling, you know you're seeing something special.

"Now it has to perform as promised and, from my perspective, I haven't gotten calls saying it doesn't and that's huge. I've been very, very pleased. In a heavy SDHI market, the ability to break up those sprays in the heat of the summer with a DMI has been huge. We lead with branded products and we love innovation, so **Maxtima** [fungicide] and **Navicon** [Intrinsic brand fungicide] fit perfectly. It's met and even exceeded our expectations, even as high as they were."

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Guests from the American Society of Golf Course Architects discuss their career paths, current and past work, design trends, and how they work with superintendents and operators to improve the functionality, playability and marketability of golf courses.

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A conversation that expands the scope of a story from the most recent issue of *Golf Course Industry*, including a chat with one of our columnists on their latest work





Candid conversations with superintendents, directors and other industry professionals about anything and everything other than their work. Episodes focus on physical and mental health, outside interests, family, and the constant pursuit of life-work balance among other topics.

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GOLF COURSE

ENVY

Editors Guy Cipriano and Matt LaWell discuss the many (many, many, many) courses they've visited during the last month. Guy brings the decades of play and maintenance; Matt brings the fresh perspective of a hack golfer who appreciates the beauty of courses and the work required.





SUPERINTENDENT RADIONET WORD

Off the Course, Episode 9 dent Radio Network — June 10

(30)









VEP, THE STILL BUILDING

MORE AND MORE GOLFERS FLOCKING TO THE COURSE MEANS THAT ARCHITECTS AND BUILDERS ARE IN HIGH DEMAND.

By Matt LaWell

▲ Business is booming for architects and builders, including Nathan Crace, who finished The Refuge Golf Club in Mississippi.

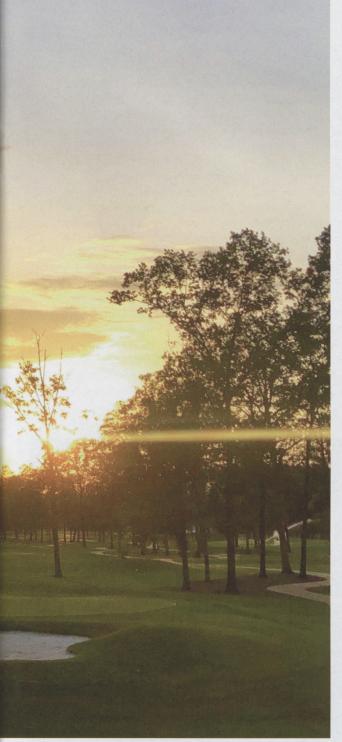
olf course design and construction can be a long game. Years certainly and sometimes even decades can pass from the first blueprints to the first rounds.

Which is one reason why architects and builders never seemed to worry much when work slowed down earlier this year as the rest of the nation and much of the world shuttered in response to the COVID-19 pandemic. Some projects were rushed through in an effort to beat anticipated lockdowns, others were postponed for

undefined stretches. But plenty of clubs — and, in turn, all the people who create courses — pushed through a month or two of limited play or closures before returning far busier than before.

And some never stopped.

"We never really shut down," says Nathan Crace, principal and golf course architect at Watermark Golf in Magee, Mississippi. "When the pandemic first hit, I had a couple of clients who said, 'We've been putting these things off and now we've got some cash on hand. We don't feel like



this is going to be a permanent thing, so maybe we need to do some of this renovation while the course is slow and we can get these things knocked out." That seemed like a good plan, except that "three weeks later, not only were the courses not slow," Crace says, "they were seeing huge increases in play. It was this weird roller coaster that, strangely enough, has been really, really good for golf."

What a roller coaster. Rounds played have increased year over year every month since May, including a 20.6

percent bump in August, according to Golf Datatech. That works out to about 10 million more rounds in August 2020 than in August 2019—or about two dozen more rounds per day at every course in the country. The total number of golfers will likely increase as well, from the 24 million people who played a course last year, according to the National Golf Foundation.

Those figures are why clubs are flush with cash, even after losing guaranteed revenue tied to outings and other events all spring. And that financial influx is sparking more course improvement projects.

Crace is working on a variety of projects and has fielded so many calls that his current count has at least doubled since late July. Same for Todd Quitno, senior project architect and VP of design at Lohmann Quitno Golf Course Architects in Chicagoland, and Jason Straka of Fry/Straka Golf Course Design in Dublin, Ohio. Both are balancing more projects than they anticipated in March, May, or even early Julyand more than they have during recent years.

"I always wonder how busy some of our colleagues are," Straka says, "and it sounds like people are doing pretty well overall."

For what seems like the first time in forever, clubs are pouring more money back into the course than, say, operations. Some of those projects are major course designs and redesigns, but far more are focused on bunkers, greens, tees and even practice facilities.

"This workload is different because some are smaller jobs than before, but they just take so much more time," Quitno says. "So it feels like we're busier to me."

Still, the ability for clubs to spend the money and for architects to provide their services is

"All of a sudden, they can finally go renovate those bunkers they've been talking about for 10 years," Crace says. "They can justify it, and that's a good thing, not only for the game, but it's good for everybody all the way around."

Crace recently wrapped up three years of work, from redesign through reconstruction, at The Refuge Golf Course in Flowood, Mississippi — a cause for celebration and a far cry from the early days of the pandemic. Back then, Crace would drive three and a half hours from his home to a work site in Alexandria, Louisiana.

"It was right after Mardi Gras and New Orleans had a huge outbreak," he says. "To set my wife at ease, I would fill up my truck and pack



▲ Apel



▲ Crace



▲ Quitno



▲ Straka



a lunch and drive down there. We would have our site meetings outside, I would eat lunch in the truck and then I would drive back. I would get to Natchez, Mississippi before I would stop to get gas because nobody really knew anything then."

While Crace was driving solo and brown-bagging out of his truck, Quitno and his design partner, Bob Lohmann, were unexpectedly slowing down after the delays of "a couple of good-sized projects that we were just trying to get the funding in place for."

"We probably spent two months kind of waiting, not doing much, wondering what was going to happen," he says. Work resumed in June on a par 3 in Wisconsin, "and then as the summer kept going, we just kept getting calls." Since July, he says, "the calls have really flooded back in."

The pandemic's impact on golf has contrasted the Great Recession, an economic crisis that led to courses shutting down projects, or even shutting down completely.

"It was a huge market correction," Crace says. "We had been building way too many courses, really almost mass producing them, and then people were building homes that they couldn't afford so they got loans and, I mean, you know the story."

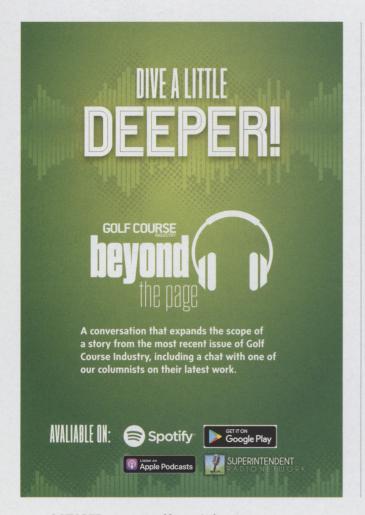
Crace remembers the numbers so well: Nearly 500 courses opened one year, fewer than 50 the next. "It was literally a 90 percent cut and then it just kept going down from there. So that was a lot tougher."

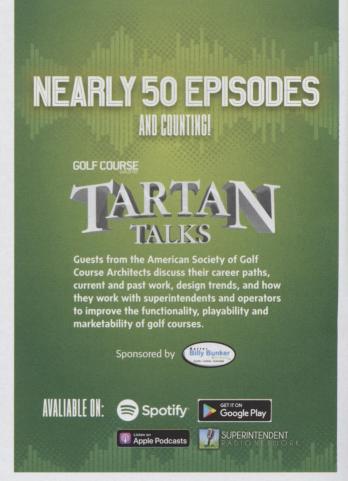
"And when we came out of the Re-

cession, there was a such a backlog," Straka says. "People had put a lot of things off, whether they ended up putting in new irrigation or updating their bunkers."

The problem now, unlike in 2009, is not the backlog but the fact that "there's no one to do the work," Quitno says. "Everybody waited to see what was going to happen and it seems like their coffers are full of money, they want to get things done and there's no one to do it."

Normally, firms are able to plan more. "This year, it's like the switch just got flipped on," Quitno says, "and what would have been a year's worth of work is being compressed into five or six months." Some clubs seem to be in a rush to finish projects this calendar year, Quitno says, and





SAVINGS THAT KEEP GOING

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"I'm actually suggesting they kind of pump the brakes. I'm not a huge fan of just flying into something."

Builders are every bit as bullish — and perhaps even busier than architects. Quitno joked that "they're probably running around like mad men right now."

When Golf Course Builders Association of America executive director Justin Apel surveyed the association's members just four months ago, he found that 38 percent said they expected things to stay the same or even increase after COVID-19 passed, and that another 22 percent were unsure but optimistic about the state of course construction. That the virus is still with us and work has picked up to an almost frenetic

pace is incredible.

"There's a lot of work that was questionable at the beginning of the year that now is active," Apel says. "And it's surprising. Even this fall, where work was tabled or shelved, it appears to be moving forward. I was just speaking to one of our rental companies and the volume of orders that they're doing tells us that builders are moving ahead with those projects."

Apel compared our current collective state to working and living not in a bubble but in a balloon. "The walls are soft, flexible and we all are learning how to work in a new environment. I look at our builders. They learned how much they can do with project managers, remote and on site, the ability to bid and to make adjustments and to change orders in a virtual setting. And now we're going to ease ourselves back into in-person, and that happy medium with the technology is going to make all of us more efficient."

But how sustainable is this construction market? In June, Apel said he was "really optimistic about the future of our game as long as we can evolve along with the changes society experiences" and predicted "a demand for quality construction work as long as golf courses continue to evolve." Four months later, those statements seem prescient. Every corner of the game, architecture and construction among them, has adapted and moved forward.

Will all those cautiously bullish predictions about next year follow suit? GCI











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GRANDIOSE CONTINUITY

THE BIGGER THE PROJECT, THE MORE APPARENT STABILITY MATTERS AT A LEADING HOUSTON CLUB WITH A TURF LEADER WELL-SCHOOLED IN CONSTRUCTION.

By Guy Cipriano

▲ River Oaks
Country
Club's 14th
hole following
a renovation
guided by
Fazio Design.

iver Oaks Country Club, a storied and stately private club on the banks of the Buffalo Bayou in the shadows of downtown Houston, doesn't change superintendents often.

Morris Johnson has held the desirable position since 2001. He has just

four predecessors since 1923.

Leading a turf team at a club such as River Oaks requires the mindset of a project manager. The job responsibilities are reflected in Johnson's formal title: director of golf course operations. The course changes — for the better — more frequently than the people responsible for

maintaining it.

The 97-year-old club whose design history includes a rare Donald Ross Texas assignment and once employed golf legends Jackie Burke Sr., Jimmy Demaret, Claude Harmon and Dick Harmon as professionals recently completed a project considered massive even by its grand

standards, repairing and armoring a nearly half-mile section of the Buffalo Bayou along the north end of the property. The 53-mile Buffalo Bayou flows through densely populated and commercialized sections of Houston, the nation's fourth-most-populous city.

The bayou adds serenity and seclusion to the club grounds. Significant parts of seven holes border the bayou. River Oaks was left with no other choice but to pursue the project in response to the devastating impact Hurricane Harvey had on the property in August 2017. Club officials are hopeful the work that commenced in 2019, with the full 18 reopened this past spring, will also minimize any future erosion.

A construction veteran whose stepfather and mentor is legendary golf course architect Bill Coore, Johnson uses trucking metrics to describe the scope of the project. The access road constructed by the club supported the passage of 2,500 concrete trucks needed to install 3-foot-diameter piers at a depth of 62 feet. Close to 20,000 semis entered the grounds during construction.

"It was an engineering feat," Johnson says. "It was completely different than golf course construction, because this was all just hardscape, concrete and barrier construction."

Carefully studied capital improvement projects are a River Oaks staple. The club hired an engineering firm in 2005 to begin studying the feasibility and logistics of a bayou restoration effort. A committee formed and additional studies ensued before work commenced last April. COO and general manager Joe Bendy, who arrived at the club one year after Johnson, says that patience, flexibility, shared visions and having "the right people in the room" from the start are requirements to executing major club infrastructure projects. At River Oaks, Johnson is a key person in every short- and longterm grounds discussion.

"He's a great leader of his team," Bendy says. "He has a strong following of loyal, long-tenured employees, which is consistent in the club. If he can get it done to make a group of members happy, he'll go out and do it. He also stands his ground when and where he should. That's really encouraged in our club. He's very good at taking the interests of the many and incorporating that into the management of the golf course to provide a really good product every day."

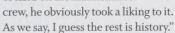
For the past 15 years, Johnson learned as much as possible about waterway restoration and erosion by speaking with engineering experts and studying the successes and failures of similar projects, continuing a career-long trend of self-education. Johnson is a golf industry rarity: a turf leader at an elite club without a college degree.

A longtime Texas resident who attended high school on the same street as River Oaks — "River Oaks Boulevard is a mile long and it dead ends at both ends," he says. "At one end there's a country club, at the other end is the high school I graduated from" - Johnson spent a year at the University of Houston and planned on transferring to Sam Houston State to finish his degree, then transfer to pursue his medical degree. Between his freshman and expected sophomore years, he received a summer job at Waterwood National in Huntsville, Texas. The superintendent who hired Johnson happened to be married to his mother, Sharon.

"I met Morris when he was 15," Coore says. "He was so bright that you knew he could succeed at whatever he chose to apply himself to."

When Johnson now assigns jobs to employees, each one is likely on the lengthy list of tasks he performed during his ascent through an industry he never expected to enter.

"He started at the very bottom, I mean the very bottom, with a weedeater and cutting grass and running mowers," Coore says. "You can tell that he actually enjoyed it. He was inquisitive, which is such a great attribute. You could just see he was taking it all in. I wasn't thinking about Morris being in the golf business in those early days and I don't know if he was either. As he progressed through the different phases, doing different types of tasks on the maintenance



One summer turned into more than four decades working a variety of construction and maintenance jobs in Texas. Extreme heat. Massive storms. Unforgiving wind. None of it mattered to Johnson, as he learned how to operate a bulldozer from Coore and the intricacies of managing a team as an assistant superintendent at Rockport Country Club. Johnson entered the high-end Texas private scene by accepting an assistant superintendent position at Houston Country Club in the late 1980s. He then accepted the superintendent position at Crown Colony Country Club in Lufkin, Texas, declining an opportunity to help Coore and his famed design partner Ben Crenshaw build the Plantation Course at Kapalua Resort in Maui.

"Maui or Lufkin, Texas," Johnson says. "People looked at me like, 'What are you thinking?' But I ended up going to Lufkin for my first superintendent's job. I wanted to prove myself. I wanted to quell any talk of me getting these jobs based on who I was related to."

Johnson spent 12 years producing consistently elite conditions at Crown Colony. He then received a call from officials at the club he passed by in high school. "Nineteen years later," he says. "It's crazy." Johnson attended an annual international tennis tournament hosted at River



▲ Johnson





▲ River Oaks
Country Club
completed a
project earlier
this year
designed
to minimize
erosion along
the Buffalo
Bayou.

Oaks as a teenager, but he never stepped on the club's golf grounds until he played the course while working at Houston Country Club.

"I'm probably in the 2 percent of superintendents who are at a high-end club with no degree, much less an agronomic degree," he says. "That drove me more and more to learn everything I could off everybody. I always took that as a challenge."

Qualities not easily taught in a classroom such as the ability to navigate major projects while overseeing daily agronomics has led to longevity for Johnson. Construction represents a River Oaks constant. The club worked with Fazio Design in 2014-15 for a complete renovation, also creating space for a nine-acre practice facility with a four-hole short course by eliminating three existing holes and adding three new ones in different locations. River Oaks has completed two bunker renovations using Bunker Solution liner and endured three punishing storms in three straight years, culminating with Harvey in 2017, during Johnson's tenure. A flood caused by an unexpected storm in 2015 submerged an excavator; Harvey kept the third green under water for two weeks. "As the city grows, our flooding issues grow," Johnson says.

The cleanup following Harvey involved senior assistant golf course superintendent Junior Schuette, a two-decade club employee, bringing a boat to the course to shuttle em-

ployees to submerged greens and fairways. Damage caused by the hurricane expedited the decision to proceed with the erosion work along Buffalo Bayou.

Johnson has worked with two celebrated architects — Tom Fazio and Rees Jones (a bunker project in 2008) — and their talented associates during his time at River Oaks. He has attended hundreds of meetings involving dozens of club committees and officials. Each spring his team must repair part of the grounds following the U.S. Men's Clay Court Championship, a professional tennis tournament that counts Arthur Ashe, Jimmy Connors, Ivan Lendl and Andre Agassi among its past champions.

Because his job requires oversight of the grounds and major projects, Johnson leans on Schuette and assistant superintendent Heath Wisdom to provide daily agronomic leadership. Perhaps the biggest agronomic challenge River Oaks faces is frequent and unexplainable sting nematode damage on ultradwarf Bermudagrass greens. "On a scale of 1 to 10, my stress level day-to-day is an eight or nine," Johnson says. "It would be more like a four or a five if

it wasn't for those dang nematodes."

Thanks to methodical pre-construction work, the club minimized the stress and distraction caused by the bayou project by finding an alternative to using the front gate for deliveries and keeping at least nine to 11 holes open throughout construction. The stakes proved much higher than a typical golf course renovation. While a hassle, a playing surface can be efficiently repaired. Returning to a major waterway because of an overlooked detail or faulty construction reflects poorly on a management team. "It's a marriage," Bendy says. "You better get the right people in the room to begin with."

Few private clubs employ the same superintendent-general manager combination for nearly two decades. River Oaks department heads are reflective of the club, Bendy says. They are continually seeking ways to evolve. That mentality extends to employees.

"To me, what's important is not just the tenure," Bendy says. "Anyone can stay in a position for a long time, but these individuals have stayed in their positions for a long time and they continue to be innovative. They continue to be creative, they continue to motivate their teams, and they develop and groom individuals below them to help them find their own positions of leadership."

At 58 years old, Johnson has devoted nearly a third of his life to ensuring a venerable club maintain its grand status. Through all the renovations, rebuilds and revamps, the serenity and security the job provides remains unchanged.

"When I'm having a cup of coffee in morning and standing on the 18th green and looking at the sun coming up, I go, 'You know what, I have probably the best office in this entire city," Johnson says. **GCI**

Guy Cipriano is Golf Course Industry's editor-in-chief.

DIY, FROM TEE TO GREEN

Nearly two decades have passed since Joe Salemi opened his self-designed, highly-acclaimed Boulder Creek Golf Club outside Cleveland. He still can't stop fixing it.

By Matt LaWell

oe Salemi wanted to build a golf course. Well, lots of people want to build a golf course, but few of them are trained architects. Salemi was one of those folks. so he started by reading books - so many books — by the modern marvels and the classic leaders and the legends. Then he hunted for land, because while he owned and operated plenty of businesses, his plots were scattered. He handed over car keys to a realtor with instructions to call whenever interesting properties popped up. Then he talked with his old friends at the local bank, because, sure, he had lots of money, just not *So, you want to build a golf course* kind of money. Those friends had loaned him money before for car washes and storage facilities. Of course they would loan him money for a golf course. Right?

opened Boulder Creek Golf Club in Streetsboro, Ohio, about 30 miles southeast of Cleveland, to incredible reviews. *Golf Digest* ranked it eighth among all the courses that had opened that year. Think about that. A car wash and storage facility owner with no formal architecture training not only figures out how to design and build and open his own course, but does a good enough job that he beats out hundreds of other links near the height of the construction boom. Heck of a story.





▲ Inspired by another famous 17th hole, the island green at Boulder Creek has both frustrated and overjoyed golfers.

trees he had cleared, all the earth he had moved, all the luck that had found him - from a shaper literally pulling off the road and asking for the job, to the shaper's superintendent brother moving up from Florida to help and eventually take over the top maintenance job, to a crew of nearly three dozen Mexican immigrants asking for work after seeing a sign near a highway exit — and returned to his old days. Instead, he returned to the course, normally two or three times every day, figuring out what could be better—and then actually following through and fixing what he calls his "mistakes."

"If it was just about making money," Salemi says, "I could have probably built another six, eight, 10 self-storage facilities and would have been so far better off.

"But life is more."

Let's talk about Joe Salemi's mistakes.

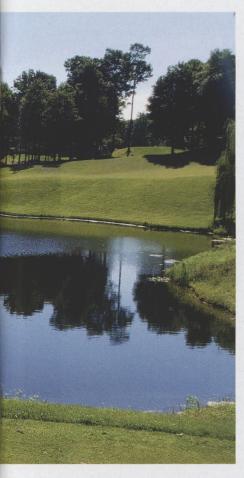
Pete Dye motivated Salemi more than any other architect, and Salemi likes to joke that while both he and Pete Dye entered the design world in their 30s, he had a considerable head start because Dye had no idea how to operate a tractor thanks to decades in the excavation business. He also likes to joke that Pete Dye was right when he wrote that no designer gets it right the first time. They both made plenty of mistakes.

Salemi's most recent mistake — and the spark for this story — is the renovation that wrapped up earlier this season on the eighth green.

"We built the green fairly close to the Ohio Turnpike fence," he says. "Consequently, if you just pull it a little bit, you're out of bounds." Salemi incorporated far too much slope into the green, too. "If it was at a private club, that slope would be OK, but for a public golf course, it was just too hard. If you don't hit the right place on the green — just like if it was a tournament course, if you don't hit the right section of the green, you don't really have a chance at birdieing the hole, or even parring the hole—you're going to three-putt, guaranteed, maybe worse. It was just too hard. That was a mistake, so we ended up building a new green to the right of that."

Salemi committed an impressively low number of other mistakes on the course.

A longtime subdivision developer, he cobbled together 375 acres of land for the course and surrounding subdivisions of single- and multi-family homes after purchasing the first 100 from an old Christmas tree farmer on a handshake deal. He relied on his own abilities for as long as he could



before bringing in outside help—and he realized exactly when he needed that added expertise. He lucked into a shaper joining the team early, a local named Matt Loose who was tired of traveling so much for work and who wound up bringing in his brother, Chris, who turned down a pay raise at Mayacoo Lakes Country Club in West Palm Beach to dive into the project. The immigrants were nothing short of a blessing. "If I hadn't had those guys, I never would have finished this course," Salemi says. "I probably would have gone broke."

There were some mistakes, of course, because Salemi is an unrelenting critic.

"I had a back tee on No. 9," he says. "It's a par 4 and it goes west, which is in the wind, and you have to hit the ball 300 yards, even the really good golfers. So we knocked that tee down - I had enough dirt - and we eliminated that really long back tee that we were maintaining for almost nobody. Now it's a lot better hole because the second shot is over a pond to the green, and there's less road noise. And I can open the hole up to carts, and that will speed up play."

Drainage is important, too, and while he didn't overlook it during construction, he also didn't pay it the attention he realized rather quickly he should have. He spends more than three quarters of a million dollars every year into course maintenance — far more than the \$552,202 average for non-private courses, according to our 2020 State of the Industry survey results - and plenty of it has been poured over the decades into drainage.

"Drainage is numero uno once you open the course," he says. "Opening the course isn't the end, it's the beginning. Now you're going to go back and do all sorts of things you didn't do when you built it, and one of the main things is drainage. The course starts softening up, at least in our area because of our soil, and once you have thatch in the ground and that soil softens, you start having issues where you're mowing and you're finding your settlement areas, because the course is going to settle. Then you start to get lower spots and the mowers start tearing it up, so now you need drain tile.

"I've probably put 10 miles of drain tile in on the fairways since we opened, and we still have a little bit more to do."

There was one other mistake that lingers in Salemi's mind.

Not long after the course opened, he received an email from a man named Jim. "He told me that he had played the course and he was going to give me an A for effort," Salemi says. "But he was going to give me a D for the whole course." The email cut deep. It devastated him. "I don't feel good about this," Salemi remembers telling his wife, Randi.

A month later, Boulder Creek was

IF IT WAS JUST ABOUT MAKING MONEY, I COULD I HAVE PROBABLY BUILT ANOTHER SIX, EIGHT, 10 SELE-STORAGE FACILITIES AND WOULD HAVE BEEN SO FAR BETTER OFF. BUT LIFE IS

- JOE SALEMI

ranked among the 10 best new courses in the country.

"I wish I still had that email because I would love to frame it," Salemi says.

He would hang it behind the counter in the pro shop.

Joe Salemi first picked up a club a little more than 40 years ago, around the same time his father, Peter, passed away and he took over the family excavation business. He had learned how to operate heavy machinery before he earned a driver's license. He had worked on big jobs, like helping create the Richfield Coliseum, the former home of the Cleveland Cavaliers, when he was still in high school.

"I had been on a lot of big jobs," Salemi says. "But nothing like trying to go out in the woods and build a golf course, especially when you had never done it before, and when you're doing it with your own equipment and your own guys. It was a monumental task. There were many times I regretted doing it, absolutely."

Salemi says he hopes there is somebody else out there who wants to do what he did. "I was lucky enough," he says. "It was a lot harder how I did it. It was a huge, expensive undertaking. Maybe there is somebody who could go out there and do it too.

"It can be done." GCI



THE PROPER ROLE TO PLAY

or the health and safety of the golf course, as well as the longevity of a superintendent's career, it's best not to turn course renovation into a DIY project.

The modern greenkeeper is a technically trained field scientist with expertise in turfgrass management and everything it takes to get grass to grow. When it comes to construction projects and changing the golf course, however, it's best for the superintendent to give way to a consulting architect. Or, to be more precise, to work collaboratively in developing a program that can be implemented by someone else specially trained in digging up and repairing golf ground.

Modern construction equipment is incredibly complicated. Trained shapers can do wonders with a three-dimensionally articulating knuckle-bucket. They can virtually see through the blade of a 12-ton bulldozer and know exactly where the edge touches the ground. Some of them are deft enough that if you put a slice of pizza on the ground, they could slide the pepperoni off without the blade touching the crust.

If you have to import the machine for the job and it's not part of your everyday arsenal, forget about operating it and hire a trained feature builder. For the vast majority of superintendents, that means confining to a sod cutter or small front-end loader for materials handling. Where superintendents are absolutely indispensable to the success of a renovation job comes in the planning stages and in overseeing implementation. Think of it as four-stage process:

VET THE ARCHITECT

A civilian committee of members or public officials will never be able to properly vet the ability of an architect to get the job done right. It's your job to help pierce through the sales pitch and judge the quality of the designer's repertoire. Check their references; make site visits to their previous work. Find out from the superintendents they've worked with if they met the deadline, kept on budget, handled labor well and worked smoothly with the facility.

COSTING

The best architects — not necessarily the celebrity ones work closely with the superintendent in securing prices for materials at local rates. That means everything from sourcing sand, gravel and pipe to labor costs and — the big unknown — local temporary housing. Even if you end up bidding the whole project out to an experienced contractor and letting them do the entire project, it will help your budget process and give you a sense of security to know you at least got estimates that reflect prevailing local conditions.

AT WHAT COST?

Work with the design team during the planning process to ensure that you understand the budget consequences of the proposed renovation. If the idea is to cultivate more shortgrass tie ins and firm up all approaches into the greens, there will be budget consequences to walk-mowing those areas and increasing your rate of topdressing. If you adopt a flashier look with dramatic grass faces to bunkers, make sure you can afford to fly mow them. The same goes for the choice

of a proper bunker liner — or the decision not to go with one. The best architects see this process as a give and take; they should not impose their vision regardless of budget and you should not demand they compromise design integrity for the sake of maintenance ease.

QUALITY CONTROL

If you adopt a conventional bid-contract model, you are still responsible for making sure that equipment, materials storage and traffic heeds the character of the site and doesn't just rumble relentlessly about. If the course is closed during the work, you will likely still be providing labor for jobs like sodding, grow in and repair. If the course remains open, you will spend half your time as a safety director and traffic cop. And if you adopt a design/build model and assume more of the risk internally, you will function as a clerk for materials testing, quality control, checklists and timeline management. You'll also secure subcontractors for everything from tree work and cart path repair to wetlands management and civil engineering.

Without proper planning by the superintendent, a renovation job can easily end up with delays and budget overruns, and in need of ongoing repairs long afterward. It might not be as much fun as getting on a bulldozer and doing some feature shaping, but it's the job you have been training for your entire career — though on a timeline and with an urgency that will feel breathless. GCI



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Common Mistakes That Can Shorten The Life Of Your Batteries



U.S. BATTERY

eep-cycle flooded lead-acid batteries continue to be the most reliable and costeffective sources of energy, which is why they are widely used in electric golf cars. While these types of batteries are very popular with individuals and owners of golf car fleets, improper maintenance is common, and can decrease performance and shorten battery life. Over the years, battery manufacturers have seen lots of battery maintenance blunders. Despite this, some of the most common mistakes can be avoided, resulting in longer battery life and potentially decreasing annual operating costs.

Overcharging: When a battery is overcharged, it accelerates the corrosion of the positive plates and increases the amount of water loss that occurs during charging. To prevent overcharging, make sure your battery charger is functioning correctly, is adequately sized for the battery set, and has a charge algorithm

recommended by the battery manufacturer. The best way to identify overcharging is by taking specific gravity readings with a hydrometer and comparing the values with the manufacturer's specifications.

Undercharging: Operating a battery that isn>t fully charged happens when vehicles need to be put back into service quickly. Unfortunately, this leads to progressive undercharge and hard sulfation that can hinder charging and negatively affect battery performance. The best way to avoid undercharging is to make sure that the batteries have enough time to complete a charge cycle. Verify your batteries are getting a full charge by checking the cells' specific gravity with a hydrometer. If the batteries have the fully charged specific gravity reading indicated by the manufacturer, the vehicle is ready for service.

Battery Storage: Another prevalent mistake is storing

a vehicle with its batteries in a discharged state. Leaving batteries discharged for an extended period of time can also cause sulfation. The main reason most golf cars go into storage is that cold conditions may prohibit their use. In addition to sulfation problems, when batteries are stored in a discharged state in cold climates, the batteries> electrolyte can freeze and damage the battery case. By fully charging batteries before they go into storage and boosting every 60 days, you>ll prevent sulfation and freezing related problems.

Under Watering: The most basic maintenance procedure for flooded lead-acid batteries is often the one that is most commonly ignored. When batteries are charged, gassing of the electrolyte causes the loss of water through electrolysis. While this gassing is completely normal and actually beneficial to the batteries, the water loss must be replaced to prevent damage to the

battery plates. Most manufacturers recommend adding water every 30 days and never allowing the electrolyte to fall below the plates. Follow your manufacturers recommendations for watering procedures to ensure proper maintenance.

Over Watering: While watering is extremely important to the battery, it is also important to add the correct amount of water. By over watering, you can cause the electrolyte to overflow from the cells and spill out of the battery, diluting the electrolyte and diminish its performance. This can occur when watering batteries that are not fully charged. Over watering can also happen when fleet owners utilize single-point watering systems with unregulated flow or defective filling components. When watering, ensure you follow the battery and watering system manufacturer's recommendations, as well as check fill-levels periodically to ensure proper watering system operation.

Deep Discharging: Trying to get every last bit of power out of your golf car>s batteries is never a good idea. Higher depth of discharge (DOD) levels can dramatically shorten battery life and result in having to purchase batteries more often. Battery manufacturers recommend never allowing batteries to go past a recommended 50% DOD and to charge the batteries at the first available opportunity. Deep-cycle batteries should always be allowed to fully charge before they are put into service again.

Knowing how to avoid some of these common mistakes can dramatically improve the performance of your deep-cycle batteries. While some may think these are small issues, making these maintenance mistakes can, in some instances, more than double your annual operating costs. So, to ensure costs are kept low and your golf car or fleet is ready for action, keep your batteries properly maintained.



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Different grasses, jarring length and plenty of beauty. The Pfau Course at Indiana University possesses championship aspirations.

By Guy Cipriano

ucked into the southern Indiana woods sits the back tee of the 18th hole at The Pfau Course at Indiana University, a spot where the future of Transition Zone agronomics and, perhaps, championship golf intersect.

From the Kentucky bluegrass surface, the hole bends right. The strong will land drives on more than two acres of Meyer zoysiagrass covering the fairway. The timid will play second shots from under trees on the left or go ball searching in the woods on the right.

Anxiety reigns the entire way.

And that's just the start of a 517yard hole playing into a prevailing wind. The approach shot must carry a native area consisting of Irish Links and fine fescue, then stop on a punchbowl T-1 bentgrass green within a natural amphitheater. Five bunkers filled with brown river sand lurk between more wispy grasses guarding the green.

The par 4 hole was designed by Steve Smyers, a Florida-based architect with an accomplished playing record who believes high-level golfers must earn happy endings.

"Real championships," says Smyers, standing on the tee during a humid Sunday afternoon in August, "shouldn't be decided with a wedge on the last hole."

While a movement to make courses easier for all comers dominates the current construction and renovation market, a client occasionally asks an architect to design a course capable of providing what Smyers calls "a thorough examination of one's abilities." The client in this case proved to be a major university seeking a course tough enough to test the best players in the Big Ten and beyond without overextending a maintenance budget or environmentally straining the most secluded spot on a 40,000-student campus.

Unlike the heavily populated

regions of Indiana, the southern portion of the state features subtly enchanting terrain. Smyers, who started his own design firm in 1983, begins the August course tour by effusively praising the Bloomington, Indiana land. "It's the best site I have ever had to work with," he says.

The Pfau Course, named in honor of lead donors Ned and Sue Pfau, was built on the same ground as Indiana University's existing golf course, a pedestrian course opened in 1957 and best known as the spot where Jack Nicklaus won the 1961 Big Ten Championship. Smyers and a team from Clarke Construction moved just 80,000 cubic yards to build the new course. Construction commenced in 2018, a year that included 70 inches of rain - much higher than the 48 annual inches Bloomington averages — and the university opened the course to the public this past June.

The course will bolster the recruiting efforts of the Indiana men's and women's golf teams and serve as a social and recreational hub for students, faculty and staff, alumni, university decision-makers and the Bloomington community. Being involved in the building, unveiling and

now daily maintenance of the course represents a highly personal assignment for superintendent Anthony Robertson, a Bloomington native who played his first round of golf at the old Indiana University course.

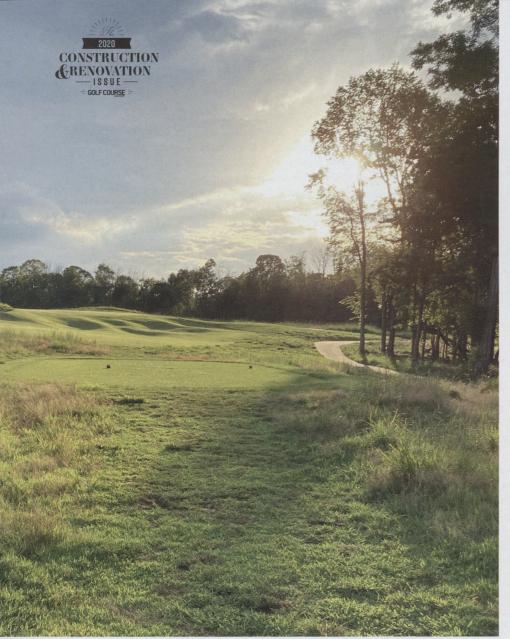
"I could never imagine anything like this being here," Robertson says. "Being a part of it and seeing it at the end, sometimes I get ... It's hard for me, because I look at everything that's wrong and I want to fix everything that's wrong. But there are the moments where I can stand back and look at this golf course and think, 'I could never imagine it being this good, not even freakin' close."

Robertson left the head superintendent position at nearby Bloomington Country Club, where his brother Levi is the current superintendent, for the Indiana job in 2016. Chatter about the university building a new course with zoysiagrass fairways attracted Robertson to the Pfau Course. Robertson established himself as one of the industry's zoysiagrass gurus by elevating the fairway conditions at Bloomington CC.

"I would put him up against anybody in the country that knows zoysiagrass," says senior assistant ◆ The Pfau Course opened this past summer on the same land as Indiana University's former course

▼ Steve Smyers, Greg Bishop and Anthony Robertson.





idea why we would have any other grass here other than Meyer zoysia. For this climate and these soils, it's what we need."

Smyers, a past member of the USGA Green Section committee, designed a course with 32 acres of zoysiagrass fairways atop heavy-clay soils. The slow-growing nature of Meyer zoysiagrass meant fairways were sodded to meet deadlines. Smyers, Bishop and Robertson are confident that zoysiagrass will yield longterm economic and environmental rewards. "It's money up front," Bishop says. "But if you look at the long term, it's really a no-brainer." The total cost of the project, including a new clubhouse, was \$12 million.

Robertson projects an annual chemical and fertilizer budget on fairways around \$20,000 and he envisions the surfaces being mowed "at most" three times per week as the course matures. Other aspects of the design should minimize the amount of labor required to keep the course in tidy condition for daily play. Only

athletic director and Pfau Course general manager Greg Bishop, a golf construction and management veteran who returned to the industry in 2015 to oversee the university's golf course development efforts. "That was a plus for what we wanted to do. He told me he would only come here if we were doing zoysiagrass. I don't know if he was going to come if we were going to do bentgrass."

Robertson, who maintains a close relationship with Bishop, laughs at his supervisor's comment: "I like to be a minimalist."

Bloomington, latitude 39.1653 north, rests in the upper portion of the Transition Zone, yet the city's three regulation golf courses feature zoysiagrass fairways. The City of Bloomington recently converted 27 holes on its Cascades Golf Course to Meyer zoysiagrass.

"The first time I hit off zoysiagrass I was 14," Robertson says. "I had no

This course doesn't need a 40-person crew. It's a great big golf course and it's a huge dramatic golf course, but, in reality, if you have a 15-person crew in the summer, we can really dial this golf course in."

— Anthony Robertson

80 acres of turf require mowing, with Kentucky bluegrass rough providing a buffer between fairways and native areas. Bunkers are plentiful - close to 150 dot the property — but Smyers says they are intended to play as hazards that fit the site, thus the brown sand.

"This course doesn't need a 40-person crew," Robertson says. "It's a great big golf course and it's a huge dramatic golf course, but in reality, if you have a 15-person crew in the summer, we can really dial this golf course in."

Labor restrictions tied to COVID-19's impact on the university represent the biggest short-term conundrum facing the course. At one point this past spring, with the opening approaching, Robertson, Bishop and a mechanic were the only employees maintaining the course. The size of the crew has slowly increased, although it hasn't reached its initially-budgeted size. The Indiana men's and women's teams are practicing on the course as they prepare for the return of Big Ten athletics.

Exhilaration overtook exhaustion when the course opened. The Hoosiers finally have a home to match many Big Ten peers. The zoysiagrass, bentgrass, bluegrass and fescue create distinct hues, giving the course a pleasant walkin-the-woods vibe. A new medical center first noticeable when walking up the 11th fairway represents the only glimpse of campus life while on the grounds.

At 447 yards, the 11th is one of just three par 4s under 450 yards from the back tees. The par-71 layout can be stretched to more than 8,000 yards for championship play, but Smyers quickly notes that immense hole yardages offer setup flexibility. "The people who play this course are going to become better players by playing it," he says. "If you can play here, you can play anywhere."

Once disruptions caused by COVID-19 pass and the course matures, a significant championship will likely be won — or lost — on the 18th hole.

"It would be a dream of mine to host a big event here," Robertson says. "The stencil is out there and we get closer every day." GCI







Champions Golf Club swiftly renovates bunkers on its Jackrabbit course to accommodate the need to use 36 holes for the U.S. Women's Open.

By Hal Phillips

hen Champions Golf Club was awarded the 2020 U.S. Women's Open, no one thought it would be played in December. But with COVID-19 affecting sports calendars across the globe, the club found itself in the unique position of hosting a U.S. Women's Open Championship two weeks ahead of Christmas — and preparing to do so on two golf courses to accommodate the lack of daylight.

Enter Jackrabbit, the second course at Champions, which will play co-host with the Cypress Creek course during the first two rounds of the tournament. As part of the preparation work, course contractor Heritage Links, the architects at Beau Welling Design and club director of

agronomy Chris Ortmeier are busy renovating the bunkers on the Jackrabbit course to ensure a successful championship. Founded by golf stars Jackie Burke Jr. and Jimmy Demaret, Champions has hosted numerous big events on Cypress Creek, including the 1967 Ryder Cup and 1969 U.S. Open.

"When the Open was rescheduled for December, there was concern about the limited amount of daylight that time of year - that it might be difficult to get a full, pre-cut field around a single course on Thursday and Friday, especially if there's weather," says Jon O'Donnell, president of Houston-based Heritage Links, a division of Lexicon, Inc. "Champions has an excellent second 18, the Jackrabbit. No one had anticipated it being thrust into this

major championship role—not prior to the rescheduling. But we're thrilled to be working with Beau and Chris to renovate all the bunkers on the Jackrabbit Course and make sure it's thoroughly Open ready."

The Jackrabbit Course, an original George Fazio design, was completely renovated by Tom Fazio in 2001. One of the young architects on the project was Shane Robichaud, today a senior vice president at Beau Welling Design. The contractor on that job nearly 20 years ago: Heritage Links.

"I'll admit to a real soft spot for the Jackrabbit Course," O'Donnell says. "That was our very first renovation job, as a company, here in the U.S. We're honored to be part of the team getting it ready for the Women's Open. And shoot, it's basically right across the street from our headquarters here in Houston."

"Shane and I have enjoyed a relationship with the Burkes and the team at Champions for more than 20 years," adds Beau Welling, BWD founder and president. "We were happy to help out with this expedited project. We were already working in Texas with Heritage on another project [the new PGA of America development in Frisco]. So, we have easily been able to provide some guidance on the bunker restoration, which has gone very well. The visual drama of the golf course is back."

In 2019, Heritage renovated Southern Hills Country Club in Tulsa, Oklahoma, in preparation for the 2030 PGA Championship as well as the 2021 Senior PGA. The firm built Chambers Bay in Tacoma, Washington, site of the 2017 U.S. Open, renovated Liberty National ahead of the recent President's Cup, and prepped both Dove Mountain and Doral ahead of their respective World Golf Championship engagements.

"Once we learned of the USGA's intentions to use both golf courses, the plans evolved quickly, from just pulling old sand and rebuilding the bunkers in place (with new liners and drainage), to something more forward-looking," Heritage vice president of strategic planning Doug Wright says. "The club saw this as an opportunity to aesthetically enhance the

bunkers, which really had not been touched since 2001."

Even with all the issues relating to the pandemic, the project has gone smoothly. And the bunkers are scheduled to be completely ready for member play in September.

"Our clear, No. 1 goal was to improve playability for the championship in December," Wright says. "That means premium sand, new liners and an overall playability that is equal to what players will experience on the Cypress Creek course. With the field of competitors utilizing each course Thursday and Friday, that was a prerequisite."

But the club also called on BWD and Heritage to create a consistent aesthetic for the Jackrabbit's 47 bunkers, along with improved design characteristics that addressed maintenance issues and playability for its members.

"We needed to reestablish some consistency along the edges," Ortmeier says. "Nothing radical in terms of change. Over the last several years, large rain events have washed out some of the steeper faces compromising the stability of the grass edges. In addition, many of the bunkers had actually shrunk in size due to the encroachment of the surrounding bermudagrass. As with any course over two decades, things change."

Regarding the aesthetic of the new bunkers, Ortmeier adds, "Beau and Shane have largely maintained the



▲ Ortmeier

high, flashed look while also creating a 6-inch brow that gives the bunkers a consistent vertical edge—all the way around. Nothing bullnosed, but there is a little bit of grass rolled over before you hit that vertical edge. Similar to the previous bunkers, we still

have those long, slow, gracefully curved edges. Maybe there's a little more wiggle in there, but nothing crazv."

This aesthetic will stand in purposeful contrast to the largely rolledgrass edges on the Cypress Creek course. Maintaining distinct styles between the two tracks was something Ortmeier and club founder Burke were determined to maintain. The effort started with Chet Williams' 2018 renovation of Cypress and will conclude with this year's work on Jackrabbit. Not coincidentally, Heritage Links handled both jobs.

"Mr. Burke doesn't trust too many people like he does Jon O'Donnell," Ortmeier says. "That's a relationship that goes back a long way - to the Fazio renovation in 2001, which was sort of a springboard toward all the success Heritage has earned since. Jon and Doug Wright, project manager Mike Webb, and every Heritage employee I've ever interacted with has been top notch. You have to evaluate other contractors and conduct a formal bid process for any renovation job, but we really appreciate the ability of Heritage to step up and deliver a really good product. And they are just across the street." GCI

Hal Phillips is a Maine-based freelance writer, managing director of Mandarin Media, Inc., and frequent Golf Course Industry contributor.

◆ Crews from Houstonbased Heritage Links are helping prepare Champions Golf Club for the 2020 U.S. Women's Open.



CRAFTING A LABOR STRATEGY

T's fall. Aeration highlights are streaming digital feeds, turf recovery programs are being implemented and 2021 operational planning is in full motion.

Superintendents haven't even taken a breath and they are again mapping out business strategies against a cloud of uncertainty with downstream effects of COVID-19.

Staffing plans often emphasize numbers and associated costs, but many of those costs remain fluid. Maintaining a flexible and agile approach to your overall budgeting and labor forecasts will demonstrate your ability to think swiftly and strategically.

Obsessing over accurate long-range plans built by historical templates has been disrupted by the pandemic. Alterations to these projections can be compounded by the smallest change. The reality is that quarterly, monthly and weekly outlooks will afford businesses to adjust rapidly.

Labor forecasting isn't new to the industry and many operations have adopted sophisticated digital tools over the years. This year proved to be the testimonial year where these tools came in extremely handy to adapt maintenance and staffing programs.

Digital tracking can make it easier for managers to access scheduling and reporting, while communicating information from anywhere. These tools are becoming more integrated to take a wide range of data points into scheduling, performance and asset management tracking.

Whether golf course superintendents have been asked to reduce hours due to COVID-19 impacts or provide direction for course maintenance enhancements, digital tools are helping on both sides of the coin. As you build your 2021 labor budget, you need to de-

sign and properly communicate your strategy.

Using these technology tools can help bolster human resources and organizational structures, too. Instead of looking at technology as replacing humans, they complement each other.

Other downstream effects of COVID-19 are the continuing complications with unemployment, H2B and other international labor programs such as the J-1 program. The natural turnover within the U.S. workforce, conforming to obsessively controlled long-range budgets in an unstructured labor environment, is also ineffective and unreliable.

Consider the average job tenure for employees ages 25 to 35 is three years, according to the U.S. Department of Labor. Golf facilities and organizations have been challenged to find suitable replacements in a pre-existing labor shortage. Now may be a good time to adopt new people practices and shift the focus from predicting financial metrics to strategic success.

Building a labor plan should be more than evaluating operational reports and hourly wages. Developing a living, breathing playbook of alternate staffing sources, total rewards compensation and customized development opportunities should be in place.

Have you participated in any outreach programs such as job fairs, mock interviews or youth field trips like First Green? These are all basic strategies employed by local competitors and mega companies. Allocating time and resources to these

programs is a necessity to remain vigilant in a competitive recruiting landscape.

Consider starting your workforce outreach with your local workforce development board. As part of the public workforce system, your tax money goes toward these government programs to assist employers by providing training, education and local economic development. Workforce boards support job seekers finding employment while partnering with businesses to recruit. It may take some initial time investment to develop relationships and educate stakeholders, but the payoff is a direct pipeline to eligible job seekers.

Developing a relationship with a local staffing agency can also be a valuable tool to help manage the flow of the season. While you do pay higher wages for their administrative capabilities, consider the savings in recruitment, workers compensation, 401(k), health insurance and other benefits.

Apprenticeships are effective structured systems to attract, develop and retain skilled employees. The Department of Labor says that for every dollar spent on apprentices, you will receive \$1.50 in return on investment.

Not persuaded? Significant reimbursement funds upwards of \$45,000 per year are available to businesses that implement apprenticeship programs. What better way to demonstrate your credibility and strategic acumen in financial planning than tapping into government funding for staffing? GCI



TYLER BLOOM is a workforce and leadership consultant and principal owner of TBloom, LLC. He previously served 15 years in the golf industry, the most recently as golf course superintendent at Sparrows Point Country Club in Baltimore, Maryland.



Editor's note: Golf Course Industry is working with SePRO to tell the story of Zio Fungicide's implementation into disease control programs. The three-part series will explore the reasons superintendents are turning to Zio, how they are using it and what are the results during the most trying moments of the 2020 season.

By Matt LaWell

evin Banks shattered an ankle earlier this vear, an unusual but not unprecedented souvenir of a winter ski trip. A spring and summer filled with recovery and physical therapy prevented any efforts to crawl down close to the turf at Vineyard Golf Club — which is a shame, because the turf there turned in a sparkling season.

Banks is the superintendent at Vineyard Golf Club on Martha's Vineyard. The course is required to use all organic products. With limited course maintenance options, Banks tested Zio Fungicide from SePRO this season, one of many superintendents across the country to include the product in their rotations.

Banks tank mixed it, spraying the course's bentgrass/Poa annua greens every three to four days over a condensed peak stretch of 10 weeks, down from the normal 12 weeks in large thanks to near-constant winds blowing in off the Atlantic Ocean. He wanted to monitor how brown patch outbreaks reacted to a new chemistry — and wound up with results that will keep it Zio his program.

"This was the first summer I sprayed greens twice a week," he says. "We had to turn back our fiveor seven-days intervals and I sprayed at a two-and-a-half-ounce rate every three or four days. The turf reacted really well to that, and I found myself using Zio maybe a little more."

Temperatures on the island were

still mild when Banks ran out of his supply, hovering around 75 overnight. He had sprayed Zio a dozen times by then, a large enough sample size to recognize that brown patch outbreaks would vanish after three or four days rather than one or two weeks.

"Some greens, we have more thatch issue, some greens might have more rings, but in years past we would see it for up to seven to 13 days before it disappeared," Banks says. "I think Zio contributed. Especially once we stopped using it, I saw more outbreaks on the golf course here and there. We have also been aggressive with our cultural practices. We DryJect our greens three times a year, and between

NEW APPROACH TO OLD DISEASES

Sponsored by SePRO

April and September we only skipped one week of topdressing due to weather, so we were very active. I wouldn't say Zio alone contributed to that, but it aided in the suppression of brown patch this year."

Half a country away, Bill Irving turned to Zio to help control root Pythium on the 50-yearold bentgrass greens at Wolf Creek, a private club in Olathe, Kansas, on the west side of suburban Kansas City. The summers there are hot "Cool for us would be highs in the upper 8os to low 9os," Irving says — but the thermometer never cracked triple digits this season.

"The last three summers have been pretty pleasant," says Irving the club's director of agronomy. "We had a little spell this year

in the middle of August when we showed up to work wearing sweatshirts, which is unheard of for us."

The relief of rain lifted some of the burden on the greens, with a couple weeks of heat normally followed by a couple days of precipitation. The relief of a new product likely contributed, too.

"Our greens have many, many issues," Irving says, "so it was nice that we were able to see them show some signs of stress, which is not unexpected in our neck of the woods, but then we would get



Kevin Banks



Tim Huber



Bill Irving

on top of them and we would see that bounceback and that recovery. In the past, we hadn't seen that. I don't know that the Zio was solely responsible for the change, but I think it certainly helped us."

Irving mixed Zio with

a variety of other root

Pythium products, applying "about an ounce per thousand" every other week, with a trio of other products on six-week rotations, over the course of the summer. A couple times, Irving says, weather pushed back applications a day or two, "and boy, the greens just had a funny look to them." Within a day or two after the next application, "Boom, they looked normal again."

"I've got some greens on my property right now that, every

year, we've lost grass — I'm talking five or six plugs on a collar — and this year there was none," he says. "There was no loss of turf on our eighth green at all. There were a handful of others where we still had to do some plugging but I think that was more wear and tear. I think the stresses we saw on those particular greens were more abiotic rather than a biotic stressor. It was water cooling or traffic stress rather than a Pythium or a root-born pathogen."

By now, Irving considers Zio to be "another bullet in the chamber for

protection on our greens," and he considers it to be the kind of product that builds on itself, season after season. "I feel better putting it in the tank because now I have something else as I rotate my chemistries that helps us maintain that consistency that we need to have," he says. "If we have that little weather hiccup and we're late getting that application down, we know we have that Zio hanging around in the soil, lending us a hand in the fight."

That fight is just starting at The Club at Carlton Woods, nestled in The Woodlands, about 30 miles north of Houston.

"Other than battling hot spots, the nice thing about the summer here is that we don't see a lot of disease, we don't see Pythium like they do in the north, especially the Northeast," says Tim Huber, the director of agronomy for the club's Nicklaus and Fazio courses. "Our season that we're scared about is flip-flopped, so right now is when we're starting to worry about leaf spot, dollar spot, Pythium, root disfunction, stuff like that, starting late September basically through February. Your Bermudagrass greens are just sitting dormant and they're slowing down, you're not growing new roots or producing new leaf tissue, so you get in this defensive mode.'

Huber has Zio on hand, and while he opted to not use it this summer because of hotter and drier conditions, he is prepared to include it in his fungicide rotation, most likely every 21 to 28 days, about five applications in all over the fall and winter.

"We rotate fungicides for Pythium root dysfunction and I think Zio is part of that because it adds a little biological control," he says. "The pathogens see something different, the spectrum of protection, if that makes sense.

"We want to spray on a preventative basis. We want to make sure we're not just spraying to spray."

Like so many superintendents, Huber likes to try out new products. See what they offer, at the very least. "When you start talking with some-

ICYMI

Parts 1 and 2 of the series explored why and how superintendents Kevin Banks, Tim Huber and Bill Irving added Zio Fungicide into their disease management programs. Enter bit.lv/ZioParti and bit.ly/ZioPart2 into your web browser to read the stories. A video overview of the product is available at bit.ly/ZioVideo.

one on a committee and they hear about what you're doing, it always seems to spark their interest," he says. "They like to hear about what's new on the market, whether you're giving it a try, why are you giving it a try. I've had a lot of people take an interest, and if it gives you any kind of added protection, any kind of superpower, it will be worth it."

The constant at each of the three courses, like almost every course, has been increased play. Vineyard Golf Club counted about 4,300 rounds in July, more than 15 percent more than a normal month, and was still scheduling about 100 rounds per day in late September, when its normal count is less than a couple dozen. Wolf Creek has already surpassed its average year of about 15,000 rounds, topping 18,000 by the middle of September. The numbers at Carlton Woods are even more staggering: A normal August at the club is slower thanks to the heat of a Texas summer. around 1,100 rounds. "This August," Huber says, "we did 3,800."

The application season is all but over for Banks and Irving, and just beginning for Huber. The testing, the search for a superpower, moves forward, just like always.

"There are a lot of things we try and don't use again," Banks says. "Every year, we try something new. If we think it works, we'll try it again. If we don't think it works, we won't use it again. Going into this year, I was hoping it was going to work, but I didn't want to let myself down. I went into it with an open mind. I was hoping it would tank mix well and it did. I was hoping it would work and it did."

And what might 2021 hold? "I'm excited now to see that it really did help regarding our brown patch and I'm excited to add it to our program next year," Banks says. ■

ZIO FUNGICIDE AT A GLANCE

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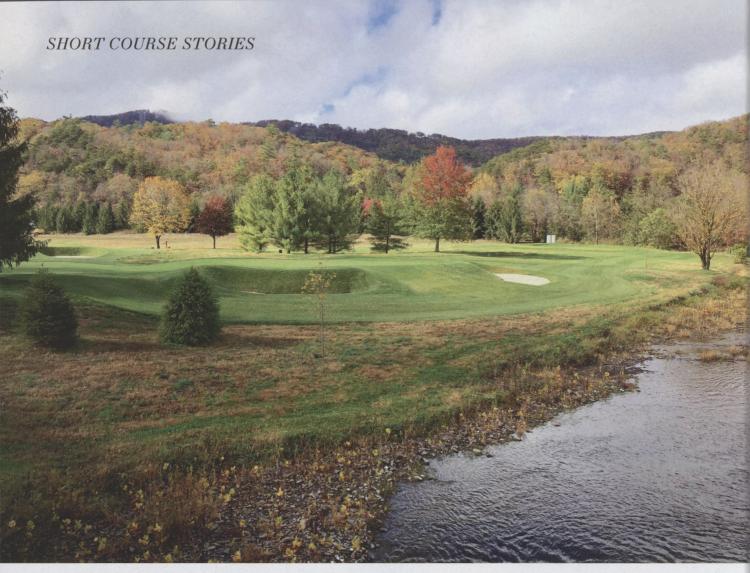
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By Guy Cipriano

Holes Inspired by the Early 1900s

A superintendent-designed course at a famed resort balances preserving the past with modern maintenance considerations.

elly Shumate replicated more than 100 years of golf history using less than six acres while never losing sight of an obstacle his industry faces.

Shumate designed The Ashford Short Course at The Greenbrier, the enduring southern West. Virginia resort where preservation drives decisions and guests have been playing golf since the early 1900s. He juggled creating a 9-hole course possessing throwback charm with the demands he experiences as the resort's director of golf course maintenance.

Named in honor of Army physician Col. Bailey K. Ashford, the course opened in 2018. More than 25,000 sol-

diers were treated at Ashford General Hospital on the resort grounds from 1942 to 1946. The course measures less than 1,000 yards and meshes fashion and function.

Because this magazine serves golf course maintenance professionals, let's start with function. Shumate's primary job involves leading the maintenance efforts of the three 18-hole courses. The Old White and Meadows are open to all; the

Snead Course is part of the private Greenbrier Sporting Club. Located across Sam Snead Drive from The Old White, the only Seth Raynor and C.B. Macdonald design open to the public, the Ashford occupies flat land beneath mountains and serves as an amenity for members and resort guests.

To keep this short course story, well, short, Shumate's team must keep plenty of greenspace in grand condition. His background as a superintendent led him to designing a course under the premise that the golf labor supply is more likely to remain limited than be enlarged.

"I wanted to make sure I wasn't creating something that was a maintenance nightmare," Shumate says. "Even though golf has rebounded, we have had this labor shortage really going on for the last 20 years. I think any new course needs to take that into consideration. How can we build a course and have a bunch of interest without taking a whole load of people to maintain it? Those are the type of courses that will endure."

The Greenbrier Sporting Club crew, led by superintendent Patrick Murphy, maintains The Ashford. On a normal day, play begins in the late morning and continues into the evening. Preparing the course often represents second-assignment jobs for Murphy's crew.

Shumate incorporated just 13 bunkers into the layout. He calls the hazards "bathtub bunkers," meaning they feature flat bottoms to prevent an abundance of washouts following heavy rain events. Bunker sizes range from 8 to 10 feet. One employee can hand rake the entire course in about an hour.

Greens, tees and approaches are A-1/A-4 bentgrass, the same variety used on the Snead. Shumate designed a pair of double greens and The Ashford features around 40,000 square feet of putting surfaces. Turf-type tall fescue surrounds and rough and fine fescue mounding complete the grassing lineup.

The horrific southern West Virginia floods of 2016 sparked a major restoration and reconfiguring of The Greenbrier's golf offerings. Shumate's rework of the Meadows course opened enough land on the former 11th and 12th holes for The Ashford and accompanying homesites. The start of the short course movement among resorts coincided with The Greenbrier's post-flood land planning

A golf course architecture aficionado who constantly studies routings, satellite imagery and landforms, Shumate designed The Ashford as he guided a determined team through a heroic recovery that concluded with the resort hosting the PGA Tour's Greenbrier Classic in 2017. Between tournament maintenance shifts in 2017, Shumate and a shaper started work on The Ashford. The course debuted in August 2018.

As for the fashion side of things, Shumate wanted to promote elements of what makes The Old White a Golden Age staple and resort guest favorite, including a few Raynor and Macdonald template greens. "Because that's what The Greenbrier is known for," he says. "A lot of people relate to that and ask: Did you play the redan? Did you play the biarritz? Did you play the punchbowl? Those things stick out. But I didn't want to do a complete nine holes of that."

The Ashford begins with a punchbowl green and boasts a redan (slopes from front corner to back corner) and reverse redan (slopes from back corner to front corner). The Ashford redans contrast the famed eighth hole of The Old White, because most golfers are hitting wedges instead of long irons into both greens. The holes feature clever Golden Age-themed names such as "Press," "Duel," and "Papa," and none plays longer than 112 yards. The course can be walked in less than an hour.

"You have to create interest and you want people to come back," Shumate says. "If you're fishing, you want that perfect lure. You want something for them to bite on. People want to feel good about themselves and get excited and not feel beat up. That's what I tried to do with The Ashford."

Shumate's interest in golf and, perhaps, golf course architec-

ture stems from his parents dropping him off as a teenager at Twin Falls State Park, the only course near his hometown of Mullens, West Virginia. He played the course multiple times per day, carrying his bag around the hilly layout until one of his parents returned in the evening. Experiencing the same course repeatedly eventually provided little mental stimulation and Shumate made an innocent comment to the pro about his desire to play elsewhere. The pro suggested playing the course backward.

"I would start on 18, then play the 17th green, then start on 17 and play to 16th green," Shumate says. "It was freaky because in the mountains of West Virginia nothing is connected. But it was really, really, interesting. I then started making my own holes. A busy day back then was maybe 25, 30 rounds, at that park. Not a lot of people were playing. Maybe that's where I got started in golf course architecture."

A few decades later, Shumate is designing holes for visitors exploring the beauty of his native region. Unlike his teenage years, he also must consider short- and long-term maintenance. "I feel blessed that ownership gave me the opportunity," he says. "It's something that I love and it's something that I have an itch for. And short courses are something that's good for the game." GCI

Guy Cipriano is Golf Course Industry's editor-in-chief.



▲ Shumate

◆The Ashford **Short Course** at The Greenbrier opened in 2018 and features various Golden Age design elements.



Q&A WITH ARY LENNERT

AMVAC Environmental Products (AEP) supplies proven and innovative products that help pest control, public health and turfgrass professionals be more successful. We are a business unit of AMVAC Chemical Corporation, an American Vanguard Corporation company, which is U.S.-based and publicly traded (NYSE: AVD).

For the golf course industry, we offer a growing portfolio of herbicide, insecticide, fungicide and fumigant products. We know that superintendents are constantly challenged to accomplish more with less. The golf market is extremely competitive, and superintendents who choose our products can rest assured that they'll get the results they need at an excellent value.

O Does AEP have any unique chemistries and

Absolutely, and we continue to seek out new chemistries and develop innovative formulations that can help make superintendents' jobs easier.

The proprietary chemistry we're best known for in the golf turf industry is pentachloronitrobenzene, or PCNB for short. Besides being a multi-site con-

tact fungicide, PCNB is the only FRAC Code 14 fungicide available for use on golf turf, making it a very valuable fungicide resistance management tool. PCNB is widely recognized as the most effective single active ingredient for control of all three major snow mold pathogens. More recently, PCNB has been shown to be one of the most effective active ingredients for control of anthracnose as well. There are four PCNB-based AEP fungicides: two granular - FF III® (PCNB, chlorothalonil, propiconazole) and Turfcide® 10G (PCNB) - as well as two liquid - PREMION® (PCNB + tebuconazole) and Turfcide® 400 (PCNB).

Earlier this year, we introduced SUREPYC IQ™, a new herbicide for warm-season turfgrasses that contains a unique combination of imazaquin and sulfentrazone. SUREPYC IQ is exceptionally effective on tough-to-control Kyllingas and purple nutsedge. While turfgrass management is extremely important, we realize that golf courses also face other types of challenges, including pest control. Our NUVAN® Prostrips® provide simple and effective control of numerous insect pests on golf courses, keeping irrigation control boxes, pump houses and storage areas free of ants, flies, spiders and stinging insects for up to four months.

It's mid-October and snow mold fungicides

As AEP's Midwest sales manager and a Wisconsin native, I've certainly seen the toll that snow mold can take on golf course turf. I've found that one of the best and easiest ways to incorporate PCNB into a snow mold control program is to use Turfcide 400 instead of chlorothalonil as the contact fungicide component in snow mold fungicide mixtures. PCNB consistently outperforms chlorothalonil in snow mold field trials, so you will achieve substantially better snow mold protection simply by making this switch.

Another great way to use PCNB in your snow mold control program is to use one of the four Turfcide 400 snow mold fungicide programs in our 2020 Turfcide 400 Snow Mold Assurance Program. Download the 2020 Turfcide 400 Snow Mold Assurance Program at www. amvac.com/aep-snowmold.

It's also Early Order season. What's new

We simplified our EOP this year - no order minimums, no forms to complete, and no invoices to

submit. We know there are many early order programs out there, and we wanted to show our dedication to this market by making our program simpler and more lucrative for golf courses across the United States.

We're now offering more products to choose from and have increased rebates on most of our insecticides, herbicides, and fungicides. Our THREEBATE 2020 EOP runs from October 1 - December 18, 2020. Purchase any of the eligible products and earn rebates in the form of a distributor credit to your account in 2021. Learn more at www. amvac.com/EOP.

What should superintendents expect to see

We're committed to increasing our support of the golf turf industry and the superintendents who work hard to keep their courses looking good. We want to help superintendents design the best possible turfgrass management programs for plant health and playability that their owners, members, and daily fee patrons alike will appreciate. We'll continue identifying better ways to use proven compounds while developing new technologies and effective "low-impact" solutions that are made in the USA. Stay tuned!



THREEBATE 2020

EARLY ORDER PROGRAM

ORDER BETWEEN OCTOBER 1 - DECEMBER 18, 2020 AND SAVE

There is no debate about it, AMVAC® Environmental Product's (AEP) offers great rebates on our three lines of proven herbicides, insecticides and fungicides. Choose from our unique chemistries such as PCNB-powered PREMION® fungicide and Turfcide® 400 for control of listed diseases from anthracnose to snow mold. Our newest herbicides, SCEPTER® T&O WDG herbicide and SUREPYC® herbicide, for cost-effective control of sedges and broadleaf weeds. And our popular lines of insecticides for control of turf and ornamental pests, annual bluegrass weevil and other listed pests. All the rebates. All three product lines. That's THREEBATE 2020.

GET REBATES AND LEARN MORE AT AMVAC.COM/EOP

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

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Q&A WITH THE EXPERT

SAVINGS ON KEY CHEMISTRIES



Q&A WITH AN THO

Turf Marketing Manager, BASF

about the Early Order and how are those changes

We started the process a year ago to make the purchasing, planning and outlining of these products easy for our customers. We took our products outside of cubes and made them available in an á la carte fashion.

Additionally, we're extending year-round rebates at a lower threshold than years past. Previously, if a customer bought at the \$35,000 level, it awarded 10% year-round rebates. This year, at the \$25,000 level, we're extending a 7% year-round rebate. This allows the customer to defer some of those in-season purchases and to buy at a lower level in EOP and still have the ability to get year-round rebates. I think that's a good way to extend additional flexibility for our customers depending on the challenges they may be facing.

Another big enhancement that we're able to offer this year is a more robust online digital calculator that allows our customers to formulate their decisions to suit the diseases, pathogens and pressures they face and allows them to buy in the quantities they need.

RETURI TO EXCELLENCE

What makes your EOP calculator such an im-

It allows customers to archive their purchases and it's fewer steps for them to go through to understand the products they've previously used [while being] able to take inventory and understand what products may be best for the upcoming season. It also allows a customer or DSR to put these products, inventories and quantities together to fit a program. Matching the right product at the right rate at the right time for the right surfaces gives [the customer] a guide. We all know superintendents face many challenges—whatever we can do to make their jobs easier and allow them to focus their skills and talents is a win-win for everybody.

Which products are new to EOP this year and how do they add value

This year, we're entering the first EOP where we've had a full season of Maxtima [fungicide] and Navicon [Intrinsic brand fungicide]. In discussions with



many superintendents, it's been a difficult season in terms of moisture challenges, with many parts of the country being dry, many parts of the country being hot - disease pressure has been above average. It's been a good year to test how well our new innovations have performed during the 2020 growing season. [They provide] very strong protection, from dollar spot to anthracnose to take-all root rot. We can now bring forward these new-generation DMIs to unlock a great rotation program that allows our customers to be successful not only managing turf health and preventing and keeping disease at bay but also managing turf health long term while understanding resistance management. Having Maxtima [fungicide] and Navicon [Intrinsic brand fungicide] as new innovations to bring into the program is key and they've proven their worth this past year.

How does EOP help

You're looking at upwards of 24% savings on a lot of these key innovative products. When you look at the cost-per-day of control on a lot of these products, they're affording customers a lot of utility. I like to look at our products as being essential to the viability of an agronomic program from a disease control standpoint. Our products, because of their longevity and their broad spectrum control, are really cornerstone products. If you're going to utilize these products, it's best to buy them at the time when you can leverage the most savings.

When is the best time for turf professionals to order products so they

October is when we heighten the rebates, and I think it's been an evolution of how EOP has been coordinated - the early bird gets the worm. It not only allows these customers an opportunity to shore up their products for the upcoming growing season but [also], in many cases, they can get an additional 6 to 10 percent of their rebate if they make these selections in October. For more information visit, betterturf. basf.us/eop.

RETURNI TO EXCELLENCE

The BASF 2021 Early Order Program is our most simple, flexible and rewarding EOP ever. Design your own program from the ground up and earn rebates up to 24%. It's time to restock your toolbox with powerful, innovative products and set you and your course up for an amazing season.

To plan, share and see your savings in real-time, use our convenient online calculator at **betterturf.basf.us/eop.**

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We create chemistry

Always read and follow label directions.

For more information and complete program details including program terms, conditions, limitations and restrictions, visit betterurf bast us/EOP. ©2020 BASF Corporation. All rights reserved.



Q&A WITH CON HATHAWA

Technical Services Manager, Turf & Ornamental, Nufarm

uestions regarding naturalized areas or reduced input areas don't only cover how to increase aesthetic quality or increase playability but how to accomplish these things with the fewest inputs as possible. This means thinking about the relative cost of inputs, the time it takes to provide an input, and which inputs are worth that time and money. In the end, the goal is to provide the beauty of contrasting tan colors and inflorescence in the summer with few inputs. However, success will be accomplished by developing a plan to include the most necessary inputs.

Which inputs are most important in naturalized

Because these areas aren't mowed regularly, weeds can get out of hand quickly. Herbicide applications are the most important input to maintain pure stands of whatever was established. When perennial weeds with vast networks of vegetative reproductive parts, like common milkweed and Canada thistle, are left untreated they get stronger and multiply quickly. Turf managers should make time to treat these areas at least once per year; it won't make a huge difference whether it is in the spring when weeds wake up or in the fall as

they prepare for winter - consistency is key because weed pressure is constant.

Which herbicides will be most valuable in

Millennium Ultra® 2 is a broadspectrum herbicide that consistently provides great broadleaf weed control on golf courses, including in naturalized areas. Some weeds emerge late and some areas have high weed pressure and require some spot treatments mid-season. Sure Power® will burn-down these weeds quickly and provides activity on a range of mid-season weeds including broadleaves, annual grasses, and many sedges. Those who have established these areas with fine fescues have a huge advantage when it comes to control of perennial grasses sethoxydim and fluazifop can be applied over the top of fine fescue species to provide selective control of many perennial grassy weeds like quackgrass, reed canarygrass, etc.

How are naturalized areas established around

At establishment, seeding grasses at a low rate is key. A playable naturalized area may have 1 large plant per 1 square foot of area. This is a huge difference from the hundreds or thousands of

grass plants in the same area mowed from 0.125 - 4 inches, and may call for a vast departure from what we are used to. Accomplishing such a sparse stand of plants is easier said than done, but here are some tips:

- 1. Choose plant species that are clump-forming and won't spread via stolons, rhizomes, or other vegetative structures into open voids. If you are seeding fine fescue species, this may include hard and sheep fescues versus creeping red fescues.
- 2. Decrease your seeding rate. For fine fescues, 10 lbs of seed per acre, or even less, may be sufficient. Set up a few test plots and compare a few low rates so you become comfortable with rates much lower than commonly used.
- 3. Add some annual ryegrass to the mix to provide some quick cover and competition for your desired species – this is a good way to ensure a thinner stand.

How can established 1 naturalized areas be

Once these areas are established, they become much more difficult to thin out, so starting thin is key. These options for stand thinning should be tested as research in small areas as they are few and inconclusive.

Keeping these areas thin will help increase plant aesthetics because they aren't competing as much with each other, but thin stands increase the likelihood of weed infiltration, so, again, weed control is key.

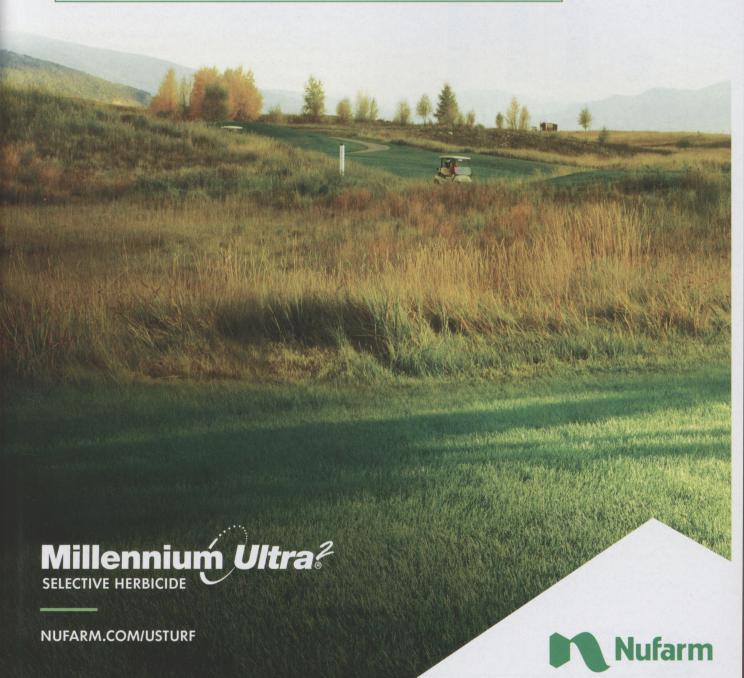
- 1. Use PGRs. There is anecdotal evidence of superintendents using PGRs such as trinexapac-ethyl and prohexadione-Ca (Anuew™) to thin stands, but little conclusive research. PGRs are used in grass seed production fields to reduce lodging (plants falling over) and increase seed production, but not necessarily to thin turf stands.
- 2. Use preemergence herbicides. Because naturalized areas produce seed each and every year, a huge amount of seed is being added to the soil seed bank. If these seeds are allowed to germinate and recruit, they may increase density over time. A preemergence herbicide application may limit survival.
- 3. Nonselective herbicides like glyphosate or glufosinate (Cheetah® Pro) could possibly be used in creative ways to thin out naturalized areas. Perhaps a boom sprayer could be used with every other nozzle turned off and a random pattern through the areas. This may seem like an odd method, but it would get the job done quickly.

PLAYABLE + NATURALIZED AREAS,

GROWING HARMONY

Naturalized areas can be both beautiful as well as beneficial to your bottom line. However, it is important to remember that naturalized areas do require some level of maintenance to prevent takeover by undesirable weeds. Our line of herbicides will help you achieve optimum balance between naturalized, yet managed, landscape settings and our team of golf experts will guide you every step of the way.

ASK YOUR LOCAL NUFARM REP ABOUT OUR NATURALIZED AREAS PROGRAM



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Grow a better tomorrow



SUPERINTENDENTS MOVING UP THE RANKS!

uperintendents are making the move from golf course superintendent to general manager/COO roles at a record pace. The trend started with Frank Dobie at Cleveland Golf and Country Club in 1964. An analysis shows that 39 general managers/COOs rose to their position from the superintendent ranks. Recent movement has seen the brothers of Eric and Nicholas Von Hofen lead The Club at Weston Hills and Colliers Reserve, respectively.

Why are superintendents having such success in making these moves? Superintendent positions develop a broad skill set that are necessary for general managers/COO positions. The traits required for superintendents and general managers/COOs to be successful include but are not limited to:

LEADERS: Impressive superintendents are the first to arrive and the last to leave in their operations. Superintendents manage large staffs. They hold their employees accountable to the standards that have been created. Superintendents cast the vision for course presentation that the staff must believe in and deliver. The greatest leaders encourage their staff to push through difficult times. The weather will often work against the efforts of the agronomy team. The superintendent as a leader stays positive, encouraging the team through the obstacle until the weather changes. Superintendents know they are only as good as their recruited and trained staffs.

COMMUNICATORS: Superintendents are experts in course conditions. They must manage this information up to the general manag-

er/COO, laterally to the director of golf and downward to the golfer. Superintendents should be the source of information to the golfer and not leave this task up to the golf shop. Superintendents create content and distribute it via social media directly to the customer and create more raving fans. Their communication plans are maintained and measured through analytics to determine the best method of delivery. Superintendents understand that being proactive stops rumors and focuses the membership on facts.

MENTORS: The millennial work force craves mentoring and superintendents have been providing that skill for years. The United States labor force continues to expand with millennials. Internship programs that have been created by superintendents have morphed into mentoring programs. Superintendents have moved from just providing a job to counseling the students with career advice beyond their internship. Creativity with housing, bonuses (signing and retention) and providing experiences beyond the golf course have been helpful.

RECRUITERS: Many superintendents host televised golf events. Superintendents are required to solicit and obtain sponsorship monies to create revenue for the added expense of supporting a PGA TOUR volunteer program. These programs require housing, transportation, clothing and food for the participants. The recruiting is performed primarily through

local GCSAA chapters, social media, universities and personal networks. General managers are also required to recruit top talent to the club for department head positions.

FINANCIAL ANALYST: Superintendents manage the largest expense department in the club. The premier superintendents build their operating budgets as zero-based budgets and not off a rolling 12 forecast. Zero-based budgets allow the department's finances to match the standards created by the green committee. Superintendents are well-versed in capital planning in equipment replacement and this skill allows them to create a recapitalization plan for the entire property when they are general managers/COOs.

CONTINUOUS LEARNER: Su-

perintendents are constantly seeking educational opportunities. Technology in their field changes rapidly with plant protectants, equipment and irrigation. Superintendents adapt to the new trends in the industry for their courses to stand apart from the competition. Country club trends are changing in relation to generational desires. The club must adapt or become irrelevant in the marketplace.

As new general manager/COO positions need to be filled, the board of governors for country clubs should expand their mindsets when filling their club general manager/COO role. The top-tier superintendent has developed the skills to succeed in those roles. GCI



TOM VLACH, CGCS, is the is the director of golf courses and grounds at Grey Oaks Country Club, a 54-hole facility in Naples, Florida.

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.

BALL MARK REPAIRS

he seven 2016 Toro Greensmaster Flex 2100 Walk-Behind Greens Mowers are equipped with Upshake bicycle water bottle holder brackets (\$7, Amazon). The plastic Rubbermaid water bottles (\$12 for three, Amazon) hold a mixture of Harrell's Dried Bagged Green-Colored Sand with Yellow Jack Coated Pure Distinction Creeping Bentgrass Seed. Each greens mower operator divides their greens into four quadrants. Each day they fill every ball mark in a single quadrant and move to the next quadrant the following day. The setup person also goes in a circle around the hole filling ball marks until play catches them - usually 10 feet around each freshly cut hole location. The coated seed and sand is mixed together in a 5-gallon bucket for easy fill-up into the water bottles. It took minutes to install the water bottle holder brackets. Dan Dingman, superintendent at the Birmingham Country Club in Birmingham, Michigan, is very precise and exact in everything he accomplishes.



BALING TREE LEAVES

ary Zagar, the director of golf course maintenance from 1994 to 2010 at the 36-hole Quail Hollow Country Club in Concord, Ohio, would cut down between 100 and 900 dead trees annually on the heavily wooded 700-acre property. They traded the firewood for useful things from different trades and received services in return and gave it away to the police and fire departments. It also produced firewood for the clubhouse's outdoor fireplace. They even sold firewood and bought a used Salsco roller. Zagar made a trade with a farmer, giving him firewood and borrowing the farmer's John Deere 336 Hay Baler, which produced about 400 bales annually from 4-foot-high piles of leaves, instead of mulching and mowing over the debris. The leaf bales were sold to hunters at 75 cents per bale for blinds, to landscapers for compost and topsoil, to local nurseries to bed their plant material, and to farmers to feed their cattle. The debris problem was solved with less wear on their equipment and the idea led to a savings of about 400 gallons of diesel fuel annually. The maintenance staff also had a great party funded by the sold bales. Jeffrey Austin is the current director of golf course maintenance.



Terry Buchen, CGCS, MG, is president of Golf Agronomy International. He's a 51-year, life member of the GCSAA. He can be reached at 757-561-7777 or terrybuchen@earthlink.net



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OUTSIDE/THE ROPES

MORAGHAN continued from page 14

facts and avoid emotion. You don't want to create the perception that this is your pet project. Identify the problem and how to remedy it and at what cost. Explain how much longer you can maintain the current situation before it won't work any longer. Provide accurate costs of perpetuating constant repairs and make sure the club understands that's simply putting a Band-Aid on

their gaping wound. Finally, in making your case, do your homework: Cite comparable examples from projects at other clubs.

OK. They're listening and agree it might be time to do something. You need a plan. What follows is pretty generic, which means it's a good

At some point, every golf course will need to be renovated or otherwise updated. Because just like us, features age or just wear out."

start but far from all you're going to need to do. Your particular situation must be factored in:

- Detail and prioritize the need for the project(s)
- Know the full scope of the project and whether it's manageable in-house or if outside contractors are needed
- Educate your board/ownership as to why the project is essential and why now
- Develop a request for proposal (RFP)
- · Create a financial plan and budget
- · Create a reasonable timeline, especially if golfers are displaced
- Have an accurate completion date in mind
- Factor in the time of year when the work will be done
- · Prepare a communications plan for each step of the process
- Organize permits, bids, vendors and contracts; factor in potential delays
- Cushion the timeframe to account for unexpected issues
- Post-project considerations (labor and budget)

The next step is probably selecting an architect and/or builder. Relationships are key. And even if you don't get to choose the contractors, you're going to have to work with them, so learn to get along. You and the builder need to be on the same page regarding standards, care and attention to detail. The contractors need to get along and work well together; choose them all wisely.

Consider yourself the project manager. Make sure you understand the full scope of the project. Have a back-up plan and designate someone from your staff to handle your normal duties. Once in the works, this project must take precedence.

Now the project is completed. But you're not quite finished. Be sure to factor in post-project maintenance. Account for varying labor needs, new maintenance routines, increased acreage to maintain, chemical inputs or cultural practices that may change.

Think it through, then think it through again. Just like that nose job, there's not much room for making a mistake.

Whichever path you take, it won't be easy, but it will be gratifying — IF you do it for the right reasons and in the right seasons. GCI

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GRIT

Was sitting in the Francis Marion Presidential Suite of the Myrtle Beach Sheraton last November with good friend Rodney Hine from Boston Golf Club. It was the final day of the annual Carolinas GCSA Conference and Trade Show and we were taking a moment to bask in the glory, if you will. There may or may not have been some good Scotch sipped. I can neither confirm nor deny!

I was wrapping up my year as president while Rodney and his family were first-time exhibitors for his invention Turf Trainer. We met and became friends at the 2015 Syngenta Business Institute. Rodney quickly established himself as the E.F. Hutton of the group. When Rodney spoke, you listened. I fondly remember our conversations that ran late into the night in the Billiards Room.

We crossed paths again in January 2017 in Harrogate, England, at the BIGGA Turf Management Exposition. We made it a point to attend a class together. It was an experience I will always remember.

So, back to last year. We sat on the sofa, soaking up the week and the year that was 2019. We talked about the trials, tribulations and challenges we each faced on our respective golf courses when our senior assistant superintendent Eric Sosnowski walked into the room.

Eric was promoted to senior assistant when his predecessor left for another opportunity last June. Thus, this was also Eric's first time attending the Carolinas Show. I introduced Eric to Rodney and began to tell Rodney about Eric's time with me.

Eric grew up in State College, Pennsylvania, and is a Penn State graduate with a four-year turf degree. I hired him straight out of college as an assistant-in-training. Our senior assistant at that time was involved in the interview process and approved of selecting Eric, but it quickly became apparent Eric didn't live up to the expectations formed by our assistant.

Wanting to trust our assistant, I made the decision that Eric needed to spend time as a crew member, gaining valuable work experience as well as learning how to survive in that environment. Believe it or not, Eric took a demotion and a pay cut, and continued to come to work every day. I must say this is the only time in my career I have taken such a drastic step.

Eric outworked everybody on the team. He is like a racehorse with blinders. When given a task, he performs it to his fullest. He is not the biggest, fastest or strongest, but his effort will impress anyone. Sometimes this mindset is detrimental in his current role as it impacts the ability to delegate vs. just taking on the responsibility personally. We are working on that.

This period of demotion lasted about a year. When the assistant departed, I promoted our then-second assistant to senior assistant, hired a new second assistant and asked Eric to resume the duties of AIT. After about 18 months, I replaced that second assistant with another new hire. Yes, Eric was passed over, but he was not deterred.

Within five months, the senior assistant left for a superintendent's position, the second moved up to senior and Eric earned his overdue promotion to second assistant. Twenty months later, when the senior assistant departed for some South Florida life, I rewarded Eric for all his hard work, determination and loyalty with the coveted senior position.

As Rodney listened to this story with Eric sitting across the room, he turned to him and said, "you've got grit, young man," and then turned to me to ask if I had read Angela Duckworth's "Grit: The Power of Passion and Perseverance." I am embarrassed to admit I still have not read it, Rodney, but I promise I will this offseason.

Grit is defined by Merriam-Webster as "firmness of mind or spirit: unyielding courage in the face of hardship or danger." New Harbinger describes grit as "passion and perseverance for long-term and meaningful goals. It is the ability to persist in something you feel passionate about and persevere when you face obstacles."

We hear stories every day about this new generation, and most of it is not favorable. Heck, over the past two seasons, I have made 16 hires — and not terminated one. Only two remain. Of the ones who left, only one provided a two-week notice.

But not all the ghosts were young, and if there is anything this world could use more of right now, it is grit. I know a 29-year-old who celebrated his seven-year work anniversary last month and has plenty to go around. **GCI**



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

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