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# 2017 STATE OF THE **INDUSTRY** REPORT p Wanted

From coast to coast, the labor market glut is impacting golf course maintenance operations. This year's report breaks down the core problem, as well as benchmarks superintendent finances and spending.



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# NOBODY DOES IT BETTER

tell anybody who asks - and anybody interested in hearing a rambling editor describe the nuances of his job - effectively conveying a fact, thought, idea or concept in 140 characters or less is more mind-numbing than writing a 2,000-word story.

Once you get beyond what we journos call a lead, a well-sourced, thoroughly researched story flows like a new golf course with a quality routing plan and empowering owner/ developer. Everything slips into its desired place and we dive into the next task.

Social media is different.

Humans holding job titles have plenty to say, audiences don't have enough time to absorb much of anything, and competition for attention is fierce. Timelines are the 21st century version of a newsstand or overstocked pro shop. Something must pop to generate curiosity.

So, journos labor over tweets and posts, trying to share what they want others to know in a clever and concise format that didn't exist when many of us received our formal



**Guy Cipriano** Associate Editor

training. We learn through trial and error. What sticks at 1 p.m. Saturday might not generate a single engagement at 10 a.m. Wednesday.

Along the way, we pause often and begin noticing



Our Kaminski Award winner, Hazeltine National's Chris Tritabaugh, increased his commitment while preparing a course in his native Minnesota for one of

the world's largest sporting events. The Twitterfest Tritabaugh and his team initiated at the Ryder Cup was arguably the greatest industry achievement in 2016. The Hazeltine crew and volunteers showed and explained practices that had been viewed and treated as secrets for decades. And they squeezed each into 140 characters or less.

We received a record number of nominations for this year's awards, and the turf side of the golf industry is 100 yards ahead of other segments in using social media to exchange ideas, help others, and promote beautiful landscapes. Nobody in turf has inspired more colleagues to explore the benefits of social media than Tritabaugh. Here's how one nominator described him:

"This year, there is a clear leader in every possible category of looking into the future and how social media will play a role in our communications. Chris Tritabaugh's (@ct\_turf) use of Twitter during the Ryder Cup was groundbreaking. It made all of us active that week feel like we were at the event. I know not every superintendent sees events that way in the future, but I thought it was brilliant. Give him any and all awards you have available.'

We're only giving Tritabaugh one award, but it's our most prestigious. The industry professionals who will surround Tritabaugh on the awards stage in Orlando proved executing brilliant social media work doesn't require hosting a gigantic tournament. Good luck trying to describe their talents in 140 characters or less. GCI

For a list of winners and #GCITweetUp17 details see page 65.

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# NOTEBOOK



# **BEE-U-TIFUL** combination

California superintendent is using pollinator activity to help strengthen local junior golf programs.

SOMETIMES THE BEES CAN BEN-EFIT a golf facility's mission more than birdies or pars.

Jay Neunsinger is in his second year as the superintendent at Boundary Oak Golf Course, a municipal facility in Northern California's East Bay. Looking to bolster the course's By Guy Cipriano

already strong environmental reputation – Boundary Oak was designated a certified Audubon Cooperative Sanctuary in 2012 – and improve the game at the entry levels, Neunsinger explored the possibilities associated with a skill he started developing before arriving at Boundary Oak. With the help of a volunteer marshal and self-taught beekeeper from his previous course, Carla Filippone, Neunsinger works with two other Bay Area courses to establish hives with sales of honey harvested benefitting Bay Area junior golf programs. The hives and pollinator areas Neunsinger

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# NOTEBOOK

has established since arriving at Boundary Oak are an extension of the core values promoted by the facility's operator CourseCo with support from the course's owners, the City of Walnut Creek, Neunsinger says. The partnership between CourseCo and the City of Walnut Creek harbors the commitment of community inclusion. Boundary Oak also has a junior-friendly reputation with the First Tee of Contra Costa, the LPGA/USGA Girls Golf, and the City of Walnut Creek Junior Golf Camp programs running at the course.

Funds from the honey sale will benefit multiple Bay Area junior programs. The initial windfall is expected to be modest, but Neunsinger has spoken with area superintendents who want to establish hives in 2017.

"We thought that maybe by selling the honey produced at the courses we could help some of the junior programs so they are not struggling for supplies or equipment to enhance their programs," Neunsinger says. "Let's say it's \$500 to start for a couple of organizations, that would be pretty cool. We are running with the idea and it has the potential to raise a lot more money while also providing opportunities to teach the kids about the importance of bees while teaching golf."

Neunsinger considers the effort a "mom and pop" operation. His interest in beekeeping stemmed from reading articles about the benefits of pollinators and with Filippone's help, they used a demonstration hive to introduce the importance of bees to a group of high school students participating in an Oakland Turfgrass Education Initiative study tour. To pique his own curiosity, Neunsinger attended free classes, joined a local beekeeper society and worked with Filippone to set up multiple hives and get hives donated by beekeepers living near Boundary Oak.

Boundary Oak has three hives, all located near the maintenance facility wash pad. Neunsinger says the equipment needed to establish hives costs less than \$400, and he tells other superintendents the time commitment is minimal.

"It's an absolute piece of cake," he says. "There are many free classes I have attended to listen about native bees, pollinators and honey bees. The one thing I have always taken home is that if you have a hive, don't try to mess with it too much. I think a lot people feel like it's this harboring hobby where they always have to check on their hive and see what their bees are doing. I get in there once a month. It takes me 30 minutes. I pop my head in and see what they are doing."

The hives produced 80 pounds of honey last fall, a total Neunsinger expects to increase as Boundary Oak obtains additional hives and he becomes a more experienced beekeeper. The honey is packaged in bear-shaped jars he received from an uncle living in Minnesota who works for a plastics company. The jars are sealed and labeled, and children will sell the honey at on-course stands during a pair of upcoming events benefitting Bay Area junior golf programs. A long-range goal involves collecting enough honey to sell the sweet substance at local farmers' markets.

"I would like to expand it," Neunsinger says. "Right now we are at the beginning stages. The more golf courses we can get online, the easier it would be to have a volume available for purchase."

Guy Cipriano is GCI's associate editor.

# The sounds of GCI

GCI received an awesome Christmas gift – a podcast recording studio.



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

We unveiled the new technology by sharing a trio of Superintendent Radio Network episodes with our listeners and followers.

Bluejack National director of agronomy Eric Bauer had an eventful 2016, completing the grow-in of the first Tiger Woods-designed golf course in the United States. The growin was the fourth of Bauer's career and each one presented unique challenges. Enter <u>bit.ly/2hof9J6</u> into your web browser to learn more about Bauer's route to Bluejack National and the story behind the Twitter handle on his golf bag. Our "Tartan Talks" series continues with Nathan Crace joining us for an entertaining conversation about building a golf course as a 10-year-old, his relationship with the late Bob Cupp and fiction writing. Enter **bit.ly/2gZG0ye** into your web browser learn more about one of the ASGCA's newest members.

And, finally, GCI publisher Pat Jones offers his parting thoughts on 2016. What trends should concern and encourage superintendents? Enter **bit.ly/2hdHPqA** into your web browser to find out.

# NOTEBOOK

# Jacobsen operations begin move to Augusta

eaders from the Textron Specialized Vehicles team provided GCI with a sneak preview of the new facility that will host Jacobsen Turf production as the company moves operations to Augusta to synchronize production with E-Z-GO and other brands.



Textron Specialized Vehicles CEO Kevin Holleran.

The move from Charlotte to Augusta means a lot of changes but the goal is to

bring all manufacturing and operations for the golf and industrial business under one umbrella. "There's a real cost when you have duplication in so many areas," Textron Specialized Vehicles CEO Kevin Holleran said. "When there are two different entities and two different P&Ls, it just doesn't work as well as it should."





Holleran and his team are preparing for the move of production lines which will be staged throughout 2017. The transition will be made easier by the fact that at least 70 employees from Charlotte have accepted offers to relocate two hours south to Augusta.

The plan is to combine what had been done with nine assembly lines in Charlotte into three modern, adaptable lines for Jacobsen's golf and turf equipment. Holleran is cognizant of the problems that plagued Jacobsen after the last move and they're employing a cautious, phased-in approach to the manufacturing shift. Parts will move last and they made it clear they would have their 10 service/parts centers fully stocked before the transition.

Holleran also paid tribute to David Withers, who ended his tenure with the company Dec 31. "I just want to recognize David for his 24 years of service with Textron," he said.

One point the new team hammered home: They're still 100 percent committed to the turf business. They recognize that moves like this raise some evebrows

but they made a compelling case that this is a smart move that will allow them to be more competitive overall and improve manufacturing quality and efficiency.

"I don't much care that the golf market is shrinking," Holleran said. "It's still a strong business and we're going to grow within the segment."

# From THE FEED

The Dye family had a memorable December. The ASGCA announced Alice will receive the 2017 Donald Ross Award and Pete turned 91 on Dec. 29. We celebrated Pete's birthday by asking our followers to share memories of their personal interactions with the Hall of Fame architect.



**Beavercreek Turf** 

@zachwike Dec I was fortunate to spend time with Mr. Dye at The Honors Course in 2005. It was an experience I will never forget

### steve wright cgcs



@wrightsteve19 22h22 Almost 10 years on HHI at Long Cove Club 1 of Pete's best and then new construction in Boca Raton Dye IV. Lots of memories.



@GLCCTurf

Met Pete Dye for the first time at the 2003 Eagle Eye Golf Club grand opening celebration as an assistant super #HappyBDayPete

### **Dan Francis**



Was an intern At TPC Sawgrass in '05-'06 when Mr. Dye & @maccurrachgolf did the rebuild of the Stadium Course, #OnceInALifetime





Join the conversation on Twitter @GCIMagazine!

## **OUTSIDE** THE ROPES

# 2016 GRAINY'S



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

# It's award season again, so without any further ado, here are my picks for last year's best moments.

BEST PICTURE. Top honors go to the remake of the "Duel in The Sun," which starred Phil Mickelson and Henrik Stenson at Royal Troon. Last year's Open Championship proved there can be great golf between two excellent players without all the manmade fanfare and course doctoring that marks the other majors. When the forecast called for wind, the R&A didn't even mow the greens

on Saturday, choosing to keep green speed from affecting the play. I'm willing to bet the untricked-up nature of the course was one reason this classic didn't turn into another version of "Law and Order," with the spotlight stolen by golf's most undesirable costars: Rules officials.

**BEST ACTOR. Dustin Johnson**, in a landslide. DJ never broke character throughout the epic disaster pic called "The U.S. Open That Ate Oakmont." Despite indecisive and over-officious

Rules impacts and heckling, Dustin stuck to the script and stole the show. He also was a breakout action star, playing three of the greatest



Johnson

golf shots you've ever seen while under the extreme pressure that is the 72nd hole of our national championship. DJ also wins the Starbucks-sponsored "Extra-Grind" award for perseverance, and he gave an assist to "The Great One," his father-in-law, Wayne Gretzky.

BEST SUPPORTING ACTOR. Oakmont came close to being the most memorable Open in history, but for all the wrong reasons. Saving it was John Zimmers and his agronomy staff, who prepared the course in true U.S. Open fashion and provided unparalleled turf and playing conditions, allowing the players to play without worry. Despite a week's worth of drama on Sunday—the course provided the perfect scenery and John deserves the credit.

**BEST PRODUCTION DESIGN.** After earning nothing but raspberries last year, FOX Sports made an incredible comeback, notably by minimizing the special effects and giving too many ill-prepared cast members speaking parts, and focusing on golf. And while some people dismiss Hollywood — and the golf world for not giving enough notable speaking roles to women, the absence of Holly Sonders from the screen this year was a good thing. Now if they could just find the right vehicle — preferably one not about golf — for Joe Buck.

SPECIAL ACHIEVEMENT AWARD. Each fall, Ralph Kepple and East Lake Golf Club go unrecognized (think of it as "Best Short-Changed Subject") for course preparation, losing out to the "blockbusters" (the majors) and what has to be the most overhyped epic of each year, the FedEx Cup. (That's me snoring again, sorry.) But Kepple and East Lake get it right, avoiding controversy, sticking to the script and doing their jobs like the professionals they are. And credit to whichever director made the smart call to reverse the nines this year so as to NOT finish on the deflating par-three 18th.

BEST DIRECTION, COMEDY. We may have to retire this award since the USGA Rules officials have an almost permanent hold on it. Just when you think a USGA event will be a serious classic A+ drama, it turns into comedy, then tragedy, when golf's version of the Keystone Kops try to enforce the law. Rules are rules and should be followed, and without them there'd be chaos. The penalties were correct, but in flubbing their lines and chewing the scenery, the USGA turned not one but two national championships into make-believe.

### **BEST CINEMATOG-**

RAPHY. To the FOX cameraperson — make that "ass-istant cameraperson" — who followed Paulina Gretzky

Gretzky

Johnson and her "tightie whitie" skirt into the scorer's room after DJ's U.S. Open win. For this year, I'm changing the name of the award to "Sin-ematography."

## Those were the best of the year. Now for the worst... THE "ISHTAR" AWARD. Golf in the

Olympics. Sorry, hype it all you want, it was just another golf tournament, hardly Olympic material. I'll take track and field, swimming, gymnastics, and all the events where underappreciated athletes (and I stress "athletes") have trained and sacrificed for years for a momentary shot at glory. And how many shot-putters flew to Rio on private jets? If golf gets cast again in the Olympics, I strongly suggest changing the format to team match play. And can someone explain to me how this event will help grow the game? Especially now that we're hearing Gil Hanse's design may be plowed under because no one plays?



### THE SHAMELESS OVER-PRODUCTION

**AWARD.** The PGA and the Ryder Cup. Yes, I'm glad the United States won because it will help promote golf in the USA, but from the "walk-of-fame" parade to the red-carpet treatment of the players to the massive press conference, it turned me off. Contrast that over-production to the perfect production from "Super-Tweeter" superintendent Chris Tritabaugh, who did himself, his club and the Minnesota turf crowd proud.

# Other Ryder Cup-related awards:

**"DO WE REALLY NEED THIRD, FOURTH AND FIFTH ASSISTANT DIRECTORS?"** To the assistant captains, all 37 of them. (Did I miss any?)

**OVER-ACTING.** Spare me the player antics and fist-pumping like it's the NBA or NFL.

make greens get that fast that quickly. No one likes to see five-putting. (And we'd better get these clowns off the stage before Monday because we have a renovation to do!) The PGA Tour does not like surprises as was evident by the facial expression on the PGA Tour's VP of Rules and Competitions Mark Russell reacting to the golf media's probing questions about



WORST COSTUME DESIGN. Why do fans wear some of those get-ups? Is it to support their teams or get 15 seconds of televised fame?

**REALITY TV**. Phil and Sergio saved it for me with their Sunday singles: 17 birdies and no animals were harmed in the making of that match.

WORST COSTUME DESIGN II. The

Ryder Cup wives and their ponchos. Red, White, and I almost Blue lunch.

WORST ACTS OF AGRONOMY. The green speed during Saturday's third round of The Players. Sorry, but wind and a sudden drop in humidity can't



sudden and unexpected course setup changes was classic Clint Eastwood. "Go ahead; don't make my greens too fast for play!"

SEQUELS THAT NEED TO GO AWAY. Golf's water issue. I get it, we don't have enough water, too much is wasted, and the industry isn't doing what it could to preserve

the little we've got. So, stop the scary movie and continue to produce documentaries that tell us what we can do. Oh, by the way, climate change is real.

**IN MEMORIAM.** Peggy Kirk Bell was one of the game's true pioneers, as a teacher and a crusader for women. No

> one better represented our game or gave more time to her students without asking for any applause in return.

## LIFETIME ACHIEVE-MENT AWARD.

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# WELCOME



econtinue to be a proud sponsor Golf Course Industry's State of the Industry Report. The study identifies opportunities we can all leverage to improve and grow our

businesses. At Jacobsen, we understand the more we can help your courses

increase rounds, revenue and profit, the more we all succeed. We serve the industry as a true partner by manufacturing superior-performing products, providing world-class service, and supporting key industry organizations.

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Moving forward, Jacobsen will continue to work as a true industry partner, providing products, service and support that make you more successful every day.

Best regards, Rachel Luken Thompson



ith the anticipation of a new year and the reflections of this past, Nufarm is eager to see the application season unfold. The golf industry continues to gain strength over previous

recession years and with that are increased demands on the quality of turf that embodies your courses. We are ready to help you in all the turf chemical needs to deliver with innovative and classic solutions.

Millinium Ultra 2 for many is a go-to product herbicide providing trusted control of the most challenging weeds by translocating to the root. For some, this may be the year to try this proven solution. For others, you may just now realize this classic solution is a Nufarm product.

Anuew is an example of Nufarm's innovative approach to problem solving and continues to be the talk of the PGRs as we are seeing many positive reviews. Dr. Kreuser's growing degree day tracker incorporates the data to assist in the Anuew application rates and timing allowing for better control and desired results. Logging weather, pest reports, applications and provides alerts, Greenkeeperap.com is gaining popularity.

On the new product front, Nufarm is your source for the new Dollar Spot fungicide, Pinpoint. This unique solution to managing the troublesome disease has already received rave reviews. A strobi for dollar spot, you may ask. Absolutely.

Another example of the innovative approaches Nufarm strives to deliver is Celero for control of sedges including kyllinga.

Our commitment to you is to continue to evolve as an international

organization and your most trusted supplier to the golf industry.

Cam Copley Golf National Accounts Managerw

2017 STATE OF THE INDUSTRY REPORT

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From coast to coast, the labor market glut is impacting golf course maintenance operations. This year's report breaks down the core problem, as well as benchmarks superintendent finances and spending.

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**WANTED:** Reliable workers to fill open positions on golf course maintenance crews.

Location: Everywhere.

esults of the State of the Industry survey supported everything we heard from superintendents on both coasts and all spots in between throughout 2016 – the industry faces a labor crunch.

How big of an issue is labor? Fifty-five percent of respondents indicated the labor situation at their course is either at a "crisis level" or makes them "nervous." Superintendents at private facilities are especially unnerved, with 60 percent falling into one of the two above categories.

Improvements in the national economy and upticks in industries such as construction, manufacturing and landscaping mean the average starting wage in the golf industry entering has

one

Now

The

Bed

dre:

Full

bath

2017 is \$10.60 per hour. The two coasts are the most expensive places to fill a crew, with 81 percent of facilities in the Northeast and 72 percent in the West reporting figures that exceed the national industry average.

General labor is the toughest positions to fill with qualified candidates, according to 59 percent of respondents. Seventy percent of Midwest superintendents listed general labor as the toughest position to fill with qualified candidates. Sixty-one percent of Midwest courses have starting entrylevel wages below \$10 per hour. Seven of the 14 states where the minimum wage is the same as the federal rate of \$7.25 per hour are in the Midwest, according to Department of Labor statistics. Arizona, Vermont, Connecticut, California, Massachusetts and Washington have minimum wages above \$10 per hour. Georgia and Wyoming have minimum wages below the federate rate, while Alabama, Louisiana, Mississippi, South Carolina and Tennessee don't require a minimum wage.

Despite the hiring challenges, the average size of a maintenance staff increased from 16.9 workers in 2015 to 18.3 in 2016. The increase is likely attributed to a higher percentage of private course responding to the 2017 survey compared to previous years. The average size of a maintenance staff at a private facility is 20.8 workers, compared to 15.7 for a public facility. Private facilities average 10.3 full-time workers, compared to 6.3 for public facilities.

# What they are saying

I would say that in 2016 I had more conversations with superintendents about the difficulty finding suitable labor than in the past 10 years combined. It's really become an issue to the forefront. —Kevin Sunderman, Isla Del Sol Yacht and Country Club, St. Petersburg, Fla.

We are lucky in that we are somewhat in an economic upturn particularly compared to 2008. We have started to see a regrowth in the housing market, regrowth in the commercial construction market and we're starting to see more business expansion occurring in our area. Our state has been somewhat prosperous when you compare us to the rest of the country and there is a real demand on labor. You are not looking to so much hire someone that has mowed fairways at five other golf courses in their life. You are looking to bring someone in that has maybe never worked at a golf course and maybe trying to get them starting on weed eating, raking bunkers or mowing greens. There's a lot of pressure on that type of person because they are now able to find jobs painting new homes or framing or doing some of the other jobs that are somewhat cyclical and tied into economic growth." — Brian Powell, Old Chatham Golf Club, Durham, N.C.

What we compete with right now is those paint plants or any automotive or factory work that is booming. Their starting wages are very high and they have very aggressive pay increase plans because they can pass the cost along. We get challenged with that, but it's very cyclical here. As soon as there is a downturn, our floodgates open with the pick of great candidates.

> – Ross Miller, Country Club of Detroit, Detroit, Mich.

**99** 

We try to build a culture and climate for our employees where we are an employer or preference and we really work hard in our department to make sure we are recognizing good employees in their efforts. We realize we are not necessarily going to get an 'A' player employee coming in but our goal is to take that employee and make them an 'A' player employee. Sometimes that opens up your pool a little larger.

- Andy Morris, Country Club of Peoria, Peoria, III.

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### Position most difficult to fill with qualified candidates



### Starting hourly wage for crew members

14%
28%
42%
11%
1%
1%

## METHODOLOGY

Same

Few less

Significantly less

Golf Course Industry partnered with GfK Kynetec, a world leader in pesticide, fertilizer and turf market research, in the creation and computation of the 2017 State of the Industry survey. This is the first SOI survey since GCI announced in February 2016 the formation of its partnership with GfK Kynetec.

The survey was distributed via eblasts, bi-weekly Fast & Firm enewsletters, Twitter and Facebook from Nov. 2, 2016 to Dec. 7, 2016. GCI received 531 qualified responses: 456 superintendents or equivalent at a single golf course, 66 superintendents or equivalent at multiple golf courses and nine assistant superintendents acting on behalf of their bosses. The survey started with eight baseline questions and respondents were given the option of participating in a panel to answer future questions about various aspects of the industry.

MARKET

RESEARCH

The split between public and private facility respondents was nearly equal, with 270 working at public facilities and 261 working at private facilities. Among public facility respondents, 89 worked at daily fee facilities, 79 at government/municipal facilities, 72 at semi-private facilities and 30 at resort/hotel facilities. Sixteen percent of respondents indicated their courses are part of a management company, hotel or chain.

Data was compiled for the industry overall, private facilities, public facilities and four geographic regions (Northeast, Midwest, South and West). GCI received at least 90 responses for each of the four regions. Illinois (7 percent) was the most well-represented state in the survey. California, Florida, Ohio and New York also accounted for 5 percent or more of the total respondents.

As an added incentive to complete the survey, GCI committed to make a substantial donation to the Wee One Foundation, a charity group started in the memory of Wayne Otto, CGCS, that assists superintendents and other turf professionals in need.

# BUDGET

ties that endured the Great Recession continue to give superintendents resourc-

es to produce quality results.

The average non-capital maintenance budget is creeping toward \$800,000, increasing from \$750,000 in 2016 to \$798,200 in 2017. Steady increases in private facility budgets are bolstering the industry. Sixty-seven percent of private courses indicated they are increasing their budgets in

## 2017. Only 12 percent are bracing for decreases. Forty-one percent of private courses will operate in 2017 with budgets of \$1 million or more. The West (37 percent) and Northeast (34 percent) have the highest percentage of facilities with budgets of \$1 million or more.

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

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

Average spending will increase in all 18 line items analyzed in 2016 and 2017. GCI added two line items – dyes and colorants and software/ data collection devices and programs – to the survey.

Capital spending will be modest in 2017, with 80 percent of projected capital budgets coming in under \$200,000.

### Budget change 2016 vs. 2017

Increase 20%or more:	1%
Increase 10-19%:	6%
Increase 1-9%:	49%
No change:	29%
Decrease 1-9%:	10%
Decrease 10-19%:	4%
Decrease: 20% or more	1%

### **Projected capital budget for 2017**

Less than \$50,000:	39%
\$50,000 to \$99,999:	21%
\$100,000 to \$199,999:	20%
\$200,000 to \$499,999:	12%
\$500,000 to \$749,999:	2%
\$750,000 to \$999,999:	1%
\$1 million to \$1.9 million:	1%
\$2 million to \$4.9 million:	1%
\$5 million or more:	1%
Don't know/don't want to sho	are: 2%

### Projected 2017 non-capital operations budget, including labor and overhead

Less than \$200,000:	9%
\$200,000 to \$299,999:	8%
\$300,000 to \$399,999:	7%
\$400,000 to \$499,999:	11%
\$500,000 to \$749,999:	25%
\$750,000 to \$999,999:	15%
\$1 million to \$1.5 million:	14%
\$1.5 million to \$1.9 million:	6%
\$2 million to \$2.4 million:	3%
\$2.5 million or more:	2%

# Projected 2017 labor costs (including superintendent salary)

Less than \$100,000:	6%
\$100,000 to \$199,999:	13%
\$200,000 to \$299,999:	19%
\$300,000 to \$499,000:	26%
\$500,000 to \$599,000:	11%
\$600,000 to \$699,000:	6%
\$700,000 to \$799,000:	5%
More than \$750,000:	14%

## 2017 STATE OF THE INDUSTRY REPORT

### **Top capital budget expenditures in 2017**

58%	26%	23%	23%	20%	15%	22%
Mowing equipment	Other equipment (sprayers, aerifiers, spreaders, etc.)	Bunker renovations	Infrastructure (cart paths, buildings, bridges, drainage, etc.)	Irrigation upgrades	Regrassing and plant materials	Other remodeling (shaping, changes in routing, tee boxes, green complexes, etc.)

Budget chart				Average non-capital	
Average total	2017	2016	2015	operations budgets the last five years	
Mowing/cultivation equipment	\$45,646	\$42,800	\$31,300		
Shop tools	\$4,127	\$3,220	\$2,860	Year	Average
Handheld equipment	\$3,733	\$2,470	\$2,410	rear	total
Course accessories	\$5,355	\$5,060	\$4,410	1154105	1000
Fuel	\$25,664	\$25,100	\$29,200	2017	\$798,200
Energy-electrical/natural gas	\$28,730	\$21,800	\$21,300		
Granular fertilizers	\$23,294	\$22,300	\$20,300	2016	\$750,000
Liquid fertilizers-biostimulants/foliars	\$15,652	\$13,500	\$12,100		
Water	\$29,008	\$17,300	\$22,800		
Irrigation parts, heads & maintenance	\$10,249	\$7,870	\$8,410		\$697,000
Fungicides	\$36,425	\$34,200	\$34,100	2015	
Insecticides	\$8,904	\$6,770	\$6,190		
Herbicides pre-emergent	\$9,395	\$6,700	\$6,370		\$651,392
Herbicides post-emergent	\$5,002	\$4,590	\$4,260	2014	
Plant growth regulators	\$5,759	\$4,640	\$4,570		
Wetting agents	\$6,923	\$5,180	\$6,150		\$622,500
Aquatic weed control/water quality	\$3,699	\$2,220	\$2,570	2013	
Seed	\$9,078	\$6,350	\$7,390		
Dyes/colorants	\$2,648	N/A	N/A	- Biresterie	
Software/data collection devices/programs	\$2,270	N/A	N/A		

**FINANCES** 

ublic facilities experienced mixed financial results in 2016. Forty-three percent turned profits while 33 percent experienced losses. The split was 38-33 among private courses. Of all golf facilities, 67 percent turned a profit or broke even, a 2 percent decrease from

2015 and 4 percent decrease from 2014.

Was your course profitable last year? 4% 41% 45% 39% 29% 29% 31% 2016 2015 2014 26% 24% 32% S Loss S Don't know S Profitable S Broke even

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### **DESIGN** CONCEPTS

# CONSTRUCTION DELAYS



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

f you completed a construction project last fall, you are probably reading this in mid-winter, warmed by the anticipation of a great new course in the spring. If your project was delayed and/or incomplete, you are probably still, warmed – or hot – by what mom called "stewing in your own juices" at the challenges you face next year.

Construction delays are common, if not notorious. I've found golf course contractors have good records, but have seen more delays since the recent recession.

Not all construction agreements are reasonable. Generic "boilerplate" agreements are maddeningly vague on delays. They recognize delays and give contractors the ability to request money and time additions. The owner must give approval, which "shall not be unreasonably withheld." Translation: "This agreement is only as good as the people signing it." You can expect negotiations all through construction.

Most do have tools for owners to deal with delays. They set a firm completion date, and state time is of the essence. They often require schedule monitoring (always a good idea) and allow owners to demand accelerated construction when the contractor falls significantly behind. And, when the contractor runs late, they have multilevel options to recoup damages.

The first remedy is liquidated

damages, a daily penalty for every day completion is beyond the then current substantial completion date. This is the owner's main - and sometimes only - compensation for delays. Damages are usually set at \$300 to \$1,000 per day. Some owners demand higher limits, but they can be self-defeating - bidders pad the bid to cover possible damages, and if they are high, the bid rises substantially. In many cases, the owner over pays in advance for delays that don't happen. Many golf construction agreements halt the daily penalty in the construction off season to avoid building up high penalties that would raise bids or discourage bids altogether.

The owner's problem with liquidated damages is that missing prime grassing dates can delay reopening by a year, with substantial revenue loss. Owners feel entitled to some compensation when they lose more time than originally anticipated, but can't get contractual relief from the contractor beyond the liquidated damages.

The next contractual remedy for severe delays is formal mediation or arbitration with a specialized construction dispute mediator/arbitrator. These are serious and rare, and have huge financial implications. In arbitration, one side wins. In mediation, which is usually preferred, a mediator can find parties at different levels of fault, and set payments, if any, somewhere between the owner and contractor positions, which seems fair in most construction disputes.

The highest compensation requires the owner to declare default or breach of the contract. However, the legal threshold to truthfully use this clause is high. And, at this point, the project becomes extremely ugly. Lawsuits and counter suits are standard, stop the project, and never help grass grow.

If your contractor has supplied a bond against default, it provides potential remedy of bringing in another contractor to finish. This is usually unsatisfying, as construction restarts only after lengthy investigations.

The best and least costly solution to construction disputes is for both sides to keep cool heads and handle disputes by private negotiation, rather than go to arbitration, mediation, bond calls or lawsuit. Occasionally, when working with a club full of lawyers, this turns out to be a minority opinion.

Most construction agreements place the burden of proof for damage on the contractor. To gain financial and time relief under most agreements, they must prove their contract performance was delayed, the delay was excusable, and for substantial time, and that they truly did incur additional expenses. In addition, the claim must be made immediately, and not at the project's end, to be valid.

These negotiations often require the architect to referee. We are paid by the owner, and tend to defend their interests. However, we are also obligated to be impartial in making any construction ruling.

The best way to deal with delays is to use the old Chicago voting technique, which is to say "early and often." Start with adequate funding and a schedule that allows for some delay. Select a responsible and adequately funded contractor, begin on time, and then hold regular construction meetings to talk, including schedule and progress monitoring. All help keep small schedule problems small and under control. **GCI** 

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Potassium might be a key nutritional component you're overlooking in turf nutrition because it might be your best bet at protecting against season stress issues.

By Rick Woelfel

hen it comes to plant health, pot a s s i u m doesn't get

as much attention as other elements, such as nitrogen. However, potassium (K) is a key ingredient in any protocol for maintaining healthy turf, especially golf courses maintaining full or partial *Poa annua* putting surfaces, and at proper levels, it may even ward off the effects of winterkill.

Potassium affects, among other things, the photosynthesis process, moisture retention and a plant's ability to deal with stress. And it might best be described as a nutritional

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supplement for the plant.

Mark Kuhns, a 40-year turf industry veteran, can attest to potassium's impact on mitigating heat- and cold-stress issues in turf.

As the director of grounds at the historic Baltusrol Golf Club in Springfield, N.J., not far from New York City, where he recently completed his 16th season, Kuhns' 36 holes encompass a vast 500 acres of turf, including eight acres of putting surfaces that are a blend of 75 to 80 percent bentgrass and 20 to 25 percent *Poa annua*. Situated on the northeastern edge of the Transition Zone, Kuhns and his team, which includes course superintendents Dan Kilpatrick (Lower Course) and Jim Delaney (Upper Course), deal with stress during the peak of the season – including during the 2016 PGA Championship – and cold-stress issues in the winter. The staff utilizes potassium throughout the property.

"We're spoon feeding almost everything in the summer months," Kuhns says. "Of course, when we do aerification, we put a lot of phosphorous down, but we always include potassium with that in some amounts. Most of the soluble fertilizer we put down contains potassium."

The Baltusrol staff utilizes a fertilizer that contains 4 per-

cent potassium. Kuhns and his team developed the product in-house in the early 2000s. It can be purchased and stored in bulk, a circumstance that has benefited the club's bottom line in the years since. As cold weather approaches and fall aerification commences, the potassium level is increased.

"When you're doing your aerification, if you want to up your potassium level say in the fall a little bit to strengthen things up, you might go with something in a 1:1 ratio of nitrogen to potassium, or even 1:2," Kuhns says.

Potassium's benefits have been well-documented within the turf industry, Kuhns adds.

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Tim Webb, CGSA, AGS, Course Superintendent, Sunningdale Golf and Country Club. London, Ontario Two 18-hole championship courses and host to the 2014 PGA TOUR CHAMPIONSHIP of CANADA

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Tim is not alone. Many 36 hole courses run 2 Pro-Flex's at the same time. Ask us why. "Everybody does it for different reasons," he says. "Certainly, the plant cells are stronger with potassium (in terms of) photosynthesis, respiration, absorption of water. All these things are improved with a certain amount of potassium. The thickness of the cell walls, resistance to heat stress, stress factors in the summer, drought, heat, cold. Everybody puts it down at different rates."

In fact, Rutgers turf researcher Dr. James Murphy remarked in a March 16, 2015 online dispatch of Plant & Pest Advisory ("Winterkill on Annual Bluegrass: Don't Skip the K") that a huge difference could be seen between no-potassium



Blotchy, tan-colored plots and borders around a potassium trial are suffering from winterkill. The green, healthier looking in the trial received potassium fertilization. The dying turf did not. Potassium affects the photosynthesis process, moisture retention and a plant's ability to deal with stress.

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and potassium-fertilized *Poa* annua plots. Two weeks after the *Poa* test plots lost their winter ice cover, the nopotassium plots steadily lost their green color and become blotchy victims of winterkill. In contrast, green, healthier looking turf was observed in plots that had received potassium fertilization.

"Take home for me – don't let your *Poa annua* turf become potassium deficient," Murphy notes. "(Graduate student, Chas Schmid's) data for suppressing anthracnose severity indicates that a soil test (Mehlich 3) )50 ppm K and a tissue level of )2% K in the clippings are indicators that the K level is good."

From metabolism photosynthesis, to the capture of sunlight and conversion into chemical energy as sugars, and then their reutilization of those sugars, potassium impacts practically everything, says Dr. Larry Murphy, a consultant for Compass Minerals, which produces plant nutrients. With an extensive agriculture background, Larry Murphy has seen the effects of potassium firsthand.

Larry Murphy also cites potassium's effectiveness as a preventative measure against moisture stress. "Potassium is involved in regulating the opening and closing of the stomata on the leaf surface through which gas exchanges and through which water is lost," he says. "If there is an inadequate supply of potassium and moisture is limited, then even more water is lost and the plant loses its ability to withstand that kind of stress."

Application rates and intervals vary widely, depending on climate, geography, and blend of turf. Larry Murphy advocates what might be described as a three-pronged approach. "One (application) needs to be made early in the season when everything is starting to kick off and really get going," he says. "One needs to be made in early summer, and a third in the fall to winterize that plant against winterkill. That's only three, but if the superintendent is making applications every time, they made a nitrogen application ... it would be good for the plant."

Potassium aids in the task of hardening the plant for winter. "In those colder months, that's going to give it one additional protection against freeze damage," Larry Murphy says. The actual application rate varies considerably based on elevation and latitude. Even a minor variance can be impactful.

During the winter months, Todd Raisch defends his 27 *Poa annua* greens at Ridgewood Country Club in Para-



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## AGRONOMICS

mus, N.J., against problems such as crown hydration, desiccation, direct temperature kill, and, of course, snow and ice cover. His task is complicated by the fact that the winter climate in northern New Jersey features significant temperature fluctuations, particularly early in the season. Three days of temperatures near or below freezing could be followed a few days later by temperatures of 50 degrees or higher; or the other way around. The extreme variance in temperature makes the task of hardening the plant in preparation for winter more challenging.

Raisch, who has served as Ridgewood's superintendent

We're spoon feeding almost everything in the summer months. Of course, when we do aerification, we put a lot of phosphorous down, but we always include potassium with that in some amounts. Most of the solvable fertilizer we put down contains potassium."

-Mark Kuhns, Baltusrol Golf Club

for the last 21 years, says if his club were located perhaps an hour's drive or so farther north, the task of preventing direct temperature kill would in some ways be simplified because the cold weather generally remains in that region once it arrives.

Raisch considers potassium an important tool in his agronomic arsenal. He and his team normally apply 2.5 pounds of potassium per application in a ratio of 1:2, nitrogen to potassium, or perhaps 1:3 in some circumstances. "I think potassium is part of any good *Poa* strategy," he says.

Raisch does have one fact in his favor: his greens are closed each winter. However, not every superintendent has that luxury.

For example, nearby Paramus Golf Course, a public facility that hosts roughly 50,000 rounds each year (compared to 30,000 at Ridgewood), has *Poa* greens that date back to 1927, although they have been renovated to improve drainage.

Andy Schuckers, the club's superintendent and general

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The second and sixth greens at Ridgewood Country Club in Paramus, N.J. Superintendent Todd Raisch uses potassium as part of his *Poa annua* management strategy.

manager, has never considered converting to bentgrass greens simply because they would never stand up to the club's volume of play. But Schuckers still faces the issues that arise when a Mid-Atlantic golf course operates year-round. Maintaining his *Poa* surfaces in a sometimesharsh climate requires a preventative approach, one that wards off potential problems before they become major headaches.

"We deep tine five or six times a year," he says, "and do venting or needle tining throughout the year." During spring and fall aeration, Schuckers utilizes threequarter-inch tines that penetrate about eight inches into the soil. Periodically, perhaps four times during the season, he uses quarter-inch tines. "That's done as a preventative measure," he says.

The same for venting or needle tining, which is done periodically through the season when conditions warrant.

Schuckers also utilizes an organic fertilizer that contains approximately 4 percent potassium. As cold weather sets in, he will increase his potassium ratio if he determines it's necessary, based on the results of soil samples.

None of these measures offer a 100-percent guarantee against problems. All a superintendent can do is try to tip the odds in his favor. "You can only work with Mother Nature," Schuckers says. "You can't beat her." GCI

Rick Woelfel is a Philadelphiabased writer and frequent GCI contributor.

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### THE MONROE DOCTRINE

# SUPERINTENDENT/ POET



Monroe Miller retired after 36 years as superintendent at Blackhawk CC in Madison, Wis. He is a recipient of the 2004 USGA Green Section Award, the 2009 GCSAA Col. John Morley DSA Award, and is the only superintendent in the Wisconsin Golf Hall of Fame. Reach him at groots@charter.net.

olf course superintendents are a talented lot, so it shouldn't be surprising that their talents are often expressed in endeavors outside of our profession.

I have, for example, watched with a keen eye those who have writing skills. From national journals to textbooks, a significant number have inspired people with their ability to express themselves, usually centered around golf turf. For example, Mike Bavier and Gordon Witteveen's book has recently been translated to Chinese, following the availability of a Spanish edition.

A visit to GCSAA headquarters or a trip to the British Golf Museum puts a statue of Old Tom Morris on display, the product of a golf course superintendent/sculptor. Superintendents become lawyers, play competitive golf and hockey, and show excellent musical skills. The list goes on.

But I have never met a superintendent who had the talent and mind to write poetry. Until recently. Let me introduce you to Rob Ganson.

Rob is the superintendent at the beautiful Apostle Highlands Golf Course on the shores of Lake Superior outside of Bayfield, Wis. The course is on a promontory overlooking the largest fresh water lake in the world, with the Apostle Islands in view. He has been a superintendent for 32 of his 60 years. He joined AHGC during its construction and has been there ever since.

Rob was fully engaged in the work on the golf course – work boots, blue jeans and a flannel shirt on the day I visited. But his longstanding interest in fescues for golf turf and his unique IPM programs born out of necessity show his approach to the management side, too. From the mechanical harvesting of cutworms to putting green fertilization with straight CHO products, Rob's work resulted in his course being selected for the Travel Green Wisconsin designation, the first north of Highway 8 to be noted.

Rob started writing poetry 12 years ago. An NPR interview of a poet who wrote a poem each day for a year provided inspiration, and he thought he would give it a try. He is still writing a poem each day. Halfway through his first year, he joined a poetry group and was encouraged to submit a piece to a poetry journal. The first few were accepted and printed.

His success can be measured by the four complete volumes of poetry he has published, in addition to contributions to collections, reviews and anthologies. His writing has been used in university classrooms as far away as New York City.

Although hardly a connoisseur, I enjoy poems that are inspiring, that capture beauty and remind me of wonderful moments in my life that can easily grow dim with time. The right poem can stir your emotions and make you smile. Some poems are political and speak to current issues. There are poems that rhyme and poems that use no punctuation. Rob has composed poems in both verse and rhyme. Inspiration comes to Rob, ultimately, from nature and from the human condition. The golf course inspires him – a great view with the fresh air of outdoors and a line pops into his head. "I'm run over by poems," he says. His cellphone has made such moments a lot easier for him to record. Similarly, a local issue might be the catalyst for a strong poem that puts the politics into a focus that he feels.

For eight months of the year, Rob Ganson is consumed by the golf course he manages. The winter months in northern Wisconsin give him the time to reflect and write. **GCI** 

Here is a sample of Rob Ganson's poetry titled: "Just Another Day." It appears here with his permission.

I crested the hill to see a sacred fire painting a path from the lake to the island, and the very heavens Nothing special, this morning no breakfast in bed, no chorus of angels or epiphany No birth, rebirth, or death just the sun, water, air

I arrived at work, to spy a sea of green atop another hill, with a view of Madeline, and the Porcupines Nothing special this day no hiring or firing, no big raise no braless goddess, posing just so in a shaft of light just growing grass amidst the orchards that spring from soil that smells like oak leaves and history and a call from my youngest down in the city

When I got home, I went to the garden to graze on maize and sweet-peas peppers, and the sound of the creek To have a dinner, an evening to play with the puppy and visit Nothing special this evening no expensive Tequila or lobster no rodeo sex with an extra woman Involved, no humongous TV or lottery win, no calamity Just a garden, a creek, a family a weather-tight home, a woman who hardly ever throws rocks at me and a sunset like a Dali painting



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You will deal with disease problems this year. Being alert for signs of trouble, maintaining sound cultural programs and then attacking the problem quickly will lessen any outbreak's severity.

By John Torsiello

orecasting 2017 disease and pest problems that might affect turfgrass is a less than exact science, but turf

researchers and industry insiders provide their most welleducated outlooks on what may

be brewing in the coming year. And a lot will have to do with environmental conditions.

For example, fungal pathogens can build inoculum in the soil and the plant, but that really does not mean much if the conditions are not right for disease, says Dr. James

Kerns, turfgrass pathologist for North Carolina State University. However, if the conditions are right, then disease pressure could be bad again.

"It seemed like the Midwest (Indiana, Ohio, southern Michigan and Kentucky) struggled with pythium root rot and root knot nematode problems," Kerns says. "Arkansas and the central states also struggled when all the rain was falling."

The type and severity of this year's disease and pest issues ultimately depends on rainfall. "But, based on the weather conditions in the northern states,



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### PESTS & DISEASE

it seems likely that snow mold will be a problem, and there is potential damage from ice and other winter conditions as well," Kerns adds.

Forecasting disease and pest issues in 2017 is like predicting today who will win in Week 8 of the 2017 NFL season, says Dr. Lane Tredway, Syngenta senior technical representative. It depends on multiple unforeseen factors - who's healthy; who's hurt; and who the teams have gained or lost in free agency. Similarly, turf pests are most strongly influenced by the current weather conditions. "Which pests become major issues in 2017 depends on what the weather does in 2017," he says.

Long-range forecasts predict a drier fall and winter compared to last year for much of the Southeast, and so far, this is holding true. "This should be good for the health of warmseason grasses, which suffered from heavy disease pressure last winter," Tredway says. "Superintendents should still stay vigilant for wet conditions that are conducive to leaf spot, pythium blight and rhizoctonia diseases and treat preventatively as needed."

One exception is superintendents whose creeping bentgrass greens in the Transition Zone suffered turf loss due to persistent heat during the summer of 2016. "Any bentgrass re-established from seed or sod will tend to be more susceptible to summer diseases and abiotic stresses next year, especially if 2017 is a hot and humid summer," Tredway says. "In this respect, hot and humid summers can have a compounding effect on the health and quality of creeping bentgrass."

# The cure for what ails

Cultural practices – such as aggressive hollow-tine aerification followed by sand topdressing – promote oxygen exchange and drive root growth and overall turf health and may reduce diseases pressure, says Dr. Jeff Atkinson, SePRO's portfolio leader/turf and landscape. Interspersed solidtine aerification should be done to encourage drainage and further encourage root depth that could have been lost due to conditions faced in the summer of 2016.

Moisture management is an important cultural practice often forgotten about during winter months, says Max Gilley, a SePRO turf field research scientist. "If the current cold weather pattern continues in the northern United States or shifts into the southern U.S., maintaining an adequate level of soil moisture to maintain crown hydration will be important to prevent winter turf damage," he says.

As for curatively dealing with a problem, "Every situation is different," Gilley says. "In most cases, it's important to keep in mind the biological limitations of turf when taking curative action after a difficult growing season and harsh winter. One thing to avoid is over fertilization or fertilizing too early."

When the first few warm days of spring arrive, it's tempting to aggressively push turf growth and recovery only to experience a setback during a seasonal late spring cold spell. Tracking soil temperature is a good indicator of growing conditions. Basing the timing of agronomic practices off air temperatures is difficult because of large daily fluctuations, Gilley says.

Outbreaks call for tank-mixtures, like Daconil Action and Appear, and become crucial, both for creeping bentgrass and Bermudagrass greens, says Syngenta's Dr. Lane Tredway. When applied every 14 days, this tank-mixture forms a strong foundation for any fungicide program by controlling a broad range of pathogens and abiotic stresses. "We see consistent improvements in the summer quality of creeping bentgrass and spring quality of Bermudagrass when these chemistries are applied every 14 days prior to and during the stress periods," he says.

In any curative situation seek an accurate diagnosis from a reliable laboratory, Tredway adds. "Anyone diagnosing diseases from a cellphone picture is just guessing," he says. "A diagnostic lab can help you to determine which pathogen or pathogens are most active in the sample and therefore which fungicide or fungicides will yield the best result."

To minimize problems with these diseases, turf mangers should be extra diligent in promoting root growth in the spring by reducing compaction, improving drainage, optimizing fertility and keeping mowing heights as high as the clientele will allow, says Dr. Alex Ellram in the Department of Animal and Plant Science, College of Agriculture and Technology State University of New York, Cobleskill. "In general, maintaining healthy turf with a quarter to a half-inch layer of thatch and optimum fertility (monitored with soil and tissue tests) will help minimize turf diseases," Ellram says.

Plant defense activators might also be helpful in reducing disease pressure. These products work in one of two ways: ISRs (induced systemic resistance) products "prime" the turf so that when a pathogen attacks, the turf responds quickly by producing chemicals to fight off the infection. ASRs (acquired systemic resistance) products upregulate production of chemicals within the turf that will help fight off pathogens directly.

Once summer patch or rapid blight appear, it's important to minimize stress by slightly raising cutting heights and maintaining balanced soil moisture, says Pat Gross, West Region Director, USGA Green Section. "Curative fungicides are going to help, but do not always stop the disease," Gross says.

Some problems superintendent may face in 2017 depend on rainfall early in the season. "Based on the weather conditions in the northern states it seems likely that snow mold will be a problem," says Dr. James Kerns, turfgrass pathologist for North Carolina State University.

Make a commitment to cultural practices, such as topdressing, venting, rolling and aerification, Kerns says. "If superintendents struggled last year, it is best to examine your agronomic program. In other words, was the turf getting enough light, food, air and water? Ask yourself was fertility adequate and examine watering practices." He adds fungicides can be effective if applied early enough.
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# PESTS & DISEASE

Most superintendents are aware of, or have experienced, summer bentgrass decline. Some mistakenly consider this is an outdated or invalid concept. But Tredway disagrees and uses the summer of 2016 as evidence. "When creeping bentgrass is stressed from persistent heat, humidity and mechanical stresses, it becomes more susceptible to a range of diseases such as summer patch, pythium root rot, anthracnose, algae and bacteria," he says. "The abiotic stresses (heat, humidity, mechanical wear) are the primary issue, the pathogens are just taking advantage of the situation."

Bermudagrass putting greens are prone to Bermudagrass decline. Abiotic stresses, specifically cool, cloudy and wet weather, cause the turf to be susceptible to a range of pathogens, such as leaf spot, pythium blight, take-all root rot, rhizoctonia zeae, cream leaf blight and other issues.

"With 2017 looking like another drought year, moisture stress on fairways and roughs is likely to cause the greatest turf losses in total area of managed turf," says Dr. Larry Stowell at PACE Turf in California. "*Poa*greens will likely be plagued with heat, soil-salt and drought stress, so anthracnose and rapid blight are the most common problems we may face."

All the major diseases will be prevalent this year, says Dr. Brian Aynardi, a Northeast research scientist for PBI-Gordon. And there is potential damage to *Poa annua* (even bentgrass) depending on the length of snow cover in New England, and freezing and thawing (usually 45 to 60 days of slushy snow cover with freezing and thawing will injure *Poa*, for bentgrass around 75 days).

"We are likely to see lots of snow mold (there has already been significant snow on the ground in the New England), and with snow freezing, thawing and melting, pink snow mold will be problematic," Aynardi. "Gray snow mold will be big problem, as well."

Microdochium patch (microdochium nivale) will be "a significant problem" on annual bluegrass putting greens in the costal Pacific Northwest, says Dr. Alec Kowalewski, an Oregon State University turfgrass specialist. "The fall of 2016 was very wet (lots of rain in October and November), which has produced a lot of fall disease pressure," he adds. "This is very concerning because the peak of disease pressure typically in the coastal Pacific Northwest is in the later winter, early spring months. If we have cool, wet weather through the winter and early spring, without significant amounts of freezing temperatures, this will complicate any problems."

Rapid blight and summer patch on Midwest *Poa annua* greens were the biggest disease problems observed in 2016, says Pat Gross, West Region Director, USGA Green Section, and they are likely going to be an issue in 2017 if we don't get good winter rainfall to flush salts out of the soil.

"Dr. John Kaminski at Penn State University identified a new disease this year, pythium patch, which looks

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## PESTS & DISEASE

a lot like summer patch," Gross says. "We'll be on the lookout for that one as well. Some courses reported not getting good control of summer patch with the fungicides they were using, and it might be that they were seeing pythium patch and not summer patch."

Ongoing drought, lack of winter rainfall and hot summer temperatures will contribute to the problem. "We really depend on winter rainfall to flush salts out of the soil, so if this doesn't happen, then the salts continue to accumulate and we can see stress earlier in the year," Gross says.

Prolonged periods of op-



Large patch could be a problem on St. Augustine and zoysiagrass in the Southeast during 2017 because soil temperatures eclipsing 60 degrees extended into December, according to SePRO's Dr. Jeff Atkinson.

pressive heat and interspersed heavy rainfall during summer 2016 meant research plots in eastern North Carolina experienced pythium root rot and physiological decline that led to a decrease in root health and overall root mass. "This has been difficult to recover from, and in 2017, I'm expecting a sensitive cool-season turf stand that will have increased vulnerability to heat/drought stress, as well as additional root disease such as pythium and take-all patch," says Dr. Jeff Atkinson, SePRO's portfolio leader/turf and landscape. "On the warm-season turf side, the lingering warm temps we experienced into December in his region (60 degrees soil temperature average on Dec. 1) allowed the infection period of root damaging pathogens to continue, as well," Atkinson says. This prolonged infection period could translate to increased amounts of spring dead spot in Bermudagrass, as well as

large patch in St. Augustine and zoysiagrass, he adds.

Because of the drought and heat that plagued much for the Northeast last summer, turfgrass root systems may be weaker coming into the spring



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than in an average year. Long-term NOAA forecasts for the Northeast indicate a wetter-than-average spring. "Excessive soil moisture may further weaken root systems by depleting soil oxygen," says Dr. Alex Ellram in the Department of Animal and Plant Science, College of Agriculture and Technology State University of New York, Cobleskill. "A weak root system is more susceptible to infection by `patch' type diseases, like take-all patch, necrotic ring spot, and summer patch. Pythium root dysfunction may also be more prevalent if excessively wet conditions persist this spring."

Long-term forecasts also indicate a warmer and wetter than average Northeast next spring and summer. These conditions promote a wide range of turf diseases, including summer patch, necrotic ring spot, pythium blight, brown patch and Waitea patch, Ellram says. Bacterial wilt also thrives under these conditions.

"Dollar spot thrives under a wide range of conditions and will likely be active most of the golfing season, as usual," Ellram adds.

As if concerns over the usual suspects aren't enough to keep superintendents up at night in the Southeast, Dr. Bruce Martin at the Clemson University Pee Dee Research and Education Center notes the Southeast has experienced three consecutive years with abundant moisture sometime during the fall, winter or spring.

"The worst-case scenario occurred in 2015 when we had very wet conditions in October (record flooding)

and cloudy wet and warm weather that persisted into the winter," Martin says. "Some greens were killed outright from pythium blight or take all root rot. This year we had Hurricane Matthew that could have set us up for a disaster if the weather had continued to be cloudy and wet. The hurricane was bad enough but it so far has been relatively dry and sunny afterwards. Of course, this could all change, so superintendents are wise to understand the potential pressures if conditions change."

While Pythium and takeall root rot are not unknown diseases in Bermudagrass, the outbreaks Martin observed in 2015 were unprecedented. "For bentgrass, the challenge continues to be managing bentgrass in heat stress environments," he says. "It is undeniable that summers are hotter than usual since we have broken heat records at least three times in the past decade. That pressure increases the challenge of managing bentgrass in this region. Pythium root rots remain the primary group of diseases that compromise bentgrass in summer and should be a major focus for managers."

For bentgrass, obvious signs of fungal mycelium or a poor or mottled dew pattern in the morning might portend impending trouble, Martin says. For Bermudagrass, warning signs are much the same, as well as spotting non-uniform color changes in the turf canopy. **GCI** 

John Torsiello is a Torrington, Conn.-based golf writer and frequent GCI contributor.

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# **RESULTS REFLECT PREPARATION**



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

"Hope smiles from the threshold of the year to come, whispering 'it will be happier." —Alfred Lord Tennyson

s the esteemed poet laureate for England and Ireland wrote in his 1892 tale of Robin Hood, the new year ushers in the annual opportunity to reset your personal and career compass.

Soon golf professionals will be off to the PGA Show, golf course superintendents will travel to the Golf Industry Show and club managers to their World Conference. The goal for every pilgrimage (in addition to finding warmer weather and reacquainting with friends) is to improve knowledge and skills.

You'll improve your chances of doing that by accomplishing a few tasks before packing your bags. First, complete your annual plan for your facility. Your annual plan forms the basis for your show strategy. Here are a few other suggestions offered from the threshold of a new year.

#### SUPERINTENDENTS

• Many superintendents use their agronomic plans to establish expectations, define standards of care and educate members. With these goals in mind, head to your show with a bias toward learning. Study best practices, compare them with your opinions and integrate new knowledge into your plans.

· Dedicate yourself to finding new solutions for labor costs. With more than one-half of the facility budget for greens and grounds dedicated to labor, this must be a point of emphasis. As national labor policy changes, demands on management professionals in every category will be more strident and urgent. Three sure-fire steps that you can take to manage labor costs: ask peers about labor solutions that are working for them, research labor solutions in non-golf categories and, if you think you might be perpetuating outdated methods, rethink your labor and scheduling plan.

• Remember the science of your profession. As the most knowledgeable scientist at most clubs, superintendents' scientific knowledge may be taken for granted. Don't make that mistake, use the GCSAA educational platform as an invaluable resource and keep current.

#### **GOLF PROFESSIONALS**

• With less than 10 percent of private clubs in North America full and most daily-fee courses in a constant state of recruitment, golf professionals should work to improve their selling skills. Three steps you can take to improve your sales skills: build a library of selling resources, including skills and rainmaking; develop your own method of managing relationships with your golfers and provide new services so they rely upon you more.

· Expand your reach in your community. For golf to increase participation - especially among women and children - more people need to be invited to and find comfort at the golf course. That falls to the golf professional and his or her staff. One opportunity is to participate in scouting programs that bring young boys and girls to your course. Teach the business skills, environmentalism and character virtues that help them earn badges. In turn, they'll tell their mothers and fathers, who will appreciate and reward your interest in their families.

#### **CLUB MANAGERS**

• Demanding times require bold and target-specific goals. Set bigger goals for your club by focusing on leadership, revenue growth and your club's brand. As you do, make sure those goals and your intended results are aligned.

• Healthy clubs are growing and replacing members who leave. Their secret lies in ongoing membership recruitment and retention. Keeping your club vibrant requires deliberate planning and execution. Increasing relevance helps to keep members engaged. Greater engagement leads to more member referrals. As a rule of thumb, successful membership recruitment is converting 10 percent of qualified leads into members. The membership recruitment net must be cast far, wide and consistently.

• Remember that club culture lies within governance and governance is often a reflection of leadership. Therefore, leaders must act with greater purpose. The most consistent example of leadership is the club manager who sets the priorities and tone for day-to-day management activity. Monitor your own daily behavior to ensure it reflects your long-term goals. **GCI** 



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Generational challenges go in both directions, leaving younger – and greener – superintendents to effectively manage more veteran members of their maintenance team. 8 tips to successfully managing the senior members of your staff.

YOUR

t is a business trend across the world that younger managers are being asked to manage older or more veteran workers. The fact is that

we have a workforce that is a hyper-sensitive mix of boomers (born 1946-64), Generation X (born 1965-80), the famous millennials/Generation Y (born 1981-97) and the moving into the workplace Generation Z.

Before you start analyzing the exact dates of each generation, it is important to know that many experts can not exactly define when one generation starts and another one stops, so we will just use these dates as guidelines. The more important message is that there are many golf course superintendents, assistant superintendents and assistants-in-training that are finding themselves managing one or two generations older than themselves daily. To do this successfully,

# By Anthony L. Williams, CGCS

takes some unique skills and a bit of insider knowledge.

So here are some great tips for successfully managing your elders as told by a boomer who thinks like a Gen Y appreciates Gen X and realizes we are all depending on the millennials to figure things out in time to save Gen Z. Here we go.

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"Remember that veteran workers respect actions, not words and they realize the smallest deed trumps the largest intention. They have many experiences and strengths as an employee but often it is a younger superintendent/ manager that is tasked with bringing that talent to the surface."

# ASK, DO NOT TELL

When it comes to younger managers, earning the respect and cooperation of older workers step one is to, "Ask, not Tell." For example, saying, "Can you take green mower No. 3 and mow the front nine greens for me?" is much more effective than saying, "Mow the front nine greens ... NOW!" Vintage workers want to follow instructions and perform well and they also want to feel that respect flows both ways. You may also want to use a healthy amount of "please" and "thank you" during your interactions as well.

# LEARN THE LANGUAGE OF VINTAGE WORKERS

Spend a little time listening closely to the phrases and speech habits of your elder staff. Note stories and things such as how they refer to their elders or bosses (or the fact that they use the term boss and not superintendent) as Mr. or Mrs., because they were taught this a sign of respect by their "greatest generation" parents and it is part of who they are. Use this to connect to their experiences and "you will be in high cotton." It is also important to note that most vintage workers do not speak text, Instagram or Twitter.

# SOPS ASAP

Establish a consistent set of standard operating procedures (SOPs) for the main work assignments within your operation. This will help you avoid misunderstandings between a multi-generational staff and the management team. The establishment of a clear set of basic procedures that are easily trained and communicated is critical for sustainable



Vintage workers want to know what's happening. Be sure to let the staff know, when it is appropriate, things such as comments from members and/or guests, tournament results, financial updates, green speeds and safety goals. Putting up a scoreboard is an option for keeping workers informed.

success. Consider the use of specified trainers from different generations (a boomer training a Gen X or a millennial training a boomer) within the crew to help everyone better understand their similarities and differences and thus make everyone more successful.

**TELL THEM THE SCORE** Vintage workers want to know what's happening. They are not so worried about all the minutia but they certainly want to hear if the team is winning or losing and if they are part of the solution or part of the problem. Be sure to let the staff know, when it is appropriate, things such as comments from members and/ or guests, tournament results, financial updates, green speeds, safety goals and status. You may even consider putting up a scoreboard in the shop.

# DATA MINE

Use personal reviews and formal/informal evaluations as opportunities to tap into some great ideas. Vintage workers are often retired or long tenured from any number of successful previous professions. Take the time to see if vou have some hidden talents in the crew and mine that field for ideas and insights. Document these skills in annual performance reviews or a note in the employee's personnel file. Your recognition of previous experiences as still valuable and relevant will prove to be a solid investment to create standout performers and innovations within the team.

# CONTROL YOUR EMOTIONS AND EXPECT EVERYONE TO DO THE SAME

No matter how stressful or seemingly impossible the situation never let the staff see you lose control and say or do something unprofessional. Take a deep breath, send someone home, do whatever it takes to control the situation and your emotions. The crew will never forget your calmness under fire but, conversely, they will also never forget you losing your composure. Vintage workers want clear boundaries and examples of what is acceptable in the workplace. Give them a visible and audible example every day and you will create a positive work environment that everyone is proud to be a part of.

# KNOW EVERYONE'S LIMITATIONS AND ERR ON THE SIDE OF CAUTION

Most vintage workers take great pride in performing the work that is assigned to them and will not say they feel dizzy or need to eat every few hours to balance their blood sugar or if they are having chest pains, especially on aeration day. It is part of the job to monitor and ensure the well-being of the staff. Never publicly embarrass a worker with medical or physical limitations, assign work according to job class and accommodate as needed. Getting the most out of the staff in a safe and respectful way is always the goal and in some cases the law. Consider having all supervisory staff CPR and First Aid certified to help you become more aware of on the job risks and how to react if there were to be an incident, especially with a vintage worker.

### PAY IT FORWARD

■ Look closely at your vintage staff and you will realize that they are where you will be in a few short decades. Take a deep, long look into the generational mirror and see the needs and the value that those elder members of your crew represent. Realize that you have a lot in common with these forbearers of the golf industry. Then do everything you can to protect their jobs and their dignity. Doing this will make a difference today and hopefully many years from now when the next generation of young and rising superintendents/managers are impacting our business. They in turn, will repay the respect you gave to the vintage workers in your day. Time will inevitably march on but what we do with the time we have will ultimately establish our worth.

The key to using these eight tips successfully is to apply a little empathy to the situation

each day. Remember that veteran workers respect actions, not words and they realize the smallest deed trumps the largest intention. They have many experiences and strengths as an employee but often it is a younger superintendent/manager that is tasked with bringing that talent to the surface. I hope that whether you are an assistant-in-training, assistant superintendent, starting you first day as a golf course superintendent or a vintage manager yourself you will invest the time to be an excellent manager of the multi-generational workplace and embrace the potential of having a few vintage employees on your golf course maintenance team, GCI

Anthony Williams, CGCS, is a veteran golf course superintendent and frequent GCI contributor.



"No matter how stressful or seemingly impossible the situation never let the staff see you lose control and say or do something unprofessional. Take a deep breath, send someone home, do whatever it takes to control the situation and your emotions."



# New year, new way to treat fairways

Launch of a versatile SDHI fungicide will give superintendents another option for managing foliar diseases.

# By Rob Thomas

ollar spot, brown patch, Microdochium patch and other foliar diseases have been put on notice. For superintendents in search of an efficient, effective control of these maladies, Bayer has introduced Exteris Stressgard.

Utilizing a next-generation succinate dehydrogenase inhibitor (SDHI) mode of action, Exteris Stressgard combines fluopyram, a new active ingredient for the turf and ornamentals market, with a proven QoI partner, trifloxystrobin, and unique formulation technology to introduce a stronger tool for foliar disease management.

According to Bayer, fluopyram and trifloxystrobin were combined and then formulated specifically to manage foliar disease in a way the market has not seen, thanks to new Leaf-Cote Technology. As the name suggests, Leaf-Cote Technology is a formulation enhancement that ensures significantly more product retention on

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Depth adjustments made from the tractor seat the leaf surface than traditional fungicides, sticking to the leaf where it's needed most – at the site of fungal activity.

Additional benefits include reduction in dry time and shortening of the leaf wetness period, providing benefits such as a frost and dew mitigation under certain conditions.

Laurence Mudge, Bayer Green Solutions Team manager, sees this product taking turfgrass care to another level.

"Exteris Stressgard is an excellent fairway fungicide," Mudge says. "With broadspectrum foliar disease control – preventative and curative – and unique formulation enhancements with Leaf-Cote Technology and Stressgard Formulation Technology, this product is going to set a higher bar for foliar disease control on fairways."

Dr. Rob Golembiewski, a member of the Bayer Green Solutions Team, concurs with Mudge's assessment.

"Exteris Stressgard is a new kind of fungicide that the turf market hasn't seen before," Golembiewski says. "The innovation with Leaf-Cote Technology brings a unique offering for a fairway product.

"More money is spent on fungicides to control dollar spot than on any other turf disease," he adds. "Exteris Stressgard provides excellent control of dollar spot along with brown patch, leaf spot and other foliar diseases."

Todd Hicks, program coordinator in the Department of Horticulture and Crop Science at The Ohio State University, has been looking, specifically, at how Exteris Stressgard works on dollar spot. "It seems to be fantastic in the fight against dollar spot," he says. "Bayer has a very strong line to begin with and early signs have been very positive – both preventative and curative."

From the East Coast and Midwest, through the Transition Zone and into the South, Hicks refers to dollar spot as "one of the most ubiquitous and most sprayed for diseases in golf," adding to the anticipation of Exteris Stressgard.

## INNOVATION

Fluopyram is the first and only SDHI of its kind, with the ability - depending on how it is formulated - to provide benefits unlike any other product on the market, Bayer says. When combining this unique active ingredient with a proven QoI partner, trifloxystrobin, Stressgard Formulation Technology, and new proprietary Leaf-Cote Technology, Bayer created a new fungicide designed to be the best foliar disease specialist available for fairways.

"SDHIs are on the verge of becoming the largest class of fungicides in golf course management," Mudge says. "Unlike DMI or QoI fungicides, which are all very similar, SDHIs are radically different from one another – and fluopyram is unique. It's special. There's a lot to be excited about with fluopyram."

"If you look at all the SDHIs currently on the market, you would see that fluopyram is in its own chemical group," Golembiewski adds. "There's no other SDHI like it."

Exteris Stressgard's bonding capabilities are second to none.

"Exteris has been formulated for optimal foliar disease control through improved leaf surface adhesion – that's the

# Exteris Stressgard's Key Benefits

- A new mode of action that offers preventative and curative control of tough foliar diseases, including dollar spot, brown patch, Microdochium patch and leaf spots
- Enhanced leaf coverage and improved product retention on the leaf surface means faster activity and improved control
- Flexibility of application rates, timing and conditions that fit within current preventative and curative programs
- Improved dry time, which ensures quicker rainfastness
- Dew and frost mitigation properties under certain conditions that offer labor efficiencies

Leaf-Cote Technology coming into play," he says. "Its delivery system is uniquely suited for foliar disease control, enabling droplets to adhere to the leaf tissue and then spread for better coverage. Because of this improved coverage, we're seeing strong curative activity and very good control even at lower spray volumes."

Lee Miller, extension turfgrass pathologist in the University of Missouri's Division of Plant Sciences, has been testing the product in the lab and in the field.

"Over the last two years, we've evaluated Exteris Stressgard in Missouri for dollar spot and brown patch control on creeping bentgrass, both on its own and as a component in a fungicide program," Miller says. "Seven applications from May-late July (1.5 and 2.0 fl oz/1000 sq ft) on 14-day intervals resulted in good control of dollar spot and brown patch, and high turfgrass quality well into late August. The impressive residual dollar spot control (28+ days) indicates Exteris is a good candidate for final 'put dollar spot to bed' applications in the fall. As we learn more about the chemistry, I'm curious to see its potential use for control of soilborne diseases."

### AVAILABILITY

Exteris Stressgard received federal registration with the EPA in July 2016 and is registered in all states except for California, New York and South Dakota. It will launch at the Golf Industry Show the week of Feb. 6 with purchases from authorized agents on March 1.

### EXPECTATIONS

"Exteris Stressgard is going to raise the bar and set the new standard for foliar disease management in fairways," Mudge says. "It offers excellent control of dollar spot as well as other major foliar diseases and is packaged with unique formulation technology. There are lots of great fungicides out there, but with Exteris Stressgard, we have a superior, highperforming product that really has the whole package."

And superintendents aren't going to be handcuffed, waiting for the calendar to change, according to Golembiewski.

"While many SDHIs are targeted toward spring or fall applications, we see the biggest benefit for supers in applying Exteris Stressgard throughout the year during peak disease pressure periods," he says. GCI

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

# **GRIGG BROS.**

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- Chelated micronutrients enhance foliar and root uptake.
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# PROGRAMMING YOUR WATER SAVINGS



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

he industry is always talking about water savings, but how to get there can be elusive for some courses. I have preached lots of different ways of saving water over the years, including accurate databases, uniformity, sprinklers level and at grade, proper scheduling, and having more sprinklers. Recently, I visited Shadow Creek Golf Course in Las Vegas, where superintendent Tim Cloninger and irrigation manager Carlos Duran have reduced their water use by about 25 percent. In quizzing Tim and Carlos about how they saved that much water, I learned of a new water savings technique that I had never given much thought to - programs.

Today's golf course central control systems are powerful and therefore very sophisticated. We all know that, but as a result many golf courses do not use their central control systems to the majority of their abilities. However, everyone builds programs for their irrigation system – if they did not, the irrigation system would never run. So, you're saying, I do programs, what's the big deal? How does that save me water?

When you look at a central control database, there are normally programs for greens, tees and fairways at a minimum with maybe some other programs for green surrounds, rough and bunkers. On some courses, you will see it further broken down into back nine fairways, front nine fairways, front nine greens, back nine greens, front nine tees, back nine tees. This allows the operator at a minimum to set separate start times for each program and to prioritize them as well as decide whether they should run on a certain night or not. But why stop there?

When you look at the Shadow Creek database, they have concentrated on developing programs for their more out of play areas where they can and have saved substantial amounts of water. They have thought about how often each area of the golf course needs to be irrigated and then developed programs for each area accordingly, grouping like areas and schedules into very specific programs. In addition to the usual programs, they also have programs for native areas, drought tolerant areas, fescue areas, pine needle beds, mulch beds and tree drip; all of which are operated on different schedules.

As it turns out, just like the more sprinklers you have, the more programs you create, the more versatile the operation of your irrigation system can be. For example, if you have native or natural areas that need to be irrigated only a few times a month or a few times a week, there should be a program just for those areas and their schedule. Trees are another good example. In most cases, you would water the trees infrequently and deep so they need their own program. The trees may be drip irrigation, different than other types of irrigation on your course and that alone would dictate a separate program. You can expand your programs almost as much as your imagination; plant beds should have their own program as well as mulched areas with sparse plantings or trees vs. mulched areas with intensive plantings.

Sun areas vs. shade areas are another parameter to consider. Even though the back nine rough is all on the back nine and in the rough, it doesn't mean there are not areas that are in full sun and others in full shade or shaded the majority of the time. This is helpful on tees where the front is sunny and the back is shady. These areas have different water requirements so they should have different schedules/programs. Some would say that you can do the same thing with station or global adjusts, but that is not as versatile as a separate program.

All of your various program areas should be broken into front nine/back nine programs or similar for a couple of reasons. One, the hydraulics of your pumping system will perform better if the water is more targeted - of course that requires a filled-out hydraulic piping tree in your database. Secondly, you can prioritize and dictate when an area gets watered. If you want to stay ahead of morning play, it will be hard to do if all 18 fairways are on one program. Front holes may still be irrigating when your maintenance staff is going out or play is starting. Other programs to think about are front green sprinklers vs. back green sprinklers. On triple-row or five-row systems (ins and outs on the fairways) it is common to see in the central control database left side fairways (ins and outs separate programs), right side fairways (ins and outs separate programs) and center fairways.

Think about how the various areas of your golf course need to be irrigated. Will separating an area into multiple programs allow you more versatility in scheduling? If it will, then water savings are to be had, just like they have at Shadow Creek. **GCI** 



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# IRRIGATION

# CHECK INSIDE



# LOOK. LISTEN. CLEAN. A FEW ROUTINE MAINTENANCE MEASURES

CAN EXTEND THE LIFE OF YOUR IBRIGATION PUMPS.

# By Rick Woelfel

very superintendent is familiar with the reminder that begins "An ounce of prevention ..." That's certainly true when the subject is irrigation pumps. Properly maintained, a pump can provide a quarter-century of service.

But some in the industry are lax when it comes to pump maintenance issues, says Brian Vinchesi, a design engineer for Irrigation Consulting Inc. "A lot of guys, if (the irrigation pumps) are working correctly, and they aren't having trouble, they don't go down and look at them very often," he says.

Technology is at the heart of the matter. Today's computer-driven systems can be monitored remotely via tablet or smartphone. But Vinchesi maintains that monitoring a pumping station from the comfort of home, or perhaps from a vehicle on the 14th fairway, is not a substitute for an inperson inspection. "You should be checking on it, at least on a weekly basis, if not a daily basis," he says. "But the way they run now, they're so bulletproof that a lot of guys just get real complacent and don't (inspect them) until something is going wrong. I'm a big fan of checking on them once a week."

Superintendents avoiding the pump house may not learn of a potential problem until it becomes a major headache. "They don't go to (the pump house) unless something goes wrong," Vinchesi says. "They're all monitored remotely so what happens is, they'll find out if something goes wrong because the irrigation won't work, but they don't go to the pump house or the pump station unless they have to. That's a really common mistake."

Putting off preventative pump maintenance is another common problem. In fairness, budgetary issues sometimes prohibit these measures. But by putting off routine maintenance superintendents open the door to potential – and often costly – problems.

"They don't do preventative maintenance," Vinchesi says, "they do reactive maintenance. What they do is they wait for something to break before they fix it. There are certain things you should do on a regular basis."



Clogged filters are a potential problem when deferring maintenance on irrigation pumps. Manually washing filters on a regular basis is a preferred form of maintenance.

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Doing routine maintenance on a pump is not unlike performing the same task on a car or a truck and it offers the same rewards. Handling routine maintenance chores promptly requires some time and expense. But doing so is a big step toward preventing relatively minor issues from escalating into major problems and expenditures. Here are a few suggestions.

# DON'T FORGET ABOUT THE PUMP FILTER

Manually clean filters on a regular basis as opposed to backwashing them. Bryan Weemes, who services pumps for Rain Bird, says this is particularly important with the Y-screen filter that is prevalent in the industry. "When a Y-screen filter is being used, there is only so much of that this is going to be cleaned, not the whole screen," he says. "I would say less than 50 percent. That may be adequate with some systems, but the other parts of the screen tend to get a buildup on them. They need to be pulled down and cleaned with a highpressure washer or whatever at least once or twice a year."

The proper interval between cleanings varies by individual circumstances.

"Is it necessary to do it every three months or was it not?" Weemes says. "Maybe six

# Don't be fooled by technology

Today's state-of-the-art pump systems provide superintendents with much more data than a few years ago, says Brian Vinchesi, a design engineer for Irrigation Consulting Inc.

The control technology and the filtering technologies have also changed. "Fifteen years ago, when you looked at the front of the pump station control box everything was manual, everything was switches," Vinchesi says. "Now everything is touchscreen and when you go to the touchscreen now, there is a lot more information you can get than you could get before."

Today's technology makes it possible for superintendents to monitor pump performance from a distance, but Vinchesi considers that a mixed blessing, "I can sit in my office, call up a computer program, and it's no different than if I were standing in front of the station at the pump house," he says. "And because I can do that, I never go down there to look at it anymore."



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# IRRIGATION

months is too long. You have to determine that frequency by doing it. But it is highly recommended that is done. Sometimes fish bones, shale or other organic materials get in the screen. The washer just can't clear it. The stuff just won't come out. It needs to be manually cleaned."

Disassembling the filter for cleaning also provides an opportunity to examine parts to see if they are wearing out or need to be replaced. "Check for unexpected wear," Vinchesi says. "Look at the part, to see if it's wearing or thinning out because a lot of those parts are plastic. So you want to look at that."

## LUBRICATE

Lubricate all electric motors properly, preferably using a grease meter as opposed to simply a certain number of applications. The amount of lubricant should be monitored carefully, Weemes says.

"A lot of service professionals say, 'I use two to five shots (of lubricant per year)," he says. "There are vents on the same motors most of the time. If you put too much grease in



grease or not doing it based on time and the motor manufacturer's recommendations."

#### LISTEN CAREFULLY

Spend time in the pump house listening to the machinery in operation. "Go down maybe once a quarter or twice a year and spend some time there and listen to it," Vinchesi says. "Just go in there and listen to how

# **C** Every 10 years you need to have your motors and your pumps checked."

— Brian Vinchesi

there, it will go through the vents. But often those vents are clogged and the grease collects dust, there is moisture in the air, whatever, and you burn out the motor due to not properly greasing it, adding too much it's running. And that will tell you a lot. Nobody's looking to spend much time in the pump house, but you should listen to how the pumps are turning on and off and how the pumps are switching. You'll figure out very quickly if it's (working properly)."

# CHECK CONNECTIONS

Periodically check to be sure pump gauges are working properly, wires are properly connected, connections are tight and surge arresters are grounded properly.

"Surge arresters are merely expensive paperweights if they are not coupled to an adequate grounding grid," Weemes says. "Lower is better. Check ground resistance often."

#### **BRING IN A PRO**

Once every 10 years, motors and pumps should undergo a thorough checkup from a qualified service professional. This is not inexpensive, but Vinchesi says it's a necessary step.

"Every 10 years you need to have your motors and your pumps checked," he says. "You don't want to wait for them to get to Year 13, 14 or 15 when they just break."

#### **BUDGET PROPERLY**

Give the pump and the pumping station an annual cleaning. "It's amazing how much longer it lasts if you do that," Vinchesi says. "It doesn't need a lot of maintenance, but if you don't do the maintenance, when it breaks it's very expensive."

Vinchesi estimates an irrigation pump could last 25 years if it's maintained properly, but perhaps only 15, or even less, if it is not. He strongly suggests superintendents set aside funds for maintenance in their annual budgets, particularly for a once-a-decade checkup. "That's not going to be cheap," he says.

There are service contractors that provide pump maintenance services but those services are not inexpensive and Vinchesi advocates a hands-on approach. "If you go down and look at it yourself," he says, "you'll know when something's not working." GCI

# POSILUNEP

# DON'T ENTER YOUR NEXT EMPLOYMENT AGREEMENT UNPREPARED. HERE ARE A DOZEN KEYS TO BETTER NEGOTIATE YOUR NEXT CONTRACT.

# By Bruce R. Williams, CGCS



s the New Year begins, it is time to look at your employment agreement with your employer. Like so many things, it is important to develop a plan and a strategy to make things happen that will benefit both you and your employer. CAREER

IF YOUR GOLF COURSE IS CONSIDERED TO BE MAINTAINED AS ONE OF THE BEST AROUND, THEN IT IS LOGICAL THAT COMPENSATION SHOULD BE IN THE UPPER 10TH PERCENTILE."

Know what your employer values most. For some employers, it may be as simple as keeping the golf course in great condition. While that is the goal at most facilities, there may be other things that have great value as well. Those could include lowering insurance premiums, an accident-free workplace, environmental initiatives, staying within budget and cost reductions. When you understand the things your employer values most, then you can develop a strategy to provide those things with potential bonuses or salary increases.

2 Knowledge is power. Understand the overall financial position of the facility you work at. This is public information for those working for cities and park districts. But if you dig deep, you will find out if your facility is profitable and determine how you played into that happening.

Knowing what your fellow superintendents make in a similar facility will give you leverage. Use the GCSAA compensation and benefits survey and it's always best to do your own survey in your area of similar clubs and responsibilities. A word of caution is to be sure you interpret the statistics to your advantage. All too often I hear clubs say that they are willing to pay the average for a superintendent yet they want their course to be a "10." If your golf course is considered to be maintained as one of the best around, then it is logical that compensation should be in the upper 10th percentile.

For those who are certified, you can use that to 🛛 🔳 your advantage in that data shows certified superintendents are compensated at a higher level. It can mean as much as \$10,000 or more per year in compensation when certified by GCSAA. For those who are not certified, think about negotiating a higher salary when attaining certification or possibly a bonus. Salary increases are preferable because that is ongoing as compared to a onetime bonus. There are other certifications that can be achieved through Audubon, GEO, Irrigation Association, etc.

Many superintendents continue to expand 🔰 🔳 their education and actually attain advanced degrees. Whether it is an associate degree, a bachelor's degree or a master's degree, this puts you in a better position to negotiate for greater compensation. Be sure to set it as a goal with your employer and ask for consideration for evaluation for additional compensation. Ideally your employer will support your desire to improve with both financial support for your class costs but also in the form of compensation with your increased value to the facility.

For those who work for non-profit businesses, such as private clubs, you will find a certain website quite valuable in finding the proper information to know what your fellow management team professionals earn. www. guidestar.com offers insight into the top earners at a facility via tax returns from previous years. This is also a good tool for people taking a new job to know what the club management compensation has been over the last few years. When asked what the top pay a superintendent can expect, I usually say that it would be highly unlikely for the superintendent to be compensated at a greater level than the general manager. However, the gap between what a superintendent makes and his ultimate earning potential will become clearer when all the cards are laid out on the table.

At some point it may be easier to negotiate benefits rather than compensation. Too many people concentrate on money and overlook benefits ... many of which are not taxable as income. While working in Chicago, I was told that my employer had a tight year financially and would be unable to give me a raise. My response was that I understood but perhaps the club would consider more vacation time for me. I went from four weeks of vacation to eight weeks of vacation and that lasted for another 18 years. Some people have negotiated use of club facilities for their families, housing, vehicles, whole life insurance, family insurance coverage, etc.

A club member once told me that the golf course superintendent used to have a nice suntan because he saw him out on the golf course all the time. Recently the superintendent was pale and not so visible out on the golf course. Much of the superintendent's time is now spent at the desk handling HR, personnel and payroll. There is no time better than the present to negotiate for having at least a part-time office assistant to take care of these tasks so supers can go back to being on the golf course and getting that tan.

**9** Timing is everything in negotiating. There are some times of the year that are better than others to negotiate so consider doing it when your course is in its best condition. This could be during the winter in Florida and at the beginning of the summer in Cleveland. Few value what the superintendent does when the golf course has a foot of snow covering it.

In recent years, the value of job security is right at the top of the list for superintendents in their golden years. More important than money may be knowing you have a job and benefits until you can get on Medicare, Social Security or a pension plan. This may include flat compensation in the final years or even development of a deferred compensation plan. Plan your later years wisely and in the final five to 10 years know that job security tends to be the highest priority for golf course superintendents.

For those looking at retirement in the short term, don't take anything for granted. It is best to develop a timeline that will work for you and the facility. This can be done gracefully, but it is sad to see disastrous ends to wonderful careers. Because you only have one chance to do this right, it is best to rely on career counselors that can walk you through the steps.

I saved the best for the last of these tips. Remember that if you "Don't Ask You Don't Get." Negotiations should be well thought out and planned in advance. Develop a strategy to prioritize items that will be good for you and good for you employer.

All too often I hear superintendents complaining they are not compensated properly or they don't have an adequate budget or resources. As problem solvers, we need to figure out a proper strategy to make things happen. Develop a realistic set of goals for yourself and your facility. As your golf course progresses, so should you. Most employers are looking for a superintendent who can take their property to the next level.

Can you take on more responsibility at your property? Some not only manage the golf course but also tennis facilities, swimming pools, skating, curling, paddle tennis, HOA grounds, building engineering, security and wastewater treatment. The more you manage, the greater your value to the facility. Each year I see more of our peers taking on positions of director of golf and also general manager. Consider this a part of your negotiation.

Pictures are worth a thousand words and prepare a "Year in Review" for your annual review in advance of your negotiation. Before and after shots validate the many things that may be taken for granted. Everyone notices when things are not right on the golf course. Having documentation of successes will position you in a positive light.

Set your goals for the upcoming year and agree upon them with your board or management. Be sure they are achievable. If it takes greater resources, then negotiate that as well.

For those with contracts, be sure that it is balanced and fair. A contract should protect both the employee and employer. For employers reluctant to give a contract, a simple letter of agreement can suffice. Key terms would be term of the contract and how and when it is renewed. My suggestion is that a contract should be three to five years in length with an automatic rollover a year out if no notice is given by either party to not renew the contract. Timing of that should be at a time when your golf course is in its best condition historically.

For those individuals desiring more in-depth training on negotiating, it is fully covered in a seminar that Tommy Witt and I put on annually and at various chapters each year. Nothing is more rewarding than having someone come up to me at the GIS and tell me that the lessons learned from that seminar ended up in improving their situation.

If all attempts fail to improve your situation, you might come to the realization that it is time to move on and perhaps time to improve your skill set. Moving on to another job is not failure. It is merely a stepping stone for you to learn more and advance your career. **GCI** 

Bruce Williams is GCI's senior contributing editor. TIMING IS EVERYTHING IN Negotiating. There are some times of the year that are better than others to negotiate so consider doing it when your course is in its

**BEST CONDITION."** 



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



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



# RECYCLED FOAM MARKER

This foam marker is a model Toro Multi-Pro 1250 that came off a Toro 5700 D Sprayer. The framework is made from 1.5-inch angle iron measuring 8 inches by 19 inches long. The "L" brackets are 1-inch square tubing stock and 1.5-inch angle iron welded together to make a slot at the bottom to slide over the 1-inch square stock. This allows the portable foamer to be removed easily by lifting it off the tractor's weight tray bracket when it is not in use. The tractor that it is mounted to is a 2011 New

Holland Model 2420. The foam marker is wired to the tractor's battery with a plug connector for easy removal and installation. The foamer is turned on and off by a toggle switch that is mounted by the steering wheel.



Total cost was about \$45 and it took about five hours to build. For a new foam marker plus materials the cost would be about \$1,300. Ryan McCulley is the equipment manager at the Westhampton Country Club in Westhampton Beach, Long Island, N.Y. Jay Glover is the superintendent.



# COURSE SETUP MOTOR SCOOTER

ourse setup is done quickly and easily with this 1994 Honda Super Cub Motor Scooter (150,000 Yen, \$1,275 used). The rear wooden box measuring 22 inches by 12 inches by 15 inches is bolted to the rear metal luggage rack and it holds a Par Aide Cup Cutter, bucket, cup hook and cup setter. Sprinkler head parts and tools are also transported. One person and their respective scooter takes care of each of the nine-hole course setup. The scooter is also used for inspecting the golf course or

to escape from work (not often). The front basket is made of plastic and stores miscellaneous tools and supplies. The wood



for the rear box was in inventory, it took about an hour to build and the front basket came with the scooter. Hajime Asahi, is the course manager/superintendent/head greenkeeper at the Taiheiyo Club, Inc., Kohnan Course, in Saitama Prefecture, Japan.

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Illinois based company seeking experienced/motivated construction project managers, field superintendents, estimators, shapers, and operators. Must be willing to travel. Please email resume to Jim Lohmann jlohmann@lohmann.com

> Golf Creations www.golfcreations.com

### (continued from page 4)

KAMINSKI AWARD Chris Tritabaugh, Hazeltine National Golf Club, Chaska, Minn.

BEST OVERALL USE OF SOCIAL MEDIA Kyle Callahan, Victoria National, Newburgh, Ind.

Steffie Safrit, TPC Piper Glen, Charlotte, N.C.

### BEST TWITTER FEED

Matthew Marsh, Santa Ana Country Club, Santa Ana, Calif. Sean McCue, The Country Club at Castle Pines, Castle Rock, Colo. Mike Richardson, University of Arkansas, Fayetteville, Ark. Jesse Shaver, Gull Lake Country Club, Richland, Mich.



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**BEST BLOG** 

Brian Stiehler, Highlands Country Club, Highlands, N.C. East Lake Golf Club Agronomy Team, East Lake Golf Club, Atlanta, Ga.

### **BEST VIDEO**

Phil Scully, Granite Golf Club, Stouffville, Ontario, "It's Your Course!" Georgia GCSA, "Golf is Greenspace"

# 2016 WAS GOOD, BAD & UGLY

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

ecently, I zipped up to the Michigan Turf Conference to see a zillion friends who attend that great event every year. While there, I did a talk about what we saw in 2016. The year behind us was, to borrow an old movie title, a mix of the Good, the Bad & the Ugly.

#### MARKET HEALTH

Overall, it was GOOD. Budgets were up 10 percent over 2015 and capital spending increases with investments in renovations, irrigation and equipment. 2016 was the first year of double-digit growth since the recession and, according to our study, 2017 budgets grew at a nice 6 percent clip.

#### **COURSE CLOSURES**

We saw another year with about 180 closures which is actually GOOD. Golf courses supply continues to slowly deflate as the majority of complete shutdowns continue for properties being converted to other real estate use or for poorly planned "anchor" courses that were part of housing developments. I see no reason why the supply shouldn't continue to trickle down for the next 5-10 years until we get supply and demand right.

#### **OLYMPIC GOLF**

The fact that golf is back in the Olympics is GOOD. The future of the

Olympic Golf Course in Rio looks very UGLY. Reports are emerging that the facility is failing – perhaps by design – and it will likely be another example of Olympic construction folly. That's no reflection on the design or the fantastic job done by Neil Cleverly and his crew to build and condition it ... it's simply what happens in the midst of an incredibly corrupt process.

#### U.S. OPEN

The course presented by John Zimmers and his team at Oakmont was not only GOOD, it was fantastic. Conditions were outstanding despite a nasty rainfall right before the event kicked off. I've said it before and I'll say it again ... it was the best conditioned golf course I've ever seen.

That said, the USGA shot itself in the foot in a very UGLY manner with the Dustin Johnson ruling. It all worked out fine in the end but it once again sent a message that a crazy obsession with rules obscures the fact that golf is a game that is supposed to be a fun pastime that allows you to enjoy nature and stay fit. It's GOOD the USGA issued a rules change last month that will (hopefully) prevent similar crap in the future.

### RYDER CUP

I can't say enough GOOD things about the entire Ryder Cup, but particularly about Chris Tritabaugh's groundbreaking approach to prepping and hosting this event. Chris (and his sister Emily) opened Hazeltine's agronomic program to the world through social media that was compelling and fun. Many superintendents have helped raise the image of the profession when the spotlight of a major championship was shined on them ... but none more so than Chris.

### SMART REMODELING

Bunker renovation and upgrading practice areas was 2016's biggest trend. It's more than GOOD to see facilities proactively investing in areas that increase their members' and customers' enjoyment of the course instead of making it harder or longer. Better bunkers pay for themselves over time and new practice/fun areas add an important dimension (and revenue opportunity) for clubs that were getting stale. The strong facilities will survive by providing the best product, not beating their golfers to death.

#### THE ASSISTANT CRISIS

This problem is getting UGLY folks. It's amazing how quickly we went from way too many turf grads to way too few. Finding ways to attract bright young people – whether they're college-bound or not – has to be a top priority. And it starts with better compensation for hard-working assistants.

## PRESIDENT TRUMP

As I write this, we're a few weeks from the inauguration of our first golf course owner/chief executive. It may be GOOD for the industry, particularly in terms of a more reasonable approach to regulation and taxation. What might be BAD is continued immigration restrictions that would limit affordable labor in the U.S.

### THE TURFHEAD ISSUE

I hope you agree it was GOOD! I'm in awe of how many great articles we packed into the issue. We'll be doing it again this December so start thinking about contributions. GCI



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