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one image of Houston' Champions Golf Club flooding after Hurricane Harvey

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10,17

# HISTORIC HURRICANES

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# **Golfdom**//10.17

VOL. 73 // NO. 10

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f E

## **HISTORIC HURRICANES**



It may sound silly, but this Australian slogan could save your life.



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Slip, Slop, Slap

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## Keeping up with **The Jones**

### KILL CREEK, "UNSTEADY"



"We have a great long-form, multi-bylined article in the issue. And we also have that hot-button story that, well, is almost hidden."

SETH JONES, Editor-in-Chief

## Judging a magazine by its cover

have been a loyal subscriber to *Sports Illustrated* for 20-plus years. I first subscribed when I moved out of my parents' house and could no longer read my dad's copy. I couldn't even afford the subscription at the time, but I just had to read the columns every week by Steve Rushin (still my favorite columnist) and Rick Reilly. I loved the occasional long-form writing on something random, like boxing or mountain climbing. And of course, I had to have the free NFL hoodie in the team of my choice (Go Chiefs!). It probably was my love for *Sports Illustrated* that got me into what I'm doing today.

An issue of *S.I.* recently arrived, and I'll confess that I didn't even crack it open. Neymar, the Brazilian soccer star, was on the cover. While I enjoy soccer, I'm not going to spend my valuable time reading up on Neymar. The other stories teased on the cover didn't interest me, either. The issue got buried in the stack of magazines on my desk.

That was until a couple of weeks later, when I was cruising through *Sports Illustrated*'s college football preview issue. In the letters section, a reader complained that Jordan Spieth's Open Championship win deserved the cover over Neymar. The reader went on to say that it was a further insult to Spieth that he wasn't the main golf story in the issue. Instead, it was a 12-page multi-bylined story on Donald Trump the golfer/golf owner.

I immediately went to my graveyard of unread magazines (typically a few *Esquires* mixed with various *Golfdom* competitors) and pulled out the Neymar issue. Sure enough, there it was... some 10,000 words on the president of the United States, his dealings in golf and the way he plays the game. (And suddenly it made sense why I had received an email from one of *Sports Illustrated's* golf writers a few weeks earlier.)

I gobbled the story up. The reader was right to complain, but the complaint should have been about Trump on the cover over Neymar and Spieth. Not only did Trump not make the cover, the story — by far the longest feature in that issue — didn't even get a mention on the cover.

So why wouldn't *Sports Illustrated* put Trump on the cover, or even make mention of the story? I can only speculate, but I wonder if *SI* was nervous about putting such a polarizing figure as President Trump on its cover. It's almost as if they tried to hide what truly was a great piece of journalism.

This issue of *Golfdom* is somewhat like that issue of *Sports Illustrated* (but no Neymar, trust me.) We have a great long-form, multibylined article in the issue (Hurricane History, page 38). And we also have that hot-button story that, well, is almost hidden.

The story "Slip, Slop, Slap" starts way in the back, after the Early Order Program guide and the hurricane story, on page 48. It was penned by Florida-based superintendent David Dore-Smith (whom you might remember from last month's "19th Hole.") And it's about dealing with — and being proactive about — skin cancer.

The story first appeared in The Florida Green, the official publication of the Florida GCSA. David told me that Golfdom wasn't the first national industry trade magazine he pitched the story to... but it was the first to actually return his email.

I'm proud of my team for the great work they did reporting on Hurricanes Harvey and Irma. I'm also proud of North Coast Media for continuing its support to fight cancer (see page 9.) Please don't let David's story be the hidden article in this issue. Take the time to read his story, because it's such an important topic for all of *Golfdom*'s readers.

Email Jones at: sjones@northcoastmedia.net.

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#### //RISE ROUNDUP

## RISE LEADERSHIP PRESENTS A PROACTIVE MISSION

BY MARTY WHITFORD // Editorial Director

FORT LAUDERDALE, FLA. — The Governing Board for Responsible Industry for a Sound Environment (RISE) unanimously approved a membership dues increase to fund a more proactive messaging stance and fight mounting pesticide litigation battles at the group's recent annual meeting.

The undisclosed dues increase the organization's first in years — is significant but needed, said RISE Chairman Jonathan Sweat, who also is BASF's director of specialty & professional solutions.

RISE President Aaron Hobbs thanked RISE members for their continued support in helping protect and advance the professional pest management and plant health industries, and in helping shape positive public policy and opinion.

"Most of our time and resources currently are dedicated to defensive efforts," Hobbs explained. "We are great firefighters; now we have to step up our fire-avoidance and suppression strategies."

Hobbs discussed recent and ongoing legislative and legal battles to defend and extend preemption. Perhaps most notably, after a four-year court battle, a



pesticide ban in Montgomery County, Md., recently was ruled unlawful and preempted by Maryland law.

"Montgomery County has appealed, but we are confident the decision will stand when it goes through the appeals process," Hobbs said. "This was a big win for RISE members — manufacturers, formulators and distributors of specialty pesticides and fertilizers."

Sweat concurred. "Our recent victory in Maryland," he said, "underlines our collective strength when we stand together behind a unified message. If we don't stand together, we're going to pull apart."

#### //GRAY MATTERS

## AUDUBON INTERNATIONAL ADDS GRAY

Marcus Gray has been named director of Audubon International's Cooperative Sanctuary Program for golf, the internationally recognized program that advances and highlights voluntary environmental stewardship activities on the world's golf courses. Gray's focus will be on building the program's membership base, forging partnerships, enhancing development efforts and conducting outreach to promote science-based conservation of wildlife, water and soil.

Gray holds a master of science in wildlife science from South Dakota State University, and a bachelor of science in wildlife conservation from Maine's Unity College.

#### //NEW KID ON THE BLOCK

## PUTTING SOME MORE HART INTO GOLFDOM

*Golfdom* is proud to announce an addition to its award-winning editorial team. Managing Editor Abby Hart will oversee the editorial production of

*Golfdom* and its sister publication, *Landscape Management*.

"We're excited to invest in the success of *Golfdom* and ensure we have the right people on the team," says Editor-in-Chief Seth Jones. "Abby's



Abby Hart

expertise in publishing and production will allow us to continue delivering quality editorial and value to our readers and advertisers."

Hart is happy to be back in Cleveland after a 10-year stint in Chicago, where she was an operations manager for a global hospitality consultancy. Hart also was managing editor of *ILLUMINE*, a health and wellness magazine, and a marketing and events consultant for several B2B publications. She's a proud Terrier, with a degree in Journalism from Boston University's College of Communication.

Wish her luck as she gets to know turf and keeps the trains running on time at *Golfdom's* Cleveland HQ.



#### //GOLFDOM SUMMIT

## Lerner headlines Golfdom Summit speaker lineup

The Golf Channel's Rich Lerner consistently is on site for golf's biggest events, and this December he's going to be on site as the keynote speaker for the 2017 Golfdom Summit.

Lerner joined Golf Channel in 1997, is a play-by-play host for Golf Channel's PGA Tour tournament

coverage and a lead host for the network's "Live From" programming. The TV veteran of more than 20 years joins a distinguished group of Golfdom Summit



**Rich Lerner** 

keynote speakers, including former President of the PGA of America Ted Bishop and Ms. 59, Annika Sorenstam.

Now in its seventh year, the Golfdom Summit brings together 50 superintendents from across the country for three days of meetings, networking, speakers, and of course golf, at the Reunion Resort in Orlando. Other speakers

include *Golfdom* Research Editor Clark Throssell, Ph.D., and Bob Farren, director of grounds and golf maintenance at Pinehurst (N.C.) Resort. Golfdom's Seth Jones again serves as MC of the event.

"After watching Rich cover the game on television for years, we are thrilled to have him join us for this year's Summit," says *Golfdom* Publisher Pat Roberts. "It truly is a privilege to have an individual who has witnessed so much golf history speak at our event. We're sure that our group of superintendents and sponsors will enjoy the stories that Rich has to share."

As of time of print, this year's sponsors are: Blount International - Oregon, Capillary Concrete LLC, Control Solutions Inc., Frost Inc., Jacobsen/Textron, Nufarm Americas Inc., PBI-Gordon Corp., Pearl Valley Organix, Smithco, Stevens Water Monitoring Systems and Winfield United Pro.

#### //VOICES HEARD

#### **GOLFERS VOICE OPINIONS ON PROPOSED RULES** OF GOLF

More than 22,000 golfers in 102 countries, as well as representatives from golf organizations throughout the world, submitted comments to the USGA and the R&A on the proposed new Rules of Golf as the organizations work toward implementation on Jan. 1, 2019.

With the worldwide survey and evaluation period now complete, the USGA. the R&A and their respective committees will continue to review all comments received with the goal of finalizing the new Rules next spring, then beginning a comprehensive education program later in 2018, according to a press release.

The USGA and R&A began an extensive review of the Rules in 2012, with the intent of making them easier to understand and apply. A draft of the new Rules was released in March, beginning the six-month feedback period.

While the feedback will continue to be analyzed over the next few months. several common themes emerged, according to the organizations, including:

• Golfers are enthusiastic about the scope and direction of the overall changes, such as pace-of-play improvements, the elimination of penalties and streamlined procedures.

 Golfers provided the most feedback on the proposed Rules changes that focus on the putting green, the creation of "penalty areas" and the new dropping procedures.

 Golfers strongly welcomed the new Player's Edition of the Rules and found it much easier to read and understand.

The current 2016 edition of the Rules of Golf remains in effect when playing, posting scores or competing until the Jan. 1, 2019 adoption of the new Rules.

## //PITCHING IN NORTH COAST MEDIA PITCHES IN TO FIGHT CANCER

North Coast Media, parent company of Golfdom and its sister publication, Landscape Management, for the fourth consecutive year is donating a portion of the company's October revenue to support the American Cancer Society.

"At North Coast Media, we understand the importance of standing up against this terrible disease. That's why we continue to make this pledge to the American Cancer Society in honor of those who are fighting or have lost their lives to cancer," said Pat Roberts, Golfdom publisher.

NCM also proudly donates to the American Red Cross, Wounded Warrior Project and The City Mission. Additionally, each Wednesday, NCM staff members volunteer their time, serving lunches at the Bishop Cosgrove Center, which helps feed those less fortunate.





PHOTO COURTESY NBC SPORTS

#### ADVERTORIAL

unnybrook Golf Club was founded in 1914 by six men who defected from the Philadelphia Cricket Club because they were frustrated with the large membership. They determined that their new club would be smaller and that there would be no tee times, a tradition that continues to this day.

The club was forced to find a new home in 1954, when it was announced that a highway would be built through parts of the golf course. The William and David Gordon-designed course opened at the club's current Plymouth Meeting, Pa., location in June 1956.

Almost 60 years later, Geoff Stricker arrived at Sunnybrook GC. He served as assistant superintendent for six years until being promoted to superintendent in 2014. In 2007, the club completed a greens and greenside bunker renovation to bring the course back to the Gordons' design. Stricker called the renovation "beautiful," but in 2013 the course wasn't looking its best because of consistent dollar spot breakouts. The staff started using Syngenta's Secure fungicide to combat the problem.

"Secure has been the biggest help since it came out," Stricker says. "We use it in the spring, and it's usually our last spray in mid- to late September, and we have seen almost no dollar spot in the last three to four years. We actually sprayed it at the beginning of April this year, and didn't do another fungicide application until the end of May."

To keep the renovated greens healthy, the staff at Sunnybrook applies combination packs of Daconil Action and Heritage Action. Stricker's greens are doing so well that he can reduce the frequency of syringes on the turf.

"We have sand-based greens, so usually we would have to syringe at least every hour on really humid days, but we've been cutting back to every one-and-a-half to two hours," says Stricker. "We have minimal issues with the greens, even with soil temperatures fluctuating so quickly with the air temperature." Æ

Hole

**Geoff Stricker** 

SUPERINTENDENT

## Hole No. 7 Sunnybrook Golf Club

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## **Assistant Living**

DID I CATCH A 'NINER' IN THERE?



"When the crew gets to the point where they, like pilots, start anticipating the next move and are familiar with your expectations and directions, you my friend, have a well-oiled machine on your hands."

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

## What I learned from YouTube

he YouTube rabbit hole. You're checking out a highlight from the game you couldn't stay awake for the night before, and next thing you know, you've been watching police dashcam videos for an hour. (True story, happened to um... a guy I know).

A few weeks ago, I somehow ended up watching a bunch of air traffic controller videos. As often is the case with losing time on YouTube, I have absolutely no idea how this happened. In any case, I realized as I was watching that air traffic controllers may be some of the most effective communicators on Earth.

They are absolute masters of the clear, concise transfer of information. All necessary information is relayed efficiently and when pilots need it — not before and certainly not after — in order to avoid confusion and overloading the pilot with too much information at once.

Effective communication requires not just the transmission of information, but also the receiving of and understanding of that information by the listener. In the case of air traffic controllers, they are speaking to an educated audience.

Because of their training, pilots not only understand the lingo, they likely are anticipating certain directions and know what information to expect at a given time and the general format in which the information will be delivered. This obviously allows them to be better prepared to receive the information and act upon it.

Because I'm alarmingly one dimensional (read: complete turf nerd), I immediately began drawing parallels between air traffic controlling and golf course maintenance. Obviously, the stakes are vastly different, but one of the main similarities between the two is frequently changing priorities and plans and the need for these changes to be communicated effectively.

When the grounds crew gets to the point where they, like pilots, start anticipating the next move and are familiar with your expectations and directions, you my friend, have a well-oiled machine on your hands. With the widespread shortage of labor in this business, getting the most out of the people on your staff is more important than ever.

Getting to that point comes down to consistency and education. By consistency, I'm referring to everything from consistency in your expectations to how you deliver instructions to the crew. As we all know, the crew tends to become familiar with your style of leadership and direction, and likely will understand and retain more of what you say if you do it in more or less the same way every time.

By education, I'm referring to telling the crew not only what needs to be done, but also *why* it needs to be done. I'm not talking here about lengthy agronomic dissertations that make most non-turf guys wish they were doing literally anything else but listening to you.

If it sounds like I've gone down that road a few times over the years, it's because, admittedly, I have. If you watch closely enough, you sometimes actually can see crew members' eyes roll back in their heads. In case I haven't mentioned it, I'm a huge turf nerd. But briefly explaining why things are done a certain way will help your crew begin to anticipate and make good decisions on their own the next time they're faced with a similar situation.

I'm certainly not suggesting that anyone start referring to 9 green as niner green. I think we all learned from the movie "Tommy Boy" that unnecessary use of the word "niner" will only get you mocked by your co-workers. But at the same time, considering that you may have just mercilessly torn a guy from his phone for 10 seconds to let him know his next job, clear and efficient communication will make everyone's life a little easier.

Matt Neff (mneff4@yahoo.com) is assistant superintendent at Wedgewood G&CC in Powell, Ohio. Take advantage of expanded products and earn more this season.

## REWARDS BEYOND



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Check out this year's qualifying products, discount period and rewards offer online: EOPSuperRewards.com **Crushin' it!** That's Wolf Creek Golf Links (Olathe, Kan.) Superintendent Bill Irving taking a swing at Arrowhead Stadium during a recent Topgolf Crush event. We haven't seen that kind of accuracy in Arrowhead since Joe Montana!

Golfcor

**Pre-game (championship) dinner** In anticipation of the 2017 PGA Championship, *Golfdom* treated the Quail Hollow (Charlotte, N.C.) leadership team to a muchneeded relaxing dinner at a Mexican cantina. (Left to right) Greg Vierkant, horticulturist, Brandon Hicks, assistant superintendent, Lori Austin, agronomy administrative assistant, Keith Wood, superintendent, Shane Omann, assistant superintendent, Basil Lowell, assistant superintendent, and *Golfdom* Editor-in-Chief Seth Jones say jqueso!

**Solution** Not to burst your bubble Jon Sweat, BASF's director of professional and specialty solutions and the Responsible Industry for a Sound Environment (RISE) chairman, informs the crowd that there is a dues increase upcoming... but hey, it's the first one in years, and they're worth it.

Let's holler at Koller Bethany Chambers, North Coast Media's director of audience engagement, was happy to learn she had a *Golfdom* audience at Seneca Golf Course, Broadview Heights, Ohio, where Geoff Koller is the PGA professional and clubhouse manager.

**Grow the game** The boss has no problem treating the sales team to a round of golf after a successful month. Here, NCM's sales force assembles at the Mayfield Sand Ridge Club in Chardon, Ohio. From left to right are Dino Vitanza, Craig MacGregor, Bill Roddy, Ryan Gerard, Pat Roberts, Jake Goodman, Steve Galperin, Chris Di Cicco and Kevin Stoltman. No word on who had the low score of the day.









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## 2017 EARLY ORDER PROGRAM GUIDE

#### A SUPPLEMENT TO

# Golfclom

## Sometimes the grass *is* greener

Much to a superintendent's surprise, having an owner/ operator buy his course was a highlight of his career.

BY JASON ADAMS

EOP4

## Big tickets and bigger timing

2017's Herb Graffis Businessperson of the Year has come to embrace planning for EOP season.

BY TIM CLONINGER

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PROGRAM SPOTLIGHT Syngenta	E0P8
PROGRAM SPOTLIGHT	E0P12
PROGRAM SPOTLIGHT Quali-Pro	EOP13
PROGRAM SPOTLIGHT PBI-Gordon	EOP14
PROGRAM SPOTLIGHT Bayer	EOP15
PROGRAM SPOTLIGHT SipcamRotam	EOP16
PROGRAM SPOTLIGHT BASF	E0P17
PROGRAM SPOTLIGHT Nufarm	EOP18

# Sometimes the grass *is* greener

Much to a superintendent's surprise, having an owner/operator company buy his course was a highlight of his career.

#### **BY JASON ADAMS**

anagement companies, owner/operators and superintendents have not always had the best relationships. However, my experience with a troubled course and a management company as the new owner may give some of my colleagues a chance to reconsider this type of affiliation. Here's my story.

Blue Hill Country Club, a member-owned private country club established in 1925 just outside Boston, used to be prominent and thriving, hosting the 1956 PGA Championship and several LPGA events in the early '90s. But like many American clubs, large capital investment projects and the downturn of the golf economy started a slow, downward financial spiral.

In 2002 and 2003 the club borrowed millions of dollars to upgrade the outdated golf course, irrigation system, member locker rooms and bar. This created some dissension, and many members left. At that time, the club also had hefty assessments on top of its already high membership dues, which kept new members from joining.

In 2008, the club experienced what other clubs in the United States already had experienced. The club dropped from 350 equity golf members to 230 equity golf members. Budgets and capital projects slowly dwindled. Its head barely above water, the club chipped away at whatever capital projects it could afford. However, the property's infrastructure, which had been ignored for years, worsened and was now more expensive to repair. The club was dated and lacked the funding to maintain its position in the local market.

#### **Enough is enough**

In the winter of 2012, the club's board of directors proposed hiring an third-party management company to help, and did so on Feb. 1, 2013. A new general manager was brought in, as well as a new food and beverage team. New policies and procedures were put in place, as well as new accounting programs and reporting.

Differences in the day-to-day operations were immediately noticeable. However, the facility still lacked capital funding. At a meeting with the membership during the summer of 2014, and taking the management company's advice, the board proposed a \$2.1 million renovation to the clubhouse. Department heads attended the meeting as a show of support.

The meeting quickly went bad. Members

## 2017 EARLY ORDER PROGRAM GUIDE



voiced concerns about the project and where funding would come from. Some members became vulgar and made verbal personal attacks on board members. The situation was extremely uncomfortable.

Over the next few months, the board held online meetings with the membership on possible "save the club" scenarios. One option was to acquire new capital from an investor. Surprisingly to the board, support was overwhelming to recapitalize or sell the club. The members said they'd had enough. They saw their beloved club struggling and wanted their once vibrant and healthy venue back and flourishing again.

After months of work, including course tours and due diligence, the board elected to sell the club to Concert Golf Partners. A new chapter was about to begin.

#### **Full speed ahead**

Fast forward to today and what Concert Golf Partners has done for the course, me and my Blue Hill Agronomy Department.

In my previous nine years of employment, greens committees, boards of directors and finance committees met tirelessly about maintenance facility issues, environmental cleanup issues, a 27-year-old underground fuel storage tank, driving range and short-game upgrades "BUYING FERTILIZER, CHEMICALS AND EQUIPMENT HAS NEVER BEEN EASIER. (WE HAVE A) NATIONAL ACCOUNT PROGRAM WITH A GREAT PORTFOLIO OF MAJOR VENDORS FROM THE INDUSTRY."

JASON ADAMS, superintendent, Blue Hill CC

and tree removal. The capital improvement wish list went on and on. Unfortunately, most of the list continued to be postponed because of a lack of capital. If the project wasn't going to instantly increase membership numbers, it wasn't going to happen.

Concert Golf Partners in 17 months has financed these items and more throughout the club. Completed last season was a major renovation of the driving range, with an addition of a 50,000-square-foot short-game practice facility. Two months after purchasing the club, I had conversations about the project with Peter Nanula, Concert Golf's chairman of the board, and John Kopack, regional director of agronomy. I presented them with designs and options I had been working on. They liked what *Continued on page EOP6* 

#### Continued from page EOP5

they saw and told me, "Full speed ahead!" They gave me the opportunity to design the project, manage bids and oversee the endeavor.

It was an opportunity many superintendents don't get. There were no greens committee meetings, no board meetings or finance committee meetings. I think there were a few emails and a couple of phone calls — that's it! Forty-six days later, the project was complete.

During the same period, we renovated the 6th hole on our other 9-hole course, completed a large environmental cleanup, installed a 1,300-square-foot fertilizer storage building, installed a new 1,200-square-foot office and breakroom facility, removed that 27-year-old underground fuel storage tank, and installed a new 1,000-gallon aboveground fuel storage tank, all within six months. *Whew!* It has been a fulfilling and exciting experience. Projects I dreamed about completing for years are finally being done, and I'm having a blast doing them.

Things are just as gratifying on the operations side. Buying fertilizer, chemicals and equipment has never been easier. Concert Golf has created national account programs with a great portfolio of major industry vendors. I've been able to create an even better agronomic program for the golf course at a significant price reduction.

Capital equipment purchases work the same way. Concert Golf gives each of its superintendents a fixed annual budget amount for conOver the last 17 months, Blue Hill has completed several projects, including the addition of a 50,000-square-foot practice facility.

stant equipment replacement. This allows me to create a long-range replacement plan without having to meet with greens committees or finance committees. Too many times in years past, capital equipment would take a back seat to other items at the club, making it difficult to execute a long-range plan.

#### A hands-off style

We are now into our second season with Concert Golf, and upgrades continue. Last winter we removed a few hundred trees that had been encroaching on the course, which always is a touchy subject at member-owned clubs. We also completed a fairway expansion and bunker renovation on our second green.

Again, it was as simple as an email to Mr. Nanula about the project, and we were off and running. It's just not that easy at a private club. The project has been received with excitement from the members. They are thrilled to see great things happening to the golf course.

Change is not easy, and it is human nature to resist it. However, superintendents must deal with change daily. We always shift gears to reach goals. I'm happy I decided to stay at Blue Hill and experience what Concert Golf Partners has to offer.

The opportunity has revitalized this 19-year superintendent. The hands-off style of the company gives me a feeling of autonomy. The influx of capital has given new life to the club. We have increased our membership significantly and are almost full. Blue Hill CC once again has become a lively, vibrant and healthy club for all members to enjoy.

Jason Adams, superintendent at Blue Hill CC, appeared on the cover of the July 2007 *Golfdom* when he was superintendent at Norfolk GC, in the article "Fine by Nine," about 9-hole courses. Check out his blog at **bluehillccgrounds.** wordpress.com.

## 2017 EARLY ORDER PROGRAM GUIDE



I plan my whole year of wetting agent applications at this time, and it's saved our property a ton of money, and it's saved a lot of water as well."

**TIM CLONINGER,** superintendent Shadow Creek Golf Course, North Las Vegas, Nev.

## **Big tickets and bigger timing**

t's been a much different summer than normal here in Las Vegas. Typically, golf slows down over the summer months. But with a couple big-ticket fights (Mayweather versus McGregor and Golovkin versus Canelo), this summer has been just as busy as our peak season.

We are nearing our overseed, and this is the most important time of the year for Las Vegas superintendents. These next few weeks are vital if we want to have good turf going into the fall. So, timing is everything and the stakes are high. And at the same time, I have to start thinking about the 2018 season and the various Early Order Programs.

When I was a young superintendent, I thought of the Early Order Programs and the sales people pitching them as a distraction. The timing always felt wrong, I had a hundred different things I was already worrying about, and now I was supposed to worry about the future as well, with the EOP season upon me. Back then, I thought it was too much all at the same time.

But over the years I've come around on the EOPs. Even though we're busy, it's actually a great time to plan for the upcoming season. The challenges of the summer and the weeds that were a nuisance are fresh in my mind. Over the winter, when I'd look back, I'd think, "Ahh, that wasn't so bad, I can skip a preemergent." That's not the case when the summer is fresh in my mind.

When it comes to EOPs, a lot of people think of fungicides, insecticides, preemergents. But I'm big on buying wetting agents during the EOP season. I plan my whole year of wetting agent applications at this time, and it's saved our property a ton of money, and it's saved a lot of water as well. I can treat my fairways more frequently, based on the cost of the product at this time of the year.

The other thing I'm big on now is buying in bulk. Instead of buying a bunch of two-and-a-half gallon jugs over the year, I'm buying a 250-gallon tote. So, I'm taking advantage of the cost savings and less packaging. The downside, of course, is that I have to store it and take care of it in a climate-controlled area, but the savings are worth finding a proper place to safely store it.

I'm now much more appreciative of EOP season because it forces me to slow down a minute, sit down with the sales representatives, and learn about the new chemistries available for my golf course. The sales reps know these chemistries better than anyone else. It's fortunate for me that I can get some of their time during the EOPs to learn what they know.

Good luck with submitting your Early Order Programs. If you're like the young me, and think of them as a nuisance, don't. Realize that, just like these big-ticket fights that keep coming to my city and packing all the area golf courses, they're really an opportunity to be appreciated.

Tim Cloninger is the superintendent at Shadow Creek Golf Club in Las Vegas. He was featured on the cover of the February issue as the winner of the 2017 Herb Graffis Businessperson of the Year Award. To read that story, visit **Golfdom.com**. SPONSORED CONTENT

## Syngenta GreenTrust 365

earlong rebates go far. Yearlong support helps you go farther. And no other purchase program offers industry-leading products with one-on-one service like GreenTrust® 365. Purchases must be placed during the **Early Order Period from October 1 to December 7, 2017.** Below are just a few of the benefits you can expect from an ongoing partnership.

#### **YEARLONG REBATES**

Spend at least \$5,000 on Qualifying Products during the Early Order Period to lock in a yearlong rebate that lasts from October 1, 2017 to September 30, 2018.





## 2017 EARLY ORDER PROGRAM GUIDE





#### **GREENTRUST REWARDS**

Every dollar spent in **October earns triple points.** Plus, you can earn up to an additional 40,000 GreenTrust Rewards points through the Spotlight Brand Points Bonus, Acelepryn® Brand Points Bonus, and the **new Secure® Brand Points Bonus.** 

#### **SUMMERPAY**<sup>TM</sup>

Order Qualifying Products by December 7, 2017 and keep your cash flow in check by **deferring payment until July** 6, 2018.

#### PALLET SOLUTIONS

Apply intelligently with the right mix of products for almost any facet of your agronomic program. You can **save up to 23%** from a selection of 14 different Pallet Solutions,



making it easy to meet your minimum order requirement.

#### **PRODUCT ASSURANCES**

Protect your course with confidence through expert application recommendations and performance guarantees.

#### MULTIPAKS

Save even more on complementary products delivered in convenient Multipaks.



#### **CALCULATE YOUR SAVINGS**

Save time and maximize your purchasing power with our easy-to-use online calculators. They can help you determine the best product configuration along with your yearlong rebate and GreenTrust Rewards points.

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## Prepare to Save. Prepare to Innovate. Prepare to Win.

Make your planning and purchasing easier with the BASF Early Order Program for 2018:

- 1) Earn up to 33% more in rebate dollars by ordering in October.
- 2) Order specially-designed cube solutions for your regional needs and save 10%.
- 3) Drive your fairway program farther with the Intrinsic<sup>®</sup> Fairway Rebate. Save an additional 10% by purchasing program quantities of either Honor<sup>®</sup> Intrinsic brand fungicide or Insignia<sup>®</sup> SC Intrinsic brand fungicide.



Order and save now to ensure championship conditions for your turf in 2018. To learn more about the 2018 Early Order Program, visit betterturf.basf.us/eop for product information, videos, and the electronic EOP Order Planner. Contact your distributor representative to place your order for innovative products and solutions.

With EOP, winning is as easy as 1-2-3.



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## Plan ahead to protect your turf and your budget with the FMC 2017 Early Order Program

REBATES AND EXTENDED TERMS OFFERED ON FMC'S MOST POPULAR T&O PRODUCTS.

uperintendents and turf care professionals can get ahead of the game this season with the FMC 2017 Early Order Program, which promises significant rebate savings on the purchase of any of FMC's top

turf and ornamental products. The limited-time program for first-time buyers and



loyal customers alike will run from October 1 to December 15, 2017.

Though the savings do last through the end of the year, the program's biggest rewards will be claimed by the earliest takers. Those who place their orders by October 31 will receive an additional rebate totaling up to 25 percent. As part of the program, all participants can also defer payment until late June.

"The FMC 2017 Early Order Program truly provides



turf professionals with a jump start into 2018," said FMC Marketing Manager Kevin Laycock. "The program offers access to the full FMC portfolio of turf and ornamental solutions at a fraction of the cost."

Overall, the more you buy during Early Order, the more you save, and it's easy to stock up with a full lineup of products that can address all your turf and ornamental needs.

Participating products include the newly launched herbicides Dismiss®NXT, and Xonerate™ 2SC; the Fame® family of fungicides; Echelon®, QuickSilver® and Solitaire® herbicides; and Talstar®, Aria® and Triple Crown® insecticides.



For full program

qualifications and details, please visit fmceop.com.

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## 2017 EARLY ORDER PROGRAM GUIDE

## Quali-Pro Simply.Grow.Together. program



et next season started off with Quali-Pro's Simply. Grow.Together. program. Qualify and purchase any of the qualifying products and you will receive the listed dollar amount in the form of a VISA gift card, check or distributor credit. Some conditions and restrictions apply. To see a list of all qualifying products or to download a redemption form, visit **www.simplygrowtogether.com**.

#### SEPT 1ST - DEC 8TH 2017

WHO QUALIFIES: End Users in all U.S. turf, Nursery and Ornamental markets who purchase Quali-Pro branded products through authorized Quali-Pro Distributors.

**TERMS:** 20% of rebate must consist of Platinum products to qualify.

LIMIT: Minimum rebate is \$100. Maximum rebate per account is \$5,000.

#### **Enclave**®

Effective against dollar spot, brown patch, anthracnose, snow mold, spring dead spot, blights, leaf spots, powdery mildew, rust diseases



PROGRAM SPOTLIGHT



NIMITZ® Pro G Effective against Lance, Sting, Root Knot and Lesion nematodes



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# The PBI-Gordon 2017 End-User Early Order Program

GROW YOUR REBATE BY UP TO 25%!

he PBI-Gordon End-User Early Order Program offers end-users a hefty rebate for ordering qualifying products from a PBI-Gordon distributor between October 1, 2017, and December 15, 2017. And when your rebate hits the \$500 mark or higher, you earn even more:

- Level 1 rebate (\$500-\$999) earns an additional 15% rebate
- Level 2 rebate (\$1,000 or more) earns an additional 25% rebate

Eleven of the most popular PBI-Gordon products are included in the program:

- Kabuto<sup>®</sup> Fungicide SC
- Segway<sup>®</sup> Fungicide SC
- Avenue<sup>™</sup> South Broadleaf Herbicide for Turfgrass
- Bensumec<sup>™</sup> 4 LF Pre-Emergent Grass & Weed Herbicide
- Katana<sup>®</sup> Turf Herbicide
- Q4<sup>®</sup> Plus Turf Herbicide for Grassy & Broadleaf Weeds
- SpeedZone<sup>®</sup> Broadleaf Herbicide for Turf
- SpeedZone<sup>®</sup> Southern Broadleaf Herbicide for Turf
- Surge<sup>®</sup> Broadleaf Herbicide for Turf
- TZone<sup>™</sup> SE Broadleaf Herbicide for Tough Weeds
- Zylam<sup>®</sup> Liquid Systemic Insecticide





#### Visit eop.PBIGordonTurf.com for more information.



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## 2017 EARLY ORDER PROGRAM GUIDE

## Bayer launches 2017 Fall Solutions Early Order Program for golf course superintendents

FALL SOLUTIONS OFFERS EARLY ORDER COST SAVINGS FOR GOLF COURSE SUPERINTENDENTS

nvironmental Science, a business unit of the Crop Science division of Bayer, is launching the 2017 Bayer Fall Solutions<sup>™</sup> Program, offering early order incentives for golf course superintendents moving into 2018. Fall Solutions opens October 1, 2017 and extends through December 8, 2017. The flexible program allows participants to save on individual products or product bundles to maximize savings per acre.

"At Bayer, we build portfolios of innovative products that address the needs of superintendents," says David Wells, Bayer Golf business manager. "And we're happy to offer them a program that gives them both the affordability and flexibility that they need to effectively manage their courses throughout the year."

Premier offers within the 2017 Bayer Fall Solutions program give superintendents the opportunity to save up to 24% on PAKs with a large selection of individual solutions and product bundles geared to suit specific turf needs. Participants can earn a 1% bonus rebate on their entire purchase when they buy any PAK and an additional 1% bonus if they buy between October 1 and October 31, 2017.

Superintendents can order early to save more with select product rebates and Total Program Rebates. The Total Program Rebate is comprised of a PAK bonus, an



Science For A Better Life



PROGRAM SPOTLIGHT

October bonus and a tiered base bonus purchase-level rebate. Those at the \$40,000 purchase level will qualify for a continued 9% rebate on all 2017 Fall Solutions products purchased through September 30, 2018.

To participate in Fall Solutions, superintendents must be a member of My Bayer Rewards. Learn more about Fall Solutions by visiting the online portal at **myrewards. cropscience.bayer.com** or contacting your nearest Bayer distributor at **backedbybayer.com/golf-course-management/ distributors**. For any questions regarding My Bayer Rewards membership, please contact My Bayer Rewards at 1-888-456-6464 or email mybayerrewards@aimia.com.

Bayer CropScience LP, Environmental Science Division, 2 TW Alexander Drive, Research Triangle Park, NC 27709. 1-800-331-2867. **www.backedbybayer.com**. Bayer and the Bayer Cross are registered trademarks of Bayer. Fall Solutions is a trademark of Bayer. Always read and follow label directions. ©2017 Bayer CropScience LP.

Not all products are registered in all states.



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## SipcamRotam Super Rewards Early Order Program

ou deserve rewards beyond great turf. Take advantage of the best incentives of the year on products you use year-round during SipcamRotam's Super Rewards Early Order Program. This year's program offers you choices and flexibility, from a newly expanded list of qualifying fungicides and herbicides to more options for redeeming your rewards.

Purchase qualifying products between September 1 and October 31 to lock in cost savings and earn valuable Super Rewards. Super Rewards are available in preloaded debit card or by check.\*

As in years past, the 2017 EOP features SipcamRotam's well-known Enhanced Turf Quality (ETQ) family of products designed to optimize turf color, strength and density while protecting against UVA and UVB rays, heat and other stress factors. But the program has also expanded to include additional fungicides including Endow<sup>™</sup> 2SC, Proplant<sup>™</sup>, and Nivales<sup>™</sup> as well as herbicides Lucto<sup>™</sup> and Rometsol<sup>®</sup>. Here is the complete list of SipcamRotam's 2017 EOP qualifying products:

- Echo Dyad ETQ<sup>®</sup>
- Eclipse ETQ<sup>®</sup>
- E-Pro ETQ<sup>™</sup>
- E-Scape ETQ<sup>®</sup>
- Sipcam Clearscape<sup>®</sup> ETQ
- Nivales<sup>™</sup>
- Endow™ 2SC
- Proplant<sup>™</sup>
- Lucto<sup>™</sup>
- Romtesol<sup>®</sup>





PROGRAM SPOTLIGHT

Super Rewards is user-friendly. Simply enroll online at EOPSuperRewards.com and contact your distributor sales representative by October 31 to make your qualifying purchases. We will remind you to submit your proof of purchase by January 19, 2018, and specify your preferred rewards redemption method (check or pre-loaded debit card).

Great turf is just the beginning. Check out the interactive cost calculator (eopSuperRewards.com) to discover the reward amounts available for qualified purchases only during the Super Rewards EOP.

\*The rewards payee will be the end-user company. Rewards will be distributed either via check or pre-loaded debit card.



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## 2017 EARLY ORDER PROGRAM GUIDE

## **BASF Early Order Program**

ake your planning and purchasing easier than ever with the BASF Early Order Program for 2018. Order and save now to ensure championship conditions for your turf in 2018.

Here's how to maximize your rebates:

#### 1 Prepare to Save.



Earn up to 33% more in rebate dollars by ordering in October when rebate levels are highest. Rebates start when you spend \$2,000. Order early, but pay nothing until June 9, 2018.

#### 2 Prepare to Innovate.

Order specially-designed cube solutions, which deliver convenience, innovation, and 10% instant savings. New cubes include the Dollar Spot Foundation Cube and Multi-Course Fairway Cube.

#### 3 Prepare to Win.

Drive your fairway program farther with the **Intrinsic**<sup>®</sup> Fairway Rebate. Save an additional 10% by purchasing a minimum of 108 pounds of **Honor**<sup>®</sup> **Intrinsic** brand fungicide or a minimum of 10 gallons of **Insignia<sup>®</sup> SC Intrinsic** brand fungicide.

Select the fungicides you need. Choose from industry-leading products like Lexicon<sup>®</sup> Intrinsic brand fungicide, Honor Intrinsic brand fungicide and Insignia



SC Intrinsic brand fungicide. Be sure to include Emerald<sup>®</sup> fungicide and Xzemplar<sup>®</sup> fungicide for dollarspotless fairways. **Gain more options.** New! **Lexicon Intrinsic** brand fungicide is now labeled for four applications per year at the highest rate of 0.47 fluid ounce per thousand square feet. See **www.cdms.net** for specimen label.

PROGRAM SPOTLIGHT

Order herbicide solutions. BASF solutions like Drive® XLR8 herbicide, Pylex® herbicide and FreeHand® 1.75G herbicide provide highly effective weed control. Order the Naturalized Area Cube II, specifically designed to maintain natural areas with proven herbicides including the new Segment® II herbicide.

Visit **betterturf.basf. us/eop** for complete EOP information. Contact your distributor representative to place your order for products and solutions that will set you up to win in 2018. With EOP, winning is as easy as 1-2-3.





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# Nufarm's 2018 Rewards Program adds buying power



ufarm announces a new rewards program for the 2018 season designed to provide enhanced opportunities to save using performance-proven Nufarm products.

Key programs, including the Distributor 2018 Early Order Program and NP3 Portfolio Performance Plan, and the Nufarm Rewards Early Order Program, have been value-fortified for next season.

The 2018 Programs will offer distributors an extended early order period and more early order, fulfillment, and growth incentive opportunities. To learn more about the



increased rebate options in 2018, distributors should contact their Nufarm Representative.

Customers of Nufarm Distributors can also add value with enhanced distributor credits across an expanded range of leading Nufarm products. End users can access 2018 Nufarm Rewards information at the new Nufarm Rewards website at **www.nufarminsider.com/rewards**. Additionally, a new rebate calculator tool will assist customers with program planning and rapidly tabulate rewards.

More than 40 trusted Nufarm-brand fungicides, insecticides, herbicides, and plant growth regulators are eligible for distributor credit. To qualify, end users must order and accept delivery of a qualifying order between September 15 and October 31, 2017. To receive rewards, end users must register during the same period. Previous registrants are automatically registered for 2018.

Nufarm's line up of rewardseligible products includes leading turf and ornamental management solutions, such as **3336 F, Affirm, Anuew, Millennium Ultra 2** and **Pinpoint**. For a complete list of Nufarm professional products, visit **www.nufarm.com/us**.





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## PLANNING A BUDGET IS ONE THING. SOLVING A YEAR'S WORTH OF PROBLEMS THAT TAKES A CONVERSATION OR TWO.

Yearlong rebates go far. Yearlong support helps you go farther. That's because no other purchase program offers industry-leading products and one-on-one service like GreenTrust<sup>®</sup> 365. With easy online tools, you can calculate a season's worth of savings and explore how an ongoing partnership can help grow your business. To get started, visit **GreenTrust365.com/Golf** 

## GreenTrust 365

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## THERE'S **CASH** INTHAT **GRASS**

## Grab More With The PBI-Gordon 2017 End-User Early Order Program

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## Grow Your Rebate By Up To 25%

Creating amazing greens and fairways is just part of your job. You also have to grow your bottom line. The PBI-Gordon Early Order Program helps you do both.

The PBI-Gordon End-User Early Order Program offers end-users an additional rebate for ordering qualifying products from a PBI-Gordon distributor between October 1, 2017, and December 15, 2017.

- Level 1 rebate (\$500-\$999) earns an additional 15% rebate
- Level 2 rebate (\$1,000 or more) earns an additional 25% rebate

Eleven of the most popular PBI-Gordon products are included in the program, including, Segway<sup>®</sup> Fungicide SC, Kabuto<sup>®</sup> Fungicide SC, Q4<sup>®</sup> Plus Turf Herbicide for Grassy & Broadleaf Weeds, and SpeedZone<sup>®</sup> Broadleaf Herbicide for Turf.

## To see the full list of qualifying products, visit eop.PBIGordonTurf.com.



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# The Golfdom

Golfdom Science Editor Clark Throssell, Ph.D., does an outstanding job collecting the industry's latest research for the Super Science section (see page 52 for research on suppressing zoysiagrass in cool-season turf). More than 80 years ago, Penn State Extension Agronomist Fred Grau, Ph.D., played a similar role for the magazine.

Grau originally provided readers with research on how to control crabgrass with sodium chlorate in the April 1934 *Golfdom*. In the February 1936 edition, Grau wrote an update on that cultural practice based on new developments in university research.

The research Grau presents is dated today, but it's still important to understand how far the research has come, and it's interesting to think about where we could be 80 years from now. To read the full article, visit **golfdom.com/exclusive.** 

# Here's the latest on sodium chlorate

### BY FRED V. GRAU

Since Golfdom in April 1934 published the first article on the control of crabgrass with sodium chlorate, there have been some additional developments. The time and the number of applications, however, are somewhat different, resulting in a great advantage in the saving of time, materials and labor...

We have learned that the food reserves of a plant are at low ebb during the seed-producing period, indicating that this period marks a weak point in the life history of the plant. This fact has been made use of in the chemical and cultural control of many farm weeds. Applied at the right time, sodium chlorate destroys the chloroplasts and starch grains and effectively prevents the formation of viable seed. In a plant, which reproduces only by seeds, the destruction of a year's seed crop would greatly diminish the infestation in the succeeding year.

With this thought in mind, and, due to the ever-present crabgrass menace in turf, a number of demonstrations were conducted in 1935 on lawn and athletic



field turf in and around Philadelphia in cooperation with Pennsylvania State College. Briefly, procedure was as follows:

A single application was made to crabgrass-infested areas at the time when the seed panicles were beginning to burst forth from the sheath (usually during July and early August) before the flowers had opened or had a chance to pollinate. Two to 2 1/2 lbs. of sugar-fine sodium chlorate were thoroughly mixed with a 12- to 14-quart pail full of screened dry soil or sand, and uniformly broadcast on 1,000 sq. ft. Water was applied as a spray

## FROM THE ARCHIVE

to dissolve the chemical so that it would be more quickly absorbed by the plants. In some cases, no water was needed due to timely rainfall and a soil that was well supplied with moisture.

## **REPORT 100 PERCENT KILL**

In every case, this simple operation accomplished the desired results. No crabgrass seeds matured, and there was virtually 100 percent kill. The bluegrass was temporarily injured, but within two weeks it was green and growing well. The operation was a success and the patient recovered. But, a convalescent patient cannot grow strong and healthy without food, and it is a well-known fact that much of the turf in the East is poor because of a lack of fertility.

Three to four weeks after the chlorate treatment, the dead crabgrass was removed with rakes and the surface soil was lightly scarified. An application of complete fertilizer was made, a little seed scattered in the thin spots where the crabgrass had smothered everything, and the area was lightly rolled and then watered.

About Oct. 1, eight weeks after the initial application, the treated areas presented a desirable dense green cover of turf whereas the untreated areas were dull, dead and brown, typical of dead crabgrass.

## FACTORS TO WATCH

The success of this simple treatment of crabgrass is dependent upon several things:

- 1. Making the initial application just as the seedheads break from the sheath
- 2. Uniform distribution of the chemical
- 3. Ample supply of soil moisture
- Subsequent fertilization and seeding of thin places to encourage a dense sod of grass, and sound maintenance practices to prevent further invasion of crabgrass

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## **Use Sites and Benefits**

	Product	Primary Use Sites	Key Benefits
1	Lexicon® Intrinsic brand fungicide	Greens, approaches, surrounds, new sod	<ul> <li>New fourth annual application allowed. See label for full details at www.cdms.net</li> <li>The plant health foundation for greens</li> <li>Optimal disease control for cool- or warm-season greens</li> <li>Broad-spectrum control of 27* diseases with residual up to 28 days</li> </ul>
2	Honor <sup>®</sup> Intrinsic brand fungicide	Fairways, roughs, tees, bunker faces, primary roughs	<ul> <li>The plant health foundation for fairways/tees</li> <li>Superior control of dollar spot and other fairway diseases</li> <li>Broad-spectrum control of 26 diseases for up to 28 days</li> </ul>
3	Insignia <sup>®</sup> SC Intrinsic brand fungicide	Fairways, primary roughs, tees	<ul> <li>Broad-spectrum disease control</li> <li>Control of key diseases: summer patch, brown patch, rapid blight, <i>Pythium</i> root dysfunction</li> </ul>
4	Pillar® G Intrinsic brand fungicide	Green surrounds, tees, roughs and any sloped areas	<ul> <li>Broad-spectrum control of 27 diseases</li> <li>Granular formulation</li> <li>Control of key diseases: Snow mold, brown patch, anthracnose, summer patch</li> </ul>

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- Apply before Memorial Day, July 4th and Labor Day.
- Spray Lexicon<sup>®</sup> Intrinsic brand fungicide on greens and Honor<sup>®</sup> Intrinsic brand fungicide or Insignia<sup>®</sup> SC Intrinsic brand fungicide on fairways, tees and surrounds.

### Warm-season program

- Apply before Halloween, after Thanksgiving and around Valentine's Day.
- Spray Lexicon Intrinsic brand fungicide on tees and greens, and Honor Intrinsic brand fungicide or Insignia SC Intrinsic brand fungicide on tees and surrounds, and as a spot treatment on fairways.

\* Subject to BASF Recommendation under FIFRA 2(ee) for spring dead spot in certain states. See www.cdms.net for BASF Technical Information Bulletin.



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# HARVEY AND IRMA

With two Category 4 hurricanes making landfall in the United States within only 16 days of each other, we check in with turf professionals as they pick up the pieces.

### BY THE GOLFDOM STAFF

# Harvey and Irma: Two names forever connected in infamy in the United States.

These two hurricanes wreaked havoc across the southern and southeastern United States for weeks. The two storms combined killed more than a hundred Americans, displaced hundreds of thousands and caused billions in damage.

Though damage to any golf course is secondary to the loss of a home, or worse, a life, golf is *Golfdom's* business. The following are reports from turf professionals who found themselves in the paths of Harvey and Irma.

### REPORTING FROM HOUSTON, TEXAS

## CHRIS ORTMEIER Superintendent // Champions Golf Club

Chris Ortmeier, superintendent at Champions Golf Club, called the flooding from heavy rainfall in April 2016 the "hardest part of his career," but he is grateful for that experience now because it prepared him for the even worse flooding the course saw during Hurricane Harvey.

The 36-hole facility has two courses, Jackrabbit, which opened back up two days after the storm hit because it didn't sustain any flooding, and Cypress Creek, named for the creek that runs through the golf course and creeps onto the course during major flooding events.

Continued on page 40

The No. 15 green after floodwaters receded at Lakeside Country Club, Houston, Texas. *Golfdom* was unable to interview Superintendent Terry Hutcherson for this story, but he expects his course will be completely open on Oct. 6.

Sa-



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# // BATTEN DOWN THE HATCHES

Continued from page 38

"I haven't finalized the numbers yet but had close to 90 to 100 acres of the golf course on Cypress Creek go under water," adds Ortmeier. "Of that, we had six greens totally submerged and an-



other three partial. They were saying (the April 2016 flood) was a 500-year flood, and (Harvey) blew that one away."

Hurricane Harvey preparations started at Champions GC about a week before it hit, and Ortmeier had his staff performing typical severe weather maintenance like spraying growth regulators and mowing everything out, but he also took his expe-

Chris Ortmeier

rience from 2016 into account.

"We learned last year we had to pull all of the electrical components out of our field satellites and power down our pump house," says Ortmeier. "We also rented three pumps, and once the creek started to recede we were out there using the floodwater to push the silt off the greens."

Golfdom talked to Ortmeier almost three weeks after Harvey Continued on page 42



Champions GC staff utilize rented water pumps to recycle receding floodwater to push silt off the Cypress Creek course.



Flooding caused by Hurricane Harvey left Champions GC's Cypress Creek course pump house flooded just below its roof.



# CHRIS FLYNN, CGCS - DIRECTOR OF GROUNDS ARNOLD PALMER'S BAY HILL CLUB & LODGE

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# // BATTEN DOWN THE HATCHES

### Continued from page 40

hit, and the Cypress Creek course had all but one hole open for play.

"We're probably 85 percent recovered," says Ortmeier. "It's still going to take some time before we get caught back up on all the details, but for the most part we're coming along pretty good." — Grant B. Gannon, associate editor



Damage was "catastrophic" to the JW Marriott Marco Island (Fla.) Resort, says Director of Grounds Todd Evans.

### REPORTING FROM MARCO ISLAND, FLA.

# TODD EVANS Director of Grounds // JW Marriott Marco Island Resort

Todd Evans and his family "have been camping out" at their home since Hurricane Irma, with power restored only the night before he spoke with *Golfdom*. Evans is director of grounds for the Rookery Course and Hammock Bay Course at Florida's JW Marriott Marco Island Resort.

"It was catastrophic," Evans says. "The eye basically went right over the top of Marco Island, which we're about two miles from. Catastrophic tree damage on both courses." He says he's "not even able to take a guess yet" on downed tree numbers.

Although the venue was spared the water surges seen in so many places, Evans says, "We did have some pretty good flooding on the Rookery golf course, and we're basically just starting to get to the tree work on the Rookery. We took all our resources and the contractors we hired, and we put them all on Hammock Bay and we got that course all cleaned up, and we'll be ready to open that course on Friday (Sept. 22)." No turf currently is under water, and the Rookery is expected to open Nov. 2.

To prepare, Evans and his staff wrapped control boxes, took the pump station offline and removed anything that could take flight. So, bunker rakes and hazard stakes, tee markers and ball washers all were brought in. A lot of effort, he notes, was directed toward securing the courses' dual clubhouses.

Evans went through Hurricane Andrew in 1992, and says recovery from Irma should follow the same timeline.

— Ed Hiscock, editor-at-large

### REPORTING FROM GALVESTON, TEXAS

# JEFF SMELSER CGCS // Galveston CC

Hurricane Harvey swept through the Houston area and Galveston Island in late August, dumping more than three feet of water in some areas. However, according to Jeff Smelser, CGCS, Galveston (Texas) Country Club, his course has seen worse.

"Our real problem when we get storms is the high tide," explains Smelser. "We have berms that keep the real high tides out, but put 31 inches of rain on top of the high tide and there is nowhere for that water to go."

The course closed Aug. 25 for hurricane preparation, which consisted of the 11-person crew spraying fungicides, removing irrigation controllers and moving everything that wasn't cemented down to the maintenance shop, which sits approximately 10 feet above sea level.

Smelser recalls that the same maintenance shop took on six feet of water during 2008's Hurricane Ike. He says his staff

learned a lot from that experience, which devastated Galveston Island and caused the club to close for three months. "We lost everything during Ike," he says. "We were lucky this time. We just had massive high tides and massive rains — we didn't have storm surges on top of that."



Jeff Smelser

Once the tides went down, the course drained off quickly. Smelser's team hand

raked 120 acres of grass, filling nearly one and a half 40-yard dumpsters with debris. The course lost only six of its 1,200 palm trees, but all bunkers were completely washed out, so the next order of business was clearing and refilling them with fresh sand.

The golf course reopened Sept. 2. "It wasn't in great shape," says Smelser. "But one thing we learned from Ike is that people want to come out and see how the course is doing."

> — Abby Hart, managing editor Continued on page 44



Galveston CC saw high tides and 31 inches of rain, resulting in massive flooding, as seen here on the No. 18 fairway.

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# // BATTEN DOWN THE HATCHES

Continued from page 42

## REPORTING FROM FORT MYERS, FLA.

ANDY ENGELBRECHT

Agronomic Sales Representative // SiteOne Landscape Supply

While all eyes were on Texas and Louisiana for Hurricane Harvey, record-breaking rain fell in southwest Florida — as much as  $10\,$ 



inches in Fort Myers.

With the ground saturated and even more rain coming down in Hurricane Irma's path, tree roots could not hold as close to 80-140 mph winds raced through the region.

"I've been to many courses and I've seen hundreds and hundreds of trees down," says Andy Engelbrecht, agronomic sales representative with SiteOne Landscape

Andy Engelbrecht

Supply in southwest Florida. According to Engelbrecht, some of the biggest obstacles facing the area include massive tree damage, extensive flooding and power outages.

To make matters worse, several days of hot temperatures followed in Irma's wake, and crews not only had to deal with flooding but also had to tend to areas in desperate need of water. With no power to irrigation systems, crews relied on water wagons to hand water areas in need.

Engelbrecht and other representatives from SiteOne are helping those affected by Hurricane Irma by bringing lunches and water to courses while crews continue the cleanup work.

"We're trying to be there as much as we can," says Engelbrecht. "What they really need is people, power and chainsaws."

— Kelly Limpert, digital editor

# REPORTING FROM FORT MYERS, FLA. BRYCE KOCH CGCS // Cypress Lake CC

The crew at Cypress Lake Country Club already planned on having a lot of maintenance work on their docket this time of year, even before Hurricane Irma started making news. They just thought it would be to put the finishing touches on their 3-year restoration project.

Superintendent Bryce Koch told *Golfdom* that 13 inches of rain fell on his course in four days before the hurricane, then 18 inches *Continued on page 46* 





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# // BATTEN DOWN THE HATCHES



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800-369-8451 WWW.ZLINEBUNKERSYSTEMS.COM Todd Stephens, CGCS Tour 18 Houston Superintendent Continued from page 44 fell during the storm.

Before Irma, new grass had been planted on the course and had been taking well. Luckily, Koch says, only some of it has to be replaced because of flooding.

Some areas of the newly planted grass will have to be replaced, and crews will have to repair bunkers that were completely washed



Flooding before the hurricane, combined with rain, resulted in weakened root systems and the loss of 180 trees at Cypress Lake.



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# // BATTEN DOWN THE HATCHES

out. But what really took a hit was the overall design of the course.

Because of weakened root systems, a tremendous amount of rain and high-speed winds, Cypress Lake lost 180 trees on its 18hole course, effectively changing the course layout and sight lines.

"We're looking at bringing our architect back in to revise some of the holes," says Koch. "Some of the holes have completely changed with the loss of trees."

Koch and his team anticipate three weeks of tree and debris cleaning, but thankfully, everyone is safe.

-K.L.

REPORTING FROM SAVANNAH, GA.

NELSON CARON Director of Golf Course Maintenance and Grounds // The Ford Plantation Club

Storm surge aftermath was the major Irma problem for Nelson Caron, director of golf course maintenance and grounds at the private Ford Plantation Club in hard-hit Savannah, Ga. Another hurricane problem, that is, after the damage caused by Hurricane Matthew when it ravaged coastal Georgia last October.

Irma inundated Savannah with a storm surge of 4.7 feet and

combined with tidal swells for nightmare water of up to 15 feet, with 14 feet washing over half the property at Ford Plantation.

Family safe, power on at home and the fallen tree on his garage taken care of, Caron turned his attention to the course, which



lost about 3,500 trees during Matthew, compared to about three dozen with Irma. He and his staff pumped 4 feet of water off about 100 acres, leaving two feet standing on the course.

Storm preparation included movement of the course's 40-person staff "to the right positions" learned from Matthew and other storms. This included some staff staying

Nelson Caron

at the course, some being placed in hotels, and others staying with club members, some of whom paid staff's home insurance deductibles after Matthew.

Caron also ordered gypsum. "We'll have a tough time with the water and the elevated salt levels," he says.

The course will open for the season as scheduled Oct. 1, but Caron says, "I'll probably feel pretty good by next May." To which he adds, "I'll take trees over water any time." **G** 

-E.H.

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### **BY DAVID DORE-SMITH**

"Slip, Slop, Slap."

When I was growing up in Australia, we often heard this slogan, created to promote skin cancer awareness by reminding you to slip on a shirt, slop on some sunscreen and slap on a hat. It was catchy and had kids all over the country singing the accompanying jingle.

I wish I could now go back in time and follow, without question, those basic recommendations. Now in my 40s, visits to my dermatologist have become a recurring practice because of the repeated sun damage I experienced as a child, teenager and young adult.

I remember on numerous occasions being burned to a crisp after a day on the beach or an afternoon playing outdoor sports. Forget the zinc cream, wide-brimmed hats and long sleeves — I was the typical bronzed Aussie but without the blue eyes and blonde hair. Over the past five years, the reality of all those days spent out in the sun has caught up with me.

### That'll leave a mark

In 2011, a suspicious raised area below my left eye was diagnosed as a squamous cell carcinoma, and I subsequently went through my first Mohs surgery. Mohs surgery is a precise surgical technique in which thin layers of cancercontaining skin progressively are removed. Each layer undergoes microscopic examination until only cancer-free tissue remains. Examination of each layer occurs during — rather than after — the surgery, eliminating the need to estimate how far out or deep go the roots of the skin cancer.

I previously had concerninglooking areas burned off the back of my hands and side of my face with liquid nitrogen (cryosurgery). That hadn't worried me too much. However, after having a 4-inch incision cut into my face and dealing with the subsequent scar, I became a lot more conscious of the effects of the sun.

This year, after one of my routine visits, the dermatologist discovered another squamous cell carcinoma, this time on my left upper eyelid. A second Mohs surgery removed a quarter of my eyelid to rid me of this potentially lethal cancer. Thankfully, the eyelid was

It may sound silly, but this Australian slogan could save your life. Slip, Slop, Slop, Slap

# // SAVING YOUR OWN SKIN





David Dore-Smith says treatment for actinic keratosis was "painful, uncomfortable and embarrassing for a few days," but still a small price to pay.

sewn back together with precision, and the offending area is barely visible.

In follow-up visits to assess my recovery, my dermatologist recommended a blue-light treatment for my face because of evidence of actinic keratosis, a skin condition that can become cancerous. In this case, a liquid product (Levulan) was applied to my entire face and left for two hours to absorb into the skin. I then was subjected to 12 minutes of bluelight therapy that was one of the most uncomfortable experiences of my life. For those 12 minutes, it felt like I had fallen face down in a pile of angry fire ants or landed face first into a bowl full of Pop Rocks candy with thousands of tiny explosions going off at once. The stinging sensation was only moderately subdued by selfapplication of cool air through a tube.

This treatment immediately made my face appear quite red and left the feeling *Continued on page 50* 



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# // SAVING YOUR OWN SKIN



Continued from page 49

of being sunburned. The following days were some of the most depressing of my life. The treatment identifies precancerous lesions and causes them to redden, swell and blister before finally becoming scaly and sloughing off.

I had a lot of these areas and my entire face was affected. This lasted for almost six days before a baby-smooth skin miraculously appeared underneath. This was only the first of three treatments scheduled over the following three months, with follow-up treatments in April and July.

# It won't go away on its own

Now that I've fully recovered from the first treatment, I must admit I'm glad I went through with the procedure. Yes, it is painful, uncomfortable and embarrassing for a few days, but I firmly believe that if I had not addressed the issue when I did, my future wouldn't be so bright.

Precancerous areas will not improve on their own and they only get worse. As your skin ages, it is less likely to recover from these type of procedures, and the use of liquid nitrogen to freeze affected areas simply is not enough to do the job and only masks underlying issues.

I encourage you to visit a dermatologist annually. If you don't have a dermatologist, ask one of your peers at your next chapter meeting who they see, and make an appointment with their doctor.

For chapters looking to add a benefit to a local meeting, consider inviting a dermatologist to give a presentation on skin cancer awareness and

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provide some free screening advice for your members. I now provide wide-brimmed hats and free sunscreen to my employees, and I encourage them to wear polarized sunglasses. One ounce of prevention is worth a pound of cure.

Although it's a silly slogan, please remember to Slip, Slop, Slap, and help prevent the world's most common form of cancer — skin cancer. @

David Dore-Smith is the director of golf course and grounds maintenance at Copperleaf Golf Club in Bonita Springs, Fla. (Readers may remember him from last month's 19th Hole interview.) This article originally appeared in The Florida Green, the official publication of the Florida GCSA.

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PHOTOS COURTESY OF DAVID DORE-SMITH

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# RESEARCH FOR REAL SUPERINTENDENTS

Hosted by Clark Throssell, Ph.D. | clarkthrossell@bresnan.net

# Super Science

# // TRUE OR FALSE

# FALSE-GREEN KYLLINGA CONTROL IN COOL-SEASON TURF

By Matt Elmore, Ph.D., and James Murphy, Ph.D.

alse-green kyllinga (*Kyllinga gracillima*) has become increasingly problematic in the Mid-Atlantic and Northeast. False-green kyllinga is related to yellow nutsedge (*Cyperus esculentus*), and both species have a triangular stem. Yellow nutsedge typically is interspersed within the turfgrass canopy, while falsegreen kyllinga tends to form a dense perennial stoloniferous/rhizomatous mat that



A dense mat of false-green kyllinga with seedheads.

appears similar to turfgrass. False-green kyllinga produces a round, green seedhead beginning in mid-July. It tends to thrive in fairways and has been found in putting greens.

Field research in 2015 examined single and sequential applications of Sedgehammer (halosulfuron-methyl, Gowan, others), Celero (imazosulfuron, Nufarm) and Dismiss (sulfentrazone, FMC) at labeled rates. Treatments

were applied on June 11 and sequential applications were made four weeks later. All treatments provided acceptable control four weeks after application. When evaluated four months after treatment, a single application of Sedgehammer (1.33 oz./A) and Celero (14 oz./A) provided 30-percent and 95-percent control, respectively. Two Sedgehammer applications on a 4-week interval provided greater than 95-percent control. Control from single or sequential applications of various Dismiss programs (4 to 8 fl. oz./A) provided control shortly after application but provided no control by October.

This research demonstrates that halosulfuron-methyl and imazosulfuron are effective products for control, but at least two applications on 4-week intervals are necessary. Include a non-ionic surfactant with imazosulfuron and most halosulfuron-methyl products.

For severe infestations, multiple applications across multiple years are required for control. While our research demonstrates that sulfentrazone is less effective, it should be part of a rotation to prevent herbicide resistance. Halosulfuron-methyl and imazosulfuron have the same mode of action (ALS inhibition), and relying solely on these products makes likely selection of an ALS-resistant biotype. It's prudent for resistance management that programs use halosulfuron-methyl or imazosulfuron one year and sulfentrazone the next year.

Matt Elmore, Ph.D., is an assistant Extension specialist in weed science at Rutgers University, and James Murphy, Ph.D., is an Extension specialist in turfgrass management at Rutgers. You may reach Matt Elmore at matthew.elmore@rutgers.edu for more information.

# NEWS UPDATES

### BIOBLITZ 2017 ATTRACTS HUNDREDS TO GOLF COURSES

Audubon International's BioBlitz 2017 recorded almost 2,000 unique species of animals, plants, fungi and insects living on golf courses around the world. Hundreds of participants gathered at local events between March 20 and June 21 to discover and document the species inhabiting these important green spaces.

Now in its third year, Audubon International's BioBlitz creates an opportunity for school children, community members, golfers and more to take a closer look at the habitats provided on golf courses.

In addition to demonstrating the large diversity of species on golf courses, the competition also engages local interest and support of the green space and recreational opportunities they provide to their towns, according to the company. Participants from North America to South Africa competed for three awards for most species counted, most participants and best photo.

Jekyll Island (Ga.) Club earned the Biodiversity Award for the greatest number of species counted with 532, Park Ridge Golf Course (Lake Worth, Fla.) received the Community Engagement Award for having the most participants, with a total of 144 volunteers, and Golf at The Villages (Fla.), one of four new sites to participate this year, won the Best Photograph contest with a photo of a bobcat.

IN BOTH 2013 AND 2015, ZOYSIAGRASS CONTROL WAS HIGHEST FROM PYLEX. IN 2014, THE RESPONSE WAS SIMILAR BETWEEN PYLEX AND TENACITY."

**Aaron J. Patton, Ph.D.** (see story on page 52)

# //ZAPPING ZOYSIA

# Suppressing zoysiagrass in cool-season turf

By Aaron J. Patton, Ph.D., and Daniel V. Weisenberger

oysiagrass (*Zoysia japonica*) is a desirable turfgrass for golf courses in the Transition Zone because of its low maintenance requirement, but it can become invasive when it spreads via rhizomes and stolons into adjacent areas where it is unwanted. Further, some golfers and superintendents find the winter dormant color undesirable when patches of zoysiagrass exist in a stand of cool-season grasses (Figure 1).

Previous attempts to control zoysiagrass with the nonselective herbicide glyphosate were successful when two or more applications were made in a season or when 2 lbs. ae/A or more (equivalent to 2.7 quarts/A or more of a 41-percent glyphosate formulation) was used in a single application. However, no selective herbicide is registered for use to control zoysiagrass in cool-season turf. The objective of this experiment was to evaluate the efficacy of two 4-HPPPD-inhibiting herbicides, Pylex (topramezone, BASF) and Tenacity (mesotrione, Syngenta), and a lipid synthesis inhibitor, Prograss (ethofumesate, Bayer Environmental Science), for selectively controlling zoysiagrass in cool-season turf with fall applications.

## HERBICIDE ASSESSMENT ON ZOYSIA

Field experiments were conducted at the W.H. Daniel Turfgrass Research and Diagnostic Center in West Lafayette, Ind., in 2013-2014, 2014-2015 and 2015-2016 in separate but adjacent areas. The soil at the location was a Mahalasville-Treaty silty clay loam with a pH of 6.8 and 3.5 percent organic matter. The



Zoysiagrass can encroach into cool-season rough and is easily recognizable by golfers in winter months.

experimental area was a mature stand of Zen 500 zoysiagrass (*Zoysia japonica*) planted by seed in 1998. Plots were mown weekly at 2 inches during the experiment.

The design for this experiment was a randomized complete block with three (year 1) or four (years 2 and 3) replications and 25-sq. ft. plots. Herbicides and rates included: Tenacity at 5.33 fl. oz./A tank-mixed with a nonionic surfactant at 0.25 percent v/v; Pylex at 1.33 fl. oz./A tank-mixed with a methylated seed oil at 0.5 percent v/v; Prograss 1.5 at 64 fl. oz./A; and a nontreated check for comparison (Table 1). We selected herbicides based on a combination of factors that included their safety for cool-season turfgrasses, control of

perennial warm-season grasses, lack of zoysiagrass inclusion among tolerant turfgrasses on the herbicide label, and/ or anecdotal evidence suggesting the herbicide may injure zoysiagrass.

Herbicides were applied starting in late August or early September each year, and each herbicide was applied three times at either a 2- or 3-week interval based on label recommendations (Table 1). We chose the application window in order to induce herbicide injury before the start of and during cold acclimation prior to winter, with the goal that a combination of herbicide and winter injury would control the zoysiagrass. We applied herbicides using a  $CO_2$  pressurized backpack sprayer equipped with XR8002 nozzle

## TABLE 1

### Application rate, number, interval and timing for the three herbicides used in this experiment.

Treatment	Application Rate	Number of Applications	Sequential Interval	Application Dates <sup>††</sup>		
Treatment				2013	2014	2015
Prograss 1.5	64 fl. oz./A	3	3 weeks	3 September, 24 September, 14 October	27 August, 16 September, 8 October	2 September, 24 September, 14 October
Pylex§	1.33 fl. oz./A	3	3 weeks	3 September, 24 September, 14 October	27 August, 16 September, 8 October	2 September, 24 September, 14 October
Tenacity§	5.33 fl. oz./A	3	2 weeks	3 September, 17 September, 3 October	27 August, 11 September, 23 September	2 September, 15 September, 1 October

<sup>1</sup> Treatments were applied with the same start date. Because of the shorter application interval for Tenacity, the last application was two weeks earlier than Prograss and Pylex.

<sup>1</sup> Oct. 23, 2013, Oct. 20, 2014 and Oct. 17, 2015 were the first autumn days with freezing temperatures recorded in West Lafayette, Ind. in each year, respectively, which signaled the end of the growing season, though zoysiagrass continued to maintain some green cover into November each year.

<sup>§</sup> A nonionic surfactant at 0.25 percent v/v was tank-mixed with Tenacity and methylated seed oil at 0.5 percent v/v; was tank-mixed with Pylex.

tips (Teejet, Spraying Systems Co., Wheaton, Ill.) calibrated to deliver 87 gallons/A at 30 psi.

We visually rated zoysiagrass injury (bleaching or phytotoxicity) in the fall at each application date, and visually assessed it on a 0-percent to 100-percent scale, where 0 percent was complete green tissue and 100 percent was completely bleached leaf tissue and/or a completely brown zoysiagrass plot. We also rated zoysiagrass green coverage on a 0-percent to 100percent scale in June and July during the summer following applications. We converted data from percent coverage to percent control in each replication as {[1- (treatment coverage/coverage in nontreated plot)]  $\times$  100} prior to analysis. We analyzed all data using SAS, and means were separated using Fisher's protected least significant difference ( $\alpha$ =0.05).

## HERBICIDE EFFECTS ON CONTROL

Our analysis revealed several instances where the treatments performed differently in each year, so zoysiagrass injury and control data from each year are presented separately. Three weeks after initial treatment, Pylex and Tenacity



Visible bleaching symptoms on zoysiagrass prior to winter dormancy from Tenacity (T) and Pylex (Py) applications. We observed little herbicide injury in the fall from Prograss (Pr) applications. The nontreated check (N) is shown for comparison. All labels are shown at the far-right edge of the plot. Photo taken Sept. 16, 2013 (two weeks after the initial application).

applications injured zoysiagrass more than Prograss (Figure 2), with the Pylex treatment providing 29-percent and 10-percent more injury than Tenacity in 2013 and 2015, respectively (Table 2). Injury was similar between Pylex and Tenacity applications in 2014 (Table 2). Subsequent injury ratings were consistent with those three weeks after initial treatment and are not shown for brevity. Zoysiagrass entered winter Continued on page 54

### Continued from page 53

dormancy shortly after the last herbicide application each year (Table 1).

Zoysiagrass response to the previous year's herbicide applications differed. In both 2013 and 2015, zoysiagrass control was highest from Pylex (equal to or greater than 46 percent) when measured in both June and July (Figure 3). In 2014, the response was similar between Pylex and Tenacity, but zoysiagrass control was less than 11 percent by July (Figure 3). It's unclear why less Pylex control was observed in 2014. Application timings and the first day of freezing temperatures were similar in each year (Table 1). The average minimum air temperature during winter (December through March) was different for each year (2012-2013 = 15.1 degrees F, 2013-2014 = 19.3 degrees F, 2014-2015 = 28.5 degrees F) but did not help explain differences

# TABLE 2

Zoysiagrass herbicide injury (bleaching or phytotoxicity) three weeks after initial treatment. This injury rating is three weeks after the initial Pylex and Prograss applications and one week after the second Tenacity application.

	Herbicide injury three weeks after initial treatment					
Herbicide	2013	2014	2015			
	%					
Prograss	13 c†	0 b	0 c			
Pylex	15.4	18.6	22			
Tenacity	14.7	13.5	22			
P-value	11.6	11.8	22			

 $^{\dagger}$  Within columns, means followed by the same letter are not significantly different ( $\propto$ =0.05). The nontreated check was excluded from the analysis.



Zoysiagrass control in early summer following herbicide applications the previous fall. Both June and July ratings are shown for each year. Within year and month, means followed by the same letter are not significantly different ( $\propto$ =0.05).

in the results. Although Tenacity caused about 49 percent or greater injury in all three years when rated three weeks after initial treatment (Table 2), it provided little to no zoysiagrass control (Figure 3). Prograss provided little to no zoysiagrass control in our study from fall applications. (Note: Anecdotal reports from superintendents suggest Prograss is more injurious to zoysiagrass when applied in spring, but we have yet to test this).

Pylex is labeled to control or suppress perennial warm-season grasses including common bermudagrass (Cynodon dactylon), dallisgrass (Paspalum dilatatum) and nimblewill (Muhlenbergia schreberi). Our study demonstrated that Pylex also provides zoysiagrass suppression, albeit inconsistent and incomplete control. Common bermudagrass control with Pylex is enhanced when coupled with overseeding of a cool-season turfgrass species. As such, late-summer and early fall Pylex applications followed by interseeding a cool-season turfgrass is our recommended strategy for zoysiagrass removal in cool-season turf.

Aaron Patton, Ph.D., is a turfgrass scientist, and Daniel V. Weisenberger was a research associate (now retired) at Purdue University. You may reach Patton at ajpatton@purdue.edu for more information. The complete paper on which this article is based can be found at: Patton, A.J. and D.V. Weisenberger. 2017. Suppressing zoysiagrass (Zoysia japonica) in cool-season turf with topramezone. Crop, Forage, and Turf Management doi:10.2134/cftm2016.07.0052.

# Acknowledgements

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"Since the 1950s, there have been 24 Category 5 hurricanes in the Atlantic, of which 10 have occurred since 2000."

KARL DANNEBERGER, PH.D., Science Editor

# Extreme weather ahead

ike so many around the world, I watched in September as Hurricanes Harvey and Irma brought misery and destruction to the Texas and Florida coasts. The dead, misplaced and lost — along with the property destruction — may take weeks, months or years to sort out, as we learned from Hurricane Katrina and Superstorm Sandy.

At the same time, heroic acts and displays of human kindness during and after the storms speak to what it means to be an American. We are fortunate to live in a wealthy and caring country that can commit resources, both personal and governmental, to help citizens and businesses rebuild in the aftermath of these storms.

In the face of these weather events and the accompanying suffering, it may seem insensitive to talk about golf. However, golf facilities face the same issues as communities as they recover and rebuild. Watching and learning from superintendent postings on social media concerning their preparations, damage and recovery plans is heart wrenching.

Agronomists think in terms of course conditions, flooding damage, deposition of debris, excessive turf growth or disease, etc. However, this is just one part of the overall picture for a golf facility. For example, when are club employees who were evacuated coming back, and when? Are they facing the loss of their home and/or electrical power? What about the loss of wages? How do they get to work?

What structural damage occurred to the maintenance facility and clubhouse? What is the condition of maintenance equipment or equipment in the cart barn or clubhouse? What's the expected financial loss and recovery outlook for the club?

What condition will golfers be in, and when will they return? Have they suffered personal loss or damage to property? And what are their expectations when returning to play? These and many more questions must be considered and planned for. Why? Because hurricanes will continue to occur.

Fortunately, articles on how to deal with these concerns will appear in magazines like *Golfdom*. At local and national meetings, superintendents will speak from personal experience to address many of the issues associated with preparation for and recovery from these storms. This information will be important in preparing for future storms. Extreme weather events that in the past were rare are now becoming somewhat common.

Since the 1950s, there have been 24 Category 5 hurricanes in the Atlantic, of which 10 have occurred since 2000. In the Pacific, no Category 5 storms were reported prior to 1959. Since then, 15 Category 5 events have occurred, with more than half since 2000. Projections from the Geophysical Physical Fluids Laboratory (https:// www.gfdl.noaa.gov/global-warming-andhurricanes/) predict at least a 2-percent to 11-percent increase in storm intensity this century, and a substantial increase in rainfall associated with storms. Significant reasons given include rising ocean levels and increasing ocean temperatures, all associated with climate change.

But climate changes are not limited to hurricanes. At the same time as the recovery from Hurricanes Harvey and Irma, the U.S. West Coast was experiencing record high temperatures and corresponding dry conditions. Portland, Ore., saw extended periods of temperatures in the 100s, breaking records that were just set in 2009. Associated with the high temperatures were numerous wildfires that contributed to an air pollution level deemed risky. The governor declared the emergency a disaster. To give some perspective to the rarity of this hot spell, 30 percent of residences in Portland (271,300) don't have air conditioning.

There always have been major environmental events. My dad talked about the 1945 typhoon in the South Pacific and the hot summer of 1934 (which now ranks 6th, behind the years 2012, 2016, 2015, 2006 and 1998). Unfortunately, extreme environmental events are occurring much more frequently. As golf moves forward, we need to recognize that the likelihood of extreme weather events is increasing, and plan accordingly.

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

# $/\!/\,\text{SEE}$ it to believe it

# Just another day in turf research paradise

had a great day July 12 at the University of Nebraska Turfgrass Research Field Day. You have read in my columns before of my belief that attending a field day is one of my favorite work activities, and the University of Nebraska Field Day was excellent. I attended the event with four other members of the USGA Turfgrass and Environmental Research Committee.

As we walked to the field day, we all agreed that attending *someone else's* field day was a great way to spend a day, and that a field day that you sponsor is not nearly as enjoyable because of the hard work involved in organizing and executing such an event.

What is so great about a turf field day? That is, perhaps, one of the easiest questions to answer. It begins with the fact that you get to see the results in the field for yourself. Added to that is the benefit of being able to talk to the scientists doing the research one on one or in a small group and getting special insight into the research and results. Even better, you get to see a bunch of research projects in progress. We saw nine research projects on the formal tour at the University of Nebraska and several more in the afternoon during an informal walk around the turfgrass research center.

The University of Nebraska turf program is doing great things. Keenan Amundsen, Ph.D., Bill Kreuser, Ph.D., and Cole Thompson, Ph.D., are leading the turfgrass program at the University of Nebraska, and all are doing excellent work. Roch Gaussion, Ph.D., has rejoined the program after six years as department head, and he surely will strengthen an already strong program. Keep your eyes on the research coming from the University of Nebraska.

# "What is so great about a turf field day? That is, perhaps, one of the easiest questions to answer."

Listed in that field day program are the titles of 61 research projects currently in progress. These research projects are being conducted by professors, graduate students, staff and undergraduate students. Suffice it to say that there is a large contingent of people working hard on all these projects.

Several research projects caught my attention and deserve mentioning. They are: Use of infrared thermography to measure water use in turf; Using nurse grasses for quick cover during buffalograss establishment; Yellow nutsedge ecology — how does yellow nutsedge invade lawns (see the June 2017 *Golfdom* for more details on this project); Cultural and chemical control of *Pythium* root rot; Evaluating inputlimited management of three fairway species and; Saving golf collars with precision PGR applications.

Bill Kreuser is leading research on saving golf collars with precision PGR applications. In short, Bill's thinking is that "PGRs last longer on higher-mown turf than on putting greens. This causes the surrounds and collars to be highly susceptible to PGR over-regulation and subsequent turf decline."

Bill's research on putting-green collar decline is fascinating, and all superintendents who apply PGRs to putting greens and collars should follow this study.

By the time you read this column, most turf field days will be over for 2017. Put the date of your local or regional 2018 field day on your calendar and make a commitment to attend. It's easy in the heat of the moment to push attending field day down the priority list, but in doing so you miss an outstanding opportunity to learn.

Seeing Bill Kreuser's research on PGR impacts on collar performance alone was well worth the time and effort to attend the University of Nebraska Turfgrass Research Field Day. All those in attendance left with ideas on how to improve collar performance through improved scheduling of PGR applications. Attending a field day is too good a learning opportunity to pass up. Plus, it's fun to see your fellow superintendents and have an opportunity to learn from them.



Clark Throssell, Ph.D., loves to talk turf. Contact him at clarkthrossell@bresnan.net.





# 1 | Cordless 40V Multi-Attachment System \_\_\_\_\_

**OREGON's latest Cordless 40V Multi-**Attachment System gives users a variety of options. The system is designed for users who want to save time and money by creating a custom tool set to meet their specific needs, according to the company. The system comes with one powerhead that can add and interchange between the four attachments. Attachments include a 14-inch cutting diameter string trimmer, a 15-inch blade hedge trimmer, pole saw and edger. The system runs on the company's recently released 2.6 Ah battery and 6.0 Ah battery. oregoncordless.com

# 2 | 40V MAX Mower/Vehicle Charger

Released in summer 2017, the 40V MAX Mower/Vehicle Charger taps directly into the battery of a mower or vehicle and enables users to recharge any **DEWALT** 40V Max outdoor power equipment battery within four hours while still on the course. The charger includes an automatic shut-off that prevents excessive discharge of the vehicle's or mower's battery. This product features an LED indicator that diagnoses batterycharge status, whether it's charged or charging, and alerts the user to a power line problem. The indicator also displays power line status and whether the battery needs to be replaced. dewalt.com

# **3** TurboTRIM

TurboTRIM, a new ratcheting tool that efficiently trims turf around golf sprinkler heads, is now available from UNDERHILL INTERNATIONAL. Designed for timesaving operation, TurboTRIM contains both right- and left-drive ratcheting mechanisms. It cuts around sprinkler heads to improve irrigation coverage and overall course appearance. The tool is 36 inches tall and features 7-inch and 8-inch replaceable cutting blades that trim around all major brands of golf sprinklers. With rubber grip handles and heavyduty steel construction, the product is designed for easy use and lasting durability, according to the company. underhill.us







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# **4** DS 2400 S GSL Trimmer

EFCO recently released an all-new, limited-edition DS 2400 S, featuring the Oregon Gator Speed Load system, a trimmer head and line system featured in the July edition of The Shop. The DS 2400 S also features a 2-stroke engine that delivers 1.2 hp. The DS 2400 S features the Easy On starting system, which is designed for smooth and quick starts, according to the company. The clutch housing is aluminum and the solid steel drive shaft is made from 24-mm solid steel tube. The company offers an extended 59-inch drive shaft that enables operators to work in upright position.

efcopower.com

# **5** Two Mules bunker liner

Inspired by the drainage and durability of the Polylast livestock floor installed in a trailer to haul his two mules, a golf course superintendent asked if the system could be installed into a bunker. Today this bunker liner system from **POLYLAST LLC** is made from 100-percent recycled crumb rubber, then mixed with a proprietary and patented process of combining U.S. binders and adhesives. The system is a durable, prefabricated pad that is delivered and ready to be installed by on-site staff or your preferred contractor. It comes standard with a manufacturer's 10-year warranty. polylastgolf.com

# **6** Capillary Concrete bunker liner

A patented, homogenous mixture of additives and specially sized stone, **CAPILLARY CONCRETE** bunker liner creates a strong and open architecture. The result is a draining product that provides a slight amount of moisture back to bunker faces to prevent sand from moving, according to the company. It's installed with basic tools and can be installed if the temperatures are above freezing.

capillaryconcrete.com

# The 19th 10cc

# **Dane Gamble**

GREENKEEPER EMERITUS // Bridger Creek GC, Bozeman, Mont.

Dane, what can I get you? Got to stay local... a Bozone Amber, from Bozeman Brewing Co.



# What teams do you root

for? Montana State is a big part of our community here, so I root for them. Growing up in the Twin Cities, I also root for the University of Minnesota, the Twins and the Vikings.

How long have you and Margaret been married? For 36 years, but we also dated for seven years. I told her it's like watching grass grow, sometimes it takes a long time.

And how many kids? We're empty nesters now, we have two grown children. Everyone lives here in Bozeman, including our two grandchildren, 3-yearold Isaac and 6-week-old Louis.

When was the last time anyone saw you without a beard? 1975.

Think of all the money you've saved on razors over the years! And I'll tell you a secret... my wife cuts my hair. I can't even imagine how much I've saved in razors and haircuts over the years... enough to buy you a couple of those Bozone Ambers.

You're the superintendent at Bridger Creek, but also a co-owner of three other golf courses. How do you find the time? Thankfully, I've passed the "MY DEFINITION OF SUCCESS IS A FULL PARKING LOT IN THE MORNING, NO EQUIPMENT BREAKDOWNS DURING THE DAY AND A FULL PARKING LOT IN THE EVENING FOR OUR VARIOUS GOLF PROGRAMS."

true superintendent duties over to Wes Easton, who has been here since the inception of the course. At the other courses, I have very good managing partners and general managers. My role is more of a CFO and an agronomic resource. But I'm a throwback, I like to go by greenkeeper. I am the one handing out titles here... maybe I should go by "greenkeeper emeritus."

# What's your favorite piece of equipment in

**the shop?** I certainly like our FieldScout TDR for managing greens. It informs us and directs us. I also like our greens rollers for how it affects ball roll.

What's the best thing about living in Bozeman? Our access to recreational opportunities; golf, hunting, skiing, fishing, pretty much any endeavor you want.

BOBCAT

**So, which one do you prefer?** Big game hunting, mostly elk.

# You're on Jeopardy! What's the Final Jeopardy category you shoot the

works on? Financial management. I've been a student of personal financial management for some time. But I clearly must not be that good at it if I'm still working.

What food are you looking forward to this fall? Hopefully, freshly harvested elk steaks, but we'll see.

**Good luck, I hope you get one.** That's really what it comes down to — luck. As interviewed by Seth Jones, Sept. 13, 2017.



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