

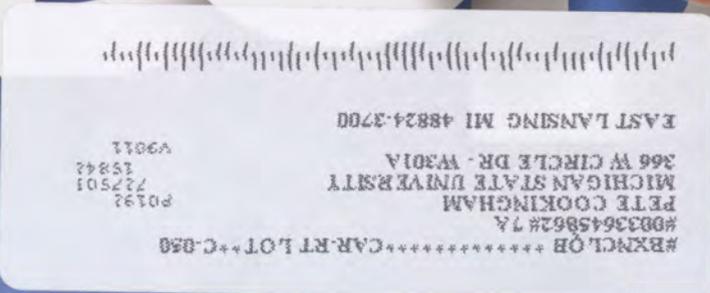
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DOWN THEY GO

Green speed and tree removal. I stray from pressing superintendents about specifics of both topics when visiting courses.

For starters, it's annoying. How fast are the greens running? Are they running 11 or 12? What happens to turf health when they're pushing 13? Superintendents are pestered enough about green speeds by members I find it surprising they don't start running 12 miles per hour in the opposite direction of their daily interrogators.

When it comes to tree removal, I find numbers don't work for somebody in my position. Ask a restoration-ready superintendent how many trees 96-year-old Wicked Field Country Club is planning to remove, and you'll often get the same deadpanned answer: not enough. *Golf Course Industry* operates to help superintendents perform their jobs – not lose them. I save tricky tree questions for architects, builders, green chairs, club presidents and arborists.

For most of October, I felt like an architect or builder, visiting nine private clubs in four states. Speaking with superintendents and club officials, in generalities, and scanning storied land with my eyes, left me believing trees planted for the wrong reasons in the 1950s, '60s and '70s are being removed for the right reasons.

The bulk of this work has occurred in this decade and it will continue into the next decade. As architect Ian Andrew tells us for this month's story, "Really old school," page 22, which examines the restoration work at venerable Knollwood (N.Y.) Country Club, tree removal conversations begin with agronomics before wading into aesthetics and strategy. I didn't make it to eastern New York, home of Knollwood and dozens of other clubs removing trees as part of master plans, but I did swing through the western part of the state. The trip included a visit to The Park Country Club of Buffalo, where Andrew has worked closely with longtime superintendent Scott Dodson on restoring a Harry Colt- and C.H. Alison-designed course that hosted the 1934 PGA Championship.

With an elevated tee, colorful wetlands backed by Ellicott Creek, an approach flowing into a contoured green, a restored flat-bottomed, grass-faced bunker on the left and a wooden connecting bridge, Park Country Club's par-3 13th hole is yardage guide cover material. The hole has more tee space because of an optional tee sitting right of the primary tee. Tree removal opened an angle for the optional tee, which boasts a dramatic view of a spectacular golf setting. The view doesn't exist without a chainsaw.

The melding of agronomics and aesthetics will continue as restoration euphoria progresses. One of the materials guiding Aronimink (Pa.) Golf Club's restoration, "See it then, restore it now," page 6, is a 1929 aerial stored in a Delaware library collection. With a sizeable gap in my schedule between leaving Aronimink last month and a co-worker's arrival at Philadelphia International Airport, I signed my literary life away to scour the glossy prints of the Hagley Museum and Library's Dallin Aerial Survey Company collection.

The jitters of conducting work research in a camera-filled room subsided once I found 1920s and 1930s aerials of Philadelphia's wonderful classic courses. The aerials depicted the clubs in their earliest and arguably most endearing forms. Trees encircled club property yet only in rare cases encroached golf grounds.

The Dallin collection has been digitized. But there's something exhilarating about wearing white cotton gloves while clutching black-and-white aerials of storied courses, especially when you know the images you are studying will help improve 21st century agronomics.

I saved the tree-counting that afternoon for somebody else. I was too busy studying golf's throwback future. **GCI**



Guy Cipriano
Senior Editor

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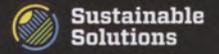
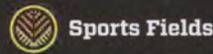
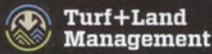
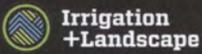
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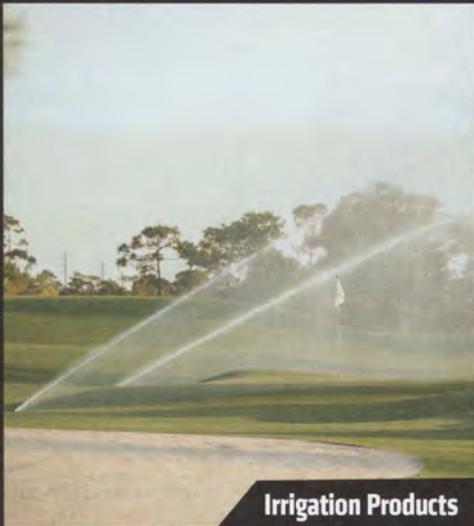




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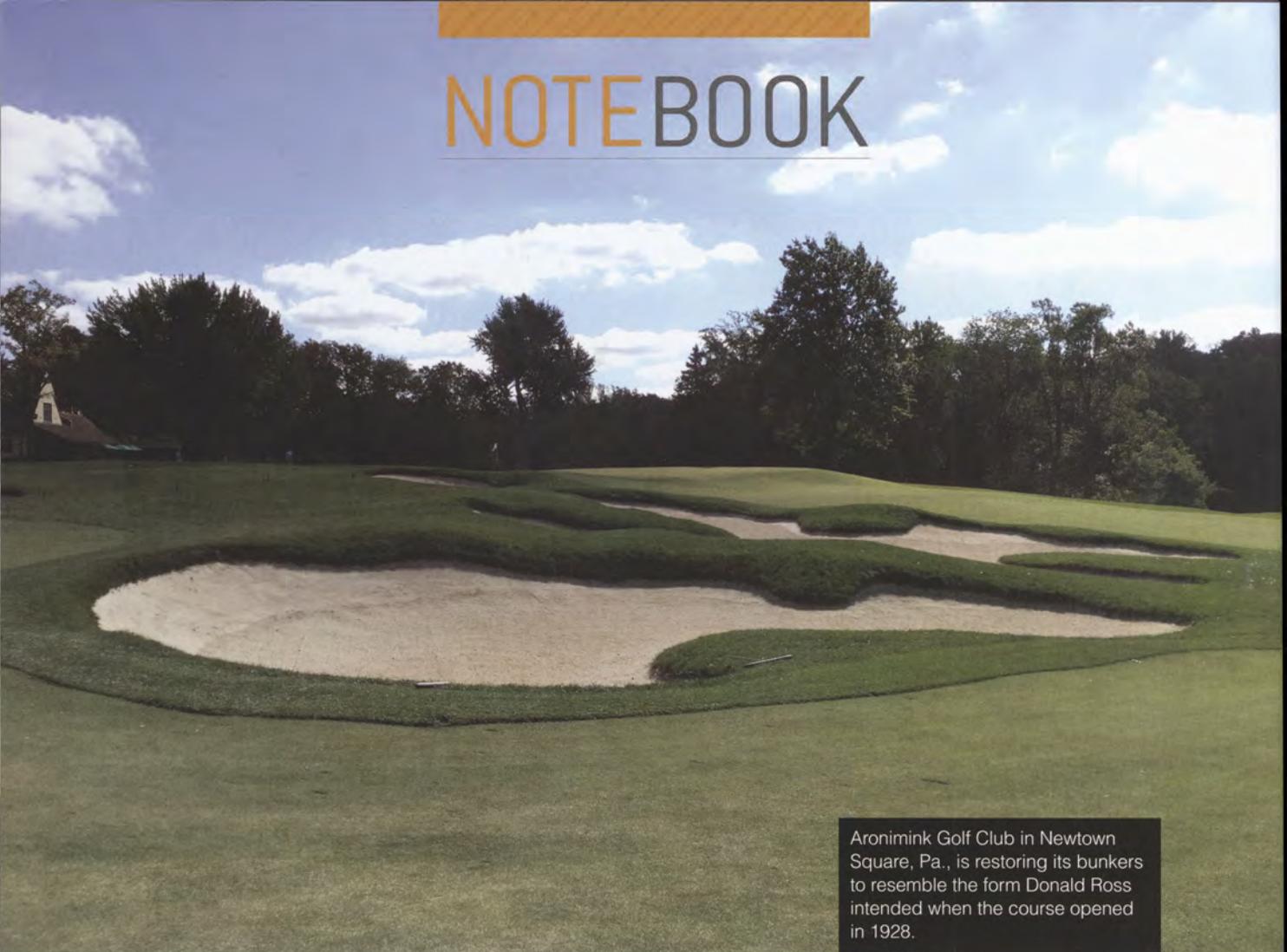
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Aronimink Golf Club in Newtown Square, Pa., is restoring its bunkers to resemble the form Donald Ross intended when the course opened in 1928.

See it then, restore it now

By Guy Cipriano

JOHN GOSSELIN PREPARED for a job interview in the mid-1990s by visiting a Delaware library. Two decades later, his current employer is using a photograph from the collection he studied as a resource for a significant and swift restoration.

Gosselin, the superintendent at Aronimink Golf Club in Newtown Square, Pa., and his team are working with Philadelphia-based architect Gil

Hanse and Total Turf Golf Services to return features of Donald Ross's original design, including more than 170 bunkers. A black-and-white aerial photograph preserved in the Hagley Museum and Library's Dallin Aerial Survey Company collection has aided the restoration.

Located 25 miles from Aronimink in Wilmington, Del., the Hagley Museum and Library once represented

a haven for superintendents, architects and builders looking to study past imagery of Philadelphia, southern New Jersey and northern Delaware courses. The Dallin collection features more than 7,800 aerials, ranging from Mid-Atlantic cityscapes to amusement parks, captured from 1924 to 1939. The number of golf course images exceeds 500. Digitizing the collection has increased access to the images,



Aronimink Golf Club superintendent John Gosselin has studied Donald Ross sketches and old aerials throughout the restoration process.



A digital option didn't exist when Gosselin started using the Dallin collection for work purposes. He prepared for his job interview at Rolling Green Golf Club, where he worked from 1996-2000, by studying negatives from Dallin's images of the Wil-

liam Flynn-designed course. Gosselin, who was working at nearby DuPont Country Club at the time, brought printed copies of the negatives to the interview. Rolling Green officials mentioned they had used three architects in five years as part of its renovation efforts. They were stunned to learn Gosselin possessed copies of aerials from the 1920s and 1930s depicting the course in the form Flynn intended.

Gosselin noticed aerials of other clubs, including Aronimink, during his visits to the library. As Aronimink begins a second fall and winter of construction, a poster-sized framed aerial of the course in 1929 sits in the maintenance facility conference room. The club used the aerial, along ground-

level imagery and Ross sketches, to guide the restoration. Ross's team completed the course in 1928.

Studying the materials illustrated major differences between the 1929 and 2015 versions of the golf course. Greens, for example, were much larger in 1929, and last fall and winter's work resulted in the surfaces expanding by 29,000 square feet, increasing shot options and potential pin placements. "It's like having another four or five greens depending on how big your greens are," Gosselin says.

Bunkers are biggest piece of the restoration. The pre-construction course had 75 bunkers with 96,000 square feet of sand. Returning to the Ross bunkering will yield 200,000 square feet of sand when construction concludes this winter.

"It's really unique in Donald Ross's portfolio because of the number of bunkers and the style," Gosselin says. "It was pretty much the height of his career in 1928. It wasn't early in his career when he was just getting started. It wasn't late. It was kind of in the middle of his career. I was hoping they would go back to what we are doing now."

The number of bunkers and square footage of sand are jarring. But because of improved infrastructure, Gosselin says his crew spent about around the same time maintaining bunkers this past season as it did before the restoration. Constructing the bunkers – and giving them a Golden Age look – required intricate techniques, and Hanse, Jim Wagner and Jaeger Kovich handled all the shaping.

The project entered November ahead of schedule after intense work last fall and winter. The changes should spark architectural discussions when the PGA Tour returns Sept. 3-9, 2018 for the BWM Championship, the third leg of the FedEx Cup Playoffs.

which include photographs of Aronimink, Pine Valley, Merion and other Philadelphia-area gems.

Visiting the museum and library in the digital age evokes memories of completing a college research project. The grounds traverse a former industrial site along a soothing stretch of Brandywine Creek. When arriving at the library, a visitor must register, provide details about the collection they wish to scour, wear white gloves when sifting through boxes of glossy prints and scribble notes in pencil. Surprisingly, cell phone photos of the aerials are permitted. A golf course history and architecture savant will relish a visit – even if it feels somewhat inconvenient in 2017.



And what about the *Poa*?

Members at Sewickley Heights Golf Club are learning carefully constructed *Poa annua* greens can generate a season-long buzz.

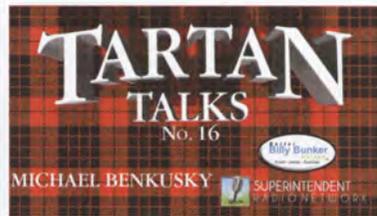
The suburban Pittsburgh club reopened May 5 following an extensive greens renovation. The project, featured in the October 2016 edition of GCI (<http://goo.gl/xtyE1q>), involved installing the necessary infrastructure to support high-quality *Poa annua* greens.

We returned to Sewickley Heights last month to visit superintendent Randall Pinckney, first assistant Corey Cheza, architect Jim Cervone and greens chairman Ted Kotarsky, and to see how the rebuilt greens have handled their first season. Members granted the team at Sewickley Heights a rare opportunity to develop the best possible situation for growing and maintaining *Poa annua* greens. Construction started Aug. 22, 2016 when a crew from Aspen Corporation arrived on site. Optimism permeated as a dry fall and mild winter expedited the work, which involved coring, installing drainage and irrigation, and laying sod on two greens per week.

The club was aiming for a late-May unveiling, but the Western Pennsylvania winter never turned nasty, giving Pinckney's team openings to fertilize and spray, thus increasing root sizes as spring approached. The course reopened earlier than expected with a ribbon-cutting ceremony featuring World Golf Hall of Famer and Sewickley resident Carol Semple Thompson.

"Members were really crawling out of their skin to get back on it," Cervone says. "We knew early on that it was going to be sooner than what we originally told them, but I don't think anyone realized how early. It was really just a home run all the way around. I can't recall any major issues or anything along the way that might have given us pause to say, 'Oh, boy, we could be in trouble here.' It really went off without a hitch."

Sewickley Heights is expected to exceed 25,000 rounds this year, a high total for a northern private course closed until May. "The members are seeing what they paid for right now and they are excited about it," Pinckney says. "I think the future of any golf course that wants to have good *Poa* greens is to do this. It's wonderful for a club to be able to shut down if you can get away with doing it. You can see the results."



Tartan Talks No. 16

A Chicagoan, Cyclone and great podcast guest.

We contacted Windy City-based architect Michael Benkusky for a Tartan Talks episode – and Benkusky delivered a podcast packed with goodies. The conversation loops to many topics, including bunker reduction, working on a Cold War missile site, and offering three- and six-hole options for time-crunched golfers.

An Iowa native, Benkusky learned the game playing and maintaining Donald Ross-designed Cedar Rapids (Iowa) Country Club. We didn't ask Benkusky about his alma mater's football resurgence – Benkusky majored in landscape architecture at Iowa State, where he was a member of the golf team – but we did slip in a question about a World Series celebration that has yet to end. Enter <http://goo.gl/x5PYry> into your web browser to hear the podcast.





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LEARNING TO FLY



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

On-the-fly learning and on-the-job training are unwritten required skills for today's time-stressed and understaffed superintendents, golf professionals and club managers.

Some leaders are more comfortable than others with OTF and OTJ learning. They easily adapt and roll with the punches, energized by the challenge of learning while doing and training in real time. Others are flummoxed by the frustration, ambiguity and the unpredictability of an unstructured process.

Regardless of your comfort level, it's important to both job security and growth to improve as an OTF and OTJ learner. We say that with confidence because we see nothing that will reverse the forces limiting the time and budget available to develop managers and their staff. So how do you improve as an OTF and OTJ learner?

Understanding the skills and personality traits that make one a spontaneous learner is a starting point. If you are a relentless learner, one who pursues new information and learns quickly from encounters with new problems and mistakes, you're probably already pretty comfortable with OTF learning. Similarly, if you enjoy the challenge of unfamiliar tasks and clearly see the underlying structure in systems

and processes, you're probably an effective OTF learner.

According to Candace Narie Thille, an assistant professor of education at Stanford University, these characteristics make you comfortable with spontaneous or experience-driven lessons called "adaptive learning." Most jobs at golf courses and clubs are a matter of constant adaptation, so learning follows in due course in many circumstances.

Managers and superintendents willing to experiment with various options to reach a solution are natural adaptive learners. In some cases, these agile thinkers will leave others behind and confused as they inject new twists in order to find a solution to an aspect of the problem slightly different than the one they were first addressing.

Those who are not comfortable learning on the fly may not analyze problems carefully or search for multiple clues and parallels because they don't want to risk being wrong, especially in front of other managers or their staff. For them, the comfort of historical and proven methods is less threatening than the ambiguity of the unknown.

HR professionals observe that managers unskilled in learning on the fly are described as:

- Doesn't look under rocks
- Just sticks to the obvious

- Looks for the simplest explanation too soon
- Functions on the surface
- Gives up too soon.

The best way to become and remain an adaptive learner is to push for continuous improvement by seeking new information and knowledge. Effective methods for self-teaching to become more proficient at adaptive learning include problem- and puzzle-solving; breaking down new technologies or services to understand how they function and how they could be adapted to other disciplines; and observing new or different businesses or technologies to understand how they work and whether they are adaptable to one's own field or professional discipline.

Zach Posner, managing director of the learning science platforms at McGraw-Hill Education, said he sees adaptive learning as an alternative for one-on-one coaching. "It's a scalable way to personalize the learning experience," he told Chief Learning Officer magazine. Normally corporate training is a one-size-fits-all proposition, so finding ways to personalize what you learn – and teach – is a more effective learning option.

To be sure, some things are best learned from the book. The science behind effective agronomic practices, chemical formulations and accounting principles, for example, are not the best candidates for OTF learning.

But in the world of course and club management, where time and resources are limited, there is so much that is best learned at the feet and at the side of those who have spent years in the business. They probably won't hand you a manual with 10 easy steps to mastering the task at hand. But if you pay attention and open yourself up to learning on the fly, you just might find new career opportunities. **GCI**

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Get Your BUDGET INCREASE

Strategies to receive the resources you need for the course your members and players expect.

By **Bruce Williams**

Over the years it is often said by club officials that golf course superintendents are always asking for more staff, more equipment and more money. Superintendents are trying to meet the expectations of their club members or course players. Here are a few helpful tips with a strategy to communicate your needs that will lead to the success of the facility.

Key Points

- Talk **business** and **golf**, not turf
- Spend **90 percent** of your time **preparing** your budget and about **10 percent** of your time **selling** your budget
- Grease the wheels up front by getting a feel for **what is acceptable** and **what is not**
- Commit your **line items** to **memory**
- Be prepared for “no” and **relate the effect** of not having or doing something will have on “expectations”
- Develop **long-term strategies**
- Use comparative budgets from clubs yours aspires to be like
- Remind people that all the fat has been cut in the last decade and now any **cuts will go into the bone**
- Prepare to **“sell”** your budget
- Practice for a **budget presentation** like you would for a job interview
- Use **professional presentation material** (PowerPoint) that may include financials with descriptors
- Consult with other department managers at your facility for **insight and guidance**

A thorough analysis of the history and the current condition of the golf course operation is necessary. Start off with a history of your operational budget in recent years. If it is helpful, you may even want to go back to pre-2007 before the recession. It should be clear that belt tightening has taken place in the last decade. During that same time, it is highly likely that the expectations of golfers have risen. This may include overall manicuring, increased green speed, lesser tolerance for pests and bunker perfection.

Additionally, a review of equipment purchases should cover recent history. Is your facility aware that the average cost for a fleet of equipment is approximately \$1.5 million? The average life expectancy of the equipment is 10 years and will vary by item and the number of hours it is used. Other factors include climate and whether equipment is stored inside. Logic would dictate that each year replacement equipment costs would be approximately \$150,000. Of course, there are leasing options which are becoming quite popular.

While there never seems to be enough money for labor and equipment, there tends to be money for projects. Projects are things near and dear to golfers as they see the immediate satisfaction from a remodel or a bunker renovation. Somehow a new irrigation system at close

to \$2 million doesn't create a warm and fuzzy feeling.

HOW DECISION MAKERS THINK

My dad taught me that you must understand how people think to be successful. Never was this philosophy truer than when making requests for budget increases and equipment. The golf course operations department is but one area of the overall club budget. Many clubs look solely at the golf course operations as an expense item with no revenue. Believe me there

is a connection between the condition of the golf course and green fees, guest fees, merchandise sales, and even food and beverage revenues. If you don't believe that, then check the parking lot on a rainy day and see how many meals are served, or lose a few greens and see what happens to overall revenues. All too often superintendents do not look at the big picture of the club finances. Sadly, many are not informed of the overall financial condition of the club. They only know their own budget. Here are some factors to consider:

- Profit or loss
- Waiting list
- Full membership
- F&B sales
- Pro Shop merchandise sales
- Cart revenue
- Practice facility revenue

The connection between

increased play (and revenue) should be an easy sell into added expense for maintenance and upkeep.



UNDERSTAND THE PROCESS FOR BUDGET APPROVAL

To be successful, you need to be able to answer the following questions about how things are done at your facility:

- Who makes the decisions?
- Is it a process through the GM and then the board of directors? Essentially, the hierarchy at your facility and where the buck is eventually going to stop.
- Is it first reviewed by the club controller? Again, become familiar with the bath that your budget will travel during the approval process.
- Have you pre-sold your budget by letting the powers to be know there are some major expenses in the year ahead? It's best for your budget to be bomb free.
- Is your budget number

13

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limited by cost of living? Educate yourself on outside economic factors and how those influence your proposed budget amount.

- Have expectations of golfers been calculated into increased expenses? Don't leave the customer out of this equation.

ZERO-BASE BUDGETING

All too often I see superintendents increasing their budget categories by a multiplier like the Consumer Price Index, which might be 3 percent in a given year. However, costs for items can vary greatly from year to year. For example, take the cost of fuel. It could increase by as much as 25 percent due to shortages and the world economy. Water is a big-ticket budget item for many facilities and usage will vary depending upon weather conditions and pre-determined water agency pricing.

Many golf courses have labor as their highest budget line item. Forward-thinking superintendents have a solid breakdown for their staff in anticipation of the required time to do tasks that have been agreed upon by written maintenance standards. So, if your labor is in line, your overall budget should be fine.

There are items the superintendent has no control over. If your budget includes administrative expenses for health insurance and such, then the controller would surely have an estimate of what that number will be for the year ahead. Again, increases of 10 to 20 percent are not uncommon and can really throw off a budget that used a 3 percent CPI multiplier.

Have additional cultural practices been added to your

overall maintenance plan? If so, calculate those in as well. In recent years, many courses have moved to a sand topdressing program on fairways. Depending on your source of sand, the cost can add \$100,000 per year to your budget. With your zero-base budget, it is easier to make decisions on applying real costs to various programs golfers want.

BUSINESS & GOLF

The best way to sell a budget is to speak the language your employers understand. Most people in governance are smart business people who are also golfers. When selling your budget, never lose sight of what is important to people. Does your request make good business sense? Know how to make your case.

For example, I was asked to roll greens three to four times per week a few years back. A quick response was to calculate:

- Purchase price of two side-winder rollers

“While there never seems to be enough money for labor and equipment, there tends to be money for projects. Projects are things near and dear to golfers as they see the immediate satisfaction from a remodel or a bunker renovation.”

- Trailers for the rollers
- Purchase price of two blowers to remove clippings after rolling
- Utility vehicles to pull the trailers
- Fuel
- Maintenance
- Man-hours to complete the process X number of days requested per week
- Administrative overhead cost added to the above

This is the way to present a business proposal. Of course,

the common refrain of “Why can't you use your own people and equipment?” is the normal reply. The answer to that is simply: “Would you prefer that they do that work instead of raking bunkers, mowing rough and fixing ball marks?”

ROI

A common business term is Return on Investment or ROI. Sometimes it costs money to save money. A recent conversation with Steven Tucker



Speaking in business terms can help a superintendent sell a budget to a membership, board of directors or owner.

Superintendents should calculate added costs into a budget if increasing cultural practices is required to satisfy golfers.



indicated that by using a specific rough mower at his course the team reduced the time to mow the rough had been reduced from four days to three days a week. It is pretty easy to calculate the reduction of 25 percent labor and overhead and then the number of hours on the machine, which would increase its longevity or trade in value.

Consider the fact that the cost of an irrigation system which can be close to \$2 million. During a recent visit to a course in California, I was told their water cost was \$1 million per year. If the efficiency of the system could be increased by 20 percent, then the savings would be \$200,000 per year and the new system

would pay for itself in 10 years.

Nobody knows what the cost of water will be in 10 years, but my best guess is it will surely be higher. By the way, irrigation systems can be financed over time and done in segments. A pump station may be done and the piping and head installation later if costs are tight.

With recent drought afflicting many regions, golf courses have adopted water-saving strategies such as converting areas to native plants and grasses, and low-water use plants. Be careful about promising overall cost reduction on that expense as there will be additional labor for weeding, pruning and managing irrigation water emitters.

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2017 Budget Trends

The average non-capital maintenance budget crept toward \$800,000, increasing from \$750,000 in 2016 to \$798,200 in 2017, according to data from GCI's recent State of the Industry research. Sixty-seven percent of private courses indicated they are increasing their budgets in 2017. Only 12 percent are bracing for decreases. Forty-one percent of private courses will operate in 2017 with budgets of \$1 million or more. The West (37 percent) and Northeast (34 percent) have the highest percentage of facilities with budgets of \$1 million or more.

Labor, mowing and cultivation, and pesticide spending are the largest line items on 2017 non-capital budgets, according to the research data. The average mowing and cultivation budget increased to \$45,646, with private courses spending \$54,892. The average pesticide budget, which includes fungicides, insecticides and pre- and post-emergent herbicides, increased from \$51,680 in 2016 to \$59,726 in 2017. Private facilities were projected to spend \$78,026 on pesticides in 2017. Projected 2017 pesticide spending by region: \$78,596 Northeast, \$71,887 South, \$52,828 Midwest and \$33,857 West.

Projected water budgets provide the biggest discrepancy in 2017 budgets, with 306 State of the Industry respondents reporting their facility doesn't pay for it. The average water budget among the 117 facilities paying for it was \$80,918 this year. Forty-two of those facilities spend \$100,000 or more on water. Thirty-five of the 42 facilities spending more than \$100,000 on water are in the West.

FINAL THOUGHTS

Remember, the best superintendents are not always the best grass growers, but they surely know how to get the resources they need for success. Conduct yourself as a professional in your preparation and presentation of budget information. You only have one chance to needed resources. Make your case. Follow up with previous successes when resources have been provided and the results that have been accomplished.

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Bruce Williams, CGCS, is GCI's senior contributing editor.

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A FEW WORDS OF THANKS



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

Before it becomes politically incorrect to utter the phrase “thank you” during the season of Thanksgiving and the holidays that follow, I’m going to use this platform to offer my thanks to all of you and remind golfers of the many reasons that they should be thankful for their golf course superintendent.

Apparently, saying thanks is the thing to do. I’m assuming you’ve seen the GC-SAA’s new television campaign starring a range of celebrities and professional golfers thanking the superintendent. That’s a great start, and we should all be thankful for whatever recognition we can get.

But do these luminaries even know what they are thanking the superintendent for? Will a shout-out from Jim Nantz or Johnny Miller make or break your career? Do these big shots – hell, does anybody – actually know what a superintendent does?

I do, and so on behalf of golfers everywhere, here is a heartfelt thanks for all you do. Which includes ...

- Getting the golf course prepared and ready every day. Rain or shine. Hot and cold. Sunup to sundown.
- Braving the elements and all the surprises Mother Nature has in her bag of tricks.
- Serving as your club’s Mr. Fix It. From turf to patio furniture, pump stations to driveway plowing, if it needs fixing, cleaning or tending,

“Will a shout-out from Jim Nantz or Johnny Miller make or break your career? Do these big shots — hell, does anybody — actually know what a superintendent does?”

you do it. Big problem or small, you take care of it, which is a credit to your resourcefulness.

- Marrying an understanding spouse, someone who tolerates your late arrivals and early departures, and the last-minute realization that the family’s afternoon picnic will have to wait.
- Willingly sharing ideas, knowledge, and expertise with other supers, wanting nothing more than knowing you’ve helped make someone else’s course better.
- Accepting unjustified pay cuts to keep your job and keep the course open in the face of a wide range of economic woes.
- Being able to laugh when someone quotes – for the 5,000th time – a line from “Caddyshack,” even though it’s the worst possible representation of our profession.
- Forgiving the incredible stupidity, ignorance and selfishness of golfers. As evidence I offer: Unraked bunkers, unfixed ball marks, carts off paths, carts on tees, carts on greens,

multiple divots, an aversion to filling those divots, leaving broken tees strewn over tee boxes, dragging their cleats across greens, driving over (or kicking and even club-smashing) sprinkler heads, pulling out plantings, breaking tree limbs, running over bunker rakes (as well as “No Carts” signs and ropes), using the course as a garbage can, and thinking that we’re nothing but overpaid lawn mowers.

- Listening – and smiling – while someone suggests a better way to do anything connected with course maintenance.
- Putting in hours of study, going to seminars, meeting with sales reps, sitting in board meetings and volunteering at any level.
- Remembering – at all times – that what we do is part of the great natural cycle, and taking extra caution not to harm the only environment we have.
- Being dedicated to your families (despite the demands of the job) and introducing your children to the golf course environment.
- Adhering to, recognizing and supporting the traditions of this wonderful game. We are the one industry that is not afraid to learn from those who have gone before us
- Fearing nothing. The golf course superintendent is always ready and willing to do whatever it takes to get the job done.

Given that this is the season of giving thanks, I ask that you stop and consider all the reasons you have to be thankful. And, very importantly, make the effort to thank those around you – at work, at home, at play.

I am thankful for every one of you, and what you do day in and day out. Thank you for everything you’ve done for me and my career. Thank you for upholding the unselfish spirit of our profession and the genuine camaraderie of our industry. It is unique, not only in golf, but throughout the world. **GCI**

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REALLY Old School

By **Guy Cipriano**

A New York course with an extensive, fascinating and complex history returns to its architectural roots.

Bobby Jones played Knollwood Country Club and golf lore indicates he met Clifford Roberts in the club's grill. Golden Age architects A.W. Tillinghast, Seth Raynor and Charles Banks also occupy spots in Knollwood history. After extensive research, current architect Ian Andrew concluded each member of the triumvirate should be credited with designing the Westchester County, New York, course.



A holistic understanding of club history inspired superintendent Matt Neus last fall when the club embarked on cramming significant restoration work into one offseason. The golf course at Knollwood, a club with a history extending to the 1890s, reopened earlier this year with fewer trees, better bunkers, expanded greens and 1920s panache.

In the case of Knollwood, a restoration meant delving deep into a fascinating and complex architectural history. "If you're weren't excited about this, then you don't really care about golf history," Neus says. "That's to be 100 percent honest. There was a ton of excitement about everything."

The restoration process started with the club hiring Andrew in the spring of 2010 to develop a master plan. Before clearing trees and expanding greens, Andrew needed to determine the influence each architect had on the course. Knollwood's original course, which was designed by civil engineer Lawrence Van Etten and opened in 1895, measured 5,300 yards in 1924, a distance unsuitable for any private club of the era, especially one surrounded by elite classic courses.

Harry Kelly Jr. acquired land owned by deceased member Henry Evans. Kelly then arranged the sale of the land to the club, giving the club space to expand the course. Tillinghast visited Knollwood multiple times in the first half of 1925 before the club decided to discontinue his services and retain Raynor as the architect. Raynor died in 1926, leaving his associate Banks to oversee the completion of the project.

Banks, according to Andrew,



designed enough of the course to be listed alongside Tillinghast and Raynor as a designer of record. Combining his research with a drawing hanging in the clubhouse and 1930s aerials, Andrew accumulated the necessary information to devise a master plan that would reintroduce the work of Raynor and Banks to the membership.

Master plans created in the middle of the Great Recession often led to delayed restoration. The club restored the 16th green in 2011 and third green in 2012 before intense work stalled. Tree management became an immediate focus when work resumed. Agronomic considerations spurred the early part of the process. "The rule of thumb is that if it's a sunlight problem, it goes," Andrew says. "I always believed that to be your starting point."

Oak and pine trees are Knollwood staples, but the course also included clusters of hickory, maple and walnut trees. Parts of Knollwood Neus responsible for maintaining

when he became superintendent in 2013 would have been unfamiliar to Tillinghast, Banks and Raynor.

Turf health and views improved gradually, and Andrew says members began embracing tree removal when clearing a section of white pines behind the 16th hole flipped a problem green into a playable surface. Clearing trees and establishing fescue, yet keeping a few towering oaks, behind the eighth green opened views of multiple holes and fostered further trust between the restoration team and membership.

"There were a few members who thought it was sacrilegious to take out a tree," club president Nick Greto says. "We treated it like a Band-Aid. We were going to do what we had to do, and we just did it. I have members who were opposed to it and they are now like, 'I don't even remember those trees.' Now that they are gone, it looks right. The health of the course is so much better."

Andrew says tree removal of-

ten "snowballs" once members see the results. And even after an extensive restoration, tree removal remains a frequently discussed topic at a private club.

"We still have a couple of areas and some greens that have too much shade," Greto says. "We are trying to figure out ways to get more light on them. It's funny. I had a few people who were like, 'I don't want to take anymore down.' And then I had a few people who were like, 'Take them all down. We love it.' We try to keep a balance. We are not a links course. There's still a lot of trees on our golf course. We took them down as far as having the impact of getting the grass to grow where you wanted it to grow."

Initially, Knollwood members approved executing the bulk of the work during a two-year stretch beginning last fall. But, after further exploring options and costs, club leaders concocted a plan that would condense the work into one

fall. Members approved the expedited timetable, and favorable weather allowed a team from GCBA member NMP Golf Construction and Neus's crew to finish major elements of the project by the end of 2016. Neus adopted a "what can we do to help" approach to construction. For example, his team stripped sod from the 12th green and returned it to the surface after the NMP crew rebuilt the green.

Like most post-recession projects, bunkers represented a key part of Knollwood's restoration. Bunkers had not only become hazards to scorecards, their condition threatened polished club heads. Knollwood joined the USGA in the 1890s, but it didn't follow every golf rule in 2016. Poor construction and contamination led to a local rule permitting members to lift rocks from bunkers. As little as one inch of rain, Neus says, would require two days of

bunker repairs.

Subsurface rock forced Andrew to devise crafty ways to ensure bunkers drained and diverted water properly. The restoration left Knollwood with flat-bottomed, grass-faced bunkers, increasing the amount of maintenance around the hazards but easing the burden on Neus's crew when following significant rain.

Improved bunkers bring expanded expectations, and Neus experimented with multiple rakes until finding one that satisfied members. The crew now carries rakes with similarities to the ones members use to smooth footprints. Neus spent more hours in 2017 training employees on fly mowing and raking techniques than previous seasons.

"It took some time, but we are just about at the point where everybody seems to be happy with the maintenance of the bunkers, how we rake the

bunkers and how they play out of the bunkers," Neus says. "It wasn't just a learning curve for us, but it was a learning curve for the membership as well."

Knollwood represents the third major project Neus has experienced in his career. He worked at Wilmington (Del.) Country Club when Keith Foster renovated the Robert Trent Jones Sr.-designed course and served as an assistant superintendent when Mike DeVries started work at Donald Ross-designed Siwanoy (N.Y.) Country Club.

"It's been pretty amazing for me when you get to be out there and say, 'I'm literally maintaining and playing the same golf course that Bobby Jones once played,'" Neus says. "This course has not changed much. Obviously, with agronomic practices ... speeds have gotten faster and so on and so forth. But as far as the actual intent of the golf course, everything

is intact and not many people get to say that. It's a really, really cool experience and it's something that I don't take lightly. Everybody should be very proud of this golf course and this property because it is something special."

Working with a superintendent who embraced the historical aspect of the project enthused Andrew, who relishes restoring the work of Golden Age architects. Knollwood offered the Ontario-based architect his first crack at working on a course Raynor helped design.

By showcasing its past, club officials are protecting Knollwood's future. Andrew says a well-executed restoration can help a club remain viable in a competitive market such as Westchester County, home to Winged Foot, Quaker Ridge, Sleepy Hollow and numerous other celebrated courses. Knollwood spent \$1.1 million on the project, which also involved altering target lines and moving two bunkers on the fourth hole. One green that didn't change much was the ninth, a Van Etten-designed complex Tillinghast, Raynor and Banks left in its original spot.

"Over the next four or five years, I think we are going to gain more members with the work we have done because we are reinvesting in the golf course," Greto says. "It's not something that you can stop doing because all the other courses are constantly trying to improve themselves. When you stop trying to improve yourself, that's when things get stale. It's a competitive area. It's rich in golf courses. There are some fantastic golf courses within a 10-, 15-mile radius. It's unbelievable. You have to do these things." GCI



GOLF'S ALT RIGHT HAZARD



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

While the phrase has recently become popular in the news, golf has always known it had an “Alt Right” problem. Specifically, architects know that average golfers usually miss to the right, and typically have trouble escaping sand bunkers, so we need to come up with alternate hazards on the right side of greens and fairways, which I have always called alt right hazards.

What they are talking about on nightly news, I have no clue. I do know that when I see a green like the one on the right, slow play is sure to follow. A sand bunker front right, covering most of the green, which sits at a steep angle. Its design makes it hard to hit. You can be sure that many “C” and “D” players will end up in the front right sand bunker, and many of those will take two shots to get out.

Image 1 - It slows play, which is always a concern, and puts fear into average golfers. However, sand bunkers rarely trouble better players, especially when they are as well maintained as is typical today. Most often, they find that grass hazards offer a harder – or at least trickier and/or more interesting recovery shot. Long grass reduces spin, and sloping lies create problems. Fairway lies offer confusing choices between chipping and pitching.



Image 1

Hmm ... grass bunkers are easier on average players, and harder on good players. That seems like a combination that should be used more often, especially on the front right of greens.

Grass hazards also offer the benefit of flexibility, in that they can be mowed short for daily play, and then allowed to grow for big events. And generally, they don't cost as much to build or maintain as sand hazards. And a combination of different sand and grass hazards certainly provides more design variety (always a wonderful thing) than yet another green with sand bunker left, sand bunker right.

Architects deride the penal style of architecture, where only good shots will hit the green. If “bunker left, bunker right” isn't penal, I'm not sure what is. Even architects who tout the strategic style often fall back on this

design crutch. To have strategic value, in most cases:

- One side should have a hazard and the other shouldn't, or
- One side should have a harder hazard, the other an easier or different hazard, (deeper bunker on one side that warrants more concern than the other).
- At the very least, sand bunkers on alternate sides should be:
 - Staggered, which begins to suggest a shot pattern.

- Smaller and larger, most often with the small hazard on the cart path side to improve circulation, which is problematic for most courses.

Considering course difficulty and speed of play, common sense says our designs should limit hard hazards (sand and water) in areas where high handicap players miss often (short right of the green).

My last few renovations have been public courses, with an emphasis on speed of play, so I have been confronted by this question, and pondered my choices for alternate turf hazards. Another benefit of grass hazards is the pure visual variety that can be used.

- Broad fairway chipping area
- Broad fairway height rolling terrain
- Sculpted fairway/rough chipping area
- Fairway with rough grass moguls

interspersed

- Grass bunker (rough)
- Grass bunker (shaggy)
- Grass moguls (rough)
- Grass chocolate drop mounds
- Large grass mounds

Here are a few options in words and pictures:

Of course, it's not always necessary to punish golfers. On this hole, if they get past the "Hooters" mounds, the slopes kick them back on the green:

Image 2 - In this case, I used sand hazards to stop some shots from going to the rocks beyond, which is an appropriate use of "sand right" in fairway and green design, especially on longer shots.

Image 3 - A "standard" grass bunker, shaped just like a sand bunker, but turfed over at rough height. The depth alone makes this a formidable hazard. This is a depression, and needs a small catch basin in the bottom. Grass bunkers can surface drain.

Image 4 - Here, I use large grass mounds as hazards and helpers. If you clear the tops, it can kick you right on the green.

Image 5 - Grass hazards are great at creating shadows, and we consider sun angles when locating and shaping. This one is sharp enough for shadows, but gentle enough to machine mow.

Image 6 - A favorite use of fairway grass slopes is to create kick plates to allow a route to the green that doesn't require a sand carry.

Image 7 - On links-themed courses, some grass bunker sand slopes can be covered with native grasses, making for a very difficult hazard, not to be used often.

Image 8 - A sculpted fairway grass hazard doesn't have to be deep or steep. It just needs a slight bank to



Image 2



Image 4



Image 6



Image 7



Image 8

force a lofted shot on to the green, hopefully landing just on the green edge when the pin is close. Even a

Image 3

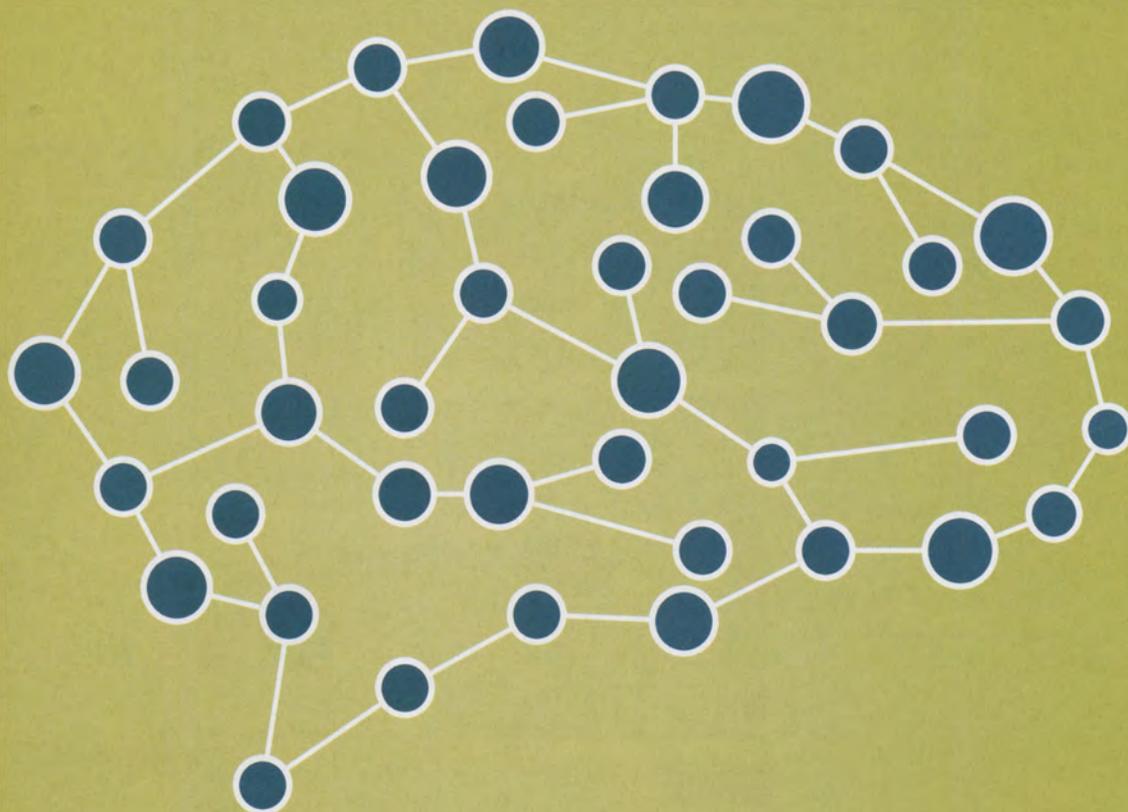


Image 5



slight green roll – either a way to reduce spin or rolling – to require perfect aim makes especially tricky, especially from a short fairway lie.

It has even been suggested to me that I work overly hard to sculpt the ground around greens, and I could really confuse golfers by leaving a flat level lie somewhere around the green. It's true, architects don't have to design everything ... so often nature does the job for us so much better. **GCI**



Injecting different theories

Is the time right for your course to examine non-traditional ways to open and fill holes on premium surfaces?

By **Rick Woelfel**

The maintenance rituals of aerification and top-dressing are fixtures in the world of golf. Depending on their locales and annual budgets, superintendents spend a few days each year punching holes in their greens with metal tines, or pulling cores with solid tines to improve airflow, break up organic material and maintain turf health.

The process requires time and man hours. It can result in lost rev-

enue, particularly at daily-fee facilities, because the course must close while the work is in progress. Golfers then may stay away for a stretch even after the course reopens.

Superintendents are exploring alternatives to traditional aerification. For example, DryJect, headquartered in Hatboro, Pa, just outside Philadelphia, has a machine that accelerates the aerification/topdressing process by substituting powerful streams of water for tines.

While no soil material is extracted in the process, a crude comparison to the technology is to think of the stream of high-pressure water as a solid tine, says Jeff Broadbelt, DryJect's vice president of operations.

"Each pulse of water is a make-believe solid tine," he says. "But the pulse of water, when it's shot down, produces an explosive-type reaction going down. There is a lot of lateral shattering going on. It's like a mini-earthquake."

Depending on soil conditions and the superintendent's preference, the holes are punched to a depth of between 2½ to 6 inches. For instance, some turf managers may desire deeper holes to break up a layer of organic material that might be present where holes were punched in the past using solid tines. The most common depth is in the 4- to 5-inch range. The holes are spaced at adjustable intervals.

What has piqued superintendents' interests is the fact that immediately after the holes are created, they are filled with sand, reducing or perhaps eliminating the need for heavy topdressing in between core aeration cycles.



Expediting recovery times is a key consideration when superintendents examine aerification methods.

"We're taking out the topdressing component by just getting it done for you right off the bat," Broadbelt says. "A lot of superintendents will maybe topdress lightly afterwards, but it's not necessary. There is a little bit of sand residue left. Not every grain of sand gets into that hole. It's equivalent to a very light topdressing."

Because the holes filled are virtually instantaneously, a superintendent could theoretically begin work on their front nine in the early morning hours and have those holes open for play by afternoon, a big difference from having to shut the greens down for a stretch of time following a core aeration.

It's common for superin-

tendents to add material, or amendments, to the sand to retain moisture in the soil and the root system of the plant. The amendment consists of sand-sized particles of material, creating a mixture that might be as much as 90 to 95 percent sand, the remainder being the amendments.

For example, Profile Products of Buffalo Grove, Ill., manufactures PPC Green Grade, a porous ceramic material that strengthens root systems, enhances moisture retention and increases disease resistance. The particles are 74 percent pore space, 39 percent capillary (water) pores and 35 percent non-capillary (air) pores. "If you look at (the particles) un-

der a microscope, they have all kinds of micropores in them," Broadbelt says.

They hold water, but once they're filled, water drains through them like a sieve. So, you're not necessarily giving away downward drainage by using the product. "It does hold water, but not so tightly that the roots can't extract from it," Broadbelt adds.

Mirimichi Green manufactures CarbonizPN, a soil enhancer it markets as an amendment, which, among other things, reduces soil compaction and water needs while also optimizing soil pH. It's a 50/50 blend of crystalized carbon (Biochar) and a premium organic compost that the company manufactures. Because the carbon portion has a half-life of around 500 years, Mirimichi Green's chief operating officer Web Cowden describes the product as a "permanent soil amendment."

"It has a very porous structure," he says. "The process by which we make this is called pyrolysis (utilizing extreme heat to simulate the chemical decomposition of organic material). What you're left with is a very porous crystalized structure that has a very high carbon content and a very low ash content. It has the ability to hold air, water and nutrients within its pore structure, and makes them available to the plant when they are needed."

In addition to CarbonizPN, Mirimichi Green manufactures Nutri-Release, a broad-spectrum liquid organic fertilizer that can be added to the sand/amendment mix as a biostimulant at a rate of three ounces per 1,000 square feet. The two products, when used in tandem,



Superintendents are exploring alternatives to traditional aerification, including substituting powerful streams of water for tines via a DryJect machine.

have a significant impact on the soil profile, Cowden says.

“You’re putting organics, you’re putting long-chain carbon, you’re putting biology into the soil profile,” he says. “And then with the liquid biostimulant, you’re actually feeding the biology that you’re putting into the soil. So, it’s kind of a one-two punch.”

The structure of the crystallized carbon, which Cowden describes as resembling a honeycomb, holds air in some of its pore spaces, thereby allowing improved air circulation in areas where organic material may have accumulated over time.

“That becomes kind of a home for all the biological activity,” Cowden says. “All the microbes have a place to go into these pores. They’re protected, they can reproduce and help keep the soil biology alive. Having an aerobic root zone is just as important as having mois-

ture down there. When that becomes anaerobic and your biology can’t survive, thrive or reproduce, then you get a dead thatch layer and everything below it just dies away.”

The process is catching on with superintendents throughout the country. Chris Tritabaugh, completing his sixth season as the superintendent at Hazeltine National Golf Club in Chaska, Minn., which hosted last year’s Ryder Cup, first used DryJect in October of 2015 and in May and October of 2016. He used it again this past May. Another treatment was scheduled for Nov. 1.

“Our greens have gotten a lot better since we started doing it from a firmness standpoint,” Tritabaugh says. “They weren’t bad, but in my opinion, they perform now just as well as they did when they were new.”

Tritabaugh and his team do not use an amendment dur-

Hole history

The idea of punching holes with water is not a new one. The technology was developed in Sweden and later became the property of Land Pride, a division of Great Plains Manufacturing.

In 2000, Peter van Drumpt and Chris des Garennes purchased the technology, along with the patent that went with it and other necessities, and then making alterations so it would be both reliable and commercially viable. Thus, DryJect was born.

It’s possible to treat 18 holes in a single day, depending on the number of DryJect machines being used on the job. Typically, two or three machines can complete the task, but perhaps four are needed depending on the size of the greens being treated.

ing the process. Instead, the holes are filled with 100 percent sand. “We’re able to get the exact same sand that was in the root zone when the greens were built in 2010,” he says. “From a spec standpoint, it’s the same thing that’s already in there.”

Some have raised the question of whether DryJect will supplant traditional aeration as a standard industry practice. Tritabaugh doesn’t necessarily

share that sentiment.

“I think it’s a tool to be used depending on what the superintendent’s desire is,” he says. “I think it would be a mistake to say that (core aeration) is unnecessary or that solid tining is unnecessary or that DryJect could replace either of those things.”

Based on his experience, Tritabaugh doesn’t believe the DryJect method will render core aeration or solid tining obsolete. Instead, he considers it just another tool in a superintendent’s turf toolbox.

“I think it can in the right situation, but I think it would be unfair to limit (a superintendent’s) tools,” Tritabaugh says. “It doesn’t mean one is particularly better than the others, but I think in the right situation certain ones are better.”

Tritabaugh hasn’t relied on pull-core/solid-tine practices at Hazeltine in recent years, but he hasn’t abandoned them either. “We’ve done some different methods on a couple of our greens,” he says. “Is it a tool we want to use in the future? It could be, but it’s not a part of our standard cultural practices.” **GCI**



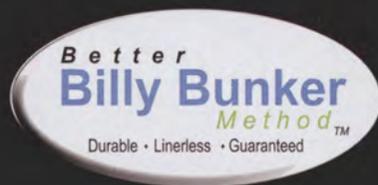
Stronger root zones are a potential byproduct of non-traditional aerification methods.

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SUPERINTENDENT
R·A·D·I·O N·E·T·W·O·R·K



THE
SUPERINTENDENTS
GUIDE TO



DEVELOPING ASSISTANTS

HAVING TRAINED 164 YOUNG MEN AND WOMEN DURING HIS CAREER, GCI'S BRUCE WILLIAMS, CGCS, OFFERS INSIGHT INTO THE BUMPS IN THE ROAD ASSISTANTS FACE ON THEIR CAREER PATH.



decade ago, the future was dim for up and coming assistants.

With the economic downturn and the reduction of golfers, we saw the market shrink. Things have changed, and we are back to the situation of demand outpacing supply of qualified applicants. Many factors contribute to this. For example, many superintendents employ multiple assistant superintendents. And while superintendents are working later into life, the industry is trending toward hiring younger assistants and superintendents who are attractive at a more affordable price.

Now it is imperative superintendents develop their assistants and have a plan to attract the right people, train them properly and retain them or have a plan for secession. This will not happen without a concentrated effort to nurture people along.

Having trained 164 young men and women during my career, I can offer insight into the challenge areas assistants face in pursuit of their career.

LISTEN AND OBSERVE

In the first few days and weeks on the job, assistants should observe the inner workings of the staff. See how people work together and what skills they possess. There are reasons the superintendent has systems in place and don't try to change anything in your early weeks. Once you know how things operate and are managed, it may be time to ask more questions but take those first weeks to observe.

IT'S NOT YOUR GOLF COURSE

Remember that it is not your golf course and we are there

just to manage it properly with the resources we have. When someone starts to think that they own the property, it is usually the end of their run at that facility. Know what the members want and what the budget can afford. Setting priorities is important and make sure that the assistant and superintendent are in sync with parallel goals and priorities.

NO WHINING

All too often young assistants want to talk about things like not having enough resources. Welcome to the world of being a golf course superintendent. Golf

courses want people who are problem solvers and those assistants who can make do with what they have. High-budget clubs are much easier to manage than those with minimal manpower and equipment. Learning how to manage golf courses with minimal and optimal resources will serve an assistant well throughout his or her career.

PATIENCE

So, you are the new assistant at a golf course and you want to clean house with the staff. There are many factors that make a good employee. Think of things like loyalty, dependability and trustworthiness. As unemployment goes down, there are less people who are willing to take on a golf course maintenance position. Instead of thinking about chopping heads, I tend to encourage assistants to develop their staff the best they can. Inspired leadership along with training will do wonders for morale and productivity.

GOAL SETTING

Assistant superintendents should set and review their goals on an annual basis. Some questions to contemplate during that self-reflection include:

- What skills have you learned in the past year?
- What skills do you need to learn in the upcoming year?
- Have you sat down with the superintendent to agree on these goals?
- What are the goals for the golf course in any given year?
- What can you do to take the golf course to the next level?
- How do you become the indispensable employee?

- How do you make your team better?

LET THE

LEARNING BEGIN

You may have the degree, but you surely don't know it all.

The position of assistant superintendent is just the beginning of a career odyssey that will take your book science and put it into practical, real-world application. Your first years as an assistant will probably tell you more about what you didn't know rather than all you believed you knew.

GROWING GRASS IS

THE EASY PART

Without a doubt, grass growing is the number one thing that we do. As an assistant, that part has been learned in turf school and on the job at previous places of employment. Here are areas most assistants lack formal training in:

- Hiring
- Interviewing
- Training
- Problem solving
- Recordkeeping
- Purchasing
- Scheduling
- Green committee meetings
- Board meetings
- Budgeting

To advance in your career, you will need to learn these skills. Speak with your superintendent so you can learn from him or her. I am sure most superintendents would love to have an assistant of-

ASSISTANTS THROUGH THE AGES

There once was a time when the supply of assistant superintendents was small in comparison to the job openings. During the late 1950s, as soon as students graduated from college, they almost instantly had an assistant superintendent job lined up and highly likely they would become a superintendent within a year or two. We must remember that there were many courses being built and there were only a handful of colleges offering bona fide turfgrass science curriculums.

Another factor of that era was that we saw a changing of the guard to the science-based golf course superintendent as compared to the previous generation of practitioners who knew the "art of greenkeeping." A whole new set of mentors came on the scene and often these kingpins of their regions knew how to pass along the art of greenkeeping along with the science base of our industry.

As we have entered the 21st century, we have seen many changes. A downturn in golf adjustments have been made to have the supply of college graduates meet the current demand ... which is much less than it was a half-century ago. Unfortunately, that trend has now caught up with the industry and there are not enough qualified graduates to fill the many vacant superintendent positions. Therefore, it is extremely important to attract and retain our next generation of superintendents for the industry to survive.

At one point, the hourly wage of an assistant superintendent was not much more than the hourly worker. In some cases, assistants were put on salary and if they calculated their true hourly rate (figuring all their 12-hour days), they were once again barely making more than the hourly workers on the staff. Thank goodness many courses now see the true value of a qualified assistant and compensate their assistants accordingly.

fer to help with bookkeeping and budgeting. If you are not learning those things, then it might be time to look for other opportunities. It may take several years to hone all those skills, but make sure you are progressing so you will be ready when the time comes to interview for a golf course superintendent position.

LEADERSHIP

Be smart on your career path and pick your jobs and mentors wisely. There is a reason great superintendents tend to develop programs for interns and assistants. Those superintendents are the people who feed the industry with new talent. Lastly, when you become a superintendent, be

sure to develop and train your assistants properly. As we all improve, it only makes the industry stronger.

We all must learn how to lead. From our mentors we learn valuable leadership skills, but we can also learn ineffective leadership skills. I may have learned more about how not to manage and lead people from poor examples, as it made me promise to not be a poor leader.

Leadership by intimidation is a good example of that. If you intimidate your people so they are afraid of losing their job, it will have short-lived results and end up in high turnover rates.

The best quote I could ever

share with assistants was that "leadership is best defined by managing people with optimal results with a high level of enthusiasm and acceptance." When assistants grasp this concept, they can build a strong, effective team.

RESPECT

A title of assistant superintendent does not equivocate to having the respect of your co-workers. Respect is earned. Meet and get to know your entire staff. Work alongside them and don't be afraid to help them with their tasks. Simply put, shoveling alongside someone earns a lot more respect than watching somebody do

that job. No job is too small and when your co-workers see you pitching in, you will soon know that there is mutual respect. This may be the most important factor to doing your job well.

SET THE EXAMPLE

During the hiring process, I always outlined my expectations for my assistants. If the staff started at 6 a.m., then I expected my assistants to be there 15 to 30 minutes early to open the buildings, stage the equipment and go over the plan for the day. At 6 a.m. instructions for the day were given by the assistant and the turf team rolled out by 6:05

to 6:10 a.m. The assistants needed to lead the team and get out on the golf course to get the job done. Be a part of a management team that sets the example rather than showing up five minutes after the crew is out on the course.

Be a helping hand and assist the team with any of its needs that will best allow for being ready for a quick start in the morning. Are machines fueled? Are tools put away? Is the building organized? Again, set the example and don't be the first person out the exit gate.

NETWORK

Getting to know your team well is important. However,

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one must look outward as an assistant and develop an appropriate network of friends, associates and influential people. If you want to make it to the top of your field, then work on getting to know people who will influence your career?

- Do you belong to your local chapter?
- Are you an active member of your local chapter?
- Do you attend meetings?
- Do you exchange business cards?
- Have you utilized LinkedIn?
- Have you made a list of everyone who can help you with your career?
- Interact with commercial

- reps
- Know your USGA agronomist
 - Stay in touch with fellow alumni
 - Communicate with university professors and researchers
- Networking doesn't just happen. You need to have a plan. The most qualified person does not always get the job, but the best networked person will surely find more opportunities.

DECISIONS

An often-asked question from assistants is, "When will I know if it is time to move on?" The answer to that question is



simple. Both the assistant and the superintendent will know when it is time to move on to another golf course or onto a golf course superintendent job. The signs are simple:

- You think you know more than the superintendent

- You want to do things your way
- You are not advancing and learning
- Your list of goals has been achieved
- You are watching other peers advance while your career is stagnant

These comments are for your typical assistant wanting to advance to a superintendent. They may not fit for those who are "career assistants," a category of industry professionals becoming more common today than ever before. **GCI**

Bruce R. Williams, CGCS, is GCI's senior contributing editor.

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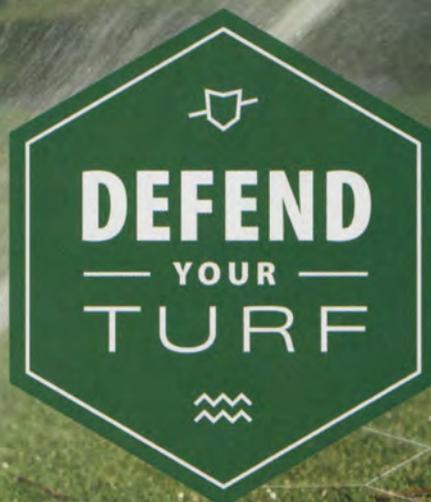
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CADILLAC VS. CHEVY



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

I have been talking a lot about the high cost of irrigation systems and I am at it again this month, hopefully this time to belie some misconceptions. As discussed, a bit last month, most irrigation designers try and provide a golf course irrigation system that meets the needs and wishes of the course maintenance staff. That comes with a price. Price is dependent on many factors, but mostly the number of sprinklers. The number of sprinklers then determines pipe size, pump station capacity and how large the control system needs to be. Optional items such as sensors and lightning protection then add to that cost.

You develop a design based on your needs and present the price to the board or owner, and they say it is too expensive. No surprise, but then they say: "We don't need a Cadillac system, we just need a Chevy." The system proposed, though, is already a Chevy. How do you convince them of that? But what is the difference between a Cadillac, a Chevy and even a Suzuki irrigation system?

A base irrigation system will be sprinklers and swing joints, pipe and fittings, controls and wiring. The fairway sprinklers will help define the "car" level and it will vary substantially with geography. A wall-to-wall system in Vermont is a Cadillac while in Arizona it's a necessity (Suzuki). A Suzuki is single row fairway system in many places, a double row a Chevy, a

triple row a Buick and a five-row (fairway in and out) a Cadillac. So, unless you have an in and out system on your fairways, you have room to spend even more money. Isolation is another area where you can differentiate. Isolating greens and tees is basic as well as the fairways laterals. Isolating quick couplers is stepping up. Mainline isolation per hole is a Cadillac; isolation every two to three holes is a Chevy. Isolate nine and nine, and we're back to the Suzuki.

Control systems can also vary, although not all manufacturers have varying levels of control systems available. I will pick on Rain Bird here as it easily illustrates my point. Cirrus, Nimbus and Stratus central control systems: basically Suzuki, Chevy, Cadillac, respectively, subject to interpretation. The more features, the more capacity. The more levels, the more expensive and the more powerful. Fittings are another good example. For PVC, basic is PVC solvent weld cement or gasketed; Chevy ductile iron; Cadillac epoxy coated inside and out ductile iron or mechanical joint. HDPE pipe, Suzuki all saddles; Chevy a combination of saddles and fabricated fittings; Cadillac a combination of saddles, molded fittings and compression fittings.

Of course, there are many other pieces of irrigation equipment that can be part of an irrigation system that many professionals would say are

not necessary and portray the system as a Cadillac. Two weather stations as opposed to one, although today maybe as opposed to none; soil moisture sensors; five remote radios versus two or three; iPads versus radios; brass quick coupler swing joints versus PVC; lightning disconnect systems and bunker irrigation systems.

The same can be said for the pump station. Two or three main pumps versus three or four mains; a jockey and a pressure maintenance pump versus just a pressure maintenance pump; back up soft starters versus across the line; computer touch screen or just a touch screen; premium efficiency motors or standard; web-based monitoring, radio or hard wired? The list can go on and on.

Depending on your course and your clientele, you may not consider these choices as options. You may view some of them – or most of them – as a necessity. The point is there are many places where you can reduce costs and many features that can also add cost to an irrigation and/or pump system. To get what you want, you need to become a salesman. Optional features need to be explained as to why they are important for your golf course. For example, a five-row system with ins and outs on the fairways might be needed as you are tight on water and it will save substantial water or your customers like hard, firm fairways and lush, green rough – you cannot do that with a double row system that waters both at the same. Your course may have steep, grassed bunker faces that without separate irrigation have to be hand watered daily. Your system may be difficult to ground, or in a high lightning area, and require enhanced grounding.

Every course is different as is every driver. What is a Cadillac to one course may be a Chevy to another or a Ferrari to some. The irrigation system features need to match the course and the needs of the turf management staff. **GCI**

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Swisher

Pagett

By **Guy Cipriano**

How does a
23-year-old entrepreneur break into a
relationship-based industry?
He relies on a powerful turf network.

With the average age of end users hovering around 50 and distribution-sales relationships spanning decades, the golf industry presents enormous challenges for a 23-year-old entrepreneur.

Hunter Swisher understands his plight. That's why he's relying on an enormous turf network – and a personal connection to somebody managing a 300-acre golf facility – as he begins an unconventional entry into the market.

Swisher is the CEO of Phospholutions, a soil amendment possessing Rhizosorb. Phospholutions, the way Swisher describes it, helps increase root depths. His personal roots are a stark contrast to many others in the business. Swisher has never worked on a golf course and he just recently started playing the game.

But he's a Penn Stater. Swisher grew up in State College, the delightful central Pennsylvania borough surrounding the sprawling campus. Swisher earned a plant science degree from his hometown university last December. His hometown university happens to boast a sterling turfgrass reputation.

Penn State has an 88-year-old turfgrass program with more than 1,800 graduates, including many who lead the agronomic operations at facilities with seven-figure maintenance budgets. Best in county. Best in state. Best in region. Best in nation. Best in world. Name a category of golf facility, and superintendent offices are

likely occupied by Penn State graduates.

The network is especially powerful in a situation like Swisher's. His presence in the golf industry stems from a 2014 classroom discussion about plant nutrition. The mention of a technology invented at Penn State capable of altering fertilization strategies intrigued Swisher. While writing a paper about the technology, Swisher discovered patents for it in Penn State's IP office. The technology never reached the commercial market. A belief in the technology's ability to maximize nutrient usage convinced Swisher to explore its commercial potential.

Swisher contacted Dr. Mark Gagnon, who coordinates entrepreneur programs for Penn State's College of Agriculture Sciences, about creating a business around the technology. Gagnon referred Swisher to the university's Small Business Development Center. The SBDC help Swisher develop what he calls "a general business" plan.

Realizing he needed to prove

Phospholutions CEO Hunter Swisher has worked closely with superintendent Rick Pagett on testing the soil amendment at the Penn State Golf Courses. The 23-year-old Swisher launched his business after receiving entrepreneurial support as a Penn State student.

the amendment worked in the field, Swisher approached a family friend, Penn State Golf Courses superintendent Rick Pagett, about performing trials. Wearing T-shirts and shorts on a 60-degree day in December 2015, Swisher and Pagett aerated the amendment into a practice green adjacent to the sixth hole on Penn State's White Course. Pagett, a veteran superintendent and Penn State graduate, then offered Swisher one of his first turf lessons. "I convinced him at that point to start taking pictures and documenting what you are doing," Pagett says.

Pagett views the 36-hole Penn State facility as an exten-

sion of the classroom. More than 100 students have worked on the crew during his decade as superintendent. Training and retraining students are tasks Pagett and assistant superintendents Scott Martell and Gabe Menna willingly perform in leadership roles at a university-operated course. Dozens of their former employees are now working as superintendents or assistant superintendents; others use principles acquired while working at the golf courses, such as the importance of rising before sunrise, in non-golf careers.

The courses, a massive swath of greenspace between campus structures, housing

and commercial development, present research opportunities for students and faculty members. If somebody affiliated with the university wants to test a product or collect data, Pagett, who teaches a turfgrass business management class at Penn State, says they simply need to contact him beforehand. "I feel that we are a great opportunity, not just for Hunter, but for anybody else, whether they are in ag, hotel/restaurant management or any other department, to come out here and do whatever they want," he says.

Trials on the practice green increased in 2016 and a sweltering summer allowed him

and Pagett to observe roots under trying conditions. Pagett then applied the amendment on the front nine holes of the Blue Course – Penn State's championship venue – this year. The season included a wet spring, mild summer and dry start to the fall.

Swisher's discovery came at a fortuitous time. Penn State hired Dr. Eric Barron as president in 2014, and Barron made providing support for students and faculty members with a desire to bring an IP to the public domain a priority.

In addition to the SBDC, Swisher received support from Invent Penn State and Pennsylvania Technical Assistance Pro-

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gram. Swisher participated in Happy Valley LaunchBox, an accelerator program that required him to participate in a nine-week entrepreneurial bootcamp, the Summer Founders Program and Ben Franklin TechCelerator. A \$10,000 grant through the Summer Founders Program allowed Swisher to use the summer of 2016 to focus on his business without obtaining a part-time job or taking classes.

After numerous discussions with business experts and Pagett, Swisher decided to make turf the starting market for Phospholutions. The product launched commercially in June, a month after a demonstration ceremony on the fifth green of the Penn State White Course attended by Barron. The ceremony marked the first time a sitting Penn State president visited the course during Pagett's tenure as superintendent. Phospholutions was applied via a Dryject machine at the ceremony. Dryject President John Paddock, a former golf course superintendent, is a Penn State turfgrass science alum.

Trials have expanded to other golf courses, and Penn State ties are helping Swisher connect with superintendents in multiple regions. "The reputation of the turf program at Penn State and being able to leverage that I'm a Penn Stater helps," he says. "There are a lot of Penn Staters across the nation at some pretty high-end clubs."

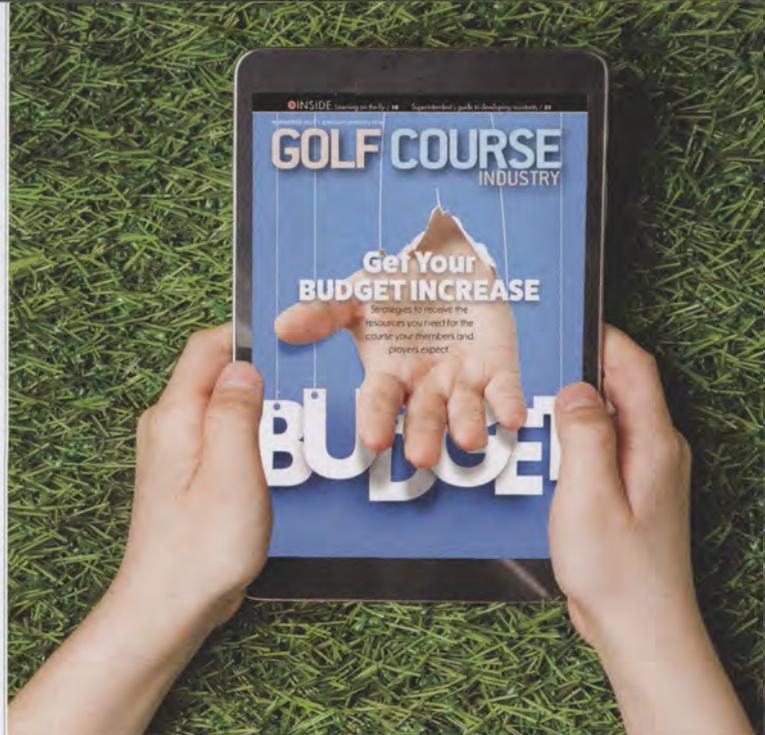
Swisher realizes he needs more than the Penn State name to break into the turf market. He must prove Phospholutions can boost roots in

myriad regions, conditions and soil types. And then there's the complex task of establishing relationships with users and distributors twice his age. Swisher spends his days making phone calls, visiting superintendents and working to develop distribution channels. He's attended multiple trade shows, including the Golf Industry Show in Orlando and GIE+EXPO in Louisville, this year.

"The hardest thing in the turf business is that it's a very mature industry and it's really a relationship-based business," he says. "For me, tapping into that is really hard. I don't have a turf background. I have a very high technical plant science background, but I have never worked at a golf course. I have learned the lingo and picked it up. It's been a pretty big learning experience for me."

The process, Swisher says, is a "slow moving one," but he speaks enthusiastically about the potential for Phospholutions in turf. Appeasing results-seeking investors is a key part of beginning any business, and identifying agricultural applications, thus expanding the market for Phospholutions, represents a long-term goal. Swisher has recently started working with a sugarcane producer who manages 5,000 acres near the Everglades.

"It's unique because most people start in ag and prove there that their product works, and then there's a side market for turf," Swisher says. "We have actually taken the reverse approach because turf is more of a high-end application. That can help get me get going." **GCI**

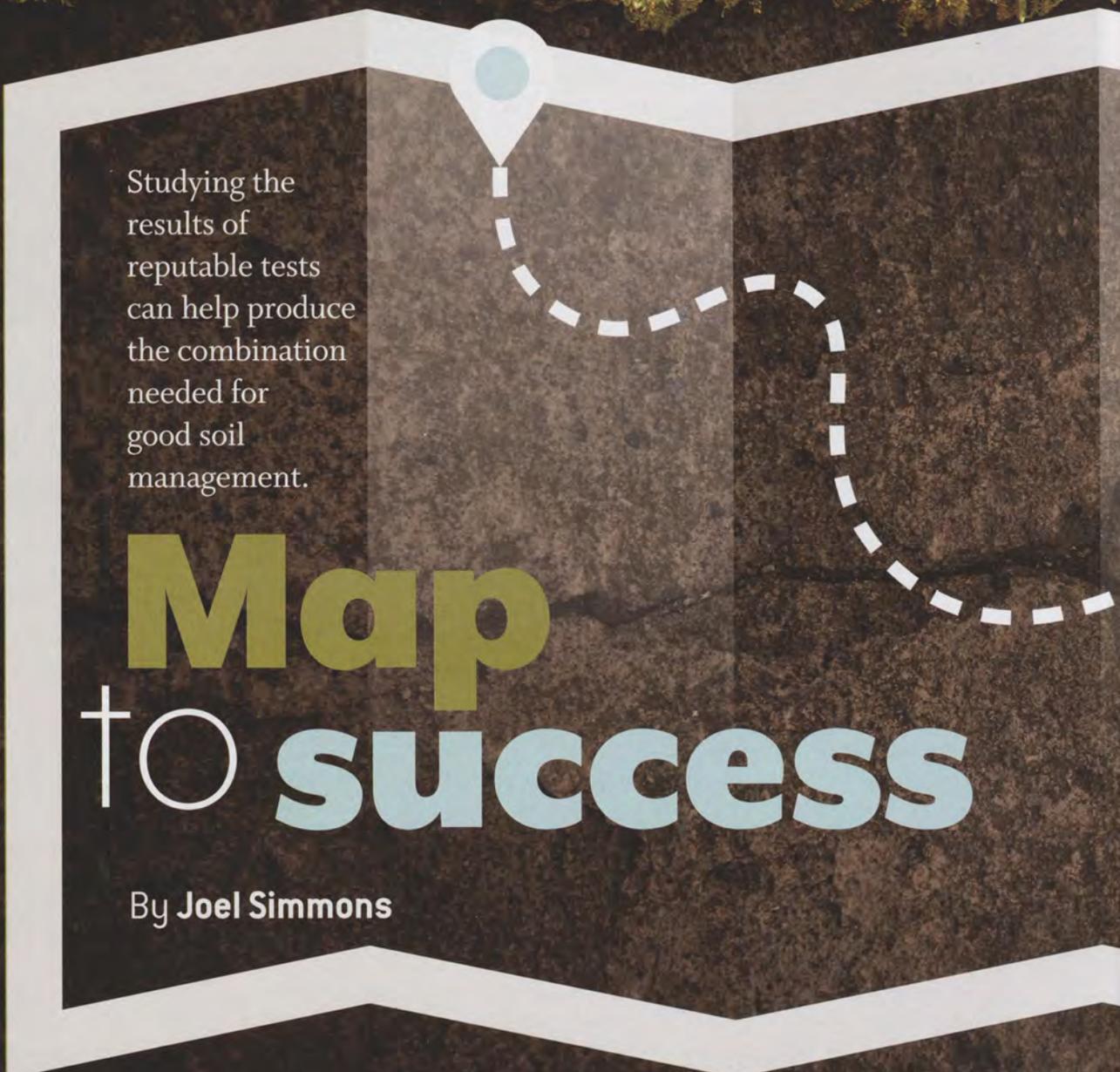


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Studying the results of reputable tests can help produce the combination needed for good soil management.

Map to success

By Joel Simmons

When one examines a multitude of soil data, trends appear. We see how things change and how they impact the success of the people we have so much respect for. Over the many years of consulting with clients, we have realized just how important this process is, but we also realized that this data is a road map and not a report card. With a good soil report, you can always work through the hard-to-explain and find the road that your map wants you on. Perhaps one of the hardest lessons that we've learned over the years is just how reactive sand-based and sand-modified soils, or low CEC soils, really are and this has led us to rethinking how we go about our soil testing protocols.

Having good soil testing data shows us the direction your fertility program would benefit from if taken. Think of it as the data that your doctor reviews after doing blood work. It's quantitative information that shows us the chemical make-up of the soil. It also gives us an idea as to the physical or even biological nature of that environment. These tests follow a true base saturation model for the standard soil tests, but we also combine that information with the data from both the water-soluble paste extracts and water tests.

Good soil management combines a working partnership between chemistry, physics and biology. Chemistry addresses the nutrient balance, physics dictates how air and water move through

the root zone, and when both work well together, the soil provides a nice home for the proliferation of beneficial biology. Chemistry affects physics, which affects soil biology, and it is this biology that is so important in mobilizing nutrients, digesting carbon into forms that microbes can use as energy, promoting good water management and creating checks and balances for pathogens. This is the heart of what biological soil management is all about.

To clarify, CEC is the cation exchange capacity of a soil and tells us how big the soil is. The higher the number, the bigger the soil, and generally, the more clay that soil has which will allow the soil to hold significantly more nutrients. On a high CEC soils, we can modify the soil chemistry to affect the physical profile of that soil, not by changing clay into sand, but by simply flocculating the soil particles and through chemistry, move the soil colloids apart just enough to let more air and water move through the soil profile. The process is known as the base-saturation model and this concept of affecting physics with chemistry is not without its critics. You will hear many academics say that this can't work, but I can tell you assuredly, as can hundreds of our clients, that it does work on higher CEC soils, and in fact, I have been seeing just that for close to 30 years.

Regarding low CEC soils, sand-constructed or sand-modified soils, especially ones below a CEC of 6, very little nutrient can be held in the soil profile making fertility

Perfect timing

Fall is a good time to conduct soil tests of our course.

Fall is a good time for superintendents to perform testing for many reasons. So we asked Turf Soil & Diagnostics Sam Ferro and Mike Tollner to weigh in on some soil testing insights.

Why is fall such a good time for superintendents to conduct soil tests on their turf, and what sorts of things should they be testing?

Project planning and changes in maintenance practices are usually implemented in fall, so they are established and in place for use the following season. Topdressing sand can be tested before aeration for particle size compatibility with existing root zone material or with previously tested sands. Aeration plugs can be collected and sent for organic matter content testing. Diagnostic core testing can be performed to help superintendents with budget prep, project planning or changes in cultural practices that they may want to implement for the following season. Most golf course budgets are prepared at this time of year, and testing can help provide needed support and guidance for project planning.

On average, how long does it take to get results back from a testing facility?

Depending on the type of testing performed, test results are usually reported to customers within a few days to a week after receipt of the samples. There are a few tests that take longer to perform. Superintendents may want to discuss this with the testing facility, so they aren't expecting results before testing is complete.

What can the results tell the superintendent, or how can the results influence fall actions, such as fall feeding or aeration?

Nutrient deficiencies can be corrected if nutrient testing is performed with enough time left in the growing season to make applications of fertilizers, prior to the onset of cold weather. Roots of turf plants can still uptake nutrients well into late fall, although it is always advantageous to fertilize while plants are actively growing.

Test results could affect aeration practices in a few ways. If test data shows the need for a reduction in thatch, superintendents may choose to use a larger tine for core aeration. Also, coarser sands may be used to fill holes after core aeration if test data shows too high of fine sand content in the upper portion of the soil profile.

How does a superintendent determine where to take the samples?

Sample collection procedures vary based on the properties being tested, type of material tested and location of the material during sampling. Sampling instructions should be obtained from the testing lab or soils consultant prior to sampling. Tools for sampling may include cup cutters, soil probes, shovels, a bucket and sample bags. It is usually a good ideal to divide putting greens or other features into subsampling areas based on topography or directional units. The sample submitted to the lab should be a composite of numerous randomly collected subsamples. Sampling depths are often in the 4-inch to 6-inch range, although they may be deeper or shallower depending on the testing to be performed.

What common mistakes should you avoid when taking soil samples?

A common sampling mistake is to only take a sample from one location and assume this represents the entire green, bunker or fairway. Composite samples taken from multiple locations provide a better picture of course conditions. Common mistakes when sending in samples to the lab include: not sending enough material to perform testing, improper sample packing/labeling and not including paperwork (sample submittal form).

management difficult. The good news here is that these soils can change very quickly, but the bad news is that these soils can change very quickly. What we have learned by looking at low CEC soil tests over the years, and by talking with the turf managers who manage those sites, is that base saturation is not the best tool for managing these types of soils. Instead of studying the data of what is on the soil colloid, via the standard soil test, experience has shown us that by managing the soluble data, as seen on the water-soluble paste extract test, we have been able to build programs that work effectively and provide the long-term success that superintendents are looking for.

The water-soluble paste extract test is a soil test, and the lab uses the same soil that it would use for the standard colloidal soil test. The difference is that instead of using a strong acid, Mehlich 3, to literally rip all the nutrients off the soil colloid, it uses deionized water as the extracting solution which is much gentler on the soil and pulls off, theoretically, just the nutrients that would solubilize in the presence of water like rain or your irrigation water. On these low CEC soils, because there is not much nutrient being held on the soil colloid, we are looking for nutrients that are mobile. We can then evaluate that data and build a soluble based program using both granular soluble products (like gypsum or K-mag) and a good carbon based liquid product line (feeding both the plant and soil microbes) to help the plant get what it needs when

we know that the soil cannot provide it.

One of the most important observations that the paste extract can provide is an understanding of how high the level of sodium and bicarbonates are in that soil profile. Both typically come from the irrigation water and can easily accumulate in the root zone causing plant stress. Because of these potential excesses, we suggest that turf managers run water tests a few times per season. I would contend that the concerns of excess sodium and bicarbonates may be the first limiting factor in any turf manager's fertility program, and that everything else may fall in line behind these limitations when trying to reduce plant stress.

Bicarbonates seal the soil surface preventing air and water from moving into the root zone easily. Soil biology needs air and water to survive, and when either is limited, microbes are affected and can die off in isolated areas. Microbiology produces byproducts known as globulin, which helps to keep the soil colloid moist and friable. When bicarbonates seal off oxygen and water movement to those areas, the soil dries out and becomes hydrophobic. This leads to localized dry spot (LDS) conditions and can be very difficult to manage. The water-soluble paste extract is the best tool to evaluate just how much bicarbonate there is in the soil profile and help us build programs to stay ahead of this concern.

The paste extract can also show us, very effectively, just how soluble sodium is in the root zone. Often, we see sodium at moderate levels on

the standard colloidal soil test, but when we run a paste extract, we can see that sodium is highly soluble. This can lead to sodium induced wilt stress; a phenomenon that occurs in soils when sodium is high and can be identified on the soil tests when the percentage of sodium becomes higher than the percentage of potassium. In this situation, the sodium can rush into the plant cell and dehydrate it. You may see wilt and assume that it is environmental and that the soil needs water, but too often it is a chemical wilt and water may not help at all since it is often the source of the sodium. Again, the paste extract is our best tool to monitor this issue and stay ahead of it especially as we move sodium and bicarbonates accumulate in the soil, as seen on the paste extract tests, and then hearing from the superintendents that they're fighting LDS and wilt-stress problems on those sites, we knew we needed to build a solution. Almost 10 years ago, EarthWorks developed the Kick Rinse In program designed to remove the sodium and bicarbonates from the soil's root zone. It starts with calcium in the forms of gypsum and Cal Vantage, which knocks the sodium and/or bicarbonates off the soil colloid. That is followed by Kick, a humic acid product, which grabs (or chelates) the recently removed excesses and keeps both from re-attaching to the soil colloid. Then a penetrant surfactant pushes all of this out of the soil root zone. Immediately after the Kick Rinse In, and before irrigation, potassium sulfate is applied, because if not, the sodium and bicarbonates in the water will replace what was just removed, but potassium can fill those liberated colloidal sites with something more beneficial. This is one of the main reasons potassium is so important in a good turf program.

Sodium and bicarbonates are not unique to sand based low CEC soils; they can easily be an issue on high CEC soils as well, but sodium and bicarbonates are much more aggressive on sand because there are fewer buffers in those soils like silt, clay or organic matter. These observations led EarthWorks to build another very important program that has

shown great success in making changes with our client's soils: our Monitoring Testing Protocol. In this program, we select a couple of sites to monitor with the paste extract and we run those tests once a month. As an example, on sand constructed golf course greens we run paste extracts on the same two greens every month. Because these low CEC soils can change so quickly, this program allows us to stay ahead of the curve, monitor sodium and/or bicarbonate build up; see when nutrients like phosphorous or calcium are falling short or catch if over applications have been made which can throw off the balance of other nutrients. This monitoring program is especially valuable as we move into the hot stressful summer months.

On low CEC soils, which are very common in sports turf, the water-soluble paste extract test is our primary data stream. This provides us the information we need to see what nutrients may or may not be available to the turf and helps us build a soluble program to reduce plant stress.

It also helps us stay ahead of the curve when it comes to sodium induced wilt stress or localized dry spots caused by high bicarbonates. These sand-base soils do not have much in the way of buffers like organic matter that can help sequester some of the built-up salts. We know that a good carbon-based fertility program can provide these needed buffers.

Through years of soil testing and thousands of reports, many run on the same sites for over 20 years, EarthWorks has built premium products like the Replenish line of dry fertilizers, a complete Soil First Foliar line of liquid fertility tools and soil amendments like Renovate Plus, to help you manage even in the toughest conditions.

Most importantly, we have learned that we are always learning. By studying quality soil data, we can help turf managers, for whom we have so much respect, make both their jobs and lives a little richer. **GCI**

Joel Simmons is the founder and president of EarthWorks.

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Travels with Terry

Globetrotting consulting agronomist Terry Buchen visits many golf courses annually with his digital camera in hand. He shares helpful ideas relating to maintenance equipment from the golf course superintendents he visits – as well as a few ideas of his own – with timely photos and captions that explore the changing world of golf course management.



Terry Buchen, CGCS, MG, is president of Golf Agronomy International. He's a 41-year, life member of the GCSAA. He can be reached at 757-561-7777 or terrybuchen@earthlink.net.

TURNING BOARD TRANSPORT BRACKETS

The greens mower high-density lightweight white plastic turning boards with easy-carry cutouts measure 24 inches by 96 inches and were acquired from www.precisionusa.com at \$90 each. They are attached to 10 Club Car CarryAll Turf 2 vehicles using metal brackets. Two of the easy carry cutouts slide over the metal brackets with the weight of the turning boards holding them in place. The front bracket is approximately 10 inches by 2 inches by ¼-inch thick flat steel. It has a “U” shaped groove welded at the top and it is bolted to the round tubing guard on the right-side bumper. The rear bracket is bent at an approximately 45-degree angle. It measures approximately 3 inches by 2 inches by ¼-inch thick and it is bolted to the top of the rear bed. Two turning boards are carried on each turf vehicle. The scrap flat metal steel was in inventory. It took about two hours to build the first set of brackets and less time for the remaining brackets. Steve Thomas, director of golf course maintenance, and Hector Borrayo, equipment manager, at Pelican Hill Golf Club in Newport Coast, Calif., are very creative.



CART PATH CURBING RAMP

This 60-inch by 12-inch by 4-inch high portable wooden ramp is great for the two 2001 Toro Greensmaster 3250-D triplex greens mowers to go over cart path curbing quickly and easily without damaging the front and rear rollers and bed-knives. These two units mow mostly tees and some approaches, and they drive at an angle when approaching the ramp going in either direction. The wooden framework is screwed together and covered with ½-inch thick regular grade plywood that will be replaced with marine-grade plywood when the need arises. The 1-inch square tubing brackets measure 6 ½ inches by 19 inches with three 11-inch pieces, respectively, on either side behind the operator's seat. They are bolted and pinned to the mower's existing frame with a 2-inch by ⅝-inch thick steel plate. Materials cost about \$40 and it took about three to four labor hours to build the framework and to build the ramp. John Nachreiner, director of agronomy, Tyler Gullickson, assistant superintendent, Doug Price, equipment manager, and Vicente Sandoval, head mechanic, make up the very efficient team at the Shady Canyon Golf Club in Irvine, Calif.



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TRAVELS WITH JONESY



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

People always ask, “Where do you come up with ideas for columns?” The problem is often not so much having an idea, it’s having too many ideas about too many topics and too little time and space to write it all.

So, to condense a bit and cover a lot of ground in this space, let’s look back at a few months that involved too many planes, trains and automobiles.

I’ll start in August with an event I didn’t even attend ... the GCBA Summer Meeting in Charlotte. You can review our coverage online, but I have to share an important addendum. For the third straight year, a GCBA member company bought the GCI auction package – a full-page ad.

What was shocking this year is that the ad was bought by the Aspen Golf folks. This is hilarious because they get the majority of their business via word of mouth (because their work is consistently excellent) and advertising is pointless. So, I got Donnie and Ronnie Adkins on the phone and asked them to explain themselves.

“We’ve had a saying since we got into this business in 1982: ‘One call does it all.’ You get a certified golf course builder with 35 years of experience and a certified irrigation installer. You don’t have to call nine people to get things done. We have a wealth of experience and our team is former supers, architects, heavy construction guys and other folks who

just know how to get the job done. There’s not much we haven’t seen over the years.”

They bought the ad not to drum up business, but to give more back to the association. With good people like the Aspen Golf team on board, there’s no doubt GCBA will get even better as golf continues the great rebuild era.

OK, now for October... I finally made it to Iowa to give a speech I’d promised to do in early 2016. The Iowa GCSA group was terrific and I learned Randy Robinson is steering that ship in the right direction. I’m impressed with the group and with how many young folks are part of their leadership. Keep it up!

Next was an invitation from the Koch Agronomic Services folks to visit FarmLinks. We had some fun (golf and fishing!) and shared insights with each other. The biggest thing I’m beginning to understand about Koch – and particularly the Polyon product line – is how effective it’s been for three decades. Yet there are still some folks who balk at the initial higher cost or who get distracted by nitrogen stabilizers or other similar technologies. The bottom line (and I say this as someone who’s been studying these products for 30 years), enhanced efficiency fertilizers are still a bedrock part of this business and Koch is doing an excellent job of stewarding the technology for the future.

The next week of October was a

doubleheader with a trip up to Erin Hills and then down to Louisville for the Kentucky Turfgrass Council Conference at the GIE+EXPO. Erin Hills was a spectacular setting for one of the best meetings I’ve ever been part of. The folks from BASF simply wanted to learn more about what you guys are thinking. As facilitator, I did what comes naturally to me: I asked a dozen smart supers a zillion dumb questions. I’ll keep the details confidential but the fundamental answers, predictably, came back to trust, good relationships, staying on top of details, embracing innovation and having fun.

Once again, I emceed the KTC Conference in Louisville. I got to hear Josh Pope tell The Greenbrier story firsthand, which was moving, spectacular and funny all at once. And, just when I think I know everyone, I found out what an awesome human Paul Vermeulen of PGA Tour Agronomy is. Not only is he good at his job, he’s just good people.

Finally, I was back in Raleigh for the 12th Green Start Academy. This remarkable event, hosted by John Deere and Bayer, has now benefitted more than 600 aspiring turf professionals. The networking is top-notch, but the wisdom offered by folks like Bob Farren, Tyler Otero, Lukus Harvey, Andy Morris, Mike Stevens and Pat Finlen was just astounding.

I met one more person from whom I learned much. I was gobsmacked by Grant Murphy, the associate superintendent of The National Golf Club of Canada. His presentation on how to get the best (not the most) from people was just outstanding. And he added this for attendees: “You are the people who will drive change in the future. You have been called to be leaders. Lead with pride, integrity and authenticity.”

Every assistant can benefit from advice like that. Make sure the best and brightest young turfheads you know apply and attend. It’s absolutely a winner. **GCI**

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