

Golfdom

10.18



FULLY CHARGED

Supers and experts discuss the pros of battery-powered equipment

PLUS

2018 EOP GUIDE

MEASURING NITROGEN LEACHING

A NEW USED EQUIPMENT COMPANY

**Smithco Sweepers
Collect Leaves, Thatch,
Grass Clippings,
Food and Beverage Debris,
Even
Bird Droppings.**



Smithco offers a lineup of debris management products made especially for golf courses. You can choose riding or tow-behind design, diesel or gas power, 72", 60" or 48" terrain following sweeper heads, and high-capacity, easy to clean hoppers. All offer outstanding value and productivity.

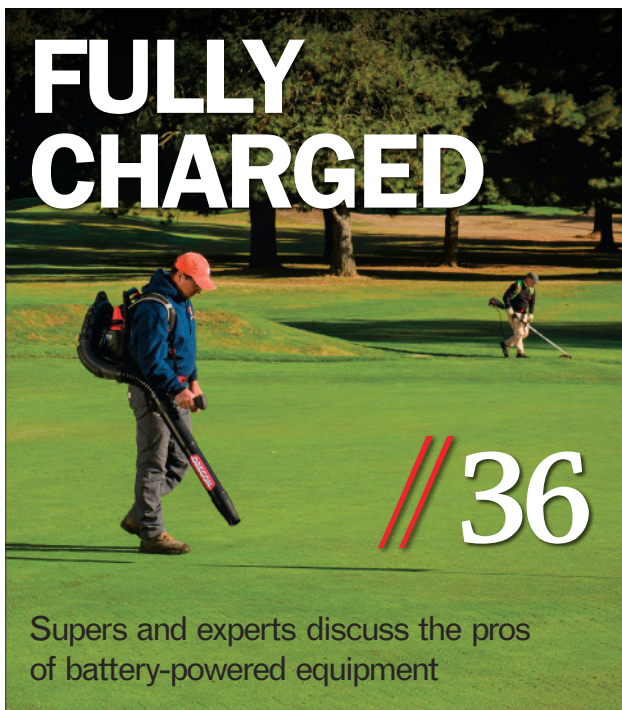


HIGHLY PRODUCTIVE. EASY ON YOUR BUDGET: The new tow-behind V62-V TURF VAC easily cleans up leaves, grass clippings, thatch, food and beverage debris, even bird droppings. 62" terrain following sweeper head, 4 cubic yard capacity, easy-to-clean hopper with electric open/close rear door.



EXTREMELY MANEUVERABLE, 48" WIDE RIDING SWEEPER: The Sweep Star 48 is a riding sweeper with 48" terrain following sweeper head, 18 hp gas engine, 1.6 cubic yard, hydraulically controlled high lift debris hopper.

See our full line of sweepers at ***Smithco.com***



Supers and experts discuss the pros of battery-powered equipment



A golf business for a golf family // 49

Instead of finding a buyer for used turf equipment company Global Turf Equipment, the Sezna family decided to buy it themselves

COLUMNS

- // 6 **Keeping up with The Jones**—Seth Jones
A whole lot of awesome, from Tiger's Tour Championship win to the microbrewery craze
- // 14 **The Walking Greenkeeper**—Joe Gulotti
Leave it to a grizzled vet to turn choosing hole locations into a thing of beauty
- // 59 **The Turf Doc**—Karl Danneberger, Ph.D.
Seeds are money: Why you shouldn't take turf seeds for granted
- // 60 **Clark Talks Turf**—Clark Throssell, Ph.D.
PBI-Gordon's Brian Aynardi, Ph.D., discusses how to control basidiomycete fungi with Pedigree

DEPARTMENTS

- // 8 **Starter**
- // 10 **Golfdom Gallery**
- // 62 **The Shop**
- // 64 **The 19th Hole**




SUPER SCIENCE

- // 55 **Sand-capping depth based on moisture retention curves**
- // 56 **Twenty years of measuring nitrogen leaching from turfgrass**

EOP GUIDE

- // EOP1 **2018 Early Order Program Guide**
(begins after page 14)





*PondHawk creates subsurface
aeration with solar even in the rain!*

AERATE THAT POND!

...with PondHawk® The solar-powered aeration system

Nearly all ponds need management to help keep the habitat, water quality and clarity in a healthy balance. Far too often though, water assets are neglected or treated with chemicals and dyes, which can easily damage the delicate pond ecosystem.

PondHawk is the patented solar-powered aeration system that works without batteries. It is designed for use 365 days a year and requires minimal maintenance.

And because PondHawk is not connected to the electric grid, its operating costs are very low. The innovative design installs quickly, doesn't require a special license and can be situated away from the pond and easily secluded if necessary.

PondHawk is quiet, doesn't require a lot of space and needs no batteries, making it the most ecologically-friendly solution on the market.

**Find out about the new PondHawk
Lease Program – call 888-755-1950
or visit www.LINNEindustries.com**



Nufarm

EDGE

REWARDS PROGRAM

GROW
YOUR EDGE

WITH THE BEST PRODUCT LINEUP YET

SIGNIFICANT EOP SAVINGS

SAVE ON 40+ PRODUCTS

SAVE ON TOP SOLUTIONS INCLUDING

Anuew™ PGR
Pinpoint® FUNGICIDE
Traction™ FUNGICIDE

REGISTER NOW

NUFARMINSIDER.COM/REWARDS

©2018 Nufarm. Anuew™ and Traction™ are trademarks of Nufarm. Pinpoint® is a trademark of Valent U.S.A. LLC.

 **Nufarm**
Grow a better tomorrow

Golfdom

Seven-time winner of the national Folio Award for editorial excellence

EDITORIAL

EDITOR-IN-CHIEF & ASSOCIATE PUBLISHER Seth Jones
785-690-7047 / sjones@northcoastmedia.net

SENIOR EDITOR Abby Hart
216-706-3756 / ahart@northcoastmedia.net

EDITOR-AT-LARGE Ed Hiscock
ehiscock@northcoastmedia.net

DIGITAL EDITOR Kelly Limpert
216-363-7933 / klimpert@northcoastmedia.net

ART DIRECTOR Pete Seltzer
216-706-3737 / pseltzer@northcoastmedia.net

CONTRIBUTING EDITORS

Karl Danneberger (*Science*), Joe Gulotti, Dillan Kanya, Matt Neff, Jared Nemitz, Clark Throssell (*Research*), Sean Tully, Mark Woodward, Steven Wright

BUSINESS

CLEVELAND HEADQUARTERS

1360 EAST 9TH ST, SUITE 1070, CLEVELAND, OH 44114

GROUP PUBLISHER Bill Roddy
216-706-3758 / broddy@northcoastmedia.net

PUBLISHER Craig MacGregor
216-706-3787 / cmacgregor@northcoastmedia.net

WESTERN REGIONAL SALES MANAGER Jake Goodman
216-363-7923 / jgoodman@northcoastmedia.net

EASTERN REGIONAL SALES MANAGER Dan Hannan
216-363-7937 / dhannan@northcoastmedia.net

ACCOUNT MANAGER Chloe Scoular
216-363-7929 / cscoular@northcoastmedia.net

EXECUTIVE SALES ASSISTANT Petra Turko
216-706-3768 / pturko@northcoastmedia.net

SR. MARKETING & EVENT MANAGER Michelle Mitchell
216-363-7922 / mmitchell@northcoastmedia.net

MARKETING & EVENT MANAGER Angela Gibian
216-363-7936 / agibian@northcoastmedia.net

SR. MGR., PRODUCTION SERVICES Rhonda Sande
216-978-9778 / rsande@northcoastmedia.net

DIR. OF AUDIENCE ENGAGEMENT Bethany Chambers
216-706-3771 / bchambers@northcoastmedia.net

SR. AUDIENCE DEVELOPMENT MANAGER
Antoinette Sanchez-Perkins
216-706-3750 / asanchez-perkins@northcoastmedia.net

MARKETING/MAGAZINE SERVICES

REPRINTS & PERMISSIONS Brett Petillo
877-652-5295 / bpetillo@wrightsmedia.com

SUBSCRIBER, CUSTOMER SERVICE
847-513-6030 / golfdom@omeda.com

LIST RENTAL Brahm Schenkman
800-529-9020 / bschenkman@infofirefery.com

CORPORATE

PRESIDENT & CEO Kevin Stoltman

VP OF FINANCE & OPERATIONS Steve Galperin

VP OF GRAPHIC DESIGN & PRODUCTION Pete Seltzer

EDITORIAL DIRECTORS Marty Whitford, Marisa Palmieri

Golfdom does not verify any claims or other information appearing in any of the advertisements contained in the publication, and cannot take any responsibility for any losses or other damages incurred by readers in reliance on such content.

Golfdom welcomes unsolicited articles, manuscripts, photographs, illustrations and other materials but cannot be held responsible for their safekeeping or return.

North Coast Media LLC provides certain customer contact data (such as customers' names, addresses, phone numbers and e-mail addresses) to third parties who wish to promote relevant products, services and other opportunities which may be of interest to you. If you do not want North Coast Media LLC to make your contact information available to third parties for marketing purposes, simply call 847-513-6030 between the hours of 8:30 a.m. and 5 p.m. CT and a customer service representative will assist you in removing your name from North Coast Media LLC's lists.

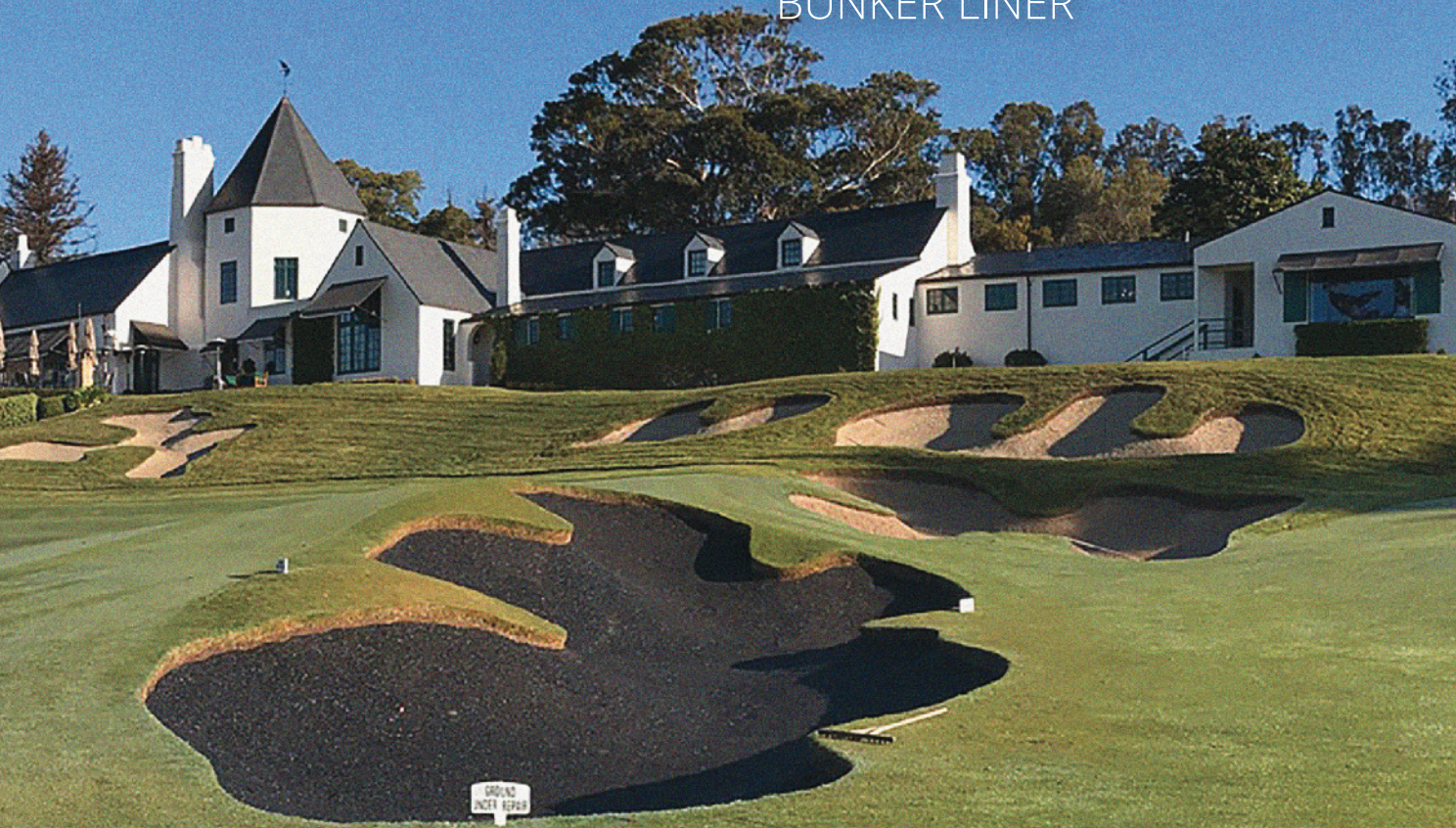
GOLFDOM (ISSN 1526-4270) is published monthly by North Coast Media LLC, IMG Center, 1360 East 9th Street, 10th Floor, Cleveland, OH 44114. **Subscription rates:** For US, Canada and Mexico, 1 year \$58.95 print and digital; two years \$88.95 print and digital. All other countries, 1 year print and digital \$109.95, 2 years \$169.95. For air-expedited service, include an additional \$75 per order annually. Single copies (prepaid only) \$10 plus postage and handling. For current single copy or back issues, call 847-513-6030. **Periodicals postage paid** at Cleveland OH 44101-9603 and additional mailing offices.

POSTMASTER: Please send address change to GOLFDOM, PO Box 2090, Skokie, IL 60076. Printed in the U.S.A. Copyright 2018 North Coast Media, LLC. All rights reserved. No part of this publication may be reproduced or transmitted in any form by any means, electronic or mechanical including by photocopy, recording, or information storage and retrieval without permission in writing from the publisher. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients is granted by North Coast Media, LLC for libraries and other users registered with the Copyright Clearance Center, 222 Rosewood Dr, Danvers, MA 01923, phone 978-750-8400, fax 978-750-4470. Call for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law.



POLYLAST™

BUNKER LINER



The greatest flexibility
in design...



In the USA:
Polylast Systems, LLC
480.998.3033
www.PolylastGolf.com

In the United Kingdom:
Aitken's Sportsturf Ltd.
+44 1977 681155
www.Aitkens.co.uk

In Europe:
GHG Golfkontor Handels GmbH
+49 40 5400700
www.Golfkontor.de



“...enough good things have been happening lately — here in Kansas and elsewhere — that I’m happy to sit back and appreciate it for a minute.”

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

Almost everything is awesome

Greetings from the Sunflower State, where Kansas Jayhawk football just ended a nine-year (*nine-year!*) road losing streak, the Kansas City Chiefs are 3-0 behind talk-of-the-NFL phenom Patrick Mahomes II, and today’s headline in the *Lawrence Journal-World* boasts, “Kansans’ Incomes Booming.”

There’s a handmade yard sign in my little town of 6,000 that I drive by every day when I’m dropping off my kids at school. It simply reads, “Remember: you’re awesome!”

‘Awesome’ might be over-used these days — everything is not awesome — but it is a nice sign to drive by every morning. I give my fellow Eudora, Kan., residents a mental high-five whenever I see it. And honestly, enough good things have been happening lately — here in Kansas and elsewhere — that I’m happy to sit back and appreciate it for a minute.

Consider these things, which are all awesome in my book:

Tiger’s win at the Tour Championship. How good did it feel to see Tiger in the zone

on Saturday and Sunday (and by the way, how good did East Lake look?) Talk about the need for an emergency 9... the PGA Tour season can’t end now, can it? With Tiger hoisting a trophy? Isn’t there a rule that states the season gets extended by an extra three weeks if Tiger wins the last tournament of the year?

Well, there should be.

At the beginning of the season I bet *Golfdom* Publisher Craig MacGregor \$100 that Tiger would never win another major championship. Right now that Ben Franklin looks like it’s in jeopardy, but like I told Mac back then — I’d pay off that bet grinning ear to ear, because if I lost it meant Tiger had his 15th major, which isn’t just awesome in general, but also

amazing for the game.

The economy and our 401(k)s are rocking. That’s no baloney about the economy in Kansas. According to a report by the U.S. Bureau of Economic Analysis, Kansans saw an increase in their incomes of 4.7 percent in the second quarter of 2018, good enough to put us in the top 10 states. Texas (6 percent increase), Louisiana (5.9 percent increase) and Kentucky (5.5 percent increase) were the top three, while Washington came in last with a 1.6-percent increase (sorry, Huskies.)

So everything remains bigger in Texas. I’m cool with that.

Microbreweries are popping up all over. As you may have surmised at any time

over the last nine years I’ve been writing this column, I’m something of a beer fan... my favorite beer is cold beer, but I also like to try other cold beers, while sometimes I just stick to cold Miller Lite.

The microbrewery craze has gotten so ridiculous now that I even had one pop up in my no-stoptlight town of 6,000: Wakarusa Brewery, named after the nearby river.

You know what would be really awesome? If they created a brew named after their nearby *Golfdom* editor. Something to strive for...

Promotions for team *Golfdom*. We’ve had some promotions here at North Coast Media. While maintaining my role of *Golfdom* editor-in-chief, I’ve also been promoted to the dual role of EIC of our sister publication, *Landscape Management* (landscapemanagement.net). Similarly, Abby Hart, who was managing editor of both pubs, has been deservedly promoted to senior editor of both books. We’ve also been empowered with an energetic staff of five editors to help us manage the chaos of publishing two turf books a month.

So I’ve got that going for me, which is nice.

I shouldn’t need a handmade yard sign to remind me that there are cool things going on right now. While the beginning of 2018 had my head spinning, the closing of 2018 looks... awesome. **G**

Email Jones at: sjones@northcoastmedia.net.



SHIFT YOUR APPROACH.

Cover more ground with the AR and TR Series.

New AR and TR Series trim mowers bring the legendary Jacobsen® cut to hard-to-reach areas. They're loaded with versatile features like AdaptiShift™** technology which moves all three cutting units from side to side, offering 12 inches (AR Series) or 18 inches (TR Series) of offset and the option to create varying tire track patterns. Their versatility enables you to deliver contour-hugging precision and unrivaled hill-climbing capabilities, providing a superior quality of cut and heightened productivity.

*AdaptiShift technology available on AR331 and TR330.

Get more details at www.jacobsen.com
or call 1.888.922.TURF



AR SERIES



TR SERIES

TEXTRONGOLF

© 2018 Textron Specialized Vehicles Inc.

Starter

NEWS, NOTES AND QUOTES



// GLUTTONS FOR GOLF



Golfers celebrate one more hole played during Youth on Course's third annual 100 Hole Hike. The event took participants 7 to 12 hours to complete.

A GOLF ENDURANCE CHALLENGE

BY ABBY HART // Senior Editor

➔ Playing a round or two in a day sounds like a good time. Five and a half rounds... that might be pushing it.

At Youth on Course's (YOC) third annual 100 Hole Hike, more than 50 golfers were up to the challenge.

YOC increases affordability and accessibility to the game of golf. This year's 100 Hole Hike took place at six courses across the country and raised nearly \$300,000, nearly doubling the goal of \$150,000. The proceeds will fund thousands of \$5 subsidized rounds of golf, scholarships and caddie opportunities for YOC's 40,000 members, ages 6 through 17.

"This is the first year (the hike) has been done outside of California, and the response in the respective cities was terrific," says Adam Heieck, YOC's

executive director.

The golfers were in for a long day. According to Heieck, the toughest part was around holes 65 to 70, where golfers have been walking the course for hours and still have a third of the way to go. "I took about a dozen ibuprofen over a 24-hour period," he admits.

At the Claremont (Calif.) Country Club, one participant knocked in a hole-in-one on his third hole of the hike. "It was a pretty euphoric way to start," Heieck says.

"For a lot of people, it was a challenge to see if they could really do it," he says. "Everybody finished, and it was really a true sense of accomplishment."

To learn more about Youth on Course, visit youthoncourse.org.

// LOWE TO BAYER

FROM GREEN SECTION TO GREEN SOLUTIONS

Environmental Science, a business unit of Bayer Crop Science, announced that Todd Lowe has joined the Bayer Green Solutions Team. Lowe will serve customers in Florida as part of the group's commitment to healthy turf through solving customer challenges and providing technical expertise and education.

"For over 18 years, Todd has been educating and empowering the industry through his work with USGA Green Section," said Laurence Mudge, Bayer Green Solutions Team manager. "His passion for advancing the green industry is clear, and his technical knowledge and agronomic expertise, particularly in the Florida region, will be an invaluable asset to our customers."

"It's not the agronomic problem solving and scientific innovation that I'm looking forward to most," Lowe said. "It's the people I will interact with every day in my work with Bayer — from customers to colleagues. Together, we solve problems that are critical to the success of the turfgrass industry."

// INDUSTRY VETERAN

CARROTHERS TO DIRECT AT FMC

FMC Professional Solutions, a business unit of FMC Corp., has named Dan Carrothers commercial director for North American Professional Solutions.



Dan Carrothers

"Dan brings deep expertise in growing business segments, launching new innovations and developing post-patent strategies in the specialty market," said Zack Zaki, director, FMC Global Specialty Solutions.

Carrothers is responsible for managing all commercial aspects of the business. His previous roles include managing the U.S. pest control business for BASF and leading the U.S. T&O business for Bayer.


"I've always had a lot of respect for FMC," Carrothers said. "It's an exciting time to be joining the organization."

FMC Professional Solutions develops and markets insecticides, herbicides and fungicides for structural pest, turf and ornamental industries.



//THE DOG DAYS

Underdogs of Turf coming in December

 Everyone loves an underdog. Thanks to a partnership between Rain Bird, John Deere and *Golfdom*, the Underdogs of Turf will be coming to all *Golfdom* subscribers.

The Underdogs of Turf calendar is the brainchild of Kasey Kauff, director of grounds at Trinity Forest Golf Club in Dallas. Kauff's vision was to create a calendar for the industry that pictured dozens of dogs on each page rather than one dog per month. Last year's calendar celebrated more than 150 dogs (and one rabbit) in its pages.

Approximately 2,500 Underdogs of Turf calendars were distributed in 2017. Thanks to this new partnership, it will now grow to 22,000 copies strong, mailed to all 50 states.

"The Underdogs calendar was a labor of love last year. I had no idea it would be such a subject of joy to others," Kauff says.

"The calendar was so much fun last year that our dog Bella still barks about it," says Matt Corentin, global technological sales manager, Rain Bird Golf. "She is a big part of our family, and since Rain Bird is a family-owned company, being a part of this calendar with Kasey was just a perfect fit."

"John Deere believes in the underdogs, and we love Kasey's vision of expanding the limelight to include more of our furry friends," says Ren Wilkes, marketing manager, John Deere Golf. "Our dogs provide so much support to us on and off the course, so we're excited to partner with Rain Bird and *Golfdom* to celebrate these important crew members."

//PAGING DR. RAMOUTAR

AQUATROLS NAMES NEW R&D DIRECTOR

Aquatrols, manufacturer of soil surfactants and related technologies, has named Darryl Ramoutar, Ph.D., as director of research and development. Previously serving in leadership positions at Scotts Miracle-Gro Co. and Clarke Environmental Services, Ramoutar brings a breadth of experience to a role that will help fuel Aquatrols' future growth and product expansion, according to the company.

Most recently director of global controls R&D at Scotts Miracle-Gro, Ramoutar specialized in providing strategic technological, regulatory and market guidance to brand teams and company leadership within the controls category.

"Darryl's deep background speaks to his wealth of knowledge and passion for agronomy," says Matt Foster, Aquatrols president and CEO. "I am confident that Darryl's expertise will not only help us improve our product line for customers, but also help us continue down the path of becoming the most trusted supplier in golf!"

GO FIGURE

1,148,082

Impressions *Golfdom* had on our digital media channels during the week of the 2018 PGA Championship, an all-time high for the magazine.



Turf Pros' #1 Top Dresser
Since 1994

TOP DRESSERS STARTING AT 2984\$



Grow your business not your crew!
1-866-ECO-LAWN (326-5296) | www.ecolawnapplicator.com

Golfdom Gallery



1 Drink (tickets) are on Golfdom! Making good on a competition from last fall, the *Golfdom* team hit the Rocky Mountain GCSA Affiliate Cup event at Grand Lake (Colo.) GC to buy the whole chapter a cold beverage. The RMGCSA successfully returned the most State of the Industry surveys, for which we're grateful.



2 Rocky Mountain high After a fun day of golf at 8,369 feet, (left to right) *Golfdom* Editor-in-Chief Seth Jones, Todd Creek Golf Club Superintendent Jeremy Casebolt, Legacy Ridge Superintendent Tim Davis, and Kenny Troutman and Steve Ehnes (both of Wilbur-Ellis) take in the view from the Grand Lake GC patio.

3 Colombia to Columbus (L to R) Country Club de Bogotá's Sebastian Delgado with Ohio State University's Ed Nangle, Ph.D., and Mike O'Keefe. Delgado interned at Firestone CC for the summer and was gearing up for his next internship at TPC Sawgrass when we caught up with him at the Ohio Turfgrass Foundation's Turfgrass Research & Technology Field Day.



4 Listen up! David Gardner, Ph.D., gives the lowdown on the latest turfgrass weed control products at the OTF Field Day.

5 A visit from Sipcam Sam The *Golfdom* team connected with Sam Wineinger (second from left) of SipcamAdvan while the group was visiting Kansas City. Seth was there too, but was squirrely about appearing in a photo with a University of Missouri grad. The *Golfdom* team, from left to right: Craig MacGregor, Bill Roddy and Jake "Goody" Goodman.



6 Lounging on Lake Lanier Kubota launched a new utility vehicle, the Sidekick RTV-XG850, during a media event at Lake Lanier, Ga. For a video to see what the Sidekick can do, visit Golfdom.com. In the meantime, here's (L to R) Roger Gifford, Kubota; Jones; *Golfdom*'s Craig MacGregor; Christa Lander, Kubota; and Rajesh Joshi, Kubota, celebrating the end of a successful launch party.



TORO[®]

Count on it.

WHAT *Workman[®] GTX.*

MATTERS *Automotive-style suspension.*



MOST *Smooth, sweet ride.*

What Matters Most to You Matters Most to Us.

Workman[®] GTX Utility Vehicles. *The Workman GTX boasts an unequalled combination of ride comfort, utility and control with the power and versatility your crews need to get jobs done efficiently. Which means they're not just working, they're working smarter.*

Join the conversation

 **@ToroGolf**

©2018 The Toro Company. All rights reserved.

Call: 800-803-8676

Visit: toro.com/GTX

ENVIRONMENTALLY RESPONSIBLE, ECONOMICALLY SOUND

Enhanced efficiency fertilizers help superintendents support industry BMPs while optimizing labor and other resources

As the world becomes increasingly urbanized, golf courses provide people with valuable opportunities to enjoy nature close to home. Even so, golf course owners and superintendents have long been scrutinized for their use of water, inputs and other resources to maintain pristine golfing conditions. However, golf's reputation is changing as courses take tremendous steps toward becoming more environmentally responsible.

The Golf Course Superintendents Association of America (GCSAA) has been working with affiliated state chapters to develop Best Management Practices (BMPs) — standard practices and procedures that provide for healthy turfgrass and quality playing surfaces while still protecting the environment. BMPs can be a feature or engineered structure on a golf course, such as a retention pond, stream channel or wetland. Or, they can be an agronomic or cultural practice that benefits turfgrass, like aeration, soil testing and soil moisture monitoring.

“Our goal is to help establish golf course BMPs for all 50 states by 2020,” says Rhett Evans, GCSAA CEO. “Through this platform, superintendents nationwide can demonstrate that they truly are responsible environmental stewards. That’s not just good for their courses and the environment, but also for the entire golf industry.”



The Ridge at Castle Pines golf course looks better than ever thanks to just three applications of UMAXX per year.

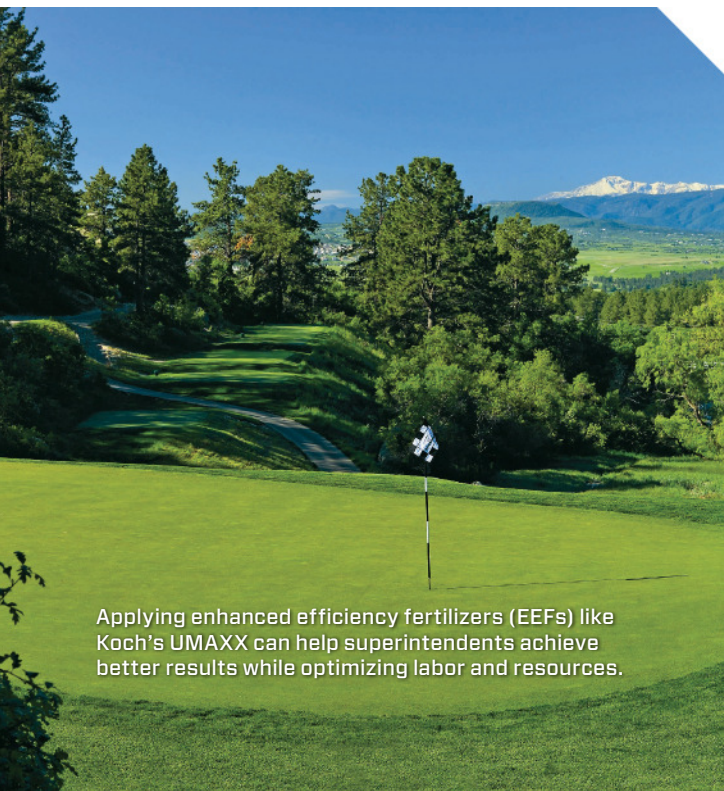
This ambitious BMP program can't happen without financial support from industry partners. In April 2018, Koch Turf & Ornamental (Koch) donated \$20,000 to the Environmental Institute for Golf (EIFG), the philanthropic organization of the GCSAA, specifically to support BMP initiatives.

“GCSAA is providing the golf industry with broad-based information and tools that promote sustainability and encourage continuous improvement,” says Marshall Bird, Koch's vice president. “We're proud to support the BMP program, which aligns with our vision of providing solutions that maximize plant performance and minimize environmental impact.”

GREATER EFFICIENCY, LESS ENVIRONMENTAL IMPACT POTENTIAL

As a global leader in the production of enhanced efficiency fertilizers (EEFs), Koch's support of BMP development isn't just financial. Their products deliver nutrients efficiently, making them environmentally responsible with low potential for nutrient loss through leaching, denitrification, runoff or volatilization. This fertilizer technology also provides an ideal solution in areas where fertilizer use is strictly regulated. Because EEFs possess characteristics that allow increased plant uptake, golf course turf gets the most from each fertilizer application.

“Enhanced efficiency fertilizers just make sense, from both an environmental and an economic perspective,” says Dr. Eric Miltner, Koch's research agronomist. “By applying a more efficient product, golf courses can achieve better results while



Applying enhanced efficiency fertilizers (EEFs) like Koch's UMAXX can help superintendents achieve better results while optimizing labor and resources.

optimizing labor and resources. And, because they're able to use fewer inputs to maintain health and playability, they're also demonstrating their commitment to a better, healthier environment. Switching to an enhanced efficiency fertilizer is a best management practice that's very easy to implement."

SUSTAINABILITY ON A BUDGET

As superintendents follow BMPs to make their courses more environmentally sustainable, they're personally discovering the value of Koch's enhanced efficiency fertilizers.

Chris Hedberg is the superintendent for The Ridge at Castle Pines, a Troon® course south of Denver that offers a high-end golfing experience. Unlike neighboring courses, the 212-acre, Audubon-certified sanctuary course is a public, daily-fee facility, and Hedberg and his team must operate within the constraints of a relatively small budget.

"We still want to provide the same conditions or better than the members-only courses around us," Hedberg says. "We try to do a lot with a little."

Hedberg and his staff emphasize environmental responsibility. They've decreased The Ridge's irrigated acres by turning seven acres into native grass. The remaining 80 acres are irrigated with reclaimed water. That same sustainable focus extends to the fertilizer that Hedberg's team applies throughout the course — Koch's UMAXX® stabilized nitrogen fertilizer. A urea-based product with a 46-0-0 analysis and dual inhibitor technology, UMAXX protects against all three forms of nitrogen loss.

"Over the past six years, it's given us the biggest bang for our buck," Hedberg says. "Its performance has even allowed us to reduce the number of fertilizer applications we make each season. We usually make three applications, maybe four depending on the weather. That's a huge timesaver, rather than having to go out once a month or every six weeks."

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

"I told them, 'Just UMAXX,'" he says. "Simply putting down the nitrogen we need when we need it has produced great results for us. We don't have to deplete our already limited budget by purchasing a lot of other products. UMAXX's sustainability and performance are great, and we're able to minimize the amount of fertilizer we apply."

Discover how UMAXX and other enhanced efficiency fertilizers from Koch Turf & Ornamental can help your course follow BMPs and limit its environmental impact. Contact your distributor or your nearest Koch sales representative today.

SPONSORED BY:

KOCH
TURF & ORNAMENTAL

Chris Hedberg Creates a High-End Course Experience with UMAXX® Stabilized Nitrogen Fertilizer

Chris Hedberg is superintendent of The Ridge at Castle Pines, just outside of Denver, CO. He has to get a lot done with a small crew while being as efficient as possible. For six years, Chris has used UMAXX to keep fairways and roughs green throughout his course's busy season — all with just three applications a year.

"Over the past six years, UMAXX has given us the biggest bang for our buck, and its performance has even allowed us to reduce the number of fertilizer applications we make each season."

"When three guys can spend a day applying UMAXX and you can get two to three months of performance out of it, that's a huge timesaver, rather than having to go out once a month or every six weeks."

Find out how else Chris uses UMAXX to improve the health and playability of his course at KochTurf.com/GolfAdvantages.

UMAXX® is a registered trademark of Koch Agronomic Services, LLC, in the United States and may be registered in other jurisdictions. Koch and the Koch logo are trademarks of Koch Industries, Inc. © 2018 Koch Agronomic Services, LLC.



“In the two seasons we worked together, I never heard a complaint from the peanut gallery of hacks about a single hole he cut.”

JOE GULOTTI, *superintendent, Newark (Del.) CC*

The final destination

I recently was having a pretty awesome day. The weather was near perfect, my boy was unexpectedly agreeable at aftercare pick-up, and everything seemed copacetic as I went to crack a beer. I was kind of jonesing a heater though, so in an effort to thwart the craving of hitting flavor country, I purposely checked my email.

The Gmail inbox was flooded with the usual garbage, but as I scrolled down, I noticed that a message from my course's pro had been delivered with the subject line “Hole locations.” I went positive, optimistic his email emphasized the fantastic job we had been doing setting up the course. But as much as I longed to “mindful superintendent” this situation, experience told me to brace for the worst.

In this instance, experience won the battle over wishful hippie thinking. The email basically said the 12 o'clock sweeps were not too stoked on some of the recent hole locations.

My first reaction was total annoyance, because don't they realize our putting sur-

faces were shaped when Joe Kennedy was making a mint illegally exporting whiskey from Canada? Meaning that they're inundated with false fronts, postage stamps in relation to size, and definitely not designed to be cut at an eighth of an inch.

I was genuinely peeved, and on my way to WaWa to pick up a pack of white knights (Marlboro Lights), the muses that enlighten my inner conscience began to whisper their sweet somethings.

Golfers really do not give two (insert preferred expletive here) about what goes into setting up the course. All they crave are good times, and gettable hole locations equate to, arguably, the best times ever. I'm often asked about the most important job we

do as greenkeepers, and my reply always is hole locations.

Back when I was the greenest greenkeeper of all time, I was taught the art of course set-up by this burly old-timer, Bob Bayalis. Bob was a master with the cup cutter, patiently following the triplex around, never daring to cut a hole on a dew-laden putting surface. A green had to be freshly mown before Bob even considered cutting a cup, and only after the triplex was out of sight would the magic of Bayalis go down.

It was almost Zen-like, watching this grizzled veteran choose a hole location. He approached this task with measured steps that involved gliding across a putting surface searching for the perfect spot. Once he chose a location,

Bob would ease that red cup cutter into the upper organic matter, then tenderly work the aluminum cylinder down into the subsurface of the green with a series of twists.

He knew the exact moment to pull the plug and never required one of those bush-league depth rings that attach to our craft's tool of ignorance. His feel was uncanny and the cleanliness with which he accomplished this job was unmatched. Not a speck of soil remained. *Leaners? Fuhgeddaboutit.*

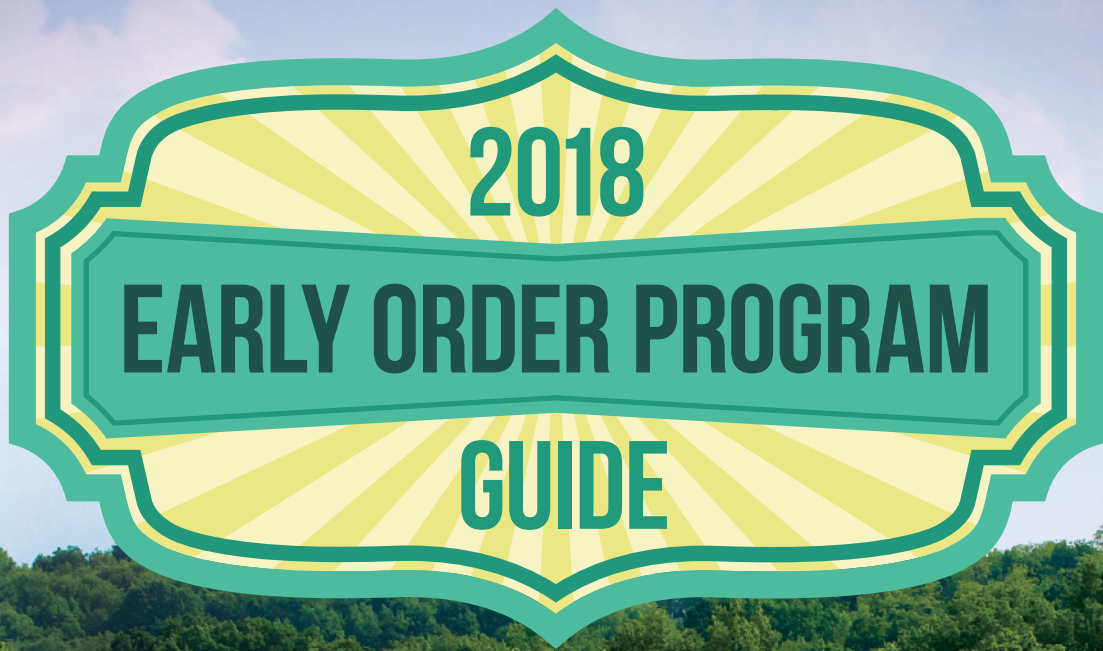
In the two seasons we worked together, I never heard a complaint from the peanut gallery of hacks about a single hole he cut. It was truly an amazing feat, bordering on the mystery of transfiguration.

Awestruck by the mastery, I asked Bob why he was so obsessed with this particular job.

“It's the final destination, kid!” he exclaimed. “Every golfer every day is going to this spot, so it better be perfect or damn near.”

As I peeled out of the WaWa parking lot without purchasing that pack of smokes, I realized the 12 o'clock sweeps had a legitimate gripe. I had totally spaced on my No. 1 fundamental. So, when I returned home, I replied to the pro's email with an apology, while also ensuring him that the final destination would be damn near perfect moving forward. ☺

Joe Gulotti (hardg43@gmail.com) is the superintendent at Newark (Del.) CC. To read his blog, visit thewalkinggreenkeeper.com.



2018
EARLY ORDER PROGRAM
GUIDE

Hole No. 10
at Pittsburgh's
Fox Chapel Golf Club.

A SUPPLEMENT TO
Golfdom

September 1, 2018
thru December 8, 2018

The Simply Grow Together
Early Order Program has
easy 3 steps:

- 1. Redemption** Complete the redemption form on the website
- 2. Calculate** Use the EOP calculator with product selections & unit quantity
- 3. Send materials** Upload all receipts & submit! Your rebate is on the way!

visit simplygrowtogether.com



Plan ahead &
Save with Quali-Pro.

Program Dates: September 1 thru
December 8, 2018

Who Qualifies

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

Terms

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

NEW FOR 2018

ONLINE FORM & CALCULATOR

You can now submit your
rebate online at

simplygrowtogether.com



QUALI-PRO

#QualiPro

quali-pro.com
800-242-5562

[@quali_pro](https://twitter.com/quali_pro) [@qualipro](https://www.facebook.com/qualipro)

Visit simplygrowtogether.com to get started | or call 281.892.2500 to locate a rep!

A SUPPLEMENT TO

Golfdom



The Bottom Line on EOP

A longtime superintendent turned salesperson gives the full scoop on the EOP process.

BY DAVE BLOMQUIST

EOP4

Sir Mix-a-Lot

Bayer's Zac Reicher, Ph.D., gives the lowdown on the proper mix.

BY SETH JONES

EOP7

PROGRAM SPOTLIGHT

Syngenta

EOP10

PROGRAM SPOTLIGHT

PBI-Gordon

EOP12

PROGRAM SPOTLIGHT

FMC

EOP14

PROGRAM SPOTLIGHT

Nufarm

EOP16

PROGRAM SPOTLIGHT

Quali-Pro

EOP17

PROGRAM SPOTLIGHT

Bayer

EOP18

THE BOTTOM LINE ON EOP

A longtime superintendent turned salesperson gives the full scoop on the EOP process.

By Dave Blomquist, Chicagoland Turf

As the calendar rolls over to October, many northern superintendents anxiously await the return of a cold, snowy tundra and putting that lush playground to bed for the winter. Oh, the anticipation of emptying out the irrigation systems... protecting the playing surfaces... blowing leaves to oblivion.

As the seasons change, it seems a pretty good time to sit back and think on the season that was. What worked? What didn't? What should we add to our spray program? What did everyone else use, and should I try that?

Maybe you're thinking about putting out a text to a few buddies to see what they are thinking about adding to their programs for 2019... or maybe I can call on my preferred vendors and get their opinion about pricing or potential label changes... maybe even learn about the new stuff that is in the pipeline... maybe put that in the rotation.

Wrong, wrong, wrong! As Mr. or Ms. Superintendent ponder these ideas over a cup of hot brew, it suddenly occurs to them — “Oh yeah! An army of knuckleheads have called, texted, emailed, cold-called... and told me that all life on Earth will come to a complete and utter standstill at midnight on Oct. 31 if I don't order up my entire year's worth of everything I am sure to need in 2019.”

But why?

The bottom line

Why does this happen, you ask — seemingly earlier and earlier every year? Let's take a trip back in time to the day I was privileged to sit in on my first manufacturer/distributor EOP planning sit-down. (EOP, of course, is early order program. We folks in sales love acronyms: OEM, FYTD, GIS, MR, DR, BMP, BFF... you get the picture.)

Having been a superintendent for 19 years and on the receiving end of all the fuss, I thought I finally was going to get the inside scoop. I made it a point to ask to be enlightened early in the meeting. That way, I would be able to better focus my queries later.

OK. So, I'm ready to let you in on the secret. Exactly what they told me. Here we go. Are you sitting down? Here's what I got:

“Cause it's October, dummy.”

They all laughed at me and ate another doughnut while I sat disappointed with the realization that there is no bottom-line secret. To this day, nobody has been able to give me a clear, concise explanation.

EOP defined

Different distributors and manufacturers run varying deals, but basically you are encouraged to commit to next year's stuff as early as possible in the fall. They incentivize end-users with a combination of extended terms, rebate checks, rebate credits, percentage price reductions, gift cards,



If you know what products you need for next year, you won't find them cheaper than during the EOP period.

warehousing specials, delivery deals, free stuff, outright bribes, tchotchkes, payment plans, yadda, yadda, yadda.

Everyone is trying to beat everyone else to the punch. But hey, you won't have to pay until next year, and you can reduce your expenses by quite a bit, maybe up to 20 percent.

Advantages to end-users

- **THE EARLIER YOU ORDER, THE MORE YOU'LL SAVE.** The simple fact is that you will not get better pricing, especially with agency items. While some vendors run programs throughout the season, the prices don't match those available during EOP. If you know what you will use, you won't find it cheaper.
- **THINGS ARE FRESH ON YOUR MIND.** The longer you wait, the greater the chance that you may forget the tweaks. A long winter can dull your recollection.
- **REST ASSURED.** By getting everything handled

before the snow flies, you can take solace in the fact that you will have one less thing to worry about going into next season.

- **REACTION TO GENERICS.** Agency products ordered in October become price competitive with post-patents. Get — at a discount — all the support, consistency and backing that the generics don't have.

Advantage to manufacturers (what they tell us)

- **INVENTORY AND PRODUCTION LEVELS.** Just about everything you use gets made in short production runs. Having an idea of market trends helps manufacturers keep costs under control.
- **BETTER SERVICING THE CUSTOMER.** A stretch, but by knowing what you want and when you want it, you'll be a happier, more organized camper.

Continued on page EOP6

Continued from page EOP5

Advantage to manufacturers (unofficially what may be true)

- **MONEY AND MARKET SHARE.** Get it while the getting is good.

- **RICKY BOBBY SYNDROME.** “If you ain’t first, you’re last!”

- **HEAD OFFICE IMPACT.** What if they change the program to say... February, and I’m just spitballing here, to coincide with GIS for example? The boys in the home office will interpret this fall as a loss and heads will roll.

While the recent past has been somewhat stable, there is no doubt that over the years purchasing decisions have moved from late winter to early fall. The old-timers always tell us that these decisions were made “after the show,” in early March. That way any new products or changes to existing products could be examined at the annual GCSAA Conference and Show (before it was called the Golf Industry Show).

With what seems like an annual influx of new distribution partners, the pressure is not going to ease. I don’t want to be a bearer of bad tidings fuddy-duddy, but I’d suggest you accept it and be

ready to go. In fact, I hope you already considered all this last month!

About the only way this is going to change is if all end-users get together and let manufacturers know how things are going to be.

Bonus advantages

There are some bonus advantages to EOPs that perhaps you’ve overlooked. 1: You’ve already seen us in October — your winter is free! 2: You’ll probably forget half the stuff you early ordered, why you ordered it and why you ordered so much of it. Don’t fret — your sales person took notes and gladly will remind you over lunch in March.

So with that, all of your salespeople hope to see you in March. ☺



Dave Blomquist is a sales rep with Chicagoland Turf. Prior to joining Chicagoland Turf, he was a superintendent for 19 years at Twin Orchard CC and Naperville (Ill.) CC.

(Editor’s note: This article first appeared in On Course, the official publication of the Midwest Association of Golf Course Superintendents. It is reprinted with the author and the MAGCS’s permission.)



Get your ordering done before the first snowfall and there’s one more thing off your to-do list for next season.

SIR MIX-A-LOT

Bayer's Zac Reicher, Ph.D., gives the lowdown on the proper mix.

By Seth Jones

There has been a lot of learning in Zac Reicher's career.

He earned his M.S. in horticulture/turfgrass science from Iowa State University, then his Ph.D. in agronomy/turfgrass science from Purdue University. He then continued learning over the 34-plus years he was turfgrass specialist at Purdue, then the University of Nebraska.

But when it comes to tank mixing, he learned the way many people did in the 1980s: from hands-on experience.

"I started working on a golf course when I was 15 years old," Reicher recalls. "No one showed me how to make a tank mix, I had to learn for myself. As an Extension specialist, and now as a member of Bayer's Green Solution Team, I learn from other people's mistakes."

Tank mixing mistakes can be costly, from loss of expensive products to — worse — loss of a job. Just this spring, Reicher saw firsthand a tank mix in the Midwest that went horribly awry. "I won't name names, but they literally ended up with the equivalent of 150 gallons of plaster," he says.

Keep it simple

Reicher often fields calls regarding tank mixes. The most common calls seek advice on the proper

order of products, or if product X is compatible with product Y.

"My most common message is, 'Keep it simple, stupid,'" Reicher laughs. "The fewer products you



Zac Reicher, Ph.D.

put in your tank, the better. But I understand that this has gotten more complicated in recent years... years ago we had more time and more labor — we weren't as worried about being so efficient."

Reicher is quick to recommend the jar test to anyone who will listen. After all, why not combine a small amount of products in a small, no-risk container before taking that combination to the spray tank? But still, Reicher says, a miscalculation from the jar test to the spray tank could cause a mishap.

Another problem Reicher sees is when a course's water changes from the beginning of the season to the end of the season. The first, second and third tank of the exact same mix are all fine, then the fourth tank turns out bad at the end of the season.

"Water changes throughout the year, so test regularly," Reicher suggests. "City water can do this the worst. Always buffer your water prior to adding anything."

Continued on page EOP8

Continued from page EOP7

Other common questions and answers from Reicher:

CAN I ADD COMPONENTS DIRECTLY TO THE TANK? Premixing in a 5-gallon bucket or the sprayer's premix tank usually is preferred.

WHAT IS THE BEST ORDER FOR ADDING COMPONENTS WHEN INCLUDING SIGNATURE XTRA STRESSGARD IN THE TANK MIX? "This is based largely on personal experience and the products to be included," Reicher says. The rule of thumb is to use the following order:

- Add all other pesticides, including growth regulators
 - Add Signature XTRA Stressgard
 - Add wetting agents
 - Lastly, add fertilizers/micronutrients
- "Signature XTRA Stressgard reduces the pH, so it's important to add it after other pesticides and PGRs to ensure they are in solution first," Reicher says.
 - Depending on the pH sensitivity of other products going into the tank, some superintendents effectively add Signature XTRA Stressgard first.

IF IN DOUBT ABOUT COMPATIBILITY — Perform a simple jar test, especially when using formulations or combinations in which you have little experience.



When tank mixing, keeping it simple can help prevent a bad mix. The fewer products in the tank, the better.



Reicher recommends testing mixes in a jar first, especially when using new formulations or combinations.

WHAT IS THE IDEAL SPRAY TANK PH? Usually near neutral or slightly acidic is the ideal pH. Consider using buffering agents prior to adding components if dramatically different.

CAN I USE IRRIGATION WATER TO FILL THE TANK? Likely yes, if your irrigation water is well water or city water. Likely no, if your irrigation water is effluent, streams or run-off fed.

HOW LONG WILL PRODUCTS LAST IN A SPRAY TANK? You should apply all products within hours of mixing, but pH is the critical determinant in stability of formulations in a tank.

Think like a doctor

For today's superintendent, it's a tank half-full, a tank half-empty when it comes to tank mixing.

Many innovative products are available to superintendents for maintaining a golf course, Reicher says. With wetting agents and plant growth regulators growing in popularity, the tools in the toolbox are numerous.

That also means it's more complicated than the days when superintendents-to-be were mastering their own mixes in east Iowa as a 15-year-old.

"The worst-case scenario is a bad interaction on the plants... a bad tank mix can cause unexpected phytotoxicity or injury, and people can lose their jobs over that," Reicher says. "Keep it simple, as simple as you can. Two or three components, max. Look at prescriptions with patients — doctors tell you, one, two, three different prescriptions? They know the interaction. But four, five or six? It's hard to know how they will interact." ©

EARLY ORDER REWARD PROGRAM
OCTOBER 1, 2018 – JULY 31, 2019

NEW for this year, the Aquatrols Approach!

Aquatrols Approach members can earn Approach Points for committing and purchasing of qualifying brands from authorized Aquatrols Distributors. Approach Points are accrued during the commitment period and can be redeemed for various items during the established redemption period. Approach Points can also be banked for future use.

Aquatrols Approach Membership:

- Register online or download the Approach app & Enter your EOP commitment
- Earn points based on your purchases from authorized Aquatrols distributors

SIGN UP SPECIAL 2,500 bonus points added to all validated sign ups and qualified account purchases.

- Earn **DOUBLE REWARDS** when orders are invoiced and shipped by February 28, 2019.
- A chance to extend your reward eligibility through the summer of 2019.

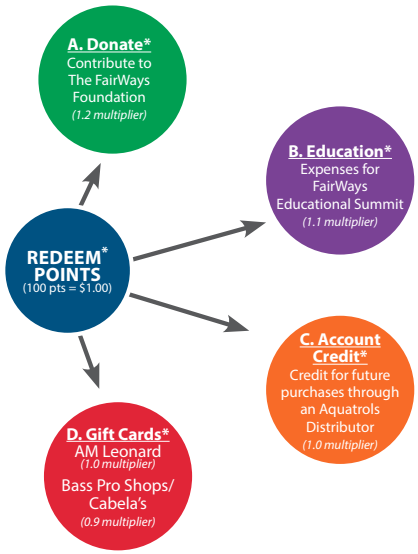


2018 Oct	2018 Nov	2018 Dec	2019 Jan	2019 Feb	2019 Mar	2019 Apr	2019 May	2019 Jun	2019 Jul
Commitment Period								Extension Period	
DOUBLE Rewards					Standard Rewards			Redemption Period	

Commitment Period:	October 1 - November 30, 2018.
DOUBLE Reward:	Qualified products must be invoiced and shipped by Distributor by February 28, 2019.
Standard Reward:	Qualified products must be invoiced and shipped by Distributor by May 31, 2019.
Extended Reward Eligibility:	Extend your reward earning potential on additional purchases through July 31, 2019 by taking your minimum early commitment purchases by March 31, 2019.

Qualifying Brands and Point Value Estimator for Aquatrols Approach						
Minimum Commitment of 15 Gallons and/or 15 Bags	Committed Between 10/01/18 & 11/30/18 Invoiced and Shipped by 2/28/19		OR	Committed Between 10/01/18 & 11/30/18 Invoiced and Shipped by 5/31/19		Estimated Points to be earned in Approach
	Total Gallons/Bags	DOUBLE Approach Points	Total Gallons/Bags	Standard Approach Points		
Zipline		x 900 pts		x 450 pts		
Aqueduct Flex		x 900 pts		x 450 pts		
Revolution		x 800 pts		x 400 pts		
Aqueduct		x 400 pts		x 200 pts		
Blast		x 400 pts		x 200 pts		
Dispatch Sprayable		x 400 pts		x 200 pts		
Dispatch Injectable		x 200 pts		x 100 pts		
Primer Select		x 200 pts		x 100 pts		
Sixteen90		x 200 pts		x 100 pts		

Points You Can Earn in Approach →



Aquatrols Approach is available online and on smart phones.



For assistance with Aquatrols Approach, contact Aquatrols directly at:

1-800-257-7797 or Approach@aquatrols.com



Syngenta GreenTrust 365

Take your course to the next level with the GreenTrust® 365 program from Syngenta. With savings on a broad portfolio of products including new **Posterity**® and **Secure Action**™ fungicides and **Manuscript**® herbicide, you can maximize your budget and your turf quality when you order between Oct. 1 and Dec. 7, 2018. Below are just a few benefits that make GreenTrust 365 the best value of the year.

Yearlong Rebates



Spend at least \$5,000 on Qualifying Products during the Early Order Period, Oct. 1 – Dec. 7, 2018, to lock in your yearlong rebate of up to 10%.

GreenTrust Rewards



Earn **3X points** for every dollar spent in October. Plus, you can earn up to an additional **70,000 points** through the:

- **NEW:** Posterity Brand Points Bonus
- Spotlight Brands Points Bonus

- Acelepryn® insecticide Brand Points Bonus
- Secure® fungicide Brand Points Bonus

Three NEW products now available

Posterity, the most-active SDHI in the turf market, provides long-lasting dollar spot control, holding strong for up to 28 days. Additionally, it delivers robust and consistent control of spring dead spot and fairy ring.

Secure Action fungicide includes a boost of *acibenzolar-S-methyl* (ASM), to better prevent and quickly recover from biotic and abiotic stress. With an enhanced formulation, Secure Action offers improved dollar spot control and brings inside out protection to your entire course.

Manuscript herbicide uses a new class of chemistry for turf to selectively control weeds at any growth stage. It controls tropical signalgrass, crabgrass and other perennial grassy weeds anytime turf is actively growing.

Dollar Value of Qualifying Products purchased during the Early Order Period	Yearlong rebate percentage
\$5,000 to < \$10,000	5%
\$10,000 to < \$20,000	6%
\$20,000 to < \$40,000	7%
\$40,000 to < \$70,000	8%
\$70,000 to < \$100,000	9%
\$100,000 +	10%

Pallet Solutions



Save up to 23% versus individual purchases with this selection of Pallet Solutions.

NEW Golf Pallets include:

- Fairway Action Protector Solution: Acelepryn + NEW Secure Action
- Dollar Spot Solution: Daconil® Action™ + NEW Posterity + Secure Action
- Contact Action Solution: Daconil Action + Secure Action



Dollar Spot Solution

Multipaks



Save even more on complementary products delivered in convenient Multipaks.

Product Assurance Programs



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

SummerPay™



Keep your cash flow in check by deferring payment until June 28, 2019. It's just one way to manage your expenses more easily throughout the season.



Calculate Your Savings



Save time and maximize your budget with our easy-to-use online rebate calculators. They can help you determine the best product configuration along with your yearlong rebate and GreenTrust Reward points. Visit GreenTrust365.com/golf and click on the calculator icon to watch short instructional videos showing how to get the most out of the Rebate Calculators.

©2018 Syngenta. **Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties and/or may have state-specific use requirements. Please check with your local extension service to ensure registration and proper use. Divanem is a Restricted Use Pesticide.** The trademarks displayed or otherwise used herein are trademarks of a Syngenta Group Company or respective third parties.

PO Box 18300, Greensboro, NC 27409 • PHONE 800-334-9481
 WEBSITE GreenTrust365.com • TWITTER @SyngentaTurf, #GreenTrust365



The Fall Classic is Back!

PBI-Gordon 2018 Early Order Program

Fall means cool weather, changing leaves, and getting a head start on next season with the best deals on proven performers from PBI-Gordon.

The PBI-Gordon 2018 Early Order Program gives end-users great deals when they order qualifying products from a PBI-Gordon distributor between Oct. 1 and Dec. 15, 2018. And turf pros can increase their rebate by up to 25% when they reach qualifying rebate levels.

Level I: Rebates that reach \$500 - \$999 get a 15% bonus*

Level II: Rebates that reach \$1,000 or more get a 25% bonus*

The PBI-Gordon EOP features 13 of our newest and most popular products, including:

- **Tekken™ Broad Spectrum Fungicide**
- **Segway® Fungicide SC**
- **Kabuto® Fungicide SC**
- **Katana® Turf Herbicide**
- **SpeedZone® products, including NEW SpeedZone® Southern EW Broadleaf Herbicide for Turf**
- **TZone™ SE Broadleaf Herbicide for Tough Weeds**
- **Surge® Broadleaf Herbicide for Turf**

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



*Rebate bonus is calculated from the rebate amount. Example: If your rebate is \$750, your rebate bonus will be \$112.50 (\$750 x 15%). Added together, your total rebate will be \$862.50.

Always read and follow label directions.

Tekken™ and **TZone™** are trademarks, and **SpeedZone®** and **Surge®** are registered trademarks of PBI-Gordon Corp.

Kabuto®, Katana®, and Segway® are registered trademarks of Ishihara Sangyo Kaisha, Ltd.



1217 West 12th Street, Kansas City, MO 64101
 PHONE 816-421-4070 • WEBSITE PBIGordonTurf.com • TWITTER @PBIGordonTurf

PBI-Gordon 2018 Early Order PROGRAM

The Fall Classic IS BACK.

Fall means cool weather, changing leaves, and getting a head start on next season with the best deals on proven performers from PBI-Gordon.

The PBI-Gordon 2018 Early Order Program gives end-users great deals when they order qualifying products from a PBI-Gordon distributor between October 1 and December 15, 2018. And turf pros can increase their rebate by up to 25% when you reach qualifying rebate levels.

Level I: Rebates that reach \$500 - \$999 get a 15%* bonus

Level II: Rebates that reach \$1,000 or more get a 25%* bonus

The EOP features 13 of the newest and most popular PBI-Gordon products, including:

- Tekken™ Broad Spectrum Fungicide
- Segway® Fungicide SC
- Kabuto® Fungicide SC

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

*Rebate bonus is calculated from the rebate amount.





Master Your Green with the FMC Early Order Program

Tee up immediate and continued savings on FMC's proven turf and ornamental products. The 2018 FMC Early Order Program runs from Oct. 1 through Dec. 14, 2018, but your savings don't have to end then. Simply meet a rebate of \$400 to qualify for 5% In-Season Savings* in 2019.

The 2018 FMC Early Order Program also offers participants a NEW Golf Kit including Fame® SC Fungicide, Triple Crown® Golf Insecticide, Xonerate® 2SC Herbicide and QuickSilver® Herbicide. The NEW Golf Kit is available through Nov. 30, 2018, and automatically qualifies for 5% In-Season Savings.*

That's more than just good turf management. It's good business.

Savings are just the start.



The 2018 FMC Early Order Program allows turf professionals to get a financially smart start on their season with a portfolio of turf and ornamental solutions they can trust.

FMC fungicides, herbicides and insecticides deliver more than just control. Your investment also buys you peace of mind.

Quality. Qualifications. Questions?

Whether it's a weed, insect, disease or a budget problem you're up against, the innovative products and services of FMC Professional Solutions can help you successfully

protect your turf and preserve your reputation.

Participating professionals must place an order with a \$250 rebate minimum by Dec. 14, 2018 to take advantage of EOP savings. Purchases made as part of the Fame® Fungicide Spotlight program count toward the 2018 FMC Early Order Program. Simply enroll at FMCEOP.COM by Jan. 31, 2019 to take advantage of the program.



To view the full array of qualifying products and to enroll for savings, visit FMCEOP.com.

*In-Season Savings are from Jan. 1 – Aug. 31, 2019 on agency products only.

Triple Crown Golf Insecticide is a Restricted Use Pesticide. Always read and follow all label directions, restrictions and precautions for use. Some products may not be registered for sale or use in all states. FMC, Fame, QuickSilver and Triple Crown are trademarks of FMC Corporation or an affiliate. Xonerate is a trademark of Arysta LifeScience North America, LLC. ©2018 FMC Corporation. All rights reserved. 18-GSS-1438 08/18

2929 Walnut Street, Philadelphia, PA 19104

PHONE 215-299-6000 • WEBSITE fmcprosolutions.com • TWITTER @fmcturf and @fmcpest



2018
EARLY ORDER
PROGRAM

OCTOBER 1, 2018 -
DECEMBER 14, 2018



MASTER YOUR GREEN.

Our valuable rebates are the perfect fit.

The FMC 2018 Early Order Program protects your turf grass and your bottom line. Save big on our most popular, most effective fungicides, herbicides and insecticides.

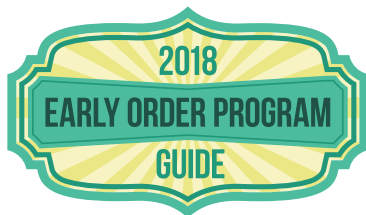
Exclusive FMC formulations and financial incentives make you the champion of your facility.



ORDER BY OCTOBER 31 FOR THE BIGGEST SAVINGS.

Visit FMCEOP.com
for full program details.

Talstar Professional Insecticide is a Restricted Use Pesticide. Always read and follow all label directions, restrictions and precautions for use. Some products may not be registered for sale or use in all states. FMC, Fame, Dismiss, Blindside, Echelon, QuickSilver, Solitare, Talstar and Triple Crown are trademarks of FMC Corporation or an affiliate. Aria is a trademark of Ishihara Sangyo Kaisha, Ltd. Xonerate is a trademark of Arysta LifeScience North America. ©2018 FMC Corporation. All rights reserved. 18-GSS-1437 09/18



Nufarm Edge Rewards Program Expands 2019 Buying Options

The 2019 Nufarm Edge Rewards Program is the best way for golf course superintendents to save on popular Nufarm products during the upcoming season. Whether it's **Traction™** for snow mold, **Pinpoint™** for dollar spot, **Arena®** for grub control, or **Anuew™ PGR** for high-performing growth regulation, Nufarm customers save on solutions that will improve the quality and efficiency of their operations.

New for Nufarm Edge Rewards

Nufarm's 2019 program is designed to bring golf course superintendents an edge. Customers can earn valuable distributor credit on the largest lineup of products



to-date, including more than 30 proven Nufarm plant growth regulators, fungicides, insecticides and herbicides. Plus, rewards participants can extend their savings options with two early order periods.

- **Save with maximum rewards during Period 1:** Sept. 15 - Oct. 31, 2018.
- **Extend your time to save during Period 2:** Nov. 1 - Dec. 7, 2018.

Registration is Quick and Easy

Registration is required to participate in Nufarm Edge Rewards. Visit NufarmInsider.com/Rewards and simply submit the registration form. Previous registrants are automatically registered and do not need to register again. At the rewards website, golf course superintendents can easily browse eligible products and maximize their rewards potential using the convenient Nufarm Edge Rewards Calculator Tool.

4020 Aerial Center Parkway, Morrisville, NC 27560
 PHONE 855-280-6609 • WEBSITE NufarmInsider.com • TWITTER @NufarmUSTurf

Quali-Pro Simply. Grow. Together. Early Order Program

New for 2018! You can now submit your rebate online at SimplyGrowTogether.com! Complete the redemption form on the website. Use the EOP calculator with product selections and unit quantity, and then upload all receipts and press submit! Your rebate is on the way! Visit simplygrowtogether.com to get started or call 281.892.2500 to locate a rep!



simplygrowtogether.com

Steps



1. Redemption. Complete the redemption form on the website.



2. EOP Calculator. Complete the EOP calculator with product selections and unit quantity.



3. Send Materials. Attach all receipts and submit! Your rebate is on the way! Please allow 4-6 weeks for delivery.

Details



Program Dates. Sept. 1, 2018 through Dec. 8, 2018. Last date to upload rebate submissions is Feb. 15, 2019.



Who Qualifies? End users in all U.S. turf, nursery and ornamental markets who purchase Quali-Pro branded products through authorized Quali-Pro distributors. Internet sales and purchases DO NOT QUALIFY.



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

5903 Genoa Red Bluff, Pasadena, TX 77507

PHONE 800-242-5562 • WEBSITE quali-pro.com • TWITTER @Quali_Pro



We've got your PAK: Bayer Fall Solutions

With Bayer Fall Solutions, superintendents can expect big savings on flagship Bayer innovations like **Indemnify**[®] nematicide, **Specticle**[®] herbicide, **Exteris**[®] **Stressgard**[®] and **Signature**[™] **XTRA Stressgard** fungicides. Offering both standalone products and agronomic packages now through Dec. 7, 2018, the customizable early order program provides flexible options for superintendents to help maximize savings per acre.

“Customer needs are at the center of everything we do,” said David Wells, Bayer Golf Segment Manager. “We’ve experienced firsthand the challenges that superintendents face, and we are able to provide a program each year that helps ensure they’re set up for success long before the season starts.”

Every Fall Solutions PAK is developed to help maximize turf performance all year, while optimizing prevention of critical turf issues such as hard-to-control weeds, and key diseases like Fairy Ring, Pythium and Leaf Spot.

Featured Fall Solutions offerings include:

- **Indemnify**, an excellent solution for nematode control, improved root growth and overall turfgrass health. Indemnify effectively controls sting, root knot, ring, *Anguina pacificae* and many other key plant parasitic nematodes.



- **Exteris Stressgard**, a foliar disease specialist with unique formulation enhancements for stress mitigation and improved performance. With Leaf-Cote[™] Technology, Exteris Stressgard offers better product retention, sticking to the leaf where it’s needed most — at the site of fungal activity.

- **Signature XTRA Stressgard**, a high-performing fungicide with formulation enhancements and an optimized active ingredient. Signature XTRA Stressgard delivers improved disease control, stress mitigation and application flexibility for superintendents.

- **Specticle FLO**, a versatile, preemergence herbicide that provides warm-season turfgrass managers with broad-spectrum control of most major weeds including *Poa annua*, crabgrass and goosegrass. It delivers superior protection against key grassy weeds plus more than 50 broadleaf weeds, and its long-term residual means fewer applications.

To participate in Fall Solutions, superintendents must be a member of My Bayer Rewards. Learn more at myrewards.cropscience.bayer.com.

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS

Environmental Science, a business unit of Bayer CropScience LP., 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. For additional product information, call toll-free 1-800-331-2867. Not all products are registered in all states. Bayer, the Bayer Cross, Specticle, Exteris, Stressgard and Indemnify are registered trademarks of Bayer. Signature and Leaf-Cote are trademarks of Bayer. ©2018 Bayer CropScience LP. ES-818-GLF-363-A-R1

2 T.W. Alexander Drive, Research Triangle Park, NC 27709
PHONE 800-331-2867 • WEBSITE backedbybayer.com/fall-solutions-golf • TWITTER @BayerGolf



ORDER EARLY

TURF CONDITIONED TO PERFORM AND RECOVER

TAKE YOUR COURSE TO THE NEXT LEVEL WITH GREENTRUST 365.

Maximize your budget and your turf quality when you order between **Oct. 1 – Dec. 7 of 2018**. With the broadest branded portfolio, the GreenTrust® 365 program offers new ways to save, includes new products, pallets and more. GreenTrust365.com/Golf

 **GreenTrust® 365**

syngenta®

 @SyngentaTurf #GT365 #Time4Savings

©2018 Syngenta. Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties and/or may have state specific use requirements. Please check with your local extension service to ensure registration and proper use. GreenTrust® the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. All other trademarks used herein are the property of their respective company. MW 1LGG8101-Golf-AG158 09/18

©



We've got

your PAK.



Fall Solutions

At Bayer, we put you at the center of everything we do, and you can trust us for the business edge you need to challenge the status quo and take your game to the next level. In short, we've got your back. And when you PAK up your solutions, you can save big. Which means we've got your PAK, too.

Save big on the solutions you love. Visit backedbybayer.com/fall-solutions-golf for more details.

United States Postal Service Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title: **Golfdom**
 2. Publication Number: 1526-4270
 3. Filing Date: 09/17/2018
 4. Issue Frequency: **Monthly**
 5. Number of Issues Published Annually: **12**
 6. Annual Subscription Price (if any): **\$58.95**
 7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4®):
 North Coast Media LLC, 1360 East 9th St., Suite 1070, Cleveland, OH 44114
 Contact Person: **Antoinette Sanchez-Perkins** Telephone (Include area code): **216-706-3750**
 8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer):
 North Coast Media LLC, 1360 East 9th St., Suite 1070, Cleveland, OH 44114
 9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank)
 Publisher (Name and complete mailing address):
 Craig MacGregor, North Coast Media LLC, 1360 East 9th St., Suite 1070, Cleveland, OH 44114
 Editor (Name and complete mailing address):
 Seth Jones, North Coast Media LLC, 1360 East 9th St., Suite 1070, Cleveland, OH 44114
 Managing Editor (Name and complete mailing address):
 Abby Hart, North Coast Media LLC, 1360 East 9th St., Suite 1070, Cleveland, OH 44114
 10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)
 Full Name: **North Coast Media LLC** Complete Mailing Address: **1360 East 9th St., Suite 1070, Cleveland, OH 44114**
 11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box. None
 Full Name: _____ Complete Mailing Address: _____
 12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)
 The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
 Has Not Changed During Preceding 12 Months
 Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement.)
 13. Publication Title: **Golfdom**
 14. Issue Date for Circulation Data Below: **August 2018**
 15. Extent and Nature of Circulation: **Free to Qualified**

	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run):	20,684	20,207
b. Legitimate Paid and/or Requested Distribution (By mail and outside the mail)		
(1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.):	15,915	16,106
(2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.):	0	0
(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®:	77	68
(4) Requested Copies Distributed by Other Mail Classes Through the USPS (e.g., First-Class Mail®):	0	0

c. Total Paid and/or Requested Circulation (Sum of 15b (1), (2), (3), and (4)): 15,992 16,174
 d. Non-requested Distribution (By mail and outside the mail)
 (1) Outside County Nonrequested Copies Stated on PS Form 3541 (include sample copies, requests over 3 years old, requests induced by a premium, bulk sales and requests including association requests, names obtained from business directories, lists, and other sources): 4,556 3,948
 (2) In-County Nonrequested Copies Stated on PS Form 3541 (include sample copies, requests over 3 years old, requests induced by a premium, bulk sales and requests including association requests, names obtained from business directories, lists, and other sources): 0 0
 (3) Nonrequested Copies Distributed Through the USPS by Other Classes of Mail (e.g., First-Class Mail, nonrequestor copies mailed in excess of 10% limit mailed at Standard Mail® or Package Services rates): 0 0
 (4) Nonrequested Copies Distributed Outside the Mail (Include pickup stands, trade shows, showrooms, and other sources): 131 80
 e. Total Nonrequested Distribution [Sum of 15d (1), (2), (3) and (4)]: 4,687 4,028
 f. Total Distribution (Sum of 15c and e): 20,679 20,202
 g. Copies not Distributed (See Instructions to Publishers #4, (page #3)): 5 5
 h. Total (Sum of 15f and g): 20,684 20,207
 i. Percent Paid and/or Requested Circulation (15c divided by 15f times 100): 77.3% 80.1%
 * If you are claiming electronic copies, go to line 16 on page 3. If you are not claiming electronic copies, skip to line 17 on page 3.
 16. Electronic Copy Circulation

	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Requested and Paid Electronic Copies	1,022	1,134
b. Total Requested and Paid Print Copies (Line 15c) + Requested/Paid Electronic Copies (Line 16a)	17,014	17,308
c. Total Requested Copy Distribution (Line 15f) + Requested/Paid Electronic Copies (Line 16a)	21,701	21,336
d. Percent Paid and/or Requested Circulation (Both Print & Electronic Copies) (16b divided by 16c x 100)	78.4%	81.1%

I certify that 50% of all my distributed copies (electronic and print) are legitimate requests or paid copies.

17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the **October 2018** issue of this publication.
 18. Signature and Title of Editor, Publisher, Business Manager, or Owner:
Antoinette Sanchez-Perkins, Senior Audience Development Manager Date: **9/17/2018**
 I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

2ND ANNUAL ROCKY MOUNTAIN GCSA Conference and Expo

NOVEMBER 5TH AND 6TH

Sheraton Denver Tech Center Hotel

7007 S. Clinton Street, Greenwood Village, CO

- **THOMAS BASTIS, PGA TOUR AGRONOMIST:** "Behind the curtain on the PGA Tour"
- **BRAD KLEIN, GOLF CHANNEL:** "Golf Course Architecture 101"
- **JOHN ROGERS, PH.D., MICHIGAN STATE UNIVERSITY:** "Putting Green and Fairway Establishment"
- **ANDONY MELATHOPOULOS, OREGON STATE UNIVERSITY:** "Pollinator Habitat"
- **MICKY MCCORD, MCCORD GOLF SERVICES & SAFETY:** "Analyzing Drainage Problems and Applying Proper Drainage Techniques"

Plus many more speakers and a SOLD OUT exhibit room floor!



ROCKY MOUNTAIN CHAPTER
GCSAA
GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

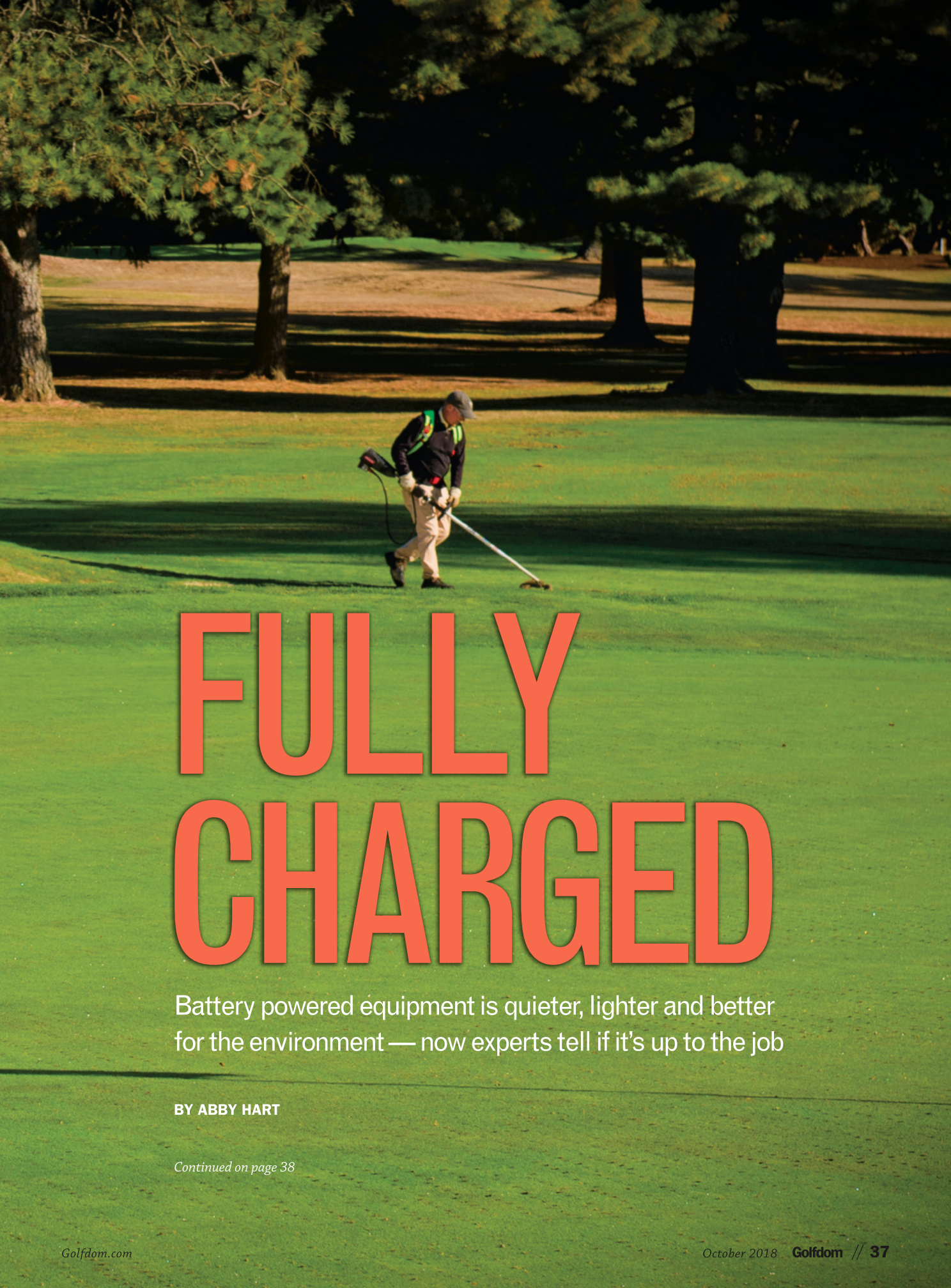


Featuring Golfdom Editor-in-Chief Seth Jones as keynote speaker and master of ceremonies

CONVENIENT, COST EFFECTIVE AND FUN! • ENJOY A TAILGATE PARTY WITH A BARBECUE, CORNHOLE TOURNAMENT AND MONDAY NIGHT FOOTBALL • COME MEET WITH YOUR FELLOW TURF PROFESSIONALS AT THIS CAN'T MISS EVENT! • CEUs AVAILABLE! • VISIT RMGCSA.ORG TO REGISTER



Updated battery-powered backpack blowers keep the noise level down on golf courses, allowing crews to get more done in the early morning hours and during play.



FULLY CHARGED

Battery powered equipment is quieter, lighter and better for the environment — now experts tell if it's up to the job

BY ABBY HART

Continued on page 38

Continued from page 37

According to California Air Resources Board (CARB) stats released in July, the number of small off-road engines in California, which includes engines in golf course maintenance equipment, is greater than the number of light-duty passenger cars — 16.7 million to 13.7 million.

Here's another brain-busting CARB stat: One hour of operating the best-selling commercial leaf blower yields smog-forming pollution comparable to driving a 2017 Toyota Camry 1,100 miles — approximately the distance from Los Angeles to Denver.

That's right, that's 1,100 miles of emissions in *one hour* of operation.

What's the environmentally conscious superintendent to do?

Lithium ion battery-powered equipment could be a potential answer. These tools are lighter, are becoming increas-

ingly powerful, and lithium ion batteries have helped the green industry go from low-voltage tools to high-powered gas replacement tools.

Driving the growth of cordless power equipment are noise and emissions restrictions on gas-powered small engines. According to Greenworks' aggregated research, in October 2017, 250 cities in the United States had noise regulations, and that number has shot up to 500 cities today. With quieter (around 57 decibels

compared to 75 decibels) zero-emissions tools, crews can work an additional three to six hours a day — hours that previously were lost because of noise and pollution ordinances.

Runtime is typically a concern, but many of these tools have 4 to 5 hours or more of life in them with a full charge. Depending on the tool and manufacturer, batteries can be fully charged in 37 to 90 minutes. Larger backpack batteries might take 3 to 5 hours to charge, but superintendents are finding that being diligent about charging batteries, planning ahead and having backup batteries for longer jobs will give them enough juice to get through the day.



Paul Spengler

Paul Spengler, executive director at Pebble Beach Golf Links, has been a fan of battery-powered tools since he first met with the Greenworks team at the company's offices in Mooresville, N.C.

After the two-hour meeting and demo, he said his first question was, "Do you guys want to get into the golf market?" Up to that point, the company primarily focused on landscaping.

"It was my 'a-ha' moment," Spengler

Continued on page 40



Battery-powered handheld edgers and trimmers have the option to be connected to backpack battery units, extending runtime.



Greenworks Commercial's 82V batteries are interchangeable between handheld tools and push mowers.

PHOTO PREVIOUS PAGE: STEVE CHERRY; PHOTOS COURTESY OF GREENWORKS COMMERCIAL



September 1, 2018
thru December 8, 2018

The Simply Grow Together
Early Order Program has
easy 3 steps:

- 1. Redemption** Complete the redemption form on the website
- 2. Calculate** Use the EOP calculator with product selections & unit quantity
- 3. Send materials** Upload all receipts & submit! Your rebate is on the way!

visit simplygrowtogether.com

Plan ahead &
Save with Quali-Pro.

Program Dates: September 1 thru
December 8, 2018

Who Qualifies

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

Terms

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

NEW FOR 2018

ONLINE FORM & CALCULATOR

You can now submit your
rebate online at

simplygrowtogether.com



QUALI-PRO

#QualiPro

quali-pro.com
800-242-5562

[@quali_pro](https://twitter.com/quali_pro) [@qualipro](https://facebook.com/qualipro)

Visit simplygrowtogether.com to get started | or call 281.892.2500 to locate a rep!

// THE BUZZ ON BATTERIES

Continued from page 38

says. He immediately recommended the equipment to Chris Dalhamer, CGCS, Pebble Beach, as well as Manny Fernandez, the head of landscaping for the property.

“These different noise restrictions that country clubs, HOAs and resorts are going through, this is the ideal solution for all of that,” Spengler explains. “The whole point of this quieter equipment is to provide a better experience for the people around it.”

Battery power on the big stage

How does the equipment fare in major tournament play, when all eyes (and ears) are on the golf course?

Paul Vermeulen, vice president of championship agronomy for the PGA Tour, saw for himself when Greenworks partnered with the 2017 Presidents Cup, played at Liberty National Golf Course in Jersey City, N.J.



Less vibration, a push-button start and minimal maintenance are among the upsides for operators of battery-powered tools.

The company had equipped four members of the maintenance staff with the backpack blowers. The crew proceeded to blow off greens two holes ahead of the tournament’s lead players without causing a disturbance.

“There is something unique about the week we host a tournament — we have a large audience on the property,” says Vermeulen. “The electric blowers are a good fit for our tournament week operations.”

Vermeulen notices a significant increase in airflow and airspeed with the new generation of battery-powered backpack blowers compared with their earlier counterparts. “It’s not something that you have to actually measure in order to make product comparisons,” he says. “I don’t need to measure anything, I know that this one has more power.”

The Presidents Cup wasn’t the only big tournament where battery power was in the spot-

light. During this year’s American Century Championship tournament at Edgewood Tahoe Golf Course, Greenworks got a shout-out on NBC Sports when superintendent Brad Wunderlich was shown on camera blowing off a green with one of the company’s backpack blowers.

Taking down trees at TPC Boston

For the superintendent of TPC Boston, Tom Brodeur, the typical wear and tear and operator issues — periodic leaks and

dripping, and the equipment getting overfilled with gas — have been a concern as his handheld equipment has aged.

The TPC Boston team has found that battery-powered tools have cut back on the need for mixing and transporting fuel around the golf course. The lack of a 2- or 4-cycle motor in handheld equipment has eliminated the necessity of oil and maintenance

Continued on page 42

Producers & Installers of Fumigated
Georgia Certified Quality Turfgrasses
for Golf Courses and Athletic Fields

Pike Creek Turf, Inc.
427 Pike Creek Turf Circle
Adel, GA 31620
1.800.232.7453

Varieties Available

Tifway | TifSport | TifTuf™ | TifGrand®
Tifdwarf | TifEagle | MiniVerde™
Celebration™ | Zorro | Meyer | Empire®
Trinity (L1F) | Platinum TE™
Sea Isle 1 | Centipede Sod & Seed

www.pikecreekturf.com PikeCreekTurfInc f

“With quieter zero-emissions tools, crews can work an additional three to six hours a day — hours that previously were lost because of noise and pollution ordinances.”

**SIGN UP
STARTING
OCTOBER 1ST**

Aquatrols Approach[®]



**SAVINGS
WITH A
TOUCH
OF A
BUTTON**

SIGN UP OCTOBER 1ST FOR AQUATROLS APPROACH THIS EOP SEASON

Approach is the all-new Early Order Program (EOP) from Aquatrols that will allow you to commit your EOP with ease. The Aquatrols Approach EOP lives in a free, easy to use application available online and on Apple iOS and Android OS. Aquatrols Approach members can earn Approach Points for committing and purchasing qualifying brands from authorized Aquatrols Distributors.

Sign up for Aquatrols Approach at www.aquatrols.com/approach



Available online and on smart phones.



INNOVATE. IMPROVE. INSPIRE.

aquatrols.com/approach |

Continued from page 40

problems such as fuel leaks on turf.

Brodeur is happy with his current lineup of battery-powered equipment — a Greenworks chainsaw, pole saw and handheld and backpack blowers. Which is a good thing, since TPC Boston's location with thousands of trees can quickly become maintenance heavy. "Plants are constantly growing in on us, and we're constantly having to limb them up," Brodeur explains.

In March of this year, four big storms rolled in with high winds and caused the course to lose a lot of plant material, including several 70- and 80-foot white pines. The TPC Boston crew fired up a Greenworks 18-inch electric chainsaw for that job, and found that it stood up to the test.

"It's every bit as powerful as a gas chainsaw of similar size," Brodeur says. "I can't

"As far as using the 120-volt edger for five, six hours, it'll power right through hard-pan soil."

think of a piece of 4-stroke equipment that is more testy when it comes to the engine than a chainsaw. Just having that, where you can just put the battery in, undo the safety, and press a button and go — it works just fine with most everything we do."

Even though the technology is becoming more efficient, some people still prefer gas. "I'm noticing it's hard to get the guys to switch," Brodeur says. "Some of them like the gas because it's more powerful, but the one they have right now is pretty good for the electric backpack blower."

And there are some things that a battery-powered blower isn't equipped to handle, such as heavy leaf cleanup or blowing off greens from aeration — those tasks still are firmly in the hands of gas-powered tools, says Brodeur.

Still, he believes there's a place for these handhelds in the shop. "I'm not saying I have endless amounts of money and I want to be wasteful, but (battery-powered tools) make the operation better in a number of ways that do have economic value, and they certainly have quality-of-operation value," Brodeur says.

Waste not, want not

Larry Raschko, superintendent of Willamette Valley Country Club, in Canby, Ore., heard about Oregon Outdoor Power Equipment's battery-powered handhelds from a club member who worked in the

Continued on page 44



CapillaryConcrete

"Your players deserve to play Capillary Concrete bunkers."

CapillaryConcrete.com | 321.939.4143

610 Sycamore Street, Suite 305
Celebration, FL 34747

Non-retouched client photo: GreenJacket System coming off in the spring!

PROVEN BY 20+ YEARS OF SUPERINTENDENT SUCCESS.

- Patented **IMPERMEABLE** Reinforced Winter Cover Turf Protection System.
- **PERMEABLE** Reinforced Grow-in Covers increase healthier turf growth.

Find out how the GreenJacket System can make a difference for your turf.

Call **888-786-2683** or Email info@greenjacket.com
See Research at GreenJacket.com

PEDIGREE™ FUNGICIDE SC



THERE'S A NEW STAR IN FUNGICIDES.

Introducing Pedigree™ Fungicide SC - The First Liquid Flutolanil Formulation

The disease control that made the granular flutolanil an industry standard is now available in a liquid! Pedigree™ Fungicide SC offers the same performance and turf safety as granular flutolanil, but it's easier to handle and easier to mix with other products.

Pedigree controls:

- Brown patch
- Fairy ring
- Leaf and sheath spot
- Brown ring patch
- Red thread
- Pink patch
- Yellow patch
- Gray snow mold
- Large patch

Protect Your Turf with The New Star in Fungicide: Pedigree!

Eligible for EOP Rebates



PBIGordonTurf.com

Always read and follow label directions. Pedigree™ is a trademark of Nichino America, Inc. 9/18 05493

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

SOL-Aer®

Winter Turf Blankets

Unique non-woven bi-component fabric: Polypropylene core sheathed in polyethylene provides the latest durability and ultra-insulation technology available on the market.



- **Fusion welded seams** eliminate sewing problems.
- **Sunlight, water, and air readily penetrate** thru this tighter-than-woven fabric to grateful turf below.
- **Durable:** Move and walk on it without damage.
- **Mark-On Surface** allows magic marker coding for precise, much easier positioning relative to other panels, sprinklers, or contours of a green.
- **Scissor cut** to shape without fraying like others.
- **Sealed edging** available with grommets every 2.5'



Available with **SILVER LACE COATING**, the exact same coating as on competitive Radiant product.

SOL-Aer Turf Blankets promote earlier, more rapid germination and greening while providing superior frost protection and moisture retention. This gives you better control of cool weather turf issues.

Try it on a few greens and see for yourself.



HIGHEST QUALITY, INNOVATIVE PRODUCTS

AERFLO.COM

800-823-7356

// THE BUZZ ON BATTERIES

Continued from page 42

blade division at the company. He started out with a 40-volt chainsaw, a weed eater and portable work lights.

Longevity and power were a concern with the 40-volt equipment. Not wanting to waste the tools once they were purchased,



Larry Raschko

his crew found little niche tasks that the tools could accomplish, such as cleaning sprinkler heads and valve boxes. "Once you cut the string really short, it cleans out a sprinkler head just beautifully," advises Raschko. "Otherwise, you have to do it with a shovel, so it's saved us a lot of time."

Willamette Valley CC is surrounded by massive fir trees, and Raschko has found that even the 40-volt chainsaw made quick work of fallen tree limbs. "It's lightweight, you grab it and you go and you're done, rather than having to grab the gas, check it for oil, put gas in it and all that."

Raschko recently received a demonstration of Oregon's 120v battery-powered tools, which include a backpack blower, a string trimmer, a hedge trimmer and an edger — and found that the previous runtime and battery issues were solved.

He's impressed with the runtime and power of the edger in particular. "You'll run into some hard-pan soil, and it'll stop the blade on a belt-driven gas-powered edger," he says. "As far as using the 120-volt edger for five, six hours, it'll power right through hard-pan soil."

Even in this early stage of using the latest Oregon tools, Raschko is on board. "My budget for this year is pretty much set, but as our gas tools begin to get used up, we'll be looking at buying this new generation of (Oregon) tools to replace it," he says.

Buzzworthy battery power

Like many others in the industry, the backpack blower was the first piece of equipment that caught John Patterson's eye.

Patterson, equipment director at Atlanta Athletic Club (AAC), says, "We thought (the blowers) would be the biggest impact for our members and get some buzz going around the clubhouse and let people know we're moving that way."

Director of Agronomy Lukus Harvey was open to taking a look at new equipment, but Patterson led the charge when it came to switching to battery power. AAC now has two backpack blowers, two batteries and two chargers.

"It's good for our membership," says Patterson. "One of our clubhouse guys was able to be right up close to where their members were meeting, and no heads raised. That means a lot to us, it adds up to a better member experience."

Patterson considers himself a big proponent of the environment. During his years at Doral Golf Resort in Miami, he looked for ways to convert cooking oil to biodiesel for equipment on

Continued on page 47



We've got
your PAK.



Fall Solutions

At Bayer, we put you at the center of everything we do, and you can trust us for the business edge you need to challenge the status quo and take your game to the next level. In short, we've got your back. And when you PAK up your solutions, you can save big. Which means we've got your PAK, too.

Save big on the solutions you love. Visit backedbybayer.com/fall-solutions-golf for more details.



Stop wasting your time and your spray.
 Droplex® and Droplex® Xtra help keep droplets within an optimal micron range to reduce drift and improve coverage so your spray hits the target the first time and every time.

Don't waste another drop.

**WINFIELD
 UNITED**
 Professional

 @winfieldpro

winfieldunitedpro.com/droplex

// THE BUZZ ON BATTERIES



Superintendents demo Oregon's 120-volt hedge trimmer, edger, string trimmer and backpack blower at the 2017 *Golfdom* Summit.

PROS OF BATTERY POWER

- Convenience of push-button start — free of priming, choke, pull cords and annual maintenance that comes with gas equipment
- Operator comfort — less vibration and less noise
- Fuel savings — but you're buying your fuel upfront in the form of batteries
- Zero emissions
- Versatility — the batteries are interchangeable for use in multiple tools

PHOTO BY: SETH JONES



Continued from page 44
 the golf course, he uses battery-powered equipment at home and also has a lithium-powered bike.

“I think even if you don’t come into this business as an environmentalist, you become one,” he says.

Patterson is measured when he discusses how effective the battery-powered tools are. Though he says the Oregon blower doesn’t match the Stihl BR600 as far as blowing debris out of bunkers, on short grass and areas around cart paths, they handle the work just fine.

Continued on page 48

FALL CHECKLIST

- ~~Dog food~~
- ~~Pizza~~
- ~~Beer~~
- Drag brush
- Levelawn
- Biodegradable landscape spikes
- Coco fiber drag mat
- Debris rake
- Wire landscape staples

LEVELAWN



Removes stones from soil, breaks up small clods of sand or loam, distributes application materials and smooths soil.

DEBRIS RAKE



Gusseted head adds extra strength and is great for removing pine needles and as a replacement for traditional bunker rakes.

DRAG BRUSH



Gently and evenly works top dressing material into the green and helps control thatch when used before mowing.

BIODEGRADABLE LANDSCAPE SPIKES



Organic spikes hold new sod in place and dissolve in approximately eight months depending on soil conditions.

WIRE LANDSCAPE STAPLES



Use to anchor sod and landscape covers, or even hold hoses in place.

COCO FIBER DRAG MAT



Spreads top dressing with a soft touch. Perfect for all playing surfaces. Tough, resilient fibers bond to vinyl-reinforced backing.

Setting the standard in golf accessories since 1910.
 866.743.9773 - StandardGolf.com
© 2018 Standard Golf Company. All rights reserved.

STANDARD GOLF COMPANY

EMPLOYEE OWNED

PRESENTS

THE ULTIMATE HOLE TOUR

A 50 PAGE DIGITAL MAGAZINE DEDICATED
TO A WORLD CLASS GOLF COURSE



HIDDEN CREEK GOLF CLUB

Egg Harbor Township, New Jersey



Complete Hole Tour Of
A Modern Classic

SEE IT AT:

[http://www.j2golfmarketing.com/
portfolio/hidden-creek-hole-tour.html](http://www.j2golfmarketing.com/portfolio/hidden-creek-hole-tour.html)

Player's notes by 2x Master's Champion &
Former Ryder Cup Captain
— Ben Crenshaw —

LET US CREATE YOUR ELITE HOLE TOUR

813-815-1140 ♦ info@j2golfmarketing.com
GolfPhotos.com

// THE BUZZ ON BATTERIES



Handhelds can handle cleanups on greens and cart paths, but experts say that gas power is still the go-to for heavy-duty jobs.

Continued from page 47

AAC is looking to purchase stick edgers next, and they plan to plug certain pieces into their equipment arsenal that will provide the most bang for their buck, as far as member experience and productivity.

The improvements in battery-powered tech have been a gateway to a larger goal for AAC. Patterson has begun to look at solar panels and commissioning a study to find out how many kilowatts they can get out of their rooftops at the golf course maintenance facility.

“Ideally, what Lukus and I would like to see is the rooftops here covered in solar panels with Tesla walls, lithium storage banks, all of our lightweight utility vehicles, all of our walk mowers and our triplex mowers being lithium powered,” he says. He hopes that will happen in the next five years, but he admits that might be a little optimistic.

In the meantime, he's making small steps toward making his handheld arsenal all battery powered. Right now, he thinks that battery-powered tools have made great strides and are useful for golf courses looking to cut back on their environmental footprint, but there's still room to improve.

“I don't think they're the end-all, do-all,” he says. “But what they're doing, they're doing really well.” ©



The Seznas' love of golf drives them to connect golf course superintendents with the equipment they need to keep their courses in top condition.

A golf business *for a* golf family

■ BY KATY IBSEN

In July, Florida-based companies Global Turf Equipment and Turf Equipment Rental merged into a single entity under new ownership, GTE Partners, LLC. This acquisition, however, is unlike most. For one family, it's the entree into a joint venture between father and son working in an industry that serves the game they love.

The decades-old companies, formerly under the leadership of Jim Sartain and Pat Yarbrough, built a strong, international reputation in pre-owned and used equipment for golf course maintenance.

Featuring top-tier brand relationships, they were able to offer equipment at a cost 60 percent less than new retail, providing courses an affordable option on quality equipment. Additionally, Turf Equipment Rental created an alternative to owning equipment for short-term projects or specialized needs such as renovations.

For Sartain and Yarbrough, the mission was to provide golf courses and their superintendents an affordable alternative to new equipment. That vision is the same for new GTE Partners owners Will Sezna and his father, Davis Sezna.

Instead of finding a buyer for used turf equipment company Global Turf Equipment, the Sezna family decided to buy it themselves

Continued on page 50

Continued from page 49

“We have tremendous respect for those who work so diligently to care for courses and facilities,” says Will, president of the new company. “Our mission is to provide a best-in-class option for our superintendents and their teams.”

■ **A FAMILY AFFAIR WITH GOLF**

The Seznas have spent much of their lives around the game of golf and in the hospitality business. They saw this acquisition as a unique opportunity to apply their love of the game to an area they highly respect.



Will Sezna

A former golfer at the University of Georgia, Davis built a career in the golf and hospitality space. He has served as the president of La Quinta Resort and PGA West, co-managing partner at Heritage Golf Group, and developed his own golf and hospitality firm, collectively overseeing multiple venues and golf courses in his tenure.

Meanwhile, Will credits growing up in the golf course businesses created by his father as part of his inspiration behind GTE Partners. While working for a private equity firm, Will served



“I have a big affinity for superintendents because they’re creative in getting the job done.”

Sartain and Yarbrough in finding a buyer for their businesses, as no succession plan was in place.

“As we got deeper into the process, we decided that instead of helping them raise funds to be acquired, we were going to raise the funds ourselves,” says Will of himself, his father and a private investor. “It was a unique opportunity where you have a company that was in a niche.”

The Seznas evaluated the company in November 2017, began pursuing it in January and finalized the purchase details in July 2018. Joining the Seznas in GTE Partners’ leadership is Chief Operating Officer Walt McMahon, who formerly served as Golf Turf Equipment’s vice president of sales.

Attesting to the quality of the two companies, Will says, “We have a great operational team already, and we’re just trying to enhance the foundation and scale.”

■ **QUALITY FOR LESS**

Assuring quality equipment, GTE inspects and assures optimum functionality in all major areas, including engines, electrical, hydraulics and cutting units. They also inspect and repair general operation items such as reels/deck lift and lower, blades/reels engaging and disengaging, safety switches, hour meters, brakes, steering, gauges, belts, bearings, seals and cooling system components. After undergoing the reconditioning process, all machines are covered by a 90-day warranty.

GTE’s quality and affordability make a compelling case to courses that are operating under challenging budgets.

“The ability to provide superintendents quality machines that have 80 percent of the life left in them for 40 cents on the dollar is a unique proposition that really helps out these clubs,” Will says.

GTE Partners’ Tampa headquarters maintains an average of 300 to 400 pieces of equipment year round, featuring Toro, John

Continued on page 52

Accuracy in Application

Experiencing GPS Spray Control is Amazing!
Our experience sets us apart from anyone else.

We Install on ANY Sprayer!

Spray Technology Products

800-621-7910
info@frostserv.com
www.frostserv.com

OREGON®

REAL POWER

Oregon® 120V
Professional Series

Finally —
Battery Technology with Real Power

Our advanced battery technology offers no compromises when it comes to power, and it's free of the inconveniences of gas tools, including fuel mix, spills, emissions, gas maintenance and of course, noise.

Blower BL120VX
String Trimmer ST120VX
Hedge Trimmer EHT120VX
Edger EG120VX



Visit OregonProducts.com to request a demo

Continued from page 50

Deere and Jacobsen. Most of the inventory is sourced from three- to four-year lease returns among top brands.

“We believe our inventory should reflect the demand in the market,” Will says. “Our job is to continue to grow the relationships with those brands.”

As for the rental fleet, McMahon says, “A large portion is geared toward equipment needed for renovation projects, equipment a course may need occasionally but may find it is more cost effective to rent than purchase and have it spend most of its time parked in the maintenance facility.”

The inventory includes aerifiers, tractors, sweepers, top dressers, material handlers and verticutters for specific projects, among additional routine maintenance equipment.

David Mattes, superintendent of The Links at Challedon in Mount Airy, Md.,

has worked with Global Turf Equipment on two separate occasions since 2016. After proposing an overhaul of select equipment to his course’s new ownership, Mattes found his local suppliers inventories were sparse. So Mattes turned to the internet, where he found Global Turf Equipment; he wanted to find the best quality products he could, for the lowest hours.

“Whereas I would love to be able to get new equipment, that’s just not the marketplace that I’m in, I have to get the best bang for my buck,” Mattes says.

In addition to low hours, Mattes found the equipment to be clean and equipped with a no-questions-asked warranty.

“They were very good on their warranty work... We had a motor that was not working on one machine, one of the mowers, and they just said, ‘OK, here it is.’ So, they sent it to us, it was really cool.”

After his initial experience, Mattes re-

turned to Global Turf Equipment last year, valuing the company’s ability to work on price and their delivery on quality products and service.

“I have a big affinity for superintendents because they’re creative in getting the job done,” says Will. “Everyone expects to have this incredibly well-manicured course and they don’t understand the amount of money it costs to run a great facility. I think we have an amazing opportunity to help out with fixing those issues of budgets being compressed.”

■ **A TARGETED APPROACH**

At the time of the acquisition, Golf Turf Equipment served courses in all 50 states and 80 countries, areas in which GTE Partners plans to increase visibility. Domestically, GTE Partners will focus on increasing its presence in the Southeast and North-

Continued on page 54



WHY LET WATER THROUGH TO ERODE YOUR SUBSOIL??

SEND IT TO THE DRAIN INSTEAD.

Klingstone®
THE PERMANENT BUNKER SOLUTION

Klingstone®, the patented liquid-applied bunker barrier, permeates and binds soil particles in the bunker cavity to stop contamination of the sand, eliminate erosion, stabilize bunker faces and enhance the effectiveness of your drainage system. By creating an impermeable barrier under the sand, Klingstone directs water to your drainage system... not to your subsoil. www.klingstone.com

PERFORMING FLAWLESSLY FOR 20 YEARS AND COUNTING...

US Patent No. 6,467,991



COMMAND YOUR COURSE

Monitor your equipment
Track labor and data collection
Optimize your communication and logistics

Carl Martins	
Reelmaster 5510 #2	ASSET
Fairway Mowing	Hole 6 LOCATION
00:42:19	00:07:31
TIME IN AREA	BENCHMARK

golf.fairwayiq.com

FAIRWAYIQ **taskTracker**



AMVAC®

NEW 2018 EARLY ORDER PROGRAM: **FOUR-SEASON SOLUTIONS™**

Save \$10/gal. on Premion fungicide – plus get rebates on other products – with the AMVAC EOP.

VISIT AMVAC-EOP.COM

SOMETIMES THE ANSWER TO ANTHRACNOSE IS A FOUR-LETTER WORD.

PCNB. It's been around awhile. But discovering that it controls anthracnose at highly effective levels? That's news. AMVAC's breakthrough premix of PCNB and tebuconazole, Premion™ fungicide, is getting attention. Formerly called Oreon, Premion delivers multiple modes of action against anthracnose. And it's just one of many answers to come from AMVAC that are worth talking about.

PREMION™
FUNGICIDE

Important: Always read and follow label instructions. Some products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status. PREMION is EPA registered.

©2018 AMVAC Chemical Corporation. All rights reserved. AMVAC, PREMION and FOUR-SEASON SOLUTIONS are trademarks owned by AMVAC Chemical Corporation. EIFG is a trademark of the Environmental Institute for Golf. www.amvac-chemical.com. A300-054223-8 9/18

AMVAC™ ANSWERS

LEARN MORE AT AMVACANSWERS.COM

// GOLF FAMILY BUSINESS

Continued from page 52

east, two regions that have vastly different needs but can be served by GTE's inventory.

The company will also focus on its international business, which makes up a valuable portion of the company. With a location in France, an emphasis will be given to central Europe. Additionally, they are prospecting in the Caribbean and South Africa. The company currently employs 22 people.

As the Seznas know well from their experience in the golf industry, relationships matter. As a result, GTE Partners is continuing to work with Sartain and Yarbrough.

"They've grown this thing from its infancy and so we're utilizing them as partners and consultants," Will says. "They're beloved throughout the industry, so it makes total sense for us to keep them close as we take over this business."



As the Seznas and their partner continue to familiarize themselves with the business, their inspiration for best serving those who work in the field will drive them to maintain a position as a leading reseller of used golf course maintenance equipment.

"We're all big golfers, golf penetrates all aspects of our lives, our families are golf-

ers," says Will. "This isn't a private equity firm coming in to take over a company — this is a partnership that adores the game of golf." **G**

Katy Ibsen is a freelance writer based in Lawrence, Kan. A frequent contributor to *Golfdom*, she most recently wrote about the bunker renovation at the Reserve Vineyards and Golf Club in Portland, Ore.

Hydration A-Plus®



THE PERFECT RAIN

Bicarbonate Reducing
Penetrant & Water Holding Agent



PLANT FOOD COMPANY, INC.

est. 1946 *The Liquid Fertilizer Experts*



For a Distributor near you
visit us online or call us today.

www.plantfoodgolf.com | 800-562-1291

The Original and Most Powerful Turbine Blower





CYCLONE SQUARED



CYCLONE EFI



(716) 592-2700

VISIT OUR WEBSITE
BuffaloTurbine.com

DON'T SETTLE FOR **KNOCKOFFS!**



Made in the USA



Super Science

// FINDING THE OPTIMAL DEPTH

SAND-CAPPING DEPTH BASED ON MOISTURE RETENTION CURVES

By Philip Brown, Ph.D., and Bert McCarty, Ph.D.

Sand capping is done on golf course fairways and sports fields that drain poorly in an attempt to allow play to resume quickly after rainfall. Sand capping involves applying a relatively thick layer of sand to the top of an existing root zone. Superintendents use sand because it's dominated by large free-draining pores that improve drainage and provide an acceptable root zone for turf growth.

Sand-capping depth can have a significant influence on the performance of turfgrass, yet no standard method currently is available for establishing an optimal depth. Several procedures to predict the optimum sand-capping depth have been suggested; most of these rely on soil moisture retention curves (SMRCs)




Sand capping a fairway at Wade Hampton Golf Club, Cashiers, N.C.

to predict depth. SMRCs show how much water is held at various depths (or tensions) of a root zone.

In this research, procedures for estimating sand-capping depth were evaluated using hanging water columns. Suggested sand-cap depth ranged from 1.6 to 13.8-plus inches, depending on sand and procedure, although several methods

provided similar capping depths. All procedures assumed the lower boundary of the sand cap to be saturated; meaning the tension at this point would be 0 inches. With this assumption, little air-filled pore space exists up to 6 inches above the lower boundary because of soil water rising through capillary action. Because of this, an alternative method for establishing sand-capping depth is suggested based on providing enough air space in the soil to accommodate rainfall.

The alternative method uses SMRCs to calculate how much free space the root zone has to accept more water. This method generally is much easier for end-users to understand, establishing the depth of sand needed based on anticipated rainfall and physical properties of the sand selected. 

Philip Brown is a post-doctoral researcher at Clemson University, where he recently completed his Ph.D. with a focus on turfgrass science and soil physics. You may reach Philip at philipb@clemson.edu for more information.

NEWS UPDATES

SEPRO CORP. LAUNCHES SOTERIA FUNGICIDE

SePRO Corp. has released Soteria fungicide, a product providing preventative and curative control of dollar spot, brown patch, anthracnose and several other diseases.

"Soteria is a cornerstone fungicide for any cool- or warm-season turfgrass disease management program," said Mark Brotherton, portfolio leader for SePRO Corp. "With 12 applications per year allowed and high compatibility with other fungicides, Soteria is a fundamental piece to season-long disease control."

Soteria is a water-based suspension concentrate that demonstrates excellent turf safety, readily mixes into solution, and offers multisite mode of action, resulting in a low potential for resistance development, according to the company.

Soteria is a featured component of the 2018-19 SePRO Pinnacle Program. With the purchase of Soteria, golf course partners can earn an additional 2-percent rebate on all purchases of SePRO's turf plant growth regulators (PGRs), including Cutless, Legacy and Musketeer, and aquatic solutions featuring SeClear, Captain XTR, Komeen Crystal and SonarOne.

Golf courses can earn up to a 21-percent rebate by integrating Soteria with PGR and aquatic technologies.

Soteria is expected to be available to golf course superintendents in mid-October 2018.

TURF MANAGERS SHOULD CONSIDER MAKING FALL N APPLICATIONS EARLIER IN THE SEASON TO REDUCE THE RISK OF LEACHING DURING WINTER."

Kevin Frank, Ph.D.

(see story on page 56)

// AGE IS NOT JUST A NUMBER

Twenty years of measuring nitrogen leaching from turfgrass

By Kevin W. Frank, Ph.D.

Turfgrass systems require a diversity of inputs to achieve a functional, high-quality surface. Among inputs that influence performance and quality, fertilizer applications are some of the most critical.

Although fertilization is essential, fertilization practices continue to be scrutinized for the amount applied and the potential for contaminating ground and surface water. In addition to phosphorus fertilizer regulations, several states now regulate nitrogen applications on turfgrass. Since the late 1980s, environmental concerns have prompted numerous studies on nitrogen leaching from turfgrass.

The United States Environmental Protection Agency has set the maximum contaminant level (MCL) for



Research provided and funded by USGA.

nitrate-nitrogen ($\text{NO}_3\text{-N}$) in drinking water at 10 ppm. Drinking water in excess of the nitrate MCL may cause detrimental health effects, including blue-baby syndrome (methemoglobinemia).

There has been extensive research on the fate of nitrogen applied to turfgrass, and the issue of $\text{NO}_3\text{-N}$ leaching in particular. In most cases, research on $\text{NO}_3\text{-N}$ leaching in turfgrass indicates that leaching poses little risk to the environment. However, the majority of

leaching research has been conducted on relatively young turf stands, and the age of a turf stand has been proposed as an important factor influencing N fate.

DETERMINING N FATE

Research at Michigan State University to determine nitrogen fate and leaching from Kentucky bluegrass turf was initiated in 1989 by Bruce Branham, Ph.D., now at the University of Illinois, and his graduate student at the time, Eric Miltner, now a Ph.D. at Koch Industries.

Four intact monolith lysimeters were constructed between the fall of 1989 and summer of 1991. The cylindrical lysimeters were constructed of 0.2-inch thick grade 304 stainless steel. The lysimeters are 3.75 ft. in diameter and 4 ft. deep. The bottom of the lysimeters have a 3 percent slope to facilitate leachate draining to a tube on one side. The soil type is a Marlette fine sandy loam (62 percent sand, 22 percent silt, 16 percent clay). Kentucky bluegrass (*Poa pratensis* L.) was established on top of the lysimeters (Figure 1).

The research initiated in 1991 evaluated an annual N rate of 4 lb./1,000 sq. ft., with emphasis on either spring or fall applications. Leachate samples collected from 1991 through 1993 indicated that there was minimal risk of $\text{NO}_3\text{-N}$ leaching from turfgrass. $\text{NO}_3\text{-N}$ concentrations in leachate generally were below 1 ppm throughout the research. From 1994 through the spring of 1998, the lysimeter area at MSU was fertilized with 3 lbs. N/1,000 sq. ft., but there were no samples taken from the lysimeters for nitrogen analysis. Jim Baird, Ph.D., now at the University of California Riverside, reinitiated

FIGURE 1



The bottom portion of the stainless steel lysimeter and the carboy that collects leachate can be seen inside the access chamber.

PHOTO BY: KEVIN FRANK, PH.D.

FIGURE 2

Nitrate (NO₃-) N concentration in leachate collected from 1998 to 2014 from Kentucky bluegrass turf fertilized at a low and high N rates. One ppm is equal to 1 mg/L.

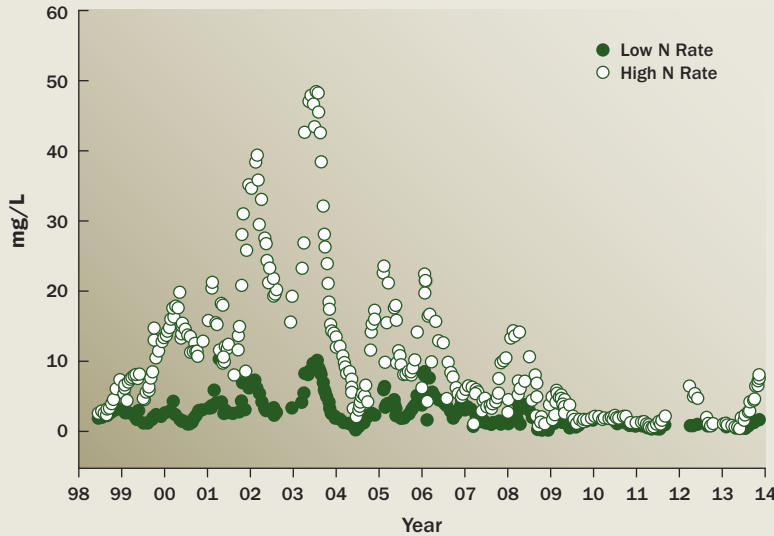


TABLE 1

Mean nitrate-nitrogen concentration in leachate for low and high N rate treatments.

Year	Mean annual flow weighted Nitrate-N	
	Low N Rate [†]	High N Rate [‡]
ppm NO ₃ -N		
1998	3	5
1999	2	9
2000	2	15
2001	4	19
2002	5	25
2003	6	30
2004	2	9
2005	4	12
2006	4	9
2007	2	5
2008	2	6
2009	1	3
2010	1	1
2011	1	2
2012	1	3
2013	1	2

[†] Low N rate = 2.0 lbs. N/1000 sq. ft. per year.

[‡] High N rate = 5.0 lbs. N/1000 sq. ft. per year from 1998 through 2002; 4.0 lbs. N/1000 sq. ft. per year from 2003 through 2013.

leaching research in the summer of 1998. Water samples have been collected from the same monolith lysimeters and analyzed for NO₃-N since July of 1998. The turfgrass area has now been under continual fertilization practices for 28 years with leachate collection for the last 20 years consecutively. To our knowledge, the long-term nitrogen leaching research at MSU is the longest-running turfgrass nitrogen leaching research in the world.

DRAMATIC AND MODEST INCREASES

From July 1998 through 2002, lysimeters were treated annually with urea at a low N rate of 2 lbs. N/1,000 sq. ft. (0.5 lb. N/1,000 sq. ft./application) and a high N rate of 5 lbs. N/1,000 sq. ft. (1 lb. N/1,000 sq. ft./application). From 1998-2002, the high N rate saw a dramatic increase in NO₃-N leaching from 5 ppm in 1998 to 25 ppm in 2002 (Figure 2). One ppm is equal to 1 mg/L. During the same time frame there was a modest increase in NO₃-N leaching for the low N rate from 3 ppm in 1998 to 5 ppm in 2002.

Because of the high nitrogen concentrations in leachate from the high-N rate lysimeters, the decision was made in 2003 to reduce the annual N rate to 4 lbs. N/1,000 sq. ft. The low N rate remained the same, 2 lbs. N/1,000 sq. ft. In 2003, the concentration of NO₃-N leaching from the high N rate treatment did not decline from the previous years. The average NO₃-N concentration leached from the high N rate treatment in 2003 was 32 ppm. In 2004, the concentration of NO₃-N leaching from the high N rate treatment declined drastically from 32 ppm in 2003 to 9 ppm in 2004. Over the next 14 years, the NO₃-N concentration in leachate from the high N rate decreased dramatically to the point that the concentrations in leachate in 2017 were similar to what was initially measured for both N rates (3 ppm at the low N rate and 5 ppm at the high N rate) when the research was initiated in 1998 (Table 1).

TWENTY YEARS OF DATA

Throughout the 20 years of collecting leachate, there were peaks and valleys

in NO₃-N concentration in leachate, especially for the high N rate. Peaks in NO₃-N leaching were especially evident centered around Jan. 1 in 2002, 2004, 2005, 2006 and 2008 (Figure 2). We analyzed these data to determine if there were differences between NO₃-N leaching in the growing and dormant seasons. Although there were individual leaching events during the dormant period with high

Continued on page 58

Takeaways in N leaching

- Changes in N leaching occur as the turf ecosystem ages, and high N rates beginning approximately 10 years after establishment may result in higher amounts of N leaching.
- This research serves as an indication of how N leaching from turfgrass can change over time but should be taken in the context that it represents one soil type and one turf species growing in a cool/humid region.
- Turf managers should consider making fall N applications earlier in the season to reduce the risk of leaching during winter.

Continued from page 57

concentrations of $\text{NO}_3\text{-N}$, especially for the high N rate, the means during the dormant and growing season were not significantly different in most years.

However, during the dormant season, when the turf is not using nitrogen (and in climates such as Michigan when soils may remain unfrozen for a portion of the dormant season) $\text{NO}_3\text{-N}$ leaching may occur and individual leaching events may have higher $\text{NO}_3\text{-N}$ concentrations than during the growing season. The practical significance of this finding: Turf managers should consider making fall N applications earlier in the season to reduce the risk of overwinter leaching.

LEACHING AND NON-LEACHING RATES

Several researchers have suggested that the ability of soil to store organic N under relatively constant management and climatic conditions (typical of turf systems) would decrease with time, and that an equilibrium level of soil organic N eventually would be obtained. A 1980 examination was made of total N content in soil to a depth of 16 inches in 105 turf systems ranging in age from 1 to 125 years old on Long Island, N.Y. The data suggest that soil organic matter accumulation is rapid in the first 10 years after establishment and slowly builds to an equilibrium at 25

years, when no further net N immobilization occurs.

The 1980 results indicated that there is a rather limited capacity of the soil to store organic N, and that after 10 years the potential for over-fertilization is greatly increased. Research in 1990 proposed that older turf sites (greater than 25 years of age) lose the ability to store additional N in the soil, and therefore should be fertilized at a rate equal to the rate turf uses N.

Our research at MSU supports the general hypothesis that the ability of a soil to store soil organic N changes as the site ages. What's surprised us is that the 5 lbs.-N rate resulted in significant $\text{NO}_3\text{-N}$ leaching, while the 4 lbs.-N rate has not.

We are not stopping after passing the 20-year milestone this July. We decided this year to increase the high N rate to 5 lbs. N/1,000 sq. ft. once again to determine if, in the 15 years since the high N rate was reduced, it will once again result in high $\text{NO}_3\text{-N}$ leaching concentrations. We will continue to monitor nitrogen leaching in a continually fertilized turfgrass system and provide insight into the effect of N rates on leaching as the turfgrass ages. 📍

Acknowledgements

Funding for this research was provided by the Michigan Turfgrass Foundation and the United States Golf Association.

Kevin Frank, Ph.D., is a turfgrass scientist at Michigan State University. Contact him at frankk@msu.edu for more information.

References

- Frank, K.W., K. O'Reilly, J.R. Crum, and R.N. Calhoun. 2006. The fate of nitrogen applied to a mature Kentucky bluegrass turf. *Crop Sci.* 46:209-215.
- Frank, K.W., J.R. Crum, J.M. Bryan, and A.D. Hathaway. 2016. Fifteen years of nitrogen leaching from a Kentucky bluegrass turf. *Crop Sci.* 56:1-7. doi: 10.2135/cropsci2016.03.0197
- Miltner, E.D., B.E. Branham, E.A. Paul, and P.E. Rieke. 1996. Leaching and mass balance of ^{15}N -labeled urea applied to a Kentucky bluegrass turf. *Crop Sci.* 36:1427-1433.
- Petrovic, A.M. 1990. The fate of nitrogenous fertilizers applied to turfgrass. *J. Environ. Qual.* 19:1-14.
- Porter, K.S., D.R. Bouldin, S. Pacenka, R.S. Kossack, C.A. Shoemaker, and A.A. Pucci, Jr. 1980. Studies to assess the fate of nitrogen applied to turf. Part I. Research project technical complete report. OWRT Project A-086-NY. Cornell Univ., Ithaca, NY.

Golfdom

Seven-time winner of the national Folio: Award for editorial excellence

EDITORIAL ADVISORY BOARD

Mike Bavier, CGCS-Ret.
Barrington, Ill.

Conrad Broussard, CGCS
ST. JAMES PLANTATION
Southport, N.C.

Julio Diaz
PUNTACANA BEACH AND GOLF CLUB
Punta Cana, Dominican Republic

Damon Di Giorgio
PLAYA GRANDE GOLF COURSE
Rio San Juan, Dominican Republic

Chris Erickson
DEL MAR COUNTRY CLUB
San Diego, Calif.

David Hay, CGCS
MISSION HILLS COUNTRY CLUB
Rancho Mirage, Calif.

Bill Irving
WOLF CREEK GOLF CLUB
Olathe, Kan.

Rees Jones
REES JONES, INC.
Montclair, N.J.

Tim Kreger
EXECUTIVE DIRECTOR
CAROLINAS GCSCA

Tom Lively, CGCS
TPC SAN ANTONIO
San Antonio, Texas

Tom Marzolf
FAZIO GOLF COURSE DESIGNERS
Hendersonville, N.C.

Roger Meier
VALHALLA GOLF CLUB
Louisville, Ky.

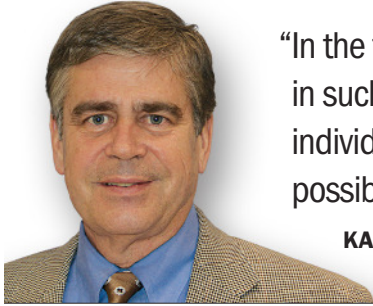
Jeff Plotts
TPC SAWGRASS
Ponte Vedra Beach, Fla.

Jackson Reiswig
CORAL CREEK CLUB
Placida, Fla.

Steve Sarro
PINEHURST COUNTRY CLUB
Denver, Colo.

Alex Stuedemann
TPC DEERE RUN
Silvis, Ill.

Andy Wilson
BETHPAGE STATE PARK GOLF COURSE
Farmingdale, N.Y.



“In the turf world, we broadcast seed in such numbers that looking at individual seed performance is not possible.”

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

Seeds are money

Seeds are a turfgrass management topic often taken for granted. We spend considerable time and effort researching the best cultivars or varieties to use on golf courses, but we focus little attention on the seed itself. Given their small size and the tremendous number of seeds we use, each one by itself can seem insignificant, especially compared with their agronomic cousins.

Soybean and corn seeds are planted in rows, with each seed placed or drilled into the row. If a seed row fails to emerge or uneven plant emergence occurs, the farmer then focuses on why the seed is not performing. Reasons for unsatisfactory germination include field conditions, weather and planter failure, or it could be something to do with the seed itself. Given that every plant that comes from a seed represents money, diagnosing the problem is important.

In the turf world, we broadcast seed in such numbers that looking at individual seed performance is not possible. We judge the success of an establishing turf stand based on an overall area. If for some reason the newly seeded turf fails, it's judged on the overall area view. Potential reasons for stand failure include environment, management and soil conditions, but again, the seed itself often goes unexamined. It never fails to amaze me.

When golf course superintendents rebuild putting greens, they have the root-zone mix tested to meet specifications and often retest the material as it's delivered on site. After completing quality control on the mix, the green is shaped to the proper depth, smoothed to just the right contours, then seeded.

Superintendents know (or think they know) the seed they're planting because it's identified on a tag or label. You would think that tag was gospel. However, during seeding, keep some of the seed you use, along with the tags. If you've ruled out all other factors in a failure, you then have a source of seed you can test as a potential failure cause.

As seeds germinate and seedlings emerge, a fundamental question arises. When is a seedling no longer a seedling?

A wide range of explanations exist to answer this question, ranging from a given number of days or weeks, to emergence of X number of leaves, to

the nodal stage. None of these answers seem to get to the heart of it.

Turf seed is comprised mainly of the embryo and the endosperm. The embryo is where root-like structures emerge — usually first — followed quickly by the shoot. During this initial development, the endosperm provides all energy for roots and shoots to develop.

Seed has a small size and relatively small endosperm. This is why we don't plant turf seeds as deep as larger agronomic crop seed. Once the leaves emerge and photosynthesis begins, the plant becomes autotrophic (independent). It's at this point that I no longer consider the seedling a true seedling. By photosynthesizing, the seedling is no longer dependent upon the endosperm for energy.

Germination and emergence of these seedlings occurs quickly. I've heard superintendents speak of creeping bentgrass germination and emergence in as little as three to five days. This comment often is followed by a complaint that the plants seem to be just “sitting there.” As these seedlings transition to autotrophic plants, the energy they capture from photosynthesis goes into root and stem development, a much slower process than, for example, an annual grassy weed, which is putting almost all of its newly acquired energy into reproduction.

Never take seeds in a turf seed bag for granted. Seeds are the beginnings of a plant's life. The genetics, the internal processes that govern germination, the initial growth and how these early stages dictate plant competition — it's all fascinating. Those processes govern how we manage that turf for years to come. **G**

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

// AN EARLY ORDER PROGRAM CONSIDERATION

Controlling basidiomycete fungi with Pedigree

Brian Aynardi, Ph.D., is a turfgrass pathologist and leads the fungicide development effort at PBI-Gordon as the company's Northeast research scientist. You may reach Brian at baynardi@pbigordon.com for more information.

Q Provide a brief history of Pedigree and its active ingredient, flutolanil.

Pedigree is a non-generic, SC (soluble concentrate) formulation of flutolanil. Flutolanil was discovered in the mid-1980s by Nihon Nohyaku, the parent company of the current supplier, Nichino America, and was the original SDHI fungicide. It is in FRAC (Fungicide Resistance Action Committee) Group 7.

Flutolanil is a single-site mode of action fungicide and will control only basidiomycete fungi. Pedigree will be available Oct. 1, 2018 as part of the early order program.

Q What diseases is Pedigree most effective in controlling?

Pedigree is the gold standard for controlling brown patch (*Rhizoctonia solani*), large patch (*Rhizoctonia solani*) and fairy ring (caused by basidiomycete fungi). Flutolanil is the go-to active ingredient for these diseases.

Other diseases in the *Rhizoctonia* group such as brown ring patch, red thread, pink patch and southern blight also are effectively controlled by Pedigree.

We are excited about the

control Pedigree provides for gray snow mold (*Typhula spp.*) and for leaf and sheath spot or mini-ring disease (*Rhizoctonia zeae*) on bermudagrass.

“PEDIGREE WILL BE BEST USED AS PART OF AN INTEGRATED PLAN THAT INCORPORATES THE STRONG PERFORMANCE OF ACTIVE INGREDIENTS FROM OTHER FRAC GROUPS.”

Superintendents can use Pedigree on all areas of the golf course, including greens, and is safe to apply to all major warm- and cool-season turfgrasses.

Q How should superintendents incorporate Pedigree into their fungicide programs?

We're unaware of any documented cases of resistance to flutolanil in turfgrass. This makes Pedigree a valuable rotation option for use in fungicide programs. We see it is a good fit for controlling *Rhizoctonia* diseases. It also can be a part of a snow-mold control plan and for preventive and curative control of fairy rings.

Pedigree is best used as part of an integrated plan

that incorporates the strong performance of active ingredients from other FRAC groups. In addition, this doesn't just mean using PBI-Gordon branded products. We promote the proper rotation of modes of action from all companies as part of a resistance-management program.

Uniform coverage is critical. Find the combination of nozzle type, pressure and ground speed that provides uniform coverage, with medium to medium-coarse droplets. Spray volume should be 2 gallons per 1,000 sq. ft. for foliar diseases and 2 to 4 gallons per 1,000 sq. ft. for diseases of the crown and roots. If a superintendent is targeting diseases of the crown or roots (in the thatch and soil area), irrigate with 1/8th inch water immediately after application.

Add a non-ionic surfactant to Pedigree when controlling large patch. Add a wetting agent to Pedigree when controlling fairy ring.

Q Is there anything else you would like to add?

The SC formulation of Pedigree will be easier to work with than previous formulations that contained flutolanil. In the SC formulation, the active ingredient molecule is smaller (milled to a finer particle size), which results in better leaf surface coverage. ☺

Q How do superintendents minimize resistance risk with Pedigree?

Rotate, rotate, rotate. Rotate fungicides from different FRAC groups. Do not make more than two consecutive applications of Pedigree, but should that happen, the next application should be a fungicide outside FRAC Group 7. Do not apply Pedigree at rates less than the label rates.

Develop and consistently implement a sound agronomic program to culturally manage the disease. Do not rely on fungicides alone. Focus on having healthy turf year-round.

Q What tips do you have to make a Pedigree application most effective?



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

**America's Best-Selling* Diesel Workhorse
Is Built to Manage It All.**



Every job, terrain, deadline and challenge.

Introducing the All-New RTV-X1120.

\$0 Down, **0%** APR Financing for **48** Months**

Offer ends 12/31/2018. See your local Kubota dealer for details.



*Power Products Marketing North American Utility Vehicle Market Reports, May 2016. **\$0 Down, 0% A.P.R. financing for up to 48 months on purchases of select new Kubota RTV-X1120 equipment from participating dealers' in-stock inventory is available to qualified purchasers through Kubota Credit Corporation, U.S.A.; subject to credit approval. Some exceptions apply. Example: 48 monthly payments of \$20.83 per \$1,000 financed. Offer expires 12/31/18. See us or go to KubotaUSA.com for more information. Optional equipment may be shown.

KubotaUSA.com



© Kubota Tractor Corporation, 2018

The Shop

// MUST-HAVE NEW EQUIPMENT



1



2



3

CHECK OUT MORE NEW EQUIPMENT ONLINE

To stay up to date on all the latest products and services, visit golfdom.com/category/products

1 Specticle FLO herbicide

Specticle FLO preemergence herbicide from **BAYER** has been proven to provide superior preemergence control of the most troublesome weeds, and also offers postemergence control of crabgrass, so you're covered — even if you apply a little late. Specticle offers broad-spectrum control of key grassy weeds and more than 60 broadleaf weeds as well as extended residual control of *Poa annua*.

Backedbybayer.com

2 Katana herbicide

PBI-GORDON's Katana turf herbicide kills *Poa annua* plus more than 50 of the toughest grassy and broadleaf weeds in turf, including kyllingas, sedges and ryegrasses, plus dandelion, chickweed and white clover. It offers exceptional cool-weather performance and is ideal for use on golf courses, professionally managed sports fields and for spot treatments on residential lawns. Katana is highly selective in seashore paspalum, bermuda, zoysia, centipede and buffalo grasses, making it excellent for effective weed control in warm-season turf or removal of overseeded cool-season grasses.

PBIGordonTurf.com

3 KelPlant 1-0-1 biostimulant

Incorporate your turf from top to bottom for fast recovery from aeration or other stress conditions. KelPlant 1-0-1 is an exclusive formulation of **PLANT FOOD CO.** A shot of KelPlant 1-0-1 in your tank will dramatically promote root mass and tighten the turf canopy for superior playability, according to the company. KelPlant 1-0-1 contains a high concentration of seaweed extract plus humic and fulvic acids that will benefit the health of the plant and soil.

Plantfoodco.com



4

4 Capillary Concrete bunker liner

CAPILLARY CONCRETE's unique capillary action ensures that bunkers drain and the sand stays at desired levels for ideal playability. Capillary Concrete is time tested and proven on golf courses across five continents. The company's performance guarantee ensures the product will work without fail, guaranteed in writing and insured by Lloyds of London. A unique financing program allows superintendents to pay for their projects over a two- to seven-year term, with no down payment.

Capillaryconcrete.com



5



6

5 Manuscript herbicide

Mature weeds have met their match. With a novel active ingredient for turf, Manuscript herbicide from **SYNGENTA** can effectively be sprayed at any weed growth stage. It controls tropical signalgrass, crabgrass and other grassy weeds any time they're actively growing in warm-season turf on golf courses. Its built-in safener speeds metabolism for enhanced weed control performance and outstanding turf safety. For quicker recovery of desirable turf, Manuscript can be used in the heat of summer when desired warm-season turf actively is growing, and will fill in quickly.

GreenCastOnline.com

6 Better Billy Bunker method

Used on more than 1,000 courses throughout the world, the **BETTER BILLY BUNKER** Method uses a 2-inch polymer-treated gravel layer for maximum drainage at 1,500 plus inches per hour. This drainage layer eliminates contamination while drastically reducing washouts. Trusted by industry leaders in varying climates and backed by a 10-year guarantee, the BBB method provides playable bunkers under any conditions.

Billybunker.com

The 19th Hole

Bob Farren

CGCS // Pinehurst (N.C.) Resort



Bob, the grill looks good! What's your specialty? I'm more of a production guy... I like to fire out 40 to 60 hot dogs and hamburgers and get everyone fed. We're still active with our youth group at church, so we have a pool full of kids every other week. The kids say they want to come to Miss Kathy's pool and have one of Mr. Bob's burgers.

Tell me about your family. I'm married to Kathy, and I definitely over-married. My son Casey lives in San Antonio, he's in architectural design; my daughter Kristin loves the outdoors and just moved back to North Carolina, she works for Young Life as a camp administrator. I couldn't be prouder of my kids. ...I just saw your son on Facebook, he's growing up quick!

Yeah, he just got in trouble at school... punched a kid in the

stomach. (Laughs) Hey, sometimes that's OK — you don't want the kind of kid that'll just lie down.

Ha! That's true. How did Hurricane Florence treat you guys? It moved so slow, they predicted it so far in advance that we actually over-prepared. It lasted three days, we lost 100 trees and got 14 inches of rain. We were closed three days during the storm and two days for cleanup... then back to business.

What's your favorite tool for getting the job done? This might sound weird, but it's our staff. We've got eight golf course superintendents, led by Kevin Robinson, 11 senior staff members and about 230 to 250 employees, many of them part-time. It's like one big Swiss army knife.



What was your first — or favorite — car? I'm not a car guy like you. My first car was a 1971 Vega... and every car after that has gotten better!



What's the best excuse you've ever heard for being late to work? This might sound harsh, but I don't listen to excuses. So I don't remember any of them! I don't have time for excuses, I move on.

Your (North Carolina State) Wolfpack is 3-0 right now...

That's our family thing right there, N.C. State athletics, especially football and basketball. I'll tell you what: We have had people in our seats at every Wolfpack (football) game since 1974. That's not bad.



How many holes are you guys up to now? (Pauses) OK, I had to pull out the calculator. We're up to 171 holes. You know, we put speakers on the Cradle for music. We've added a brewery. The culture here has changed. We've always been known for championship golf — and we still are. But now we also want to be known for fun at the highest level. That's pretty cool.

As interviewed by Seth Jones, Sept. 25, 2018.

// BEST ADVICE

"BE HONEST, BE PATIENT AND BE NICE TO PEOPLE. IF YOU APPROACH EACH DAY WITH THAT ATTITUDE, IT WILL SERVE YOU WELL. MY DAD INGRAINED THAT IN ME."



MAIN PHOTO COURTESY OF BOB FARREN / CHEVROLET. FRIENDS (STOCK.COM; THINGLASS (CHALKBOARD) / NC STATE

TRUEDGE

THE EDGE YOU WANT. EVERY TIME.



THE TRUEDGE ADVANTAGE

- Maintain the architectural integrity of the green's true edge
- Simple, easy to see display precisely guides the operator
- Quickly mounts to most walking and riding greens mowers



CUBCADETGOLF.COM/TRUEDGE

Cub Cadet®

NO ONE CAN PUTT WHILE PYTHED.



Segway® Fungicide SC sinks Pythium disease!

Missing a two-foot putt is maddening, but seeing Pythium destroy healthy turf can drive you over the edge. Stop it with Segway® Fungicide SC.

Segway delivers outstanding protection against Pythium disease, including root dysfunction, blight, damping-off, and root rot. Segway lasts up to 28 days, and has no known cross-resistance with existing fungicides, making it ideal for your rotation program.

We can't help you with your putting, but we can help you stop Pythium: Segway.



PBIGordonTurf.com

 **pbi/gordon**
CORPORATION
Employee-Owned

Always read and follow label directions. Segway® is a registered trademark of Ishihara Sangyo Kaisha Ltd. 1/18 05261