

# Golfdom

10.19

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#### SOME GUY'S BACKYARD

(Left to right) Ben Hotaling, Zach Brough and Evan Bissell on No. 1 tee at Brough Creek National in Kansas City, Kan.

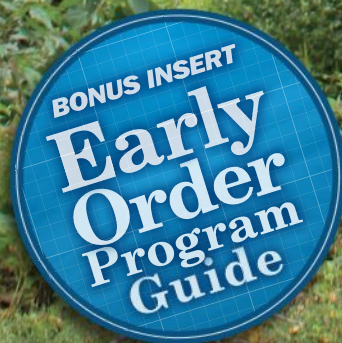


# Golfdom

10.19

## LAND OF THE FREE

There's no budget, superintendent or green fees at Brough Creek National — just some bros and a big idea



### SOME GUY'S BACKYARD

(Left to right) Ben Hotaling, Zach Brough and Evan Bissell on No. 1 tee at Brough Creek National in Kansas City, Kan.

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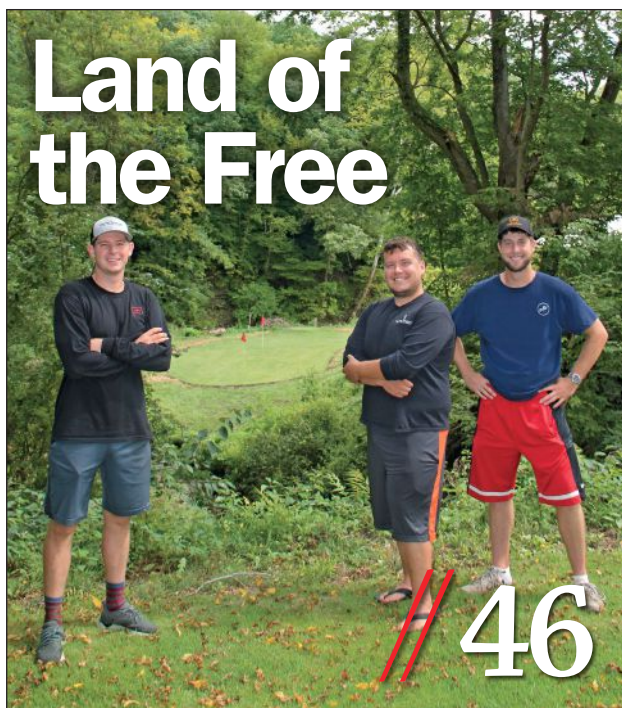


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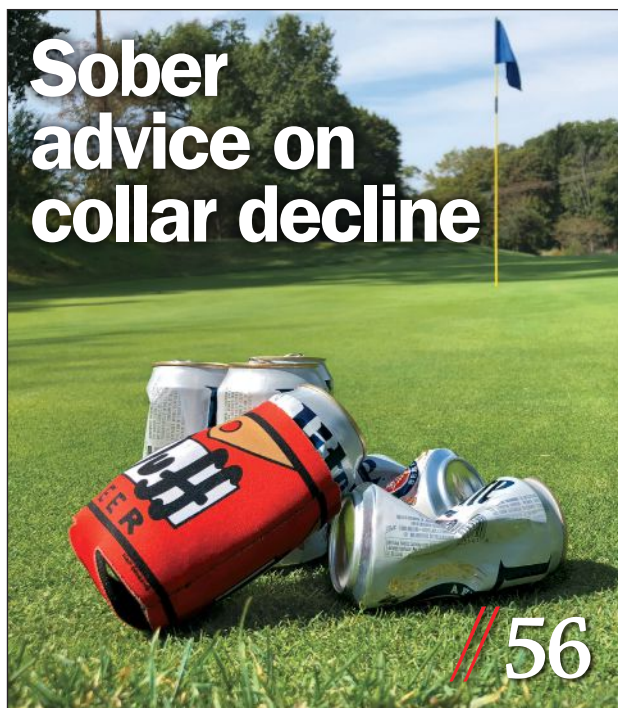
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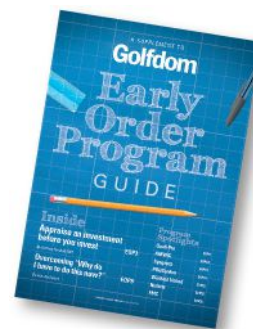
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“... this issue — with a cover story on some fun-loving buddies in Kansas City and a backup feature on how golf course collars might be over-served — calls for some good movie quotes.”

**SETH JONES**, Editor-in-Chief & Associate Publisher

## We are men of action

I will admit I love dropping a good movie quote into a conversation, even if it's just for my own amusement. Sometimes the movies I quote are obvious (*Caddyshack*, *Happy Gilmore*), and sometimes the quotes are for me only (off the top of my head, *Snatch*, starring Jason Statham and Brad Pitt and *Blue Streak*, starring Martin Lawrence and Dave Chappelle). In this month's cover story, I quote *Willy Wonka & the Chocolate Factory* because darn it, it felt appropriate, and yes, I love that movie.

Some journalists might quote Shakespeare or Henry Thoreau in their writing. Sorry, you've got me here. I'm just not sophisticated enough to pull that off. But this issue — with a cover story on some fun-loving buddies in Kansas City and a backup feature on how golf course collars might be over-served — calls for some good movie quotes. If I could assign more movie quotes in this issue, here's how it'd look:

**“220, 221 ... whatever it takes.”** (*Mr. Mom*) to Carlos Arraya and the new approach he took to keep his staff motivated while in a difficult St. Louis summer (page 12). This line from Michael Keaton,

where he's boasting about a house renovation and gets caught in an awkward ad lib, is what I imagine Arraya felt this summer dealing with his crew. We've all been there ... at least I know I have.

**“Hey, sewer rat might taste like pumpkin pie, but I'll never know, because I wouldn't eat the filthy (creature).”** (*Pulp Fiction*) to our backup feature “Sober advice on collar decline” (page 56), written by Curt Harler on the research of Bill Kreuser, Ph.D. Perhaps golf course collars look at PGRs like Samuel L. Jackson's Jules Winnfield did bacon in *Pulp Fiction* — a hard pass. Now give him back his wallet. It's the one that

reads ...

**“Now I have a machine gun. Ho, ho, ho.”** (*Die Hard*) to the entire Early Order Program supplement (which starts immediately after *Golfdom* Files on page 14), made possible by our partners and its two authors — Andrew Turnbull and Alan FitzGerald. There's a lot in this supplement that will empower superintendents when they start making their purchasing decisions heading into 2020 ... reminding me of the feeling Bruce Willis as John McClane must have had when he scored that machine gun in Nakatomi Plaza.

**“I ain't got time to bleed.”** (*Predator*) to this month's

research article “Germinating creeping bent in the cold,” (page 64). Jesse Ventura's portrayal of Blain in *Predator* goes down as one of the great performances of the 1980s — I won't debate this — and he dryly makes this statement when his fellow soldier sees he's been shot and is bleeding. This is the same attitude a superintendent has when recovering from winterkill — there's no time to ponder the blood (winterkill), only the solution. This research shows some interesting findings in how quickly seed germinates and in what temperatures. Like Poncho responds in the movie, “You got time to duck?”

**“We are men of action ... lies do not become us.”** This line from *The Princess Bride* is for the guys at Brough Creek National (BCN), the subject of this month's cover story. Yes, I already gave them one movie quote, but I'll also give them this one. Many people talk a big game when they get an idea, but never follow through. Like Brandon Horvath, Ph.D., University of Tennessee, said to me while we were discussing BCN, “How many guys do you know who say, ‘I want to build a golf green.’ So, you tell them, ‘OK, go buy a greens mower.’ And they say, ‘Wait, my lawn mower can't do it?’ And that's the end of that idea.”

While the crew at BCN lacks most commonalities with *Golfdom*'s readers, one thing they do share: They, too, are men of action. **G**

Email Jones at:  
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# The Solheim Cup Depends on POGO.

Organizers of the 2019 Solheim cup at Gleneagles' PGA Centenary Course in Scotland delivered perfect conditions for the pinnacle of women's golf.



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# Starter

NEWS, NOTES AND QUOTES



## // REACH FOR THE SOUTHEAST



A look inside one of Simplot's fertilizer warehouses in Birmingham, Ala.

## SIMPLOT TURF AND HORTICULTURE EXPANDS INTO SOUTHEAST

BY SARAH WEBB // Associate Editor

➔ For the past five years, Simplot Turf & Horticulture has been in expansion mode, and it hasn't looked back.

"For us, it just proves that we're going to be a leader in the turf and horticulture business," says Barry Mac Ban, general manager of Simplot. "We're not just an ag company. It's proving to our customers that we're going to be in this business for a long time, and we're excited about growing our business."

It began with the opening of a facility in Oklahoma City, the first location outside of Simplot's Southwest and Pacific Northwest footprint.

From there, Jeff Higgins, Ph.D.,

had a vision to grow further — into the Southeast — according to Mac Ban. Higgins started with Simplot in May 2018.

"I started at ground zero in May, now we have 26 sales reps, 50 employees in total here in the Southeast ... Virginia, Texas, the panhandle of Florida," Higgins says. "Our plan is to have the complete map of the U.S. eventually covered with Simplot."

"Simplot is very diversified," he adds. "They do over \$7 billion a year in revenue. That, to me, brings a lot of value ... if you're just in the fertilizer business, you won't last. That's the part I like — we're not just a fertilizer company."

## // LIGHTNING STRIKES

### INCLEMENT WEATHER STRIKES AT TOUR CHAMPIONSHIP

The third round of the Tour Championship at East Lake Golf Club was suspended because of lightning strikes — a tree near the range, No. 15 green and No. 16 tee was hit, and debris from that struck and injured five people.

The Atlanta Police Department and Atlanta Fire and Rescue later confirmed that five individuals were injured and transported to nearby hospitals; a sixth person was treated at the scene and released. All of those taken to hospitals were later released.

"The safety and well-being of our fans and players is our highest priority, and we were with those being treated until they were released from area hospitals," the Tour said in a statement. "We are deeply grateful that the injuries were not more serious, and we're proud of the collective efforts of the on-site team to quickly care for our fans during this frightening incident."

## // DREAM TEAM

### BAYER APPOINTS SEVERAL TO LEADERSHIP POSITIONS

The Environmental Science business of Bayer within the company's Crop Science division has made appointments to several leadership positions.

These changes will enhance the focus on finding innovative solutions for the evolving needs of customers, the company said. Bayer has made the following changes in project and product development management in the Environmental Science (ES) Field Solutions Organization in North America:

- Axel Elling, T&O product development team lead, ES Field Solutions Organization, North America
- Jake Doskocil, global project lead, Pest Management and Rodent Control
- Nonggang Bao, head of the ES Field Solutions Development and Experience Center
- Xulin Chen, T&O Field Solutions Team, product development manager

PHOTO BY: SIMPLOT TURF & HORTICULTURE / ISTOCK.COM, WELLGLAD (GOLFBALL)

//WAY TO GO, CARLOS!

## Arraya to speak at *Golfdom* Summit

➔ *Golfdom* columnist Carlos Arraya, CGCS, is slated as the keynote speaker at the 2019 *Golfdom* Summit.

The Summit is an invitation-only event that brings together qualified



**Carlos Arraya**

superintendents with leading suppliers of products used for the maintenance of golf courses. The 9th annual Summit will be held at the beautiful Reunion Resort in Orlando, Fla., Dec. 3-5.



"The *Golfdom* Summit has become the destination event for superintendents," Arraya said. "I am excited and privileged to be the keynote speaker at this year's event."

Arraya is the director of grounds and agronomy at Bellerive Country Club in St. Louis, Mo. He has been a *Golfdom* columnist since June.

### GO FIGURE

# 17

The average number of years in the turf industry that attendees of Bayer's Women in Golf event had under their belts. Held Sept. 18-20, the educational event provided 50 women (30 from the U.S. and 20 from Canada) the opportunity to partake in professional development, personal development and agronomics.



L to R: Alexandra Hills, Bay Hill Club & Lodge; Sally Jones, Benson Golf Club; Carey Hofner, The Club at Cordillera; Miranda Robinson, Cordova Bay Golf Course

PHOTO BY: CLARA RICHTER

//SAVING THE PLANET

## NEW ZEALAND GOLF BODIES MAKE SUSTAINABILITY PLEDGE

The golf bodies of New Zealand announced their unified support for a new national initiative that will focus on the sport's sustainability performance.

The statement comes at the launch of OnCourse New Zealand, a national version of the international program developed and assured by the GEO Foundation.

Dean Murphy, CEO of New Zealand Golf, launched the initiative from Remuera Golf Club in Auckland, the home of NZG, the Golf Managers Association of New Zealand and the New Zealand Golf Industry Council.

"All of the associations felt it was time to take our existing efforts in environmental stewardship and social value to the next level. We see this as vital to the long-term health of our clubs and the sport, and we also want to make a meaningful contribution to the issues that we know are of significant concern for the people of New Zealand," Murphy said.

//RECREATION AND REHABILITATION

## VA, DAV PARTNER TO HOST TEE TOURNAMENT FOR VETERANS

The U.S. Department of Veterans Affairs (VA) and Disabled American Veterans (DAV) hosted nearly 300 veterans with visual impairments, amputations and other physical and mental challenges at an annual adaptive sports event Sept. 8-13 near Iowa City, Iowa.

The National Disabled Veterans Training Exposure Experience (TEE) Tournament is a six-day instructional and rehabilitative event to promote health, wellness, fellowship and camaraderie for veterans with life-changing disabilities.

It offers veterans education in adaptive and therapeutic golf, with instruction from PGA professionals, as well as opportunities to develop new skills and participate in recreational sports, including horseback riding, disc golf, fishing, kayaking, scuba diving and biking.



# Golfdom Gallery

**TOUR**  
CHAMPIONSHIP  
EDITION



**1 The home of Coke** In Atlanta, birthplace of Coca-Cola, even the street signs love the beverage.

**2 Divot crew on patrol** The divot crew was hard at work making sure East Lake's Meyer Zoysia fairways were spotless. From left to right are Chris Sheffield, Auburn University, Connor Paul, Michigan State University, and Robert Mandrink, Michigan State University.

**3 Going the distance** Megan Ashley, an intern from Michigan State University, rides shotgun with Corey Finn, a native New Zealander who travels all the way from the United Arab Emirates — specifically Saadiyat Beach GC in Abu Dhabi — to volunteer at the Tour Championship.

**4 Looking like \$15 million** Out to get a sneak preview of the course, Bill Brown of Aqua-Aid Solutions (left) and *Golfdom* publisher Craig MacGregor looked like they were ready to join the field of 30 golfers and take a shot at that \$15 million purse.

**5 The final countdown** (Left to right) Karen Parker, Wally Gresham, Bulk Aggregate Golf, Bland Cooper, PGA Tour Agronomy, Charles Aubry, East Lake superintendent, and Evan Miller, Detroit CC superintendent, on a pleasant Atlanta morning the day before the Tour Championship teed off.

**6 A quick breather** East Lake Superintendent Charles Aubry (left), Assistant Superintendent Davis Watts (center) and Assistant Superintendent Dustin Bucher (right) smile for a photo during one of the few quiet moments of tournament week.



PHOTOS BY: SETH JONES (1-3, 5-6);  
TYLER GUNTER (4, 10)



**7 No excuse** *Golfdom* Editor-in-Chief Seth Jones (left) and Digital Editor Tyler Gunter (right) had no excuse to use the wrong hashtag during the Tour Championship.



**8 “Chuckles” and crew** The crew was all smiles as (left to right) Clayton Craig, Chris “Chuckles” Smith and Jay Dever took time to visit with us on *Golfdom* TV. We learned from the guys that the crew is like a family at East Lake, and that yes, his nickname is Chuckles because he likes to laugh.



**9 Branch removal 101** East Lake GC Lead Horticulturist Jennifer McLaurin (left) gives Michigan State University student Connor Paul (center) and Michigan State’s Trey Rogers, Ph.D., a quick course on tree branch removal at East Lake.



**10 Thanks for the lift** Jones was able to cover more ground on his first day at East Lake compared to his colleagues. The benefit a ride makes — given by the gracious Trey Rogers, Ph.D., of Michigan State — is hard to express, but can best be seen in the difference from one day’s Fitbit statistics to the next.



**11 Getting to know you** *Golfdom* Digital Editor Tyler Gunter (left) took a timeout from snapping pics to get to know Eamonn McCarthy (right), superintendent at Country Club de Bogota in Bogotá, Colombia.



**12 First on the scene** The first two people we ran into at the Tour Championship: Bill Brown of Aqua-Aid Solutions (left) and Ralph Kepple (right), CGCS, director of agronomy at East Lake Golf Club.



"Instead of traditional motivational speeches and unhealthy food options, I decided to go with the grain instead of against it. It was by sheer coincidence that I stumbled across a new tactic."

**CARLOS ARRAYA**, CGCS, Bellerive CC, St. Louis

## The struggle is real!

**W**hen asked how she is doing, my daughter has responded for years with, "Pops, wow, the struggle is real!" This year, my struggle has been prolonged, difficult personally and professionally, and in fact, real.

So yes, honey, the struggle is, indeed, real.

Please do not share that I said she is right. If she ever were to find out I mentioned that she is right, I might never live another day without hearing about it. This article already has become therapeutic for me; thanks for reading. I'll share more about my professional struggle, with the hopes of providing you with some motivation.

The struggle for me this year is my responsibility for executing a complex greens restoration project that has been accompanied by historic rain events slamming the St. Louis region, all the while trying to reopen a course for play on schedule.

From March 15 through the summer months, there was some form of precipita-

tion on the property every fourth day. I have watched our team rebuild the same areas of our golf course five to six times in a two-week period. Most of our staff have turned into professional bodybuilders from all the times they have repaired bunker washouts this summer.

You may say, "Carlos, that's par for the course," but I beg to differ. While it may be par for the course when taken strictly as a course maintenance requirement, the fact remains that it's more than that. The struggle is the psychological impact on our team members, as well as on the membership. I ran out of motivational tactics, phrases, doughnuts and pizzas, until it dawned on me that I needed to think differently. How in the world do I motivate a group of men and

women who seem to be receiving daily haymakers from Mother Nature?

Here is how I overcome the struggle.

Instead of traditional motivational speeches and unhealthy food options, I decided to go with the grain instead of against it. It was by sheer coincidence that I stumbled across a new tactic. It unfolded like this.

After receiving another 3.5 inches of rain one day, I approached a group of our team members. I wanted to start a conversation and check on their spirit, and because I felt terrible that they had to repeat a task they had already completed, I just couldn't find a way to start the conversation.

Finally, out of my mouth, came this: "Wow, the struggle

is real." Believe it or not, most of the team members started to laugh when I said it. It immediately diffused the angst, pressure and state of frustration of having to repair a green that was rebuilt five times. It also started a whole new conversation about a real-life struggle. One team member asked, "Hey, have you seen that hurricane? That's a *real* tragedy. We need to keep them in our thoughts and prayers. This is nothing compared to that."

I drove off completely astonished, and a bell went off. Let me try that again. As I approached the next individual, I started with, "Wow, the struggle is real." The conversation went in a completely different direction, but it worked once again. It allowed that individual to express struggles that had been on her mind for quite some time. And you've guessed it; I used the statement to open a lot of my difficult conversations, even with members.

The struggles associated with our golf course operations are real, but nothing compares to life struggles. During the struggle, consider changing your style or simply lend an ear to someone. Don't ever allow your struggle on the course to become a life struggle.

And never forget: "Wow, the struggle is real!" **G**

Carlos Arraya, CGCS, is director of grounds and agronomy at Bellerive Country Club in St. Louis. Follow him on Twitter at @carrrayacgcs.

## Sustainable Colorado Golf Course Applies UMAXX® to Maintain Upscale Conditions on a Budget

**T**he Ridge at Castle Pines, a Troon® course south of Denver, offers visitors a high-end golfing experience that's unique to Colorado's Front Range. The 212-acre, Audubon-certified sanctuary course sits at an elevation of 6,500 feet with vistas and wildlife that few other courses in the area can match.

"Coyotes, bobcats, mountain lions — they're all roaming around, and there's a good chance you'll see a few while you're playing," says Chris Hedberg, superintendent at The Ridge. "You can also get a great view of Pike's Peak and even downtown Denver from a few holes." Unlike neighboring courses, The Ridge is a daily-fee facility that's open to the public. Although Hedberg and his team must operate within the constraints of a relatively small budget, they work hard to provide the best possible course conditions.

"We still want to provide the same conditions or better than the members-only courses around us," Hedberg says. "We try to do a lot with a little. We have around 10 crew members, two assistants, a mechanic and me — a pretty small group for what we're trying to produce. Whether it's spraying fairways, applying fertilizer or simply making sure our day-to-day operations are running smoothly, each of us needs to pitch in."

As busy as they are, Hedberg and his staff put a strong emphasis on environmental responsibility. They've decreased The Ridge's irrigated acres over the past few seasons by turning 7 acres



*Chris Hedberg, superintendent, The Ridge at Castle Pines*

into native grass. On the 80 acres that are irrigated, they use reclaimed water provided by a facility in nearby Castle Rock, Colo. They also repurpose any trees that need to be cut down or trimmed, creating benches and mulch that can be used throughout the course.

That same sustainable focus extends to the fertilizer that Hedberg's team applies throughout the course — UMAXX stabilized nitrogen fertilizer from Koch Turf & Ornamental. A urea-based product with a 46-0-0 analysis and dual inhibitor technology, UMAXX protects against all three forms of nitrogen loss: leaching, denitrification and volatilization. It's a completely soluble granular product that's equally effective whether it's sprayed or spread.

"Before I came to The Ridge, I was an assistant superintendent at another course," Hedberg says. "We used UMAXX at that course, so I was familiar with it and knew it could provide excellent results. Over the past six years, it's given us the biggest bang for our buck, and its performance has even allowed us to reduce the number of fertilizer applications we make each season."

Hedberg and his crew apply UMAXX as a granular, walk-spreading the fertilizer around tees, green surrounds, bunkers and bunker fingers. Then, they apply it to larger areas of the course with a tractor and tow-behind spreader. It's a time-consuming process, which makes the fact that they can apply UMAXX just a few times a year even more beneficial.

"We usually make three applications, maybe four depending on the weather, and that will get us through a full season," Hedberg explains. "When three guys can spend a day applying fertilizer and you can get two to three months of performance out of it, that's a huge timesaver, rather than having to go out once a month or every six weeks."

Perhaps even more importantly, The Ridge's turf looks better than ever. A few years ago, one of Troon's agronomists tested the course's soil and asked Hedberg what he was applying to the turf.

"I told them 'Just UMAXX,'" he said. "Simply putting down the nitrogen we need when we need it has produced great results for us. We don't have to deplete our already limited budget by purchasing a lot of other products. The agronomist was blown away when he heard what our course budget was and saw how great our course looked."

"Overall, not having to apply fertilizer every month saves us time and money, because we don't have to pay for fuel and labor. Last year, our weather conditions were such that we were able to stretch our time between UMAXX applications to almost 12 weeks. UMAXX's sustainability and performance are great, and we're able to minimize the amount of fertilizer we apply."

**UMAXX**  
STABILIZED NITROGEN

# The Golfdom

## FILES

FROM THE ARCHIVE

"In some cases, rubbish was piled on the greens and there burned." That sentence would make most superintendents cringe, and unfortunately, it's what happened after a massive hurricane hit Rhode Island in the fall of 1938. Despite the big burn brought about by an even bigger storm, with the help of a dedicated superintendent, a determined president and a pro from a neighboring club, Winnapaug Hills GC in Westerly R.I., was able to bounce back. Take a look at the article from the July 1939 issue of *Golfdom* to see how the 1922 Donald Ross-designed course — which is still active today and where Jeff Sprague serves as superintendent — made its comeback. To read the full article, visit [golfdom.com/exclusive](http://golfdom.com/exclusive).

## Catastrophe works to club's benefit

BY EDWARD J. BUTLER

When the hurricane of September 15, 1938, lashed the southern Rhode Island coast, taking a toll of 125 lives at the popular shore resorts of Watch Hill and Misquamicut and wrecking over 300 summer homes, prospects for a successful 1939 season at the Winnapaug Hills GC in Westerly were far from favorable.

### GREENS DAMAGED UNNECESSARILY

Extra funds would be needed in 1939 to repair damage done to the course by the storm. Wreckage of houses and tons of debris of every description had washed across to the meadow holes from the wiped-out resort that was Misquamicut. Relief workers assigned to the area after the catastrophe had no realization of the value of turf to a golf course, and in some cases, rubbish was piled on the greens and there burned.

It was a sorry situation, and even club professional Don Vinton, one of the country's leading instructors, feeling the future jeopardized, sought another position at a Massachusetts club.

But with the traditional Yankee spirit, the directors, led by President James W. McCormick, descendant of the canny Scots, lost no time in planning repairs to the course and devising a novel membership campaign. The four meadow holes, which were the repository for the destroyed beach houses, were reseeded, and Greenkeeper Oscar Chapman gave them his closest attention. The other 14 holes, all located in the rolling hills just north of Westerly's Shore Rd., had not been damaged, and the club members were satisfied to confine their play to this area

during the early spring, with the assurance that the full 18 holes would be available before the end of July.


The services of Del Kinney, pro at the Ledgemont Club in Warwick, were secured part time, and he opened his shop on Memorial Day.

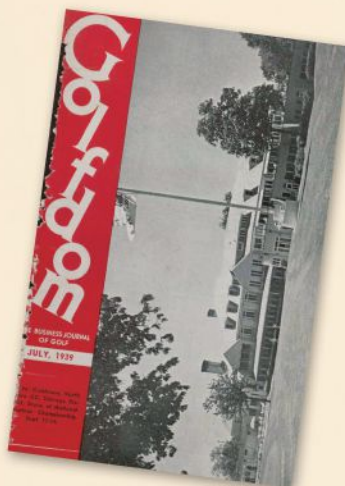
How to increase membership to make up for the loss of transient revenue in the summer was solved by a plan that actually made every member an active wheel in the campaign. The annual dues in 1938 were \$66, and as an incentive, this fee was to be reduced to \$44 if the member could sign up a prospect.

First-year dues were also set at \$44. Any member who failed to bring in a new member would pay the full \$66 fee.

### MORE REVENUE FROM MORE MEMBERS


Officials of the club were hopeful that through the plan, the membership would be nearly doubled, and that although there would be a resultant decrease in individual dues, the total revenue would rise from the \$5,940 received in 1938 to around the \$7,500 mark. And a larger membership would also tend to bring in more guests at the usual \$2 green fee, while the sale of food and refreshments at the clubhouse would gain.

Happily, the faith of the directors has been vindicated. The membership roll has advanced to 140 and is certain to reach at least 170 before the summer ends. The hurricane-scarred meadow links have been nursed back to their original condition and are now playable. And while 300 houses were destroyed in the September storm, over 300 which were not built on the sandy shore are still intact and are occupied by seasonal visitors, who are lending their support to the club as never before. 




A SUPPLEMENT TO

# Golfdom



# Early Order Program

## GUIDE



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[What's the appropriate project?]

## Appraise an investment before you invest

By Andrew Turnbull, BSC

**P**art of a turfgrass manager's role is to propose one or more capital expenditure projects that would benefit the facility. These projects are then proposed to the management board or a greens committee, typically as a part of the budgeting process. The manager and the board probably will have more capital proposals than they have cash to fund them, so a method is required for choosing the most appropriate projects, whether they are machinery, course improvements or clubhouse investment.

Typical capital investment decisions facing the enterprise from time to time include:

**Replace or repair/keep?** As equipment or facilities become nearly used up, course management must decide whether to repair them and use them longer or replace them. Generally, the older these items are, the more costly the ongoing maintenance.

**Purchase capital item A or B?** When buying a new machine, the course usually has a choice among different brands, sizes, performance characteristics, etc. While decision-makers may base much of the decision on technical differences, a major consideration has to be the economic differences between competing proposals.

**Lease or buy?** Golf courses often have the option to buy equipment or lease it, and the course must consider differences in the economics of the two options.

**Do it yourself or hire it out?** Maintenance and construction work can be done either in-house staff or by outside contractors. Economic differences often are the deciding factor.

These capital investment decisions occur throughout the year rather than as daily operating decisions. Ideally, the manager anticipates these major changes and carefully plans for them.

### Appraisal methods

There are several methods of investment appraisal; however, the three main methods are (1) payback, (2) annual return and (3) net present value

Remember when evaluating investment appraisal methods that they all rely on the accuracy of predicted net cash flows over the project lifetime. Net cash flow is the difference between the cash received and cash paid during the defined lifetime period. For example, installation of a drainage system should enable a golf course to be open for more days, bringing in extra revenue. When replacing old machinery, the cash received is the savings on maintenance and repair costs.

We'll use the three investment appraisal methods by examining three options a golf club has for spending \$40,000 available for improvements. The superintendent would like to do one of the following: make course alterations to reduce maintenance time and costs (Project A); upgrade the irrigation system (Project B); or install drainage (Project C). Each of these options is costing the club money through repair bills and loss of income. However, the superintendent can choose only one option because of cash restrictions.

### PAYBACK

The payback method estimates how long it will take for a project to start generating an income. It looks at the value of the initial investment compared to the projected net cash flow.

Having calculated the payback period, it may be of interest to calculate the surplus cash generated during the project lifetime after recouping the initial investment. This surplus cash could be from income generated, such as from the purchase of golf carts, or savings on costs, as in replacing old machinery.

*Continued on page EOP4*

# 2019 Early Order Program Guide

Continued from page EOP3

## Example 1. Making course alterations to reduce maintenance time and costs

Calculations from a forecasted maintenance schedule analysis show that if an initial investment of \$40,000 is made for Project A, it will generate the following net cash flows (savings in maintenance costs):

Year	Net Cash Flow
1	9,000
2	9,500
3	10,500
4	10,500
5	12,000

We calculate the above figures by estimating the reduction in maintenance costs compared with keeping the course as it is.

To calculate the payback period of the \$40,000 investment, total the net cash flow figures over consecutive years until the full investment is recouped.

TABLE 1

Years 1+2+3+4	= \$39,500 (used to recoup investment)
In year five amount needed to recoup investment in full	= \$40,000 – \$39,500 = \$500
Months in year five before investment fully recouped	= $\$500 \div \$12,000 \times 12$ = 0.49 months
Net cash flow over five-year project	= \$51,500
Total net cash flow (after payback)	= \$51,000 – \$40,000 = \$11,500

With this example, the investment is fully recouped in just over four years, resulting in a total net cash flow after payback of \$11,500 for the five-year project.

## Example 2. Installation of a borehole to replace irrigation water mains

Project B requires an initial investment of \$40,000 and is forecasted to yield the following net cash flow figures in water savings:

Year	Net Cash Flow
1	5,000
2	5,000
3	6,000
4	6,000
5	7,000

TABLE 2

Years 1+2+3+4+5	= \$29,000
Throughout five-year project	= \$29,000
Total net cash flow (after payback)	= \$29,000 – \$40,000 = (\$11,000)

With this project, the initial investment would not be recouped after five years. This does not preclude the project, as ongoing savings may make the project worthwhile.

## Example 3. Drainage of three fairways that cause regular closure of the course during the winter and loss of green fees

An initial investment of \$40,000 into Project C will lead to the following net cash flows:

Year	Net Cash Flow
1	(4,000)
2	9,000
3	13,000
4	16,500
5	18,000

TABLE 3

Years 1+2+3+4	= \$34,500
In year five amount needed to recoup investment in full	= \$40,000 – \$34,500 = \$5,500
Months in year five before investment fully recouped	= $\$5,500 \div \$18,000 \times 12$ = 3.6 months
Net cash flow over five-year project	= \$46,000
Total net cash flow (after payback)	= \$52,500 – \$40,000 = \$12,500

# [What's the appropriate project?]

Payback is the most frequently applied technique and is used to screen out projects that take too long to recoup the initial investment. The course would then use a more accurate method of investment appraisal.

Table 4 shows how to evaluate the above projects using payback as the selection criterion. The cash inflows and outflows for each are shown.

**TABLE 4**

	Proposal A	Proposal B	Proposal C
	Cash Cost \$40,000	Cash Cost \$40,000	Cash Cost \$40,000
	Savings	Savings	Savings
1	\$9,000	\$5,000	(\$4,000)
2	\$9,500	\$5,000	\$9,000
3	\$10,500	\$6,000	\$13,000
4	\$10,500	\$6,000	\$16,500
5	\$12,000	\$7,000	\$18,000
Avg annual cash savings	\$10,300	\$5,800	\$10,500
Payback	Four years, 0.5 months	Not achieved	Four years, four months

The payback period can be of some use in screening the three proposals. Proposal A seems to be better than Proposal C; the shorter payback period clearly is better. The course can discard Proposal B outright; its initial cost exceeds future cash savings, so it does not pay for itself. Therefore, with payback, the course accepts Proposal A.

This method has several shortcomings that limit its usefulness. First, the method does not consider the earnings that continue after reaching the payback period. Proposal C, for instance, has a total savings of \$52,500 compared to the \$51,500 total earnings of Proposal A. The slightly shorter payback of Proposal A may mislead the superintendent who relies solely on the payback approach to evaluating investments. Also, keep in mind that we ignore the time value of money of the cash savings for each proposal when using the payback approach.

## AVERAGE ANNUAL RETURN

Because of unpredictable fluctuations in returns over the life of a project, managers often use average return as a slightly more accurate measure of investment appraisal.

It averages total return (net cash flow) over the duration of the project.

The average annual return can also be converted into a percentage in relation to the value of the initial investment.

Course managers may use both these figures as a basis of comparison for different investment proposals. Initially compare the average annual return percentage with the business's cost of capital (explained in discounted factor, next page).

### Example 1

Using the figures for Project A, which had an initial investment of \$40,000:

Year	Net Cash Flow
1	9,000
2	9,500
3	10,500
4	10,500
5	12,000

**TABLE 5**

Average return	Total return/ years	$\$51,500 \div 5$	$= \$10,300$
Average return %	Average return/ investment	$\$10,300 \times 100 \div \$40,000$	$= 25.75\%$

### Example 2

Using the figures for Project C with an initial investment of \$40,000:

Year	Net Cash Flow
1	(4,000)
2	9,000
3	13,000
4	16,500
5	18,000

Continued on page EOP6

# 2019 Early Order Program Guide

Continued from page EOP5

**TABLE 6**

Average return	Total return/ years	$\$52,500 \div 5$	$= \$10,500$
Average return %	Average return/ investment	$\$10,500 \times 100 \div \$40,000$	$= 26.25\%$

## NET PRESENT VALUE

Both payback and average return have a major drawback in that they ignore the “time factor” that \$1 received today is worth more than \$1 received in one year’s time.

The net present value is the net value of the future cash flows. Said another way, the value of the future total cash value flow minus the initial capital investment.

The cost of capital is the sacrifice made by the business by investing in a project. This considers:

- Comparison with returns from investing the capital in an alternative way, such as an account in a bank;
- Interest on debts incurred to raise the funds to finance the project;
- The time value of money.

## Discount factor

We use discount factors to calculate the present value of predicted net cash flows. Table 7 shows a discount factor table, used to provide the relevant discount factor for specific rates of costs of capital.

The discount factor used for a net cash flow after five years at a cost of capital of 6 percent would be 0.7473. Therefore, a predicted net cash flow of \$100 in five years’ time at 6 percent would have a present value of  $\$100 \times 0.7473 = \$74.73$ .

## Example

(1) Apply the 10-percent discount factor to the following Project A figures to calculate the present value of the future cash flows.

(2) Calculate the net present value of the project where the initial investment is \$40,000.

Year	Net Cash Flow
1	9,000
2	9,500
3	10,500
4	10,500
5	12,000

**TABLE 7**

Present Value of \$1 received after n years discounted at 1 percent										
i	1	2	3	4	5	6	7	8	9	10
n										
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9259	0.9174	0.9174	0.9091
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8573	0.8417	0.8417	0.8264
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7350	0.7084	0.7084	0.6830
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.6806	0.6499	0.6499	0.6209
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6302	0.5963	0.5963	0.5645
i	11	12	13	14	15	16	17	18	19	20
n										
1	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8475	0.8475	0.8403	0.8333
2	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.7182	0.7182	0.7062	0.6944
3	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.6086	0.6086	0.5934	0.5787
4	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.5158	0.5158	0.4987	0.4823
5	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4371	0.4371	0.4190	0.4019
6	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3704	0.3704	0.3521	0.3349

# [What's the appropriate project?]

TABLE 8

Calculation of present values			
Year	Net cash flow	Discount factor	Present Value
1	9,000	0.909	8,181.00
2	9,500	0.827	7,856.50
3	10,500	0.751	7,885.50
4	10,500	0.683	7,171.50
5	12,000	0.621	7,452.00
<b>Total</b>	<b>51,500</b>	<b>Total</b>	<b>38,546.50</b>

**Calculation of Net Present Value:**

Net Present Value = Total Present Value - Initial Investment  
 = \$38,546.50 - \$40,000  
 = (\$1,453.50)

**Comments:** This project is not worthwhile at 10 percent. You could calculate at the percentage rate at which the project would be financially viable and then assess the likelihood of this happening.

**Example:** Calculate the Net Present Value at 10 percent for Project C where the initial investment is \$40,000.

TABLE 9

Calculation of present values			
Year	Net cash flow	Discount factor	Present Value
1	(4,000)	0.909	(3,636.00)
2	9,000	0.827	7,443.00
3	13,000	0.751	9,763.00
4	16,500	0.683	11,269.50
5	18,500	0.621	11,178.00
		<b>Total PV</b>	<b>36,017.50</b>
		<b>Less Initial Investment</b>	<b>(40,000)</b>
		<b>Net Present Value</b>	<b>(3,832.50)</b>

**Comments:** A nonprofitable investment. Compare this result with the example for Project C using the payback method to see the effect of discounting.

**Example**

Calculate the net present value at 10 percent for Project C where the initial investment is \$40,000.

Year	Net Cash Flow
1	(4,000)
2	9,000
3	13,000
4	16,500
5	18,000

**"Remember when evaluating investment appraisal methods that they all rely on the accuracy of predicted net cash flows over the project lifetime."**

This shows a nonprofitable investment. Compare this result with the example for Project C using the payback method to see the effect of discounting.

**Considering cash flow**

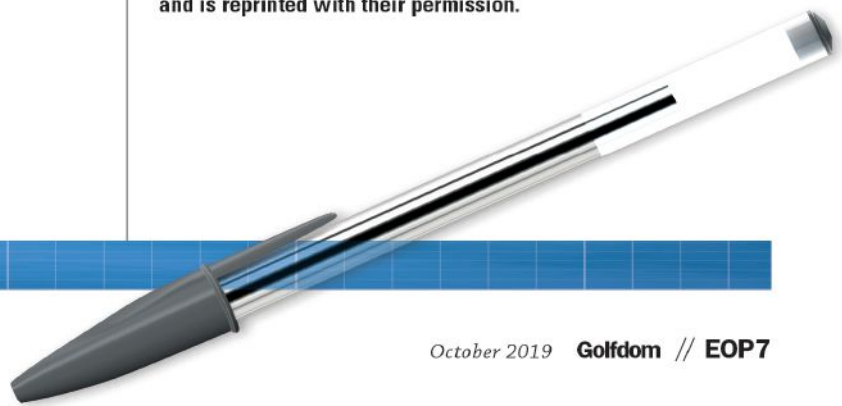
Capital budgeting focuses on the acquisition of facilities and equipment. The methods presented here consider the cash flows related to the proposed project. First, there is the initial cash outflow, which is the cost of the investment. Second, there may be cash inflows and cash outflows or cash savings over the life of the investment.

The payback approach determines the number of years required for a project to pay for itself. This approach is best used for screening projects for further consideration using the net present value approach.

The net present value approach considers both the amount of the cash flows and the timing of the cash flows. Using present value factors, future cash flows are discounted to the present time and compared with the initial cost of the project.

When considering a single proposal, if the net present value of a proposed investment is equal to zero or is positive, make the investment.

**Andrew Turnbull BSC (Hons), Dip. RSA, Cert Ed., is the owner of AllTurf Management and managing director of the Great Lawn Company Ltd. Contact him at [allturfman@ntworld.com](mailto:allturfman@ntworld.com). This article was previously featured in Pitchcare and is reprinted with their permission.**



# 2019 Early Order Program Guide

[Didn't I just get done with this?]



**"My participation in EOPs over the years has greatly increased, largely because of clearer programs and newer, more efficient products."**

**ALAN FITZGERALD**, *superintendent,  
LedgeRock Golf Course, Mohnton, Pa.*

## Overcoming "Why do I have to do this now?"

**E**very year as fall rolls around, superintendents across the country breathe a sigh of relief that they survived the summer's 90 days of hell and look forward to a relatively easy period where the turf can take care of itself. Meanwhile, on the "dark side" of the industry, sales reps are starting their 30 days of hell and ramping up for Early Order Program (EOP) season.

The sudden uptick in calls and texts to set up sales appointments in late September is the not-so-subtle reminder that it's EOP time.

The general consensus is, "Why do we have to do this now?" and the usual opening line from the reps is, "I know you guys are, 'Ugh, I just got done with this year, I can't even think about next!' but I still have to drop this off."

My participation in EOPs over the years has greatly increased, largely because of clearer programs and newer, more efficient products. When I first became a superintendent, I saved money by using generic pesticides, which at the time were similar to the brand-name lines. As the brand-name companies launched newer, high-efficacy

products, simple math showed that these products cost less. The longer residuals reduced the price per acre, even before considering factors like extra labor for multiple applications needed to maintain the same coverage. The benefit of these products, coming with EOP savings upward of 25 percent, makes it even easier to justify purchasing them.

Gone also are the days when you got purchase points that could be traded for stuff. I never liked that method. There always was an awkward conversation trying to explain to a GM that the club has credits that will expire if they are not used to "buy" something from this catalogue — essentially paying for the item out of the pesticide budget.

The current programs are a lot

cleaner because the club can see actual savings. Saying that, it would be nice to have all the rebates rolled in upfront because it throws off my inventory prices and makes it difficult to work out exact savings.

Going back to the big EOP complaint — not wanting to think about next year — I like putting together a rough game plan for applications for the following season. I know it will change because of the weather, but having a guideline of when I want to apply certain products is great for planning. I use EOPs for 60 to 75 percent of my purchases, and supplement the remainder based on what the season brings. EOP time coincides with the club's budget preparation, so it helps me plan expenditures for the upcoming year and provides a clear monthly breakdown of costs — greatly helping the club's cash flow.

While the Irishman in me loves a bit of wheeling and dealing, I like that EOPs have agency pricing, so the purchases ultimately go to those who provide the best service and not to those willing to discount more. There are no downsides other than having delivered — but unpaid for — product in my inventory over the winter; it shows as a liability.

Knowing I can use the latest products, with their benefits of better control and longer periods of efficacy — while also getting the best value for the club — makes participating in EOP programs worthwhile. **G**

**Alan Fitzgerald** is superintendent at LedgeRock Golf Club and this year's Herb Graffis businessperson of the year.

## [Program Spotlight]

# Quali-Pro Simply Grow Together Early Order Program

**G**et next season started off with Quali-Pro's Simply Grow Together Early Order Program. Quali-Pro is offering special incentives now through Dec. 6. Take advantage of the Simply Grow Together early order program by Oct. 31 for the biggest rebates. Some conditions and restrictions apply. To see a list of all qualifying products, visit [simplygrowtogether.com](http://simplygrowtogether.com).

Promotion period for the Simply Grow Together Early Order Program is from Sept. 2, 2019, through Dec. 6, 2019. Order now while supplies last. Submit your rebate online at [simplygrowtogether.com](http://simplygrowtogether.com) using the online form and the EOP calculator. Follow the three easy steps and your rebate is on the way!

**Step 1:** Complete the redemption form on the website.

**Step 2:** Use the EOP calculator to calculate your rebate by entering your product selections and unit quantities.

**Step 3:** Upload all receipts and submit.

**Who Qualifies:** End Users in all U.S. Turf, Nursery & Ornamental markets who purchase Quali-Pro branded products through authorized Quali-Pro Distributors.

**Terms:** 20% of rebate must consist of QP Platinum products to qualify. Minimum rebate is \$100. Maximum rebate per account is \$5,000.

Visit [simplygrowtogether.com](http://simplygrowtogether.com) to get started or call 800-242-5562 to locate a rep.



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# 2019 Early Order Program Guide

## [Program Spotlight]

# AMVAC 2019 VIP Early Order Program

**A** MVAC's 2019 VIP Early Order Program is here with your chance to save cash and cover your grass year-round. Go to **AMVAC.com/EOP** to explore the latest rebate offers and ways you can save on AMVAC's comprehensive Four-Season Solutions™ portfolio of fungicides, herbicides and insecticides. Together they offer full-calendar, full-course coverage of a broad array of common turf diseases and pests.

Order between Aug. 12 and Dec. 31, 2019, to take advantage of big savings for 2020.

This year's EOP includes two new products as AMVAC's line continues to grow: Avensis® insecticide/miticide and Oximus™ fungicide. Avensis provides control of ornamental and turfgrass pests including nematodes and annual bluegrass weevil. Oximus fungicide offers broad-spectrum, cost-effective control of brown patch and other listed diseases. Also available are AMVAC's other fungicides, including Premion™ — a proven tool for anthracnose control — as well as Turfcide®, an outstanding value on long lasting snow mold control. And for preventive control of turfgrass diseases, there's Previa® fungicide armed with chlorothalonil — a standard for broad-spectrum control.

AMVAC's Scepter® and Surepypc® herbicides are also available in this year's EOP. Scepter is a flexible, selective, post-emergence herbicide that offers superior, broad-spectrum control of many tough weeds. When your

## VIP EOP 2019 EARLY ORDER PROGRAM

**AMVAC**™  
An American Vanguard Company

course is facing troublesome yellow nutsedge and green kyllinga, reach for fast-acting Surepypc to see results in just 24 to 48 hours.

Also new to AMVAC's VIP EOP is online functionality. Get complete product details along with rebate information at **AMVAC.com/EOP**. If you prefer, you can also submit your redemption online for added convenience and speed in processing. Rebates can still be redeemed through fax or mail through a downloadable, printable form on the website.

AMVAC's 2019 VIP EOP gives turf professionals the savings and solutions they need — and a growing portfolio that offers more new combinations than ever before.

Go to **AMVAC.com/EOP** to learn more.

**AMVAC**™  
An American Vanguard Company

4695 MacArthur Court #1200, Newport Beach, CA 92660 | **PHONE** 888-462-6822  
**WEBSITE** amvac.com/EOP | **FACEBOOK** AMVACChemical | **TWITTER** @AMVACChemical



**Break away from the**

***PAK mentality***



/// Go with your instincts – see what's new at [es.bayer.us/flex-solutions](https://es.bayer.us/flex-solutions)

This fall, break away from the PAK to find the best solutions for your turf.

Pick only the products you want. See rates, recommendations and savings all in one place.

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS.

Bayer Environmental Science, a Division of Bayer CropScience LP, 5000 CentreGreen Way, Suite 400, Cary, NC 27513. For additional product information, call toll-free 1-800-331-2867. [www.environmentalscience.bayer.us](https://www.environmentalscience.bayer.us). Not all products are registered in all states. Bayer and the Bayer Cross are registered trademarks of Bayer. ©2019 Bayer CropScience LP. ES-0819-GLF-0088-A-1

# Flex Solutions:

## A new day for superintendents

Bayer's new online platform allows superintendents to purchase only the products they need

BY CHRIS LEWIS

An online platform designed specifically for superintendents, one that allows them to easily choose and purchase only the products they want, seemed like a work of fiction — until now, that is.

Launched Oct. 1, Bayer's Flex Solutions platform takes all pre-packaged bundles out of the equation and lets superintendents create their own product bundles. As a result, superintendents are no longer bound to certain solutions.

Bayer Product Manager Mark Clodfelter advises superintendents to first choose the products they need for the upcoming season by conducting searches for certain diseases and pests as they decide which products are the best fit for their courses.

This results in a list of recommended products specifically by Bayer chosen for those issues. Superintendents can even import their previous sales history and receive calculations regarding costs and savings directly from the platform.

"It's all very dynamic," Clodfelter says. "The system calculates everything for them."

This simplicity, flexibility and personal touch, each of which allows superintendents to have the

freedom of choice they've been seeking for years, are the platform's three most significant benefits. In fact, they're the main objectives Bayer has been striving to fulfill for its customers.

### Benefits for end users and distributors alike

"Through the Flex Solutions program, end users and distributors alike will benefit," says Sean McNerney, Bayer area sales manager.

Aside from viewing rates and recommendations based on searches for their courses' acreage, growing area and turfgrass species, superintendents also can discover discounts via a rebate finder that features blue tags for promotional products. Of equal importance, they can easily access product information,

pest solutions (through a pest finder) and customer support. This support — offered by a team of Bayer experts — is available throughout the ordering process.

At the same time, distributor representatives now have the flexibility and freedom they need to build economic solutions for clients because they're no longer

tied to specific products, bundles and rates. They can adapt unlike ever before, which is critical for them to meet clients' unique needs based on climate, diseases and pests that are common in (or specific to) their regions and turfgrasses.

"Distributor representatives used to have various logistical challenges as they sought to provide solutions to their clients, from finances to inventory (as end users often received products they didn't need, while also lacking products they did)," Clodfelter explains. "But, thanks to the Flex Solutions platform, that's no longer the case."

### The way of the future

As noted by McNerney, there has been a massive shift to digital in recent years; virtually everything can be found now online. Through Flex Solutions, Bayer — and with it, ordering of turf products — has joined the digital shift.

"Flex Solutions shouldn't be thought of as an EOP system," he stresses. "Rather, it's a tool, the first we're going to be able to use in this digital shift and one that will have a lot to offer to people moving forward."

In the past, the golf course maintenance industry had a large group of distributors (thousands, really) who were extremely knowledgeable



**Mark Clodfelter**



**Sean McNerney**



*Brian Giblin, Bayer area sales manager, works alongside Mike Dachowski, golf course superintendent at Shelter Harbor Golf Club, providing recommendations on the products best suited for his turf and exploring the additional ways he can save as he places his early order purchase.*

but had to put all of their eggs in one basket, so to speak, because they were limited on the types of products they could sell to end users. The lack of a digital tool prevented them and their clients from reaching their full potential concerning the unique bundle of products they could use to target course-specific diseases and pests, improve turfgrass vitality and enhance customer experiences.

“Of equal importance, as younger superintendents rise up in the industry, they’ll want this flexibility to collaborate — with their distributors and vice versa — via a digital platform,” McNerney adds. “This digital shift is really exciting.”

To participate in the Flex Solutions platform and experience the radical difference firsthand, superintendents

must register for a My Bayer Rewards account. Through this account, they can earn points on eligible purchases. These points then can be redeemed for online catalog items.

In addition, users must create Flex Solutions credentials to search for products, view detailed product information, choose the products that are the best fit for their courses’ diseases and pests and finalize their purchases.

If superintendents already have a My Bayer Rewards account, they need only to update their information prior to creating their credentials. Once an account has been finalized or revised and credentials created, a superintendent can use the platform on laptops, PCs or phones — yes, Flex Solutions is mobile friendly, too.

“Superintendents are determined to be more efficient with labor and become better stewards of the environment,” McNerney says. “Now is the time to achieve these goals, simplify the ordering process and enjoy EOPs again.”

“As a result of the Flex Solutions platform,” he says, “the digital shift for end users and their distributors has begun.”

*Learn more when you visit [es.bayer.us/flex-solutions](https://es.bayer.us/flex-solutions).*



# 2019 Early Order Program Guide

## [Program Spotlight]

# Syngenta GreenTrust 365

**G**et straight to savings with the GreenTrust® 365 program from Syngenta. Simply choose any product from the largest branded golf portfolio and earn yearlong rebates to put savings straight back into your business. The Early Order Period (EOP) runs **Oct. 1 – Dec. 6, 2019**.

Check out the many benefits that make GreenTrust 365 the best value of the year:

### Yearlong Rebates



Spend at least \$5,000 on qualifying products during EOP to lock in your **yearlong rebate of up to 10%**.

### NEW GT Bonus Booster



Now you can earn an additional rebate on qualifying purchases and receive more for your business faster than ever. Save up to **3% more** on qualifying purchases made in **October** for **savings up to 13%**. With the GT Bonus Booster, you'll receive a rebate sooner than ever before. Your distributor

credit or your first check will arrive by April 30, 2020, for purchases made in October 2019.

### Pallet Solutions



Save up to 22% with our Pallet Solutions.

Purchasing just one of the 12 Pallet Solutions that are over \$5,000 automatically qualifies you for a yearlong rebate. If you purchase in October, you will qualify for up to an **additional 3% GT Bonus Booster**.

### NEW Pallets for 2020

#### Greens Foundation Solution:

- Appear® II + Daconil® Action™ + Secure® Action fungicides

#### Greens Protection Solution:

- Appear II + Briskway® + Velista® fungicides

#### Northern Fungicide Solution:

- Banner Maxx® LinkPak™ + Daconil Action + Heritage® Action + Velista fungicides + Primo Maxx® PGR LinkPak

Amount of Qualifying Products Purchased during EOP: Oct. 1 – Dec. 6, 2019	Yearlong rebate percentage
\$5,000 to < \$10,000	5%
\$10,000 to < \$20,000	6%
\$20,000 to < \$40,000	7%
\$40,000 to < \$70,000	8%
\$70,000 to < \$100,000	9%
\$100,000 +	10%



Purchases Made Oct. 1 – 31, 2019	NEW GT Bonus Booster
\$5,000 to < \$20,000	2% rebate
\$20,000 +	3% rebate

# [Program Spotlight]



Dollar Spot Solution

## SummerPay™



Keep your cash flow in check by deferring payment until June 26, 2020. It's just one way to manage your expenses more easily throughout the season.

## Product Assurance Programs



Protect your course with confidence with our Assurance Programs that guarantee results when used according to agronomic recommendations.



## Multipaks



Save even more on complementary products delivered in convenient Multipaks.



## Rebate Calculators



Save time and maximize your budget with our easy-to-use online rebate calculators. They can help you determine the best product configuration along with your qualifying rebates. Visit [GreenTrust365.com/Calculators](https://www.GreenTrust365.com/Calculators) to calculate your savings today!

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WEBSITE [GreenTrust365.com](https://www.GreenTrust365.com) | TWITTER @SyngentaTurf, #GreenTrust365

IT'S TIME TO PUT PREMADE PALLETS  
IN THE PAST. IT'S TIME TO

# CHANGE COURSE.

**I** Introducing the revolutionary  
**2020 Early Order Program.**

**I** Simple. Flexible. Rewarding.

 **BASF**

We create chemistry



*Design your own cube and* **EARN REBATES UP TO 24%**

## Finally, an EOP designed with your needs in mind.

You asked, and we listened. No more pre-made pallets. That means no more buying products you don't need at acreage sizes that don't fit your course. The 2020 EOP is simple, flexible and rewarding. You buy the products you want, in the package sizes and acreage units that meet your needs — without sacrificing the larger rebates that came with pre-made pallets of the past.

With this flexible Early Order Program, you have the freedom to build your own fungicide spray program at the right acreages, all with rebates that provide the value you expect. Simple. Flexible. Rewarding. It's an EOP that's as easy as 1-2-3.

You now have more options than ever, including two brand new disease-fighting innovations: Maxtima® fungicide and Navicon® Intrinsic® brand fungicide.



### Design Your Own Cube with these Qualifying Fungicides:

**1** Select at least three qualifying fungicide brands. Partial cases still count toward your rebate level.

**2** Order at least \$5,000 to start saving.

**3** Order in October to lock in highest rebates.

Extended terms to June 7, 2020.

Qualifying Fungicide Purchase Level	Earned Incentive %	
	Oct.1-31, 2019	Nov.1-Dec.6, 2019
\$5,000-\$14,999	12%	8%
\$15,000-\$24,999	16%	10%
\$25,000-\$34,999	20%	12%
\$35,000 <sup>1</sup> +	24%	14%

1. Purchase at least \$35,000 consisting of at least three different Qualifying Fungicide brands during EOP and qualify for 10% rebate on all purchases of EOP rebate-qualifying products January 1, 2020 through September 30, 2020.

### Remaining Portfolio: Herbicides, Ornamental and Other Solutions

**1** Start earning rebates at only \$2,000.

**2** Earn 10% rebate by reaching only \$15,000 in total purchases.

**3** Buy now and don't pay until June 7, 2020.

Qualifying Remaining Portfolio Purchase Level	Earned Incentive %
	Oct.1-Dec.6, 2019
\$2,000-\$6,999	4%
\$7,000-\$14,999	6%
\$15,000+	10%

For full 2020 Early Order Program details visit [betterturf.basf.us/eop](http://betterturf.basf.us/eop).

Always read and follow label directions.

All products may not be registered for sale or use in all states. Please check with your state or local Extension Service.

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# 2019 Early Order Program Guide

## [Program Spotlight]

## It's EOP time, and PBI-Gordon has you covered!

**S**ay goodbye to this year and start planning for next. The PBI-Gordon 2019 Early Order Program helps you get 2020 off to a great start.

The PBI-Gordon 2019 Early Order Program gives end-users great deals when they order qualifying products from a PBI-Gordon distributor between Oct. 1 and Dec. 13, 2019. And turf pros can maximize their rebate when they order in October.

- **Level I:** rebates that reach \$500 - \$999 earn a 15% bonus\*
- **Level II:** rebates that reach \$1,000 or more earn a 25% bonus\*

The PBI-Gordon EOP features 14 of our most popular products, including:

- **Tekken™** Broad Spectrum Fungicide
- **Segway®** Fungicide SC
- **Pedigree™** Fungicide SC
- **Katana®** Turf Herbicide
- **SpeedZone®** Broadleaf Herbicide for Turf, including **SpeedZone®** Southern EW

To see the full list of qualifying products, visit [eop.PBIGordonTurf.com](http://eop.PBIGordonTurf.com).

\*Rebate bonus is calculated from the rebate amount.

**G** pbi / Gordon  
CORPORATION  
Employee-Owned

**EARLY ORDER  
PROGRAM**  
*October 1 - December 13*



22701 W. 68th Terrace, Shawnee, KS 66226 | **PHONE** 800-884-3179  
**WEBSITE** [eop.PBIGordonTurf.com](http://eop.PBIGordonTurf.com) | **FACEBOOK** [PBIGordonTurf](https://www.facebook.com/PBIGordonTurf) | **TWITTER** [@PBIGordonTurf](https://twitter.com/PBIGordonTurf)



# 2020 STARTS NOW.



## ***PBI-Gordon Has You Covered.***

It's that time again: Say goodbye to this year and start planning for next. The PBI-Gordon 2019 Early Order Program helps you get 2020 off to a great start.

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- **SpeedZone®** Broadleaf Herbicide for Turf, including **SpeedZone® Southern EW**

To see the full list of qualifying products, visit [\*\*eop.PBIGordonTurf.com\*\*](http://eop.PBIGordonTurf.com).

\*Rebate bonus is calculated from the rebate amount.



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# 2019 Early Order Program Guide

## [Program Spotlight]

### WinField United Pro Early Order Program

**T**he WinField United Pro Early Order Program (EOP) helps you plan for success and stretch your budget with incentives, rebates and rewards. Between October 1 and December 14, 2019 you can:

- Spend more, save more
- Combine purchases from leading suppliers with WinField United Pro's proprietary products
- Choose from extended term offers, defer payments for purchases of qualifying products until June 2020
- Earn additional rewards based on what you buy

In addition to rebates up to 5.5% on manufacturer products, WinField United Pro offers rebates on their proprietary portfolio of products too.

Economics are no match when you take advantage of the WinField United Pro EOP. Customers can secure

supply of products they will be using in-season when products continue to be under supply constraints from global pressures. Pricing pressure from production constraints and tariffs are no match for you. With the WinField United Pro EOP, you can get ahead of price increases that take place during the first of the year.

In addition, WinField United Pro offers extended terms through the end of June 2020 on purchases made during the October 1 and December 14, 2019 period.

Don't have a place for all of your products you want to purchase? No problem! WinField United Pro also offers storage for customers that may not have the room at their facility or don't have enough heated storage over the winter.

Visit [winfieldunitedpro.com/programs/early-order-program](http://winfieldunitedpro.com/programs/early-order-program) to get started.

**WINFIELD  
UNITED**  
Professional

**2020**  
EARLY ORDER PROGRAM

4001 Lexington Ave. N, Arden Hills, MN 55126-2998

**WEBSITE** [WinfieldUnitedPro.com/programs/early-order-program](http://WinfieldUnitedPro.com/programs/early-order-program)

**PHONE** 800-328-9680 | **TWITTER** @WinfieldPro | **LINKEDIN** Winfield-United-Pro

– DEFENSE! DEFENSE! –  
**PHITE! PHITE!**  
**PHITE!**



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**GRAVITY® L 38 Special** uses superior phosphites to protect your turf from potential stressors. Let your greens phite anything that comes their way.

CONTACT YOUR WINFIELD UNITED PRO REPRESENTATIVE TO LEARN MORE.

**WINFIELD®  
UNITED**  
Professional

[WinfieldUnitedPro.com](http://WinfieldUnitedPro.com)

# 2019 Early Order Program Guide

## [Program Spotlight]

# Nufarm Edge Rewards Program Expands 2019 Buying Options

**T**he 2020 Nufarm Edge Rewards Program is the best opportunity for golf course superintendents to save on popular Nufarm products during the upcoming season. Nufarm is a leading provider of high-performing plant growth regulators, herbicides, fungicides and insecticides — and participating in Nufarm Edge Rewards brings you savings on more than 30 popular Nufarm brands, such as Traction™ for snow mold, Pinpoint® for resistant dollar spot and Arena™ for grub control. Plus, the “fairway volume bonus” offered for performance-leading Anuew™ PGR features 3x the savings this season. SureGuard® SC has a significantly increased rebate along with time-saving, season-long residual.

### New for Nufarm Edge Rewards

Nufarm’s 2020 program is designed to bring golf course superintendents an edge. You can achieve more lucrative savings than ever before on solutions that improve the quality and efficiency of your operations. Plus, Nufarm Edge Rewards participants can extend their savings options with two early order periods.



- Save the maximum during **Period 1:**  
September 16 - October 31, 2019.
- Extend your time to save during **Period 2:**  
November 1 - December 6, 2019.

### Registration is Quick and Easy

Registration is easy and required to participate in Nufarm Edge Rewards. Visit [nufarmrewards.com](https://nufarmrewards.com) and submit the registration form. Previous registrants are automatically registered and do not need to register again.

At the Rewards website, browse eligible products and build a qualifying order with ease, using the new online Nufarm Edge Rewards Calculator Tool. It can tabulate your savings and be emailed directly to your distributor.

4020 Aerial Center Parkway, Morrisville, NC 27560

PHONE 800-345-3330

WEBSITE [nufarm.com/usturf](https://nufarm.com/usturf)

TWITTER @NufarmUSTurf



# /// REWARD YOURSELF

GROW YOUR EDGE WITH BIG REWARDS  
ON PROVEN TURF PROTECTION PRODUCTS



ADD SAVINGS  
INSTANTLY  
WITH OUR  
NEW ONLINE  
CALCULATOR



EARN REWARDS  
FASTER WITH  
OUR LOWER  
\$2,500  
MINIMUM



SAVE MORE  
ON ANUEW™  
WITH THE  
FAIRWAY  
VOLUME BONUS

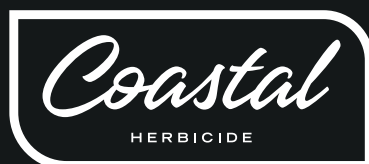
**REGISTER TODAY**  
**NUFARMREWARDS.COM**

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# PROTECTING SOUTHERN TURF FROM COAST TO COAST

Introducing the most all-encompassing and easy-to-use herbicide for southern turf available today. With three active ingredients combined in one jug, broad-spectrum Coastal™ Herbicide can be used safely on all of the four major warm-season turf grasses without the need to tank mix. And Coastal™ outperforms the current industry leader on hard-to-control weeds, including crabgrass and *Poa annua*. Ask your distributor about new Coastal™. The ultimate herbicide for warm-season, southern turf grasses.



## START EARNING REWARDS TODAY

### TAKE ADVANTAGE OF THE SIPCAM SMART REWARDS EARLY ORDER PROGRAM

The 2019 Smart Rewards Early Order Program from Sipcaml provides significant savings for golf course superintendents, sod producers and turf-care professionals. And this year, there are more choices and more ways to save than ever before, with three bundling opportunities, a long list of



qualifying products, new fungicide options to fight dollar spot and other diseases, and a new herbicide for warm season that controls *Poa annua*.

The Sipcam Smart Rewards Early Order Program runs from September 1 through December 6, 2019. And redemption is easy – simply make a purchase, submit proof of purchase online anytime before January 31, 2020, and earn valuable distributor credits to invest back into your business. It couldn't be easier!

To learn more or to calculate how much you can save, visit [sipcamagrousa.com/smartrewards](https://sipcamagrousa.com/smartrewards).

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# 2019 Early Order Program Guide

## [Program Spotlight]

# Make EOP Last All Season With RebateLock and FMC True Champions!

**W**ith the rollout of our new FMC True Champions program, we've added season-long rebate opportunities – like our exclusive RebateLock and In-Season percentage features – that all start with EOP:



With just \$300 in total rebates during the Early Order Program and working up to the maximum, you can lock in EOP rebates into the 2020 season. At the \$1,000 and \$2,000 rebate levels, you earn our exclusive RebateLock feature, giving you EOP rebate levels from January to August of 2020.






You still get the best deals of the year in October plus no payments required until June 2020. In addition, new this year, there is no minimum unit purchase requirement. Rebate minimums still apply.

Check out the new Fame SC fungicide 2.5-gallon size. It's perfect for fairways and comes with a \$675 rebate per unit, which automatically gets you 5% in-season rebate and puts you well on your way to RebateLock levels.

### More Kit Purchasing Options

To make it even easier to lock in rebates *and* get the products you need at the best prices, we've also added more kit options! With five pre-curated golf kits, there's maximum efficacy and value for any situation.

Kits come with the best rebates too, all the way up the Fairway Champion Kit with its \$2,100 rebate level automatically maximizing your RebateLock with only one kit.

 <p><b>Tee &amp; Green Champion Kit:</b> A perfect fit to manage your tees and greens against diseases, insects and silvery thread moss. <b>Kit Rebate: \$1,120</b></p>	 <p><b>Fairway Champion Kit:</b> The ideal kit for fairway management of insects, diseases and postemergent sedges. New Fame SC fungicide pack size! <b>Kit Rebate: \$2,100</b></p>	 <p><b>Complete Champion Kit:</b> Enjoy peace of mind with disease and insect control combined with the 100-day Echelon Assurance Program. <b>Kit Rebate: \$1,100</b></p>
 <p><b>Foundation Champion Kit:</b> The cost-effective foundation for pre and post sedge, broadleaf and grassy weed control. <b>Kit Rebate: \$690</b></p>	 <p><b>California Champion Kit:</b> Registered in California and Arizona. Provides well-rounded control of brown patch, yellow nutsedge and silvery thread moss. <b>Kit Rebate: \$1,000</b></p>	

### Product Rewards + Solution Assurances + Industry Commitment.



The FMC True Champions program comes to the T&O markets! We know your day begins hours before sunrise. Whatever challenges the day brings, your dedication will carry you through for the good of your staff, your course and its members. FMC True Champions rewards what you do every day by providing resources to manage your course and support the future of your industry. FMC understands you're more than a golf course superintendent. You're a true champion.

Quick to enroll, easy to qualify and fast to get rewarded all season long. **Enroll at [FMCTrueChampions.com](http://FMCTrueChampions.com)** to get started today.

**LEGAL:** Triple Crown Golf insecticide is a Restricted Use Pesticide. Always read and follow all label directions, precautions and restrictions for use. Some products may not be registered for sale or use in all states. FMC, the FMC logo, Dismiss, Echelon, Fame, QuickSilver, Solitare, Triple Crown and True Champions are trademarks or service marks of FMC Corporation or an affiliate. ©2019 FMC Corporation. All rights reserved. 19-GSS-1520 09/19

FMC Tower at Cira Centre South, 2929 Walnut Street, Philadelphia, PA 19104  
**PHONE** 215-299-6750 | **WEBSITE** [FMCTrueChampions.com](http://FMCTrueChampions.com) | **TWITTER** @FMCturf

# QUALI-PRO



# PLAN AHEAD AND SAVE WITH QUALI-PRO

## PROGRAM DATES

September 2<sup>nd</sup> thru December 6<sup>th</sup>, 2019

## WHO QUALIFIES

End users in all U.S. Turf, Nursery, & Ornamental markets who purchase Quali-Pro branded products through authorized Quali-Pro Distributors.

## TERMS

20% of rebate must consist of QP Platinum products to qualify. Minimum rebate is \$100. Maximum rebate per account is \$5,000.

1  
Complete form on the website to get started

2  
Calculate product selections & quantity

3  
Upload all receipts & submit!



EOP Online Calculator!

VISIT [SIMPLYGROWTOGETHER.COM](http://SIMPLYGROWTOGETHER.COM)  
TO GET STARTED.

# STRAIGHT TO SAVINGS

The path to savings just got easier to follow. To earn rebates through the GreenTrust® 365 program, choose from the largest branded golf portfolio and **save up to 22%** on pallet solutions and up to an additional **13% in rebates** to put savings straight back into your business.

***No paperwork, no confusion,  
just savings.***

## ***NEW GT Bonus Booster***

*Save up to 3% more on  
purchases made in October.*



Get straight to it at  
**GreenTrust365.com/Golf**



**syngenta®**

🐦 📺 @SyngentaTurf #GreenTrust365

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GS\_4631

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"Have you ever asked yourself why no one ever writes these tell-all exposés on things that few people actually know anything about like, say, greenkeeping?"

**MATT NEFF**, *assistant superintendent,*  
*Wedgewood G&CC, Powell, Ohio*

## 5 things your greenkeeper is thinking (but not saying)

**W**e've all seen those clickbait articles, like "10 Things Your Waitress Doesn't Want You to Know," or "15 Secrets Your Flight Attendant Won't Tell You." Spoiler alert — sketchy things sometimes happen in restaurant kitchens, and people occasionally do really weird stuff on airplanes. Everyone knows you're pretty much rolling the dice on some level when you go out to eat or board a plane, without those intrepid reporters blowing the lid off the story.

Have you asked yourself why no one ever writes these tell-all exposés on things that few people actually know anything about like, say, greenkeeping? I have, and coincidentally, this magazine is dedicated to the greenkeeping industry, and I happen to write a column that appears in said magazine. If the world is interested in "12 Things Your Barista Isn't Telling You," it might be interested in "5 Things Your Greenkeeper Is Thinking But Not Saying."

**When you tell us the course is great, we're always waiting for the "but."**

Sad but true. Maybe it's the result of our fragile egos. Maybe it's the result of having

experienced it several times in the past. Maybe we have fragile egos because we've experienced it several times in the past. The psychopathology behind this one probably could be turned into a Ph.D. dissertation.

**When we help you find your ball, we're basically just trying to keep you moving so we can get back to work faster.**

Of course we want to be helpful, but we probably want to get back to work even more. Nothing personal, we just don't want to fire the mower back up until you're out of earshot, and that's not going to happen until you find your ball. Maybe Karl Marx is right

— there is no such thing as altruism.

**We hate aerification as much — if not more — than you do.**

We know you hate it, and we don't blame you. We're not big fans of it either, but we also know that it's one of the most important practices in pursuit of the putting surfaces we both want. Pay me now (deal with aerified greens for a week or two) or pay me later (inferior greens or worse for extended periods of time).

**We really try to pay attention and stay out of your way while we're working.**

However, occasionally we can't or don't see you waiting

to tee off or hit your approach shot into the green. Just letting it rip anyway and hoping we can hear you yell "fore" over the tractor engine is a really bad way to handle this situation. Sending a member of your foursome to give us a heads up isn't really that big of a deal when you consider the possible consequences. Most of you are in carts anyway, right? High-speed projectiles and the human skull are not a good mix.

**We're not that interested in how your swing looks or how good (or bad) of a player you are.**

Trust me, we've seen it all, so no matter how bad the shot you hit, we've probably seen worse. Honestly, we're more focused on not disturbing you, then getting back to work as soon as possible, than we are on your shot. Stop thinking, let things happen and be the ball, Danny.

Because this column lacks food safety horror stories or gratuitous airplane bathroom shenanigans, I have little faith it will be widely read or picked up by the purveyors of this hard-hitting brand of journalism. But because people seem to be interested in "The 12 Things Your Barista Isn't Telling You," I would think that inside access into the glamorous world of greenkeeping would blow people's minds. ☺

Matt Neff (mneff4@yahoo.com) is assistant superintendent at Wedgewood G&CC in Powell, Ohio.



"Once Nick joined our team, he became my lead assistant and counsel. His is a story of overcoming failure and harnessing his potential to succeed."

**JARED NEMITZ**, superintendent, *The Peninsula Club, Cornelius, N.C.*

## A risk worth taking

**D**ata shows senior assistants are staying longer at a single course, which means they are learning more, taking on more responsibility and proving to be an integral part of an organization. But do we express that to them?

A superintendent recently posted on Facebook a picture of his assistant in an irrigation hole and a thank-you note. The assistant came in after hours to stop an irrigation leak when the superintendent couldn't get there. It was nice to see recognition for a position that is difficult in many ways. It got me thinking about the value of a good lead assistant and how a good one can affect your operation in a positive way.

A senior assistant is your right-hand decision maker, someone who generally runs the staff, can run the course in the superintendent's absence and deserves much of the credit for the product. The senior assistant arguably is the most essential person on the team to a superintendent.

However, the assistant in many instances is the forgotten warrior, a casualty of long

hours and — in many cases — not much recognition. But today's assistant is a vital member of the organization and superintendent team.

Nick McLennan has been my lead assistant at The Peninsula Club for five years. Our professional relationship goes back much further and has some interesting twists and turns. Nick was one of my first educational interns at The Ford Plantation eight years ago. He was a hard worker, extremely likable, listened and had an extreme passion for turfgrass. He had all the ingredients of someone you would want to bring back as your assistant after graduating from university. So, when Nick graduated from Purdue University, he came back to join the team.

His work ethic was mostly impeccable, but Nick continually was late to work. In this

industry, getting up early and being on time are staples to success and are nonnegotiable. After many chances, we had to let Nick go. This story is important to me because I believed in Nick when he was an intern, and I believed in his abilities the day we had to let him go.

Shortly thereafter, I was offered the job at The Peninsula Club. Strangely, Nick was my first, extremely anxious call to come and join me. Being a first-time superintendent, I wanted someone who knew me and knew what type of facility I ran. I knew it was a risk, but one I thought worth taking.

Once Nick joined our team, he became my lead assistant and counsel. With maturity he has really grown. He's the ideal employee and now he'd never dream of coming in late. His is a story of overcom-

ing failure and harnessing his potential to succeed.

I want Nick to be the best he can be. The better he is, the better my life is and the more I am pushed to better myself. The only way an assistant gets better is by their boss continually challenging them and teaching everything they can. Withholding information because your No. 1 could take your job someday is a sign of a dishonest relationship.

Developing assistants takes extra time and effort by both parties. Showing them how to create budgets, manage a course project or give a presentation to a green committee shows confidence in your assistant. I want my assistant to learn and then be able to protect me from making the big mistake. If my entire team is always questioning and involved, they can help me even when I don't know I need it.

The superintendent's life is better off with a strong assistant. The relationship between the assistant and the superintendent makes work less stressful, more tolerable and much more fun. We have all been assistants before and know how difficult the job is. Take time to make your assistant know how valuable he/she is, and help them reach their goals. I'm sure they're helping you reach yours. **G**

Jared Nemitz is superintendent at The Peninsula Club, Cornelius, N.C. He can be reached at [jared.nemitz@thepeninsulaclub.com](mailto:jared.nemitz@thepeninsulaclub.com) or followed at [@jarednemitz](https://twitter.com/jarednemitz).

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# LAND OF THE FREE

There's no  
budget at  
Kansas City's  
Brough Creek  
National GC  
— just some  
bros and  
a big idea

WORDS & PHOTOS BY SETH JONES

MacKenzie. Ross. Tillinghast.

Twitter?

A modest piece of property near the Missouri River in Kansas City, Kan., has transformed from unused family land to a seven-hole short course birthed by social media and energetic buddies wanting to improve their hangout. Brough Creek National GC, named after property owner Zach Brough (pronounced “*bruff*”), might go down as the first golf course if not built, then inspired — and funded — entirely by social media.

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// **SOME GUY'S BACKYARD**

**Full circle** — A shot of the green of Nos. 1 and 7. The course ends and begins on the same green.

## // SOME GUY'S BACKYARD

Continued from page 46

The course hosts its grand opening this month and will welcome its “early adopters” to play the course for its locked-in green fees rate: free. They’ll come from all corners of the United States. Members teeing it up at the invite-only grand opening will include golf nuts from California, Ohio, North Carolina and Massachusetts, among other places.

This is what happens when an online idea sparks to full flame. But after the grand opening, what will become of Brough Creek National (BCN) and the bros who have formed what they endearingly refer to as Some Guy’s Backyard Architecture?

### Dirt’s not cheap

It’s opening Sunday for the NFL season. Here in Kansas City Chiefs country that means work ceases at noon Central Standard Time. At 4429 N. 79th Street in KCK,

brats are grilling while the Brough Creek National maintenance team retreats indoors to catch the action.

If this were a private country club, Zach Brough would be the superintendent, Ben Hotaling would be head pro and Evan Bissell would be director of marketing. But this is the opposite of a private country club. While the guys call Brough superintendent, he prefers the more casual term of *maintainer*.

“I own the property, so I’ve got to be out here cleaning it up,” Brough says. “We all wear a bunch of different hats.”

“He’s got the tractor, and he’s the only one who drives it. He’s the one mowing and the one that waters when we need it during the week,” says Hotaling. “Everything about what we’re doing is tongue-in-cheek.”

The group met at Kansas University in Lawrence. Upon graduation, the crew



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**Almost ready** — The Meyer zoysia greens in this photo are just a few weeks away from popping for the grand opening in October. Oh, and not to worry, the boat will be long gone by then.

reconvened at Brough's place regularly, then Hotaling moved in. One night, Hotaling told Brough they could have a pretty decent golf hole from right there on the porch if they took down just one tree ...

The chainsaw came out and everything spiraled from there, Brough says.

"That's when I started blogging about it," Hotaling says. "It was a joke to start. It's not much of a joke anymore. The people wanting to help became too much to ignore. And taking trees down is addictive, because you see so much progress immediately."

Armed with enthusiasm and tech savvy — Hotaling is in technology sales and Brough is a business intelligence developer

*Continued on page 50*

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## // SOME GUY'S BACKYARD

*Continued from page 49*

with a penchant for multimedia — the Brough Creek team first asked its social media followers to help out by donating materials. While used flagsticks and cups were nice, they soon realized their followers wanted to donate money. Their GoFundMe page quickly raised \$20,000. The only payback they offered was a thank you and a lifetime membership at Brough Creek National GC, where they promise to never charge green fees.

“The materials are the most expensive thing,” Hotaling says. “Dirt, man. I think we spent \$4,000 on dirt!”

### Progress you can feel

The Brough Creek crew has caught the eye of many on social media (**SomeGuysBackyard.com**, @someguysbackyrd), including those who do this golf maintenance thing for a living.

“It’s unique, it’s fun and it isn’t being done anywhere else,” says Carol Turner, second assistant superintendent at the Ladies GC of Toronto. She saw the course in person while visiting GCSAA headquarters in Lawrence for a meeting. “It looked so fun and cool. They still had a lot of work to do because I saw it in the early stages. I wish I lived closer because I’d love to help out and play there for fun.”

What does a turf professional see as the biggest obstacles for the guy’s backyard?

“Keeping up with everything budgetwise,” Turner says. “Finding money to do the basics.”

The crew is tracking all their expenses on their website. Turf has been the biggest expenditure so far, but the team didn’t get over their heads and try to build USGA-spec greens.

“Having real greens was never a consideration. If we wanted to go to the lake for the weekend, we don’t want to worry about our greens dying,” Hotaling says. “We wanted to pick something that is going to have a good chance with minimal human interaction.”

They chose Meyer zoysiagrass, a popular grass in the Midwest, after a long discussion with Brandon Horvath, Ph.D., University of Tennessee. Horvath found BCN on Twitter. As he followed



**No. 7** — The closing hole is 140 yards. Beware, the **Popeye's Chicken** sign might make the player hungry for some biscuits.

along, he became a fan of the BCN team and volunteered his expertise, something the BCN team quickly took him up on. “The guys have an idea,” Horvath says, “but they also have no idea.”

Horvath hoped they would go with a different turf variety than Meyer, but says the decision was a good compromise, based on budgetary restrictions. “Their biggest challenge ... none of the guys have a direct understanding of turf management,” Horvath says. “It’s like the running joke in the industry — I have a nice lawn, so I could maintain (University of Tennessee’s) Neyland Stadium, right? Well, you can’t.”

Horvath says that despite their lack of formal turf background, the BCN team will be successful, because they understand their limitations.

“When they asked me about turf, I gave them the names of some sod producers. I didn’t do the work for them. They did their due diligence. When it came time to choose sand, they sent me samples to look at. They’re likable guys, and if they’re willing to engage people who want to see them succeed ...” Horvath says. “If they have enough time, energy and money, they’ll have something playable ... like a throwback to 1965. For the backyard? That’s pretty cool.”

The team has topdressed three times in recent weeks, hoping to peak for the grand opening.

“We’re going to cut it to half an inch, and it’ll be like a really good greens surround,” Hotaling says. “And that’s more than we

*Continued on page 53*

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## // SOME GUY'S BACKYARD

### Working for a living

Clearing forestland can be backbreaking, but documenting the job can be hilarious. While the guys are wielding chainsaws, throwing sand and pushing rollers, the fourth member of their crew, Mark Robinson, is armed with a video camera. The creation of Brough Creek National GC is equal parts golf project and reality TV.

"We're realizing that the visualization aspect of what we're doing is the core driver for our success, so we're really investing in it," Hotaling says. "You can only post so many of the same aerial videos, so we're trying to drive interest in us, not just BCN. If we're well-respected, known people, that gives us a little bit more opportunity."

They're not sure what that opportunity is exactly, but they're hopeful that once BCN is complete, another project will arise. This could be a niche market, they

*Continued on page 54*



**Aiming high** — Some guys shoot hoops at halftime. At Some Guy's Backyard, Evan Bissell (pictured) hits full wedge shots.

*Continued from page 50*

could ever ask for."

It's hard work, but at the same time, it's fun.

"If you said to me, 'Hey, want to go rake some forest land?' No! That's not fun,"

Hotaling says. "But it's my opportunity to hang out with my friends. It's progress you can feel with your hands and see with your eyes. All of that combined makes it fun. We're working towards something bigger, which is exciting."

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## // SOME GUY'S BACKYARD

*Continued from page 53*

hope — creating backyard golf courses.

“We have a chance to put one in the ground and have people come and check it out,” Hotaling says. “If a wealthy person has some land and was considering a synthetic putting green ... how about doing something like BCN instead, and actually hitting some shots? If a community wanted to do this, we’d love to.”

After all, it’s better than working.

“We’re all five years into working, and working sucks,” Hotaling says. “The prospect of hanging out for a living — that would be sick, right?”

### A wedge in one hand ...

Brough says the prospect of doing more courses with his friends beyond his own backyard is what keeps him motivated. At first, when they had 60 comments on a blog, he thought that was as far as the proj-

ect would go. Now they have 1,700 members and people in 10 countries wearing golf apparel with his name on it.

Which also could make a property owner nervous. While he has understanding neighbors, he doesn’t want people teeing it up in his yard at their convenience.

“We’re going to have three or four week-ends a year where it’s just, come on out here and play,” Brough says. “Beyond that, it’s got to work for us. It’s a liability thing — I can’t have people falling off my hill.”


There’s a bucket of balls in the driveway. The Chiefs game is at halftime. Some guys shoot hoops. At Some Guy’s Backyard, they take turns firing at the pin 100 yards away tucked behind the creek. Their motto is that golf should be played with a wedge in one hand, a beer in the other.

Some of the architecture references at BCN — a Redan hole, the Road Hole — might be a little auspicious. After all, there

**Star Treatment** — The BCN crew uses the Hudson Star ([HudsonStar.com](http://HudsonStar.com)) greens mowers on its Meyer greens.

is a Popeye’s Chicken sign on display near No. 7 green. If the Golden Age architects were here to see it for themselves, they might tell these Jayhawks to turn in their crayons.

Or maybe they’d pat them on the backs. After all, in this age of social media influencers and trending topics, who is to judge? Like Willy Wonka angrily shot to Veruca Salt, “We are the music makers and we are the dreamers of dreams.”

“It’s unconventional, it’s different,” Hotaling admits. “But it’s a ton of fun. We’re having success, we’re selling merchandise, people are liking it and it’s giving us different opportunities. It’s also proving you don’t have to spend \$1 million a year to have a really good freaking time.” 

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# Sober advice on collar decline

BY CURT HARLER

**J**ust as shirt collars tend to wear quickly, collars on greens also tend to decline fast.

At superintendent gatherings, explanations for collar decline are many: Irrigation runoff gets trapped there, they suffer extra abuse by mowers and other equipment, crews pile bags of fertilizer on the collars rather than dimple greens.

However, drawing on a decade of experience with collar decline, University of Nebraska turfgrass researcher William Kreuser, Ph.D., has another culprit in mind: PGRs.

"The big factor in collar decline is overapplication of PGRs," Kreuser says. "The PGR effect on both collars and fairways is greater and lasts longer than it does on greens."



PHOTO BY: SETH JONES

He compares PGRs for grass to beers for golfers. A lightweight drinker can absorb a beer or two in an afternoon. A big guy is likely fine handling a six-pack over time. Drinking a case, for anyone, is overkill. Yet that's what he sees happening on golf courses with PGRs.

### **Collars are heavy drinkers**

"Collars are getting drunk on PGRs," Kreuser explains. Because the effects of PGRs are cumulative, as is alcohol in humans, pretty soon these effects are devastating. "We overapply PGRs if we use them at the same rate as we do on greens." The plants stagger and fail to grow. That leaves them more susceptible to low-growth diseases like dollar spot.

It shows up fast. "Bentgrass fairways and collars are much more sensitive to PGRs than greens are," Kreuser states. The work has not yet been replicated on bluegrass, although there may be parallels.

The simple fact is the PGR effect is greater and lasts longer on collars than on greens. Greens are noticeably warmer than collars. They grow faster. The hormone that PGRs inhibit is produced faster in greens, and more PGR material is removed with daily greens mowing.

### **Toss out your calendar**

In research at places as varied as New York, Arkansas and Nebraska, Kreuser has found that multiple factors may counteract drunken and damaged collars.

"Toss out your calendar," Kreuser advises. "Use growing-degree day models."

Almost any golf management website has a way to calculate local growing-degree day (GDD) data. **Greenkeeper-App.com** is a good one. At 350 GDDs, Primo will give 20-percent suppression on greens versus 55-percent suppression on fairways.

With Trimmit, a superintendent can stretch it even longer if conditions allow. Kreuser figures that 250 to 270 GDDs is a good target for most applications. Trimmit at 5.5 ounces will be effective. Legacy at 4.8 ounces at 270 GDDs or Musketeer at 12 ounces on 290-day schedules work.

Forget about doubling the rate and trying to extend the activity period. A two-times rate typically gives a mere two

**"Collars are getting drunk on PGRs."**

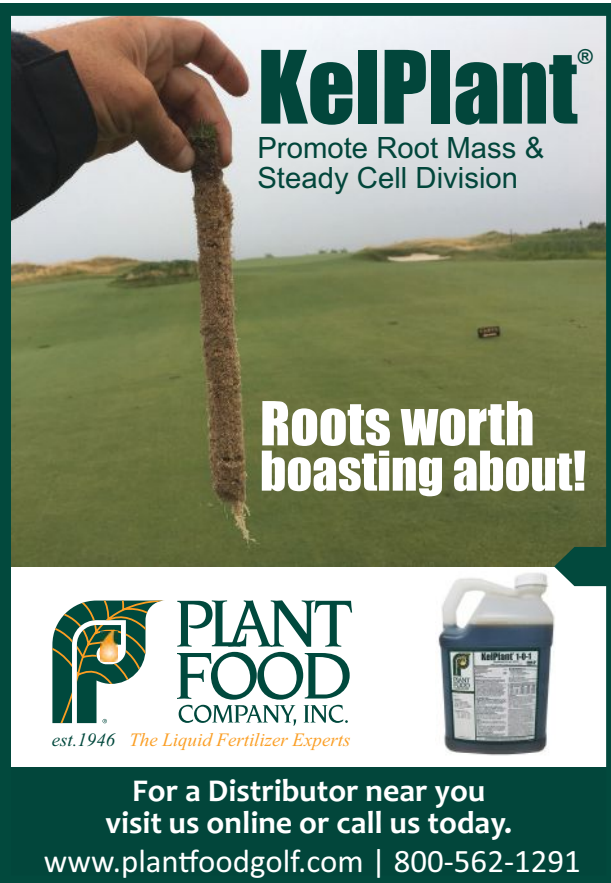
— WILLIAM KREUSER

extra days of suppression.

Overapplication is a major concern in the spring when the weather is cool. The GDDs do not add up as quickly, Kreuser told a gathering of superintendents at the recent Ohio Turfgrass Foundation conference. Likewise, temperature dips in the summer can wreak havoc with PGR performance and collar survival.

"The biggest challenge with PGRs is to know when they are

*Continued on page 58*



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## // DON'T LET A PGR CAUSE A DUI

*Continued from page 57*

working," Kreuser says. "I don't care if it is 110 degrees ... those PGRs are still working. When it is warm, all grasses grow fast. They'd grow even faster if you hadn't applied PGRs."

Fairways, too, are more sensitive than greens to PGR applications. Keep that in mind when figuring application rates and time intervals.

Research indicates that lowering the mowing height on collars might help, too. There is some serendipity in this finding, which appeared in Kreuser's research accidentally.

"If you are mowing bentgrass or bent/*Poa* collars at one-half inch, going down to three-eighths or .350 would be one way to mitigate damage,"

he says. Or, take a .400 height down to .300 on collars.

"Reducing mowing heights makes the grass grow faster." Somewhat higher N rates will help, too.

### **You'll know by the yield**

The only sure way to know when, and how well, a PGR is performing is to do regular clipping yield checks. Be aware of the PGR effect on greens speeds, too. On bentgrass, peak suppression generally happens around day seven. When it is hotter, courses have to be ready to apply Primo every week as opposed to three- or four-week intervals later in the season.

If you find yourself in trouble, he says, it might pay to look at a gibberellin product like

RyzUp. Applied at 0.15 ounces per acre, it will give stunted collars a real boost.

Rather than continuing to overdose, look at regulating the N on the collars. Consider lowering mower height from .500 to one-quarter inch.

First aid for PGR-soaked greens is possible on leaf-absorbed materials. Simply hose or irrigate the collars a bit more, washing off excess material. This has to be done right away, because 90 percent of PGR material is absorbed within 15 minutes of spraying a product like Primo.

"Don't let it sit," Kreuser says. "You have to do it rapidly — within 10 minutes." This strategy works only with foliar-absorbed PGRs and not

products like Trimmit or Cut-less or combinations.

Another strategy is to turn off the boom early when doing a PGR-only spray. Many programs alternate a tank mix spray of fertilizer, control products and PGRs with a PGR-only spray. It is tough to risk not getting full coverage, but keeping the PGRs away from the collar on the PGR-only spray is a good idea. GPS sprayers can be a big help.

"Over-regulation of collars is real," Kreuser says. "Don't get your collars drunk on PGRs." **G**

A frequent contributor to *Golfdom*, Curt Harler is a freelance writer with expertise in agronomy and turfgrass who resides in Strongsville, Ohio.

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# Super Science



The left photo shows hail damage on a green the morning after the storm, and the right photo shows the green later that day after implementing the recovery plan at Pryor Creek Golf Course.

// **HOLY HAIL!**


## RECOVERING FROM HAIL DAMAGE

By Cole Clark

A severe storm hit Pryor Creek Golf Course, near Billings, Mont., on Sunday, Aug. 11. The storm produced wind gusts of up to 70 mph and golf-ball- to tennis-ball-sized hail. The storm happened late enough at night that we waited until Monday morning to begin cleanup. To make the greens playable, we sent staff with backpack blowers up the center of each green to clear a path wide enough for a cart and turbine blower to get on the greens without mashing more sticks into the greens as they cleared debris from the rest of each green.

The first step of the plan I came up with was to vibratory roll the pock marks as smooth as possible. We followed the vibratory roll with a circle verticut at  $\frac{3}{16}$  inch with carbide tips. I believed the circle verticut gave me a chance to attack each pock from multiple directions.

We followed up the verticut by blowing remaining debris from the surface and did another vibratory roll. I then mowed each green with my sand reels, which were set 0.005 inch higher than the daily cutting units. Mowing at a higher cutting height avoided scalping any “tufting” that occurred from the hail or verticutting.

We followed all of that up with a light topdressing, which was watered in. On Monday night, the course had men's league playoffs on the nine holes that were hit the hardest. I didn't hear any complaints about the greens. I mowed for four days using the sand reels before switching to the regular reels. I'm about 10 days out from the storm while writing this, and the only different thing I've noticed is a bit of bruising of the leaf tissue, which seems to be improving daily. 

Cole Clark is the golf course superintendent at Pryor Creek Golf Course. You may reach Cole at [yegensuper@outlook.com](mailto:yegensuper@outlook.com) for more information.

## NEWS UPDATES

### PBI-GORDON REMOVES CERTAIN RESTRICTIONS ON AVENUE SOUTH

PBI-Gordon Corp. eliminated ambient temperature restrictions on when Avenue South Broadleaf Herbicide can be applied.

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“Avenue South delivers fast visual response on broadleaf weeds, with an exceptional degree of turf safety,” said Jay Young, herbicide product manager for PBI-Gordon. “Eliminating the ambient temperature restrictions gives turf professionals more flexibility as to when they can apply it.”

Avenue South can be used on golf course fairways and roughs, residential and commercial areas, ornamental turf sites, recreation areas, as well as other noncropland sites.

**“WHATEVER THE EXACT CAUSE, WINTERKILL OFTEN IS THE SOURCE OF SPRINGTIME STRESS FOR GOLF COURSE SUPERINTENDENTS.”**

Garett C. Heineck et al.

(see story on page 63)



"I've modified that first greeting over the years, adding a little more color. In my version, John comes up to me, puts his arm around me and says, 'This is how we are going to do this.'"

**KARL DANNEBERGER, PH.D.,** *Science Editor*

## Dedicated servant

**M**y first day on the faculty at The Ohio State University was Dec. 1, 1983. On my second day, I went to the Ohio Turfgrass Conference and Show. After registering, I didn't know what I was going to do. I knew no one. I'm sure no one knew me. As I was loitering, John Spodnik came up, shook my hand and introduced himself. John said to contact him if I needed any help.

I've modified that first greeting over the years, adding a little more color. In my version, John comes up to me, puts his arm around me and says, "This is how we are going to do this."

I saw John in August at his 90th birthday celebration in Westfield, Ohio. Numerous past and present superintendents, industry representatives, golf course architects, Westfield Insurance employees, family and friends gathered to pay tribute to John. As I listened to John and his old friends, I couldn't help but realize what an impact he had on the Northern Ohio Golf Course Superintendents Association (NOGCSA), the Golf Course Superintendents Association of America (GCSAA) and superintendents around the country.

With thanks to Frank Dobie of Sharon Golf Club, I want to convey what it was like to be around John Spodnik.

John graduated from Portage Township High School in 1947, a short time later enlisting in the U.S. Coast Guard, achieving the rank of chief petty

officer (1949-1951). Following his service, he attended Fenn College — now Cleveland State University — where in 1956, he received his Bachelor of Science degree in industrial engineering. During this period, he worked as a crew member at Oakwood and Canterbury Country Club for the legendary Mal McLaren and at Shaker Heights Country Club for Colin Smith. In 1960, John became superintendent at Westfield Country Club, where he remained until he retired in 1995.

John became secretary/treasurer of NOGCSA in 1960 and held that title for 34 years. He transformed NOGCSA from a loosely organized group into a professional organization. He placed the organization on solid financial footing and instituted the decorum necessary to run proper meetings. As one superintendent said, "Back in those days, I hadn't even heard of Robert's Rules of Order, but John made sure we all knew how to run a meeting according to those rules."

It was common after a monthly meeting that John and Don Figurella would call superintendents to ask why they were not at the meeting. John was still secretary/treasurer in 1994 when he became an honorary president of NOGCSA. During that period, he became president of GCSAA (1969), president of the Midwest Regional Turfgrass Foundation (Purdue 1975), director of the Ohio Turfgrass Foundation (1960-1967) and treasurer of The Musser International Turfgrass Foundation (1990).

John has received numerous awards, such as the Mal McLaren Award, the GCSAA Distinguished Service Award and Ohio Turfgrass Foundation Professional Excellence Award. He was inducted into the Northern Ohio Golf Association Hall of Fame.

The words integrity and honesty echoed throughout his birthday celebration. John has lived his personal and professional life believing in those words.

John's impact on those he mentored and supported in the profession has been great. Jean Esposito, golf course superintendent/owner of Hinckley Hills Golf Club, shared that when she was just starting out, John dropped by and welcomed her to NOGCSA and has been a supporter and friend ever since. She mentioned how important that professional friendship was to her during a time when the profession was not welcoming to women.

One of the golf course superintendents John Spodnik mentored is Mark Jordan, previously superintendent and now natural resources leader at Westfield Country Club. Mark is in line to be the 2021 GCSAA president. Maybe John once put his arm around Mark and said, "This is how we are going to do this." ©

Karl Danneberger, Ph.D., *Golfdom's* science editor and a professor at The Ohio State University, can be reached at [danneberger.1@osu.edu](mailto:danneberger.1@osu.edu).

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Wisdom TC Flowable	4 x 1 gal/case	\$6.00
Orthene TTO 97	12 x .773 lb cans/case	\$3.00
Orthene TTO 97	4 x 7.73 lb bags/case	\$15.00
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//HOW COLD IS COLD?

# Germinating creeping bent in the cold

By Garrett C. Heineck, Sam J. Bauer, Matt Cavanaugh, Andrew Hollman, Eric Watkins, Ph.D., and Brian P. Horgan, Ph.D.

**A**s turf begins to green up in the spring (or not), superintendents need to quickly repair winterkill damage to putting greens to increase early-season revenue.

The term winterkill is a catchall phrase describing several stresses, including damage from cold-weather desiccation, intracellular freezing, anoxia from ice sheeting and cold-loving fungi. Whatever the exact cause, winterkill often is the source of springtime stress for golf course superintendents.

This past winter was particularly hard on golf greens, with several greens in the Twin Cities area losing spring playability altogether (Figure 1). Many areas of the Upper Midwest received rain in early January followed by extreme cold, leading to early ice accumulation in low areas followed by localized dead patches in the spring. This was bad news for any superintendent, but especially ones who maintain creeping bentgrass (*Agrostis stolonifera* L.) greens with *Poa annua* intermixed, since *Poa* is not winter hardy.

It's well known that turfgrass species vary greatly in both days to germination and seedling vigor. For example, creeping bentgrass often takes six to 10 days to germinate, while perennial ryegrass (*Lolium perenne* L.) may germinate in as little as three days. Efforts to improve germination through cultural practices generally have led to poor results.

For example, applying polyethylene covers over spring establishments of creeping bentgrass following winterkill shows little to no improvement in the

**FIGURE 1**



Annual bluegrass winter kill in a putting green with green patches of creeping bentgrass that survived.

speed of germination and establishment. Cool spring conditions with nighttime temperatures averaging in the mid-30 degrees F for much of April (Figure 2) are the root cause of slow germination, lack of germination and subsequent establishment. However, within species (cultivars), there may be variation for germinability under these conditions of which superintendents can take advantage when overseeding creeping bentgrass greens in early spring.

## GERMINABILITY

With this in mind, the turfgrass group at the University of Minnesota designed an experiment to determine temperature-specific guidelines for seeding creeping bentgrass based on realistic spring temperatures in the Upper Midwest and

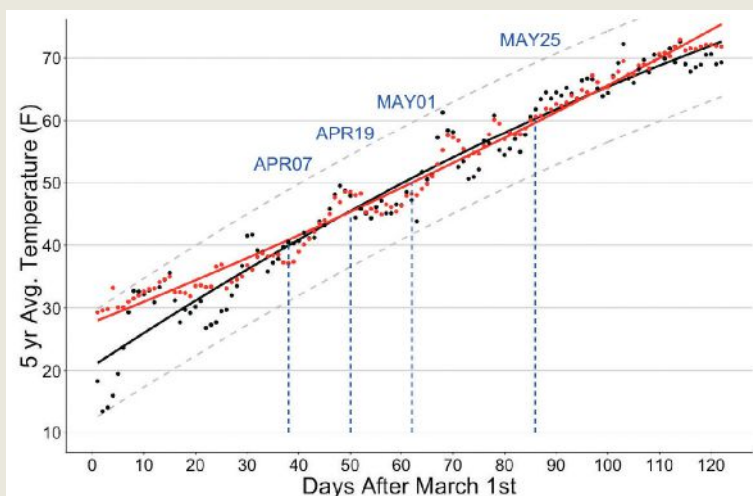
also to describe differences between 21 creeping bentgrass cultivars for their ability to germinate under suboptimal temperatures.

The study was conducted at the University of Minnesota using controlled growing environment equipment that mimicked the diurnal temperature changes observed in the field at a 2-inch soil depth. Temperature treatments represented a range of average spring temperatures in Minnesota from April 7 to May 25 (Figure 2). We sowed seeds in petri dishes and measured germination events daily until germination ceased (Figure 3).

Collective seed germination, sometimes referred to as germinability, is an interesting phenomenon to describe

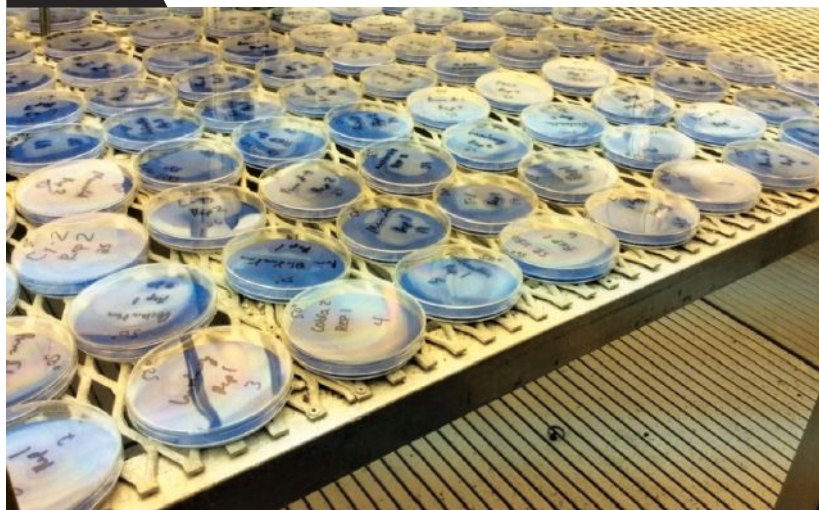
Continued on page 64

**FIGURE 2**



Typical temperatures observed in Minnesota throughout late winter and spring, based on a five-year average. The black dots and line represent air temperatures, while the red dots and line represent temperatures near the soil surface. The vertical blue lines represent experimental treatments used to determine cultivar germinability performance.

**FIGURE 3**



Germination test conducted at the University of Minnesota in a controlled environment. Temperature fluctuation and light duration mimicked spring conditions in the Upper Midwest. Each petri dish contained 100 seeds.

Continued from page 63  
because of the different measures that determine success. Some superintendents simply may be interested in the number of seeds that germinate in relation to the amount seeded without

regard to time (what we call maximum germination).

However, when winterkill strikes, a superintendent may want to fill in bare areas as quickly as possible to increase early-season revenue and maintain

healthy turf going into the summer months. Therefore, the amount of time in which germination begins to occur (time to 50-percent germination) and rate of germination (slope) are important parameters to consider (Figure 4).

Our research team integrated these ideas into our analysis, which relied upon a metric called the area under the germination curve (AUGC). This metric is similar to the area under the disease progress curve and takes into account the timing and amount of seed that is germinating. Discussing spring germination potential in terms of AUGC units gives a more comprehensible description; as AUGC units increase, so does early-season germinability (Figure 4).

Our findings showed that, indeed, as temperatures rose, so did the speed of germination. For example, there was no germination at an average temperature of 40 degrees F, which translates to typical early-April conditions in Minnesota. However, at conditions similar to late May, we found germination took only about nine days, which happens to be the same result under optimum textbook temperatures. Interestingly, we found the lowest temperature at which germination occurs was at an average temperature of 45 degrees F. This base temperature equates to typical late-April conditions and is the earliest we recommend overseeding bentgrass putting greens.

What happens if you seed earlier than this? In general, premature seeding, especially near the surface of the soil, increases loss in viability from rot and can result in seed predation by insects and small mammals. Additionally, we found that seeds treated with suboptimal temperatures often exhibited secondary dormancy, which greatly reduced maximum germination. We recommend watching soil temperatures near the soil surface and seeding when they reach 45 degrees F.

## CULTIVAR MATTERS

Our results showed that cultivar does

play a role in early-season germinability. Proclamation, Declaration and Pure Select performed well in the late-April treatment, all accumulating at least 7 germination units, significantly higher than any other entry (Figure 5). Independence and Memorial, on the other hand, clearly were the worst-performing cultivars under late-April conditions, accumulating only 2.5 and 2.7 germination units, respectively.

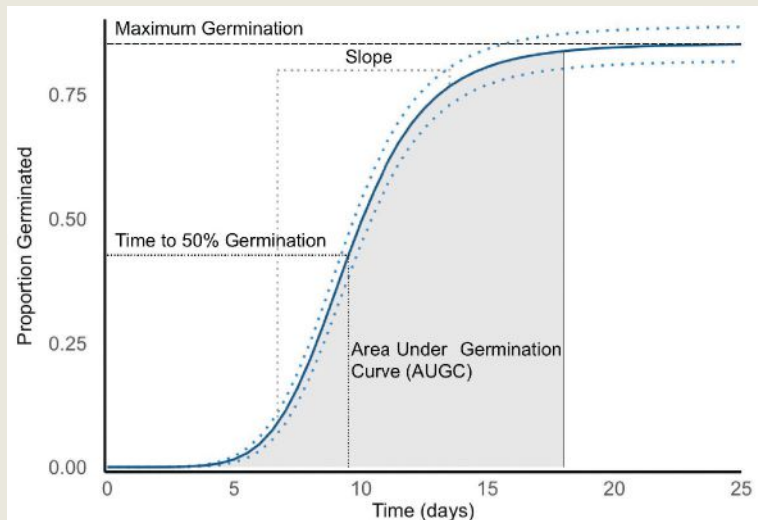
We did not find substantial time variation in which germination began to occur. Cultivars generally took 14 days to reach 50-percent germination, although Independence was markedly slower than the top performers. Most important, the speed at which germination occurred (slope) was much greater in Proclamation, Declaration and Pure Select (Figure 5). This means superintendents need fewer seeds from the top-performing cultivars to fill winterkill patches. We observed few differences in AUGC between cultivars at late-May temperatures. Therefore, when seeding in late spring, superintendents can select cultivars based on other desired characteristics such as disease resistance and color, even if rapid germination is a priority.

Early establishment of creeping bentgrass after winterkill decreases the success of *Poa annua* germination and establishment, leading to long-term consistent playability in the spring. Creeping bentgrass is one of the most winter-hardy turf species, so a little extra effort in making sure your greens are predominantly creeping bentgrass will pay dividends in springtime revenue.

Our research determined that cultivar selection plays a role in early-season germination and should be considered before overseeding into winterkill areas. When using overseeding as a management tool, please note that new cultivars might create localized changes in color over time and create the potential for reduced aesthetics. **G**

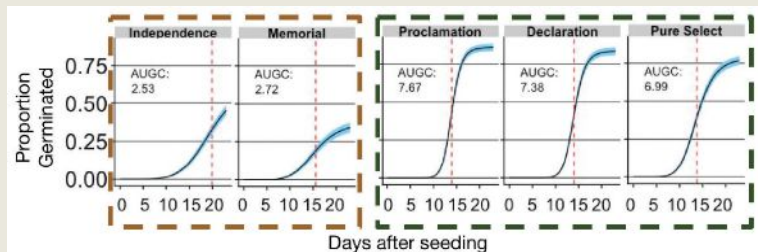
*Editor's note: A more extensive version*

**FIGURE 4**



Graphical demonstration of a predicted germination curve. Single-value germination values plotted over the curve represent maximum germination, slope and time to 50-percent germination. Area under the germination curve (AUGC) is represented in the gray area below the curve.

**FIGURE 5**



Select cultivar performance for temperatures mimicking late April. Fitted germination curves and AUGC values for the two worst-performing cultivars, Independence and Memorial, are outlined in brown, and the three best, Proclamation, Declaration and Pure Select, are in green. The larger the AUGC value, the better germinability under cold temperatures. Dotted red lines indicate time to 50-percent germination.

*of this research recently was published this year in the journal Crop, Forage & Turfgrass Management and can provide additional details on this research.*

Garett C. Heineck, Andrew Hollman, Eric Watkins and Brian P. Horgan are at the University of Minnesota. Sam Bauer is with BauerTurf, Wayzata, Minn., and Matt Cavanaugh is at Rush Creek Golf Club, Maple Grove, Minn. You may reach Garett at heine237@umn.edu for more information.

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**Silvery thread moss** is prevalent in putting greens with man-made, sand-based root zones.

## Suppressing silvery thread moss

Silvery thread moss easily can be spotted in putting greens by its silvery sheen, according to Zane Raudenbush, Ph.D., assistant professor of turfgrass management at Ohio State University.

Raudenbush adds that it's particularly persistent in creeping bentgrass or annual bluegrass putting greens, especially in greens with constructed or man-made sand-based root zones.

"Once you allow silvery thread moss to get into a putting green, you're going to have to use an array of tools to get it out and keep it controlled," Raudenbush says.

Reevaluating irrigation practices is one way to keep silvery thread moss at bay.

"The survival of moss is so dictated by the availability and persistence of water because it is just like a sponge," Raudenbush says. "So, any time you'd think of rainwater

or irrigation water that rehydrates the sponge, that's when moss would be actively photosynthesizing."

Because a colony the size of a quarter may boast up to 1,000 threadlike shoots, Raudenbush also recommends being wary that equipment — and even golfers' shoes — can track the silvery thread moss from green to green.

"Things like brushing, verticutting, basic mowing, especially at low cutting heights, are going to help disperse some of those moss shoots," he says.

In some cases, superintendents can physically remove the moss with a cup cutter, dispose of the plugs and use their nursery plugs to reestablish the area.

Making use of herbicides with the active ingredient of pyraflufen-ethyl or carfentrazone-ethyl is another piece of the puzzle to fend off the disease. **G**

PHOTO COURTESY OF: ZANE RAUDENBUSH

## FMC Professional Solutions

### TINA BOND

Technical service manager

Silvery thread moss (*Bryum argenteum*) is a perennial, nonvascular plant that spreads by spores, fragmentation or bulbils. It typically can be seen growing in greens in small patches that have a silver-green sheen and texture. It is highly adaptive and can survive some of the harshest conditions. Spores may be spread by equipment, surface water drainage and even by golfers. With its spongelike appearance and texture, silvery thread moss can retain an enormous amount of water and survive on extremely little water. It often appears in voids in the turf; therefore, we always recommend maintaining healthy, dense turf. It's important to irrigate infrequently, but thoroughly enough to encourage turf root growth deep into the soil. Raising mowing heights has shown to decrease its severity. Increasing nitrogen levels will promote turfgrass growth. Rolling, aerification and topdressing can help reduce the incidence of silvery thread moss. Superintendents can make QuickSilver applications when turf actively is growing so it can fill in voids left by the moss.



## Bayonne Golf Club

### THOMAS WOODWARD

Golf course superintendent

We've pretty much always had a moss problem on the greens, and it fluctuates. Some years it's pretty minor and others it's pretty severe — a lot of that depends on the weather, how much rain we're getting, how much cloud cover we're getting. Wet, cloudy weather really seems to help it grow and spread. We do a light topdressing once or twice a month and try to restrict irrigation. The best irrigation practices are deep and infrequent. We typically spray QuickSilver periodically throughout the year if we start seeing it flare up. It's better to do it on a sunny day. Aerification to break up the moss pads also helps, anything you can do to break up the pad of the moss to try and get the bentgrass to grow through it. Something else I think is key is spraying the QuickSilver somewhere between three to seven days before you do major cultural practices like aerification and verticutting, so you're not spreading those spores all over.



## LaFortune Park Golf Course

### SCOTT SCHURMAN

Golf course superintendent

We deal with (silvery thread moss) a bit at LaFortune Park GC, but the majority of what I've dealt with was in Carney, Neb. Originally, we'd take a weed wand — it's a tube — it's got a little sponge on the end and a spring. We'd daub the greens out a bit, and we were having good luck with it. A few years later, I took a webinar, and it mentioned that if you have silvery thread moss on one green, you have it on all of them because the spores get on the rollers and spread. We started blanket spraying 2 ounces per acre of QuickSilver once a month. When we were using it in the summer months, we also added TrimIt to the tank mix, and that would help encourage the bentgrass to spread and start covering over the dead spots of the silver thread. We'd start treating it in early April or late May and treat it all the way through September.



## The Country Club at Muirfield Village

### RODNEY ROBINS

Golf course superintendent

I'm in my third season at The Country Club at Muirfield Village, and one of the first things I noticed when I got here is that I had three greens that had really bad moss. I had some golf-ball- to baseball-sized patches. What we had was beyond what we could chemically control. I've been extremely aggressive with just plugging it out with the cup cutter. We just physically remove it. We looked at the reasons why we have moss here. We've taken corrective actions on all of those. I had poor irrigation coverage that was overwetting areas. I had some shade issues with some trees; I wasn't getting any direct sunlight until 10 or 11 a.m. We're pretty much now just using the QuickSilver. I'll do three sprays three weeks apart at 2 ounces per acre. We've stopped the bleeding and started recovering all of these areas. I treat with QuickSilver across all the greens when I do the application. I add ammonium sulfate at 21-0-0; it helps pull the QuickSilver into the plant.



# Manuscript herbicide to control tropical signalgrass and other weeds

*Lane Tredway, Ph.D., is a technical services manager with Syngenta. Lane has overseen numerous field experiments with Manuscript and other herbicides. You may reach Lane at [lane.tredway@syngenta.com](mailto:lane.tredway@syngenta.com) for more information.*

## **Q** Briefly describe Manuscript and its fit on golf courses for weed control.

Manuscript herbicide contains the active ingredient pinoxaden and a safener, and is packaged with the surfactant Adigor. Pinoxaden is classified as an ACCase inhibitor. While ACCase herbicides have been in the agricultural market for many years, the molecule was redesigned by scientists at Syngenta for selective control of perennial and annual grasses in bermudagrass and zoysiagrass turf. As a result, Manuscript is extremely safe on bermudagrass and zoysiagrass, but should not be applied to any other warm- or cool-season turfgrass species on the golf course. Manuscript is an MSMA replacement in Florida.

## **Q** What weed species are most effectively controlled by Manuscript?

In Florida, tropical signalgrass (*Urochloa distachya* L.) is a difficult weed to control and is one of the weeds controlled by Manuscript postemergence. Two applications of Manuscript applied two

to three weeks apart, with the first application made in late spring or early summer to actively growing tropical signalgrass, will provide effective control. Application of Manuscript at this time will allow bermudagrass to fill in any voids. As a result, a high-quality playing surface is ready for the fall golf season.

Manuscript also is an effective postemergent herbicide on crabgrass (*Digitaria* spp.) when two applications are made two to three weeks apart, with the first application made in late spring or early summer.

Dallisgrass (*Paspalum dilatatum*) is controlled with Manuscript, but like other herbicides, it performs best in the fall and spring. We recommend two applications on a 14- to 21-day interval starting in mid-September to mid-October or late April to May. Superintendents need persistence to control dallisgrass. It has a network of large rhizomes that allow it to recover from herbicide applications. To completely control dallisgrass, superintendents must commit to a several-year program of fall and spring herbicide applications.

For control of tropical signalgrass, crabgrass and dallisgrass, apply Manuscript at the spot treatment rate of 9.6 fl oz per 10,000 ft<sup>2</sup>.

Broadcast rates of Manuscript (9.6 to 19.2 fl oz/acre) are extremely effective for removing overseeded perennial ryegrass (*Lolium perenne* L.) from bermudagrass turf. It is effective at low rates and provides an abrupt transition from perennial ryegrass to the base bermudagrass. Research continues to refine Manuscript rates to remove overseeded perennial ryegrass from bermudagrass.

## **Q** Explain in more detail the spot treatment rate.

The advantage of the spot treatment rate is that it is higher than the broadcast rate, so it provides more effective weed control. When using the spot treatment rate, superintendents can treat only a maximum of 10,000 sq. ft. in an acre. This means superintendents must have a good handle on the distribution and area of the weed infestation to be treated.

In cases with widespread weed infestation, it may be necessary to use another herbicide to reduce the area of infestation before using Manuscript to control the remaining weeds.

## **Q** What tips do you have for superintendents to use Manuscript most effectively?

Manuscript is foliarly absorbed, so uniform coverage is essential. Apply Manuscript in 40 gallons of water per acre, and be sure to use Adigor (the surfactant) packaged with Manuscript. The area needs to be rain free and irrigation free for a minimum of three hours following application to allow Manuscript to be absorbed. Also, target weeds need to be green, actively growing and not under drought stress to allow Manuscript to be translocated throughout the weed.

## **Q** What is the environmental profile of Manuscript?

Manuscript has a reasonable environmental profile with no major environmental concerns. That said, superintendents need to read and follow all label directions, use appropriate application techniques and follow common sense safety precautions. ☺



Clark Throssell, Ph.D., loves to talk turf. Contact him at [clarkthrossell@bresnan.net](mailto:clarkthrossell@bresnan.net).



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# The Shop

// MUST-HAVE NEW PRODUCTS



1



2



3

## 1 Klingstone bunker liner

**KLINGSTONE** is a polyurethane resin that cures to an inert, plastic substance when it penetrates the soil base of the bunker cavity. Klingstone is sprayed directly onto the subgrade of bunkers using a garden hose and a simple spray nozzle. This saturated sand layer becomes a hard plastic/sand liner. The process is much like thoroughly watering the bunker cavity. Klingstone has a 20-year track record of successful installations and is a veteran-owned business.

[Klingstone.com](http://Klingstone.com)

## 2 Bunker Dry system

Managing bunkers is now easier with the **BUNKER DRY** system, the company said. The system saves time and money by using hydraulic pressure and gravity to simply drain water quickly and more efficiently from sand bunkers. Bunker Dry replaces traditional subsoil-type drains that require extensive trenching, coils of pipe, tons of gravel and yards of geotextile.

[BunkerDry.com.au](http://BunkerDry.com.au)

## 3 Humic DG

Humic DG by **THE ANDERSONS** is a humic-acid-based soil amendment containing a complete spectrum of humic substances. These homogenous granules contain 70 percent humic acid and feature Dispersing Granule (DG) technology. While increasing phosphorus uptake, Humic DG also enhances nitrogen efficiency and micronutrient availability. Humic DG improves water infiltration, increases CEC and improves soil structure, according to the company. Combine fall fertility applications with Humic DG to improve fertilizer efficacy and overall soil health.

[AndersonsPlantNutrient.com](http://AndersonsPlantNutrient.com)



4

## CHECK OUT MORE NEW EQUIPMENT ONLINE

To stay up to date on all the latest products and services, visit [golfdom.com/category/products](http://golfdom.com/category/products)

### 4 Erosion-resistant bunker sand

**KAFKA GRANITE**'s erosion-resistant bunker sand was specially designed for high-maintenance, out-of-play bunkers at Whistling Straits Golf Course. The material easily can be installed over the steep faces of preexisting bunker sand. This allows water to shed down into the drainage system without erosion — drastically cutting back on maintenance, the company said.

[KafkaGranite.com/golf](http://KafkaGranite.com/golf)

### 5 Manuscript herbicide

Superintendents can control dallisgrass this fall using **SYNGENTA**'s Manuscript herbicide. With a novel active ingredient for turf, Manuscript controls mature weeds any time they are actively growing. Manuscript is labeled for use in bermudagrass and zoisagrass on golf courses. Control dallisgrass with a spot-treatment rate of 0.96 fl oz Manuscript and 0.64 fl oz Adigor surfactant per gallon of water per 1,000 ft<sup>2</sup>. Apply again 14 to 21 days later, treating no more than 10,000 ft<sup>2</sup> per year. Manuscript also controls grassy weeds like tropical signalgrass and crabgrass.

[GreenCastOnline.com/Manuscript](http://GreenCastOnline.com/Manuscript)



5



6

### 6 Blinder Bunker liner

**BLINDER BUNKER** liner is a flexible, completely seamless porous bunker liner using recycled crumb rubber mixed on-site with a proprietary binding agent. Blinder's properties include resistance to club strikes and the ability to withstand changes in temperature and the associated expansion and contraction of surrounding soil. It also offers all the benefits of a porous liner, such as minimizing washouts and improving the consistency and playability of bunkers, according to the company.

[TheBlinder.com](http://TheBlinder.com)

# The 19<sup>th</sup> Hole

## Scott Schurman

**SUPERINTENDENT** // LaFortune Park GC, Tulsa, Okla.



### Scott, what can I get you?

Water would be great, but I also like a good lager.



### Tell me about LaFortune

**Park.** LaFortune Park GC was started in 1961 and is owned and operated by Tulsa County. We have an 18-hole championship course and an 18-hole par-3 course. In 2018, they renovated the par-3, re-routed a number of holes and updated the lighting. The championship course has L-93 greens, and the par-3 has TifEagle greens.

**Tell me about your family.** I've been married to Carol almost 17 years. My son is Joseph, and we have a yellow lab — Wrigley — who was in the Underdogs of Turf calendar last year.

### Would you want Joseph to pursue this industry?

Yes and no. It'd be nice if he were a third-generation superintendent. But right now, he's 11, and he's writing his "novel." He's creating his own space language. He wants to be an author and an artist. Whatever he decides to do, I will support him.

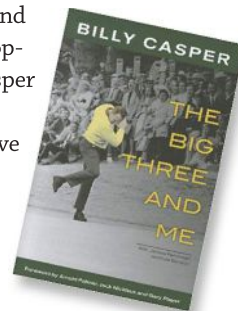


**So, he's into science fiction?** Yes, he is. He knows more about "Star Wars" than I do!

### What sports teams do you root for?

I root for the Nebraska Cornhuskers and the Chicago Cubs.

**What's your favorite book?** "The Big Three and Me," by Billy Casper. It's about Palmer, Nicklaus, Player and Billy Casper. I've had the opportunity to meet Mr. Casper a couple of times. He was one of the nicest guys I have ever met.



### Where's the best place to eat in Tulsa?

Umberto's Pizza. I once asked Umberto how he got into it. He was working for a pizza chain in New York, and they transferred him to Tulsa. They were going to transfer him again, but he liked Tulsa so much he decided to stay and open his own pizza joint.

### What's the coolest event you've attended in person?

The 1986 Masters. I went to the practice round on Tuesday, and I got to see Sam Snead. Byron Nelson was walking around with Tom Watson. We followed those two guys from 16 green up to 18, and we got to 18 tee, and Watson looks at Byron and says, "Byron, do you want to hit a shot?" He teed up, and I got right behind him on 18 tee. I got a picture of Byron and his swing. It's a swing you'd see back in the '30s and '40s. It was like going back in time, when Mr. Nelson was on the Tour.

### // BEST ADVICE

**"TREAT YOUR CREW WITH RESPECT, AND THEY WILL TREAT YOU WITH RESPECT. ONE OF THE THINGS THAT STICKS WITH ME THAT MY DAD TOLD ME WAS, 'IF YOU THINK YOU'VE GOT THE GOLF INDUSTRY FIGURED OUT, THEN QUIT — IT'S CONSTANTLY CHANGING.'"**



As interviewed by Seth Jones, Sept. 6, 2019.

PHOTO OF SCOTT SCHURMAN BY: LOU FERRARO, SOUTH PARK PHOTOGRAPHY;  
DOG PHOTO BY SCOTT SCHURMAN; FAUX REAL (T-SHIRT);  
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