

ADVERTISEMENT


SINCE 1927—The Resource for Superintendents // Golfdom.com

Golfdom^{9.17}



Think of it as chemistry with horsepower.

3 FRAC codes. 4 active ingredients. 120 days of control. That's the power in Contend™ fungicide.* Use it to protect fairways from snow mold. Bank on it for performance. And make sure you get it fast. Purchases this year must be made on or before December 7, 2017. For complete details, visit GreenCastOnline.com/Contend

 @SyngentaTurf #SnowMoldFreeFairways

 **Contend™**
Fungicide

 syngenta®

*Contend™ is sold as a combination of separately registered products: Contend A and Contend B fungicides.

©2017 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.** Contend™, GreenCast®, 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 1LGG7041-PL0W-AGCW 07/17

SINCE 1927—The Resource for Superintendents // Golfdom.com

Golfdom

09.17

LESS TURF OR BETTER TURF?

Or both?

Course managers decide where and what grasses optimize their courses for play and profit.

No. 9 at the recently renovated Los Robles Greens GC, Thousand Oaks, Calif.

PLUS

GOING WILD WITH BENTGRASS

2017 PGA CHAMPIONSHIP PHOTO PARADE

DEBUT COLUMN: THE WALKING GREENKEEPER

MORE ROLLERS WITH MORE TO LIKE.

SMITHCO ULTRA LITE

- At 605 lbs it's the lightest riding greens roller made with dual hydraulic drive.
- Superior traction and maneuverability.
- Direct drive ends chain maintenance.
- Hydraulic operation of both 8" seamless tapered steel drums eliminates slipping.
- 9 hp Honda Commercial Duty engine.
- The most affordable roller made by Smithco.



SMITHCO TOURNAMENT ELECTRA A/C

- Used at the Ryder Cup, PGA Championships and U.S. Open to eliminate any chance of oil leaks on the greens.
- Enough power to roll 18 holes on any golf course on a single charge. (proper battery condition required.)
- Exceptional traction in both directions.
- 48-volt D/C source using (6) 8-volt deep cycle batteries.



TOURNAMENT ULTRA 7580

- Our most-popular greens roller is loaded with exclusive features.
- 16 hp (12 kW) twin-cylinder gasoline engine reduces vibration, and low-tone muffler provides "Ultra" quiet.
- "Direct-Drive System" couples hydraulic motors directly to roller shafts eliminating time-consuming drive chain maintenance.
- Dual-roller drive provides exceptional traction in both directions.



0% FINANCING FOR UP TO 36 MONTHS

Smithco and Univest Capital, Inc. are partnering to offer you this exclusive opportunity on all Smithco products. To learn more talk to your local Smithco dealer or call Smithco directly at 1-877-833-7648 and ask for Kim. You'll find more information under Financing at our website: Smithco.com.

Offer limited to approved applications received between 8/1/2017 and 9/30/2017 and closed on or before 10/31/2017. \$1.00 purchase option, \$250 documentation fee and 1 advance payment required. Financing provided by Univest Capital, Inc., a subsidiary of Univest Bank and Trust Co. Equal Opportunity Lender.

THE SMITHCO XL70



NO WONDER.

The Smithco XL70 is the most productive greens roller made.

GREENS ROLLER IS SETTING SALES RECORDS.



NO OTHER ROLLER MEASURES UP.

Three articulating rolling heads give you a 70"-wide rolling area. You'll get the job done up to 40% faster which translates to substantial savings in labor costs. And, it's loaded with features, many you won't find on other rollers in this category.

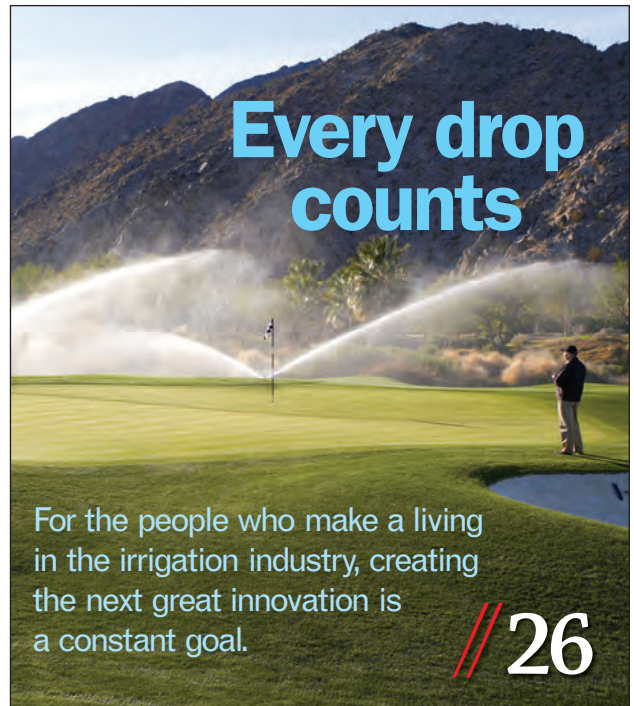
- Triple hydraulic direct drive to rollers provides superior traction.
- Eliminates time-consuming chain maintenance.
- Lighter weight.
- Powerful 16 hp Vanguard engine.
- 10 mph ground speed for rolling.

Smithco 50 1967 ★ 2017
YEARS



Less turf + better turf = better golf

In an effort to make golf better for the budget and better for the golfer, courses take a close look at where the green goes. // 16



Every drop counts

For the people who make a living in the irrigation industry, creating the next great innovation is a constant goal. // 26

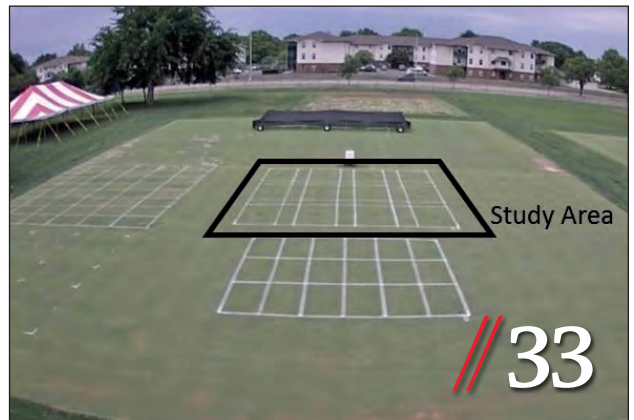
COLUMNS

- // 6 **Keeping up with The Jones**—Seth Jones
- // 14 **The Walking Greenkeeper**—Joe Gulotti
- // 38 **The Turf Doc**—Karl Danneberger

Debut column!

DEPARTMENTS

- // 8 **Starter**
- // 12 **Golfdom Gallery**
- // 40 **The Shop**
- // 42 **The 19th Hole**



// 33

SUPER SCIENCE

- // 33 **Using heat vision to aid water-use predictions**
- // 34 **Going wild with bentgrass**

NIMITZ[®] Pro G



Before NIMITZ[®] Pro G



After 3 Treatments

Simply Better Nematode Control

NIMITZPro.com



Control Solutions Inc

Innovation you can apply.

Call 800-242-5562

Quali-Pro.com



QUALI-PRO

NIMITZ and Quali-Pro are registered trademarks of Adama Group Company. Contact your local distributor or Quali-Pro representative for more information. This product may not be registered in all states, please check the Quali-Pro website or the state's department of agriculture for registration information.

Nufarm REWARDS

// GIVING YOU AN EDGE

INCLUDING PROVEN PERFORMERS
3336® F // ANUEW™ // PINPOINT™

GROW YOUR EDGE WITH NEW EARLY ORDER REWARDS

Order early and save big with enhanced rebates on an expanded range of products. The new Nufarm Rewards Program includes more than 40 trusted Nufarm-brand fungicides, insecticides, herbicides, and PGRs to help you get ahead.

// NOW INCLUDING CELERO®,
CERTAINTY®, AND PINPOINT™

// MAXIMIZE PROFITS WITH
INCREASED REBATE OPPORTUNITIES

LIMITED TIME // SEPT 15 - OCT 31, 2017
NUFARMINSIDER.COM/REWARDS

©2017 Nufarm. 3336® and Anuew™ are trademarks of Nufarm. Pinpoint™ is a trademark of Valent U.S.A. LLC. Celero® is a trademark of Sumitomo Chemical Company. Certainty® is a trademark of Monsanto Technology LLC.



Grow a better tomorrow.

Golfdom

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

EDITORIAL

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

ASSOCIATE EDITOR Grant B. Gannon
216-363-7928 / ggannon@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, Matt Neff, Jared Nemitz,
Clark Throssell (*Research*), Sean Tully, John Walsh,
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 Patrick Roberts
216-706-3736 / proberts@northcoastmedia.net

ASSOCIATE 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 Chris De Cicco
216-337-4417 / cdiccico@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

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

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

WEB DEVELOPER Jesse Malcmacher
216-363-7925 / jmalcmacher@northcoastmedia.net

MARKETING/MAGAZINE SERVICES

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

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

LIST RENTAL Brahm Schenkman
800-529-9020 / bschenkman@infoenergy.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 2017 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.



**IN 1910,
SUPERINTENDENTS
USED THE
WIND TO
HELP TOP
DRESS THEIR
GREENS -
OR DID
THEY TOP
DRESS?**



**Coco Fiber
Drag Mat**

**STANDARD
GOLF** COMPANY

Setting the standard in golf accessories since 1910.
866.743.9773 • StandardGolf.com

© 2017 Standard Golf Company. All rights reserved.



“From Quail Hollow’s perfect greens at 7 a.m. to Baldwin City’s perfectly imperfect sand greens at 7 p.m.”

SETH JONES, *Editor-in-Chief*

Disparate golf destinations

If my Adidas golf shoes could talk, they would have said, “Jones, what the heck is going on here?”

And for good reason. My recent golf weekend should earn some kind of prize in terms of disparate golf destinations. In less than 48 hours I went from the PGA Championship host course in North Carolina to a night golf tournament on sand greens in Kansas to a Topgolf event at an NFL stadium in Missouri.

Friday morning, bright and early, I was in Charlotte, N.C., hanging out with my friends at Quail Hollow. The 2017 PGA Championship host course was immaculate. Jordan Spieth told *Golfdom*, that even after all the rain, “The course is absolutely fantastic, it’s so pure.” What a tremendous finale to the 2017 major championship season. To check out our extensive coverage of the PGA Championship — where we interviewed some of the biggest names in the game as well as the key members of the

crew — visit Golfdom.com. And to see some of the photos we took, check out this month’s two-page *Golfdom* Gallery on pages 12-13.

A delayed flight home gave me barely enough time to stop by the house to grab my sticks. I had a 7 p.m. tee time at Baldwin City (Kan.) Golf Course. The town of 4,500 has a 9-hole course with sand greens.

From Quail Hollow’s perfect greens at 7 a.m. to Baldwin City’s perfectly imperfect sand greens at 7 p.m. I’m glad such a drastic change in golf surroundings can’t cause the bends.

I’ve played at Baldwin City before, but it’s been years. My playing partners had to give me a refresher on the rules of etiquette for playing sand greens: Try not to walk around too much. Anything within a flagstick length of

the cup is considered good. Take turns raking the greens in a circular motion once the hole is completed.

Oh, and don’t look down as you rake, because it will make you dizzy. (That advice was given just a moment too late.)

But that evening round at Baldwin City will be a summer of 2017 highlight. Nine holes at dusk on an ideal Kansas evening. Stop for a barbecue. Then nine holes of night golf with glow-in-the-dark golf balls. I even saw a shooting star.

The next afternoon I was off to Arrowhead Stadium, home of the Kansas City Chiefs, to play Topgolf Crush. Hitting bays were set up in the club level of the stadium (I don’t get up there too often) and the boys and I smacked low-flight golf balls toward targets spread out on the NFL field below us.

Hitting golf balls in an NFL stadium has a novelty to it, but it’s not the same as playing golf. Our hour-long match ended quickly and we retreated to a local sports bar, where much of the conversation was about how much fun night golf was the previous evening.

So, while this was no weekend in Monterey, it was memorable for how unorthodox it was. Email me and let me know if you’ve had a more diverse golf weekend, and what the circumstances were.

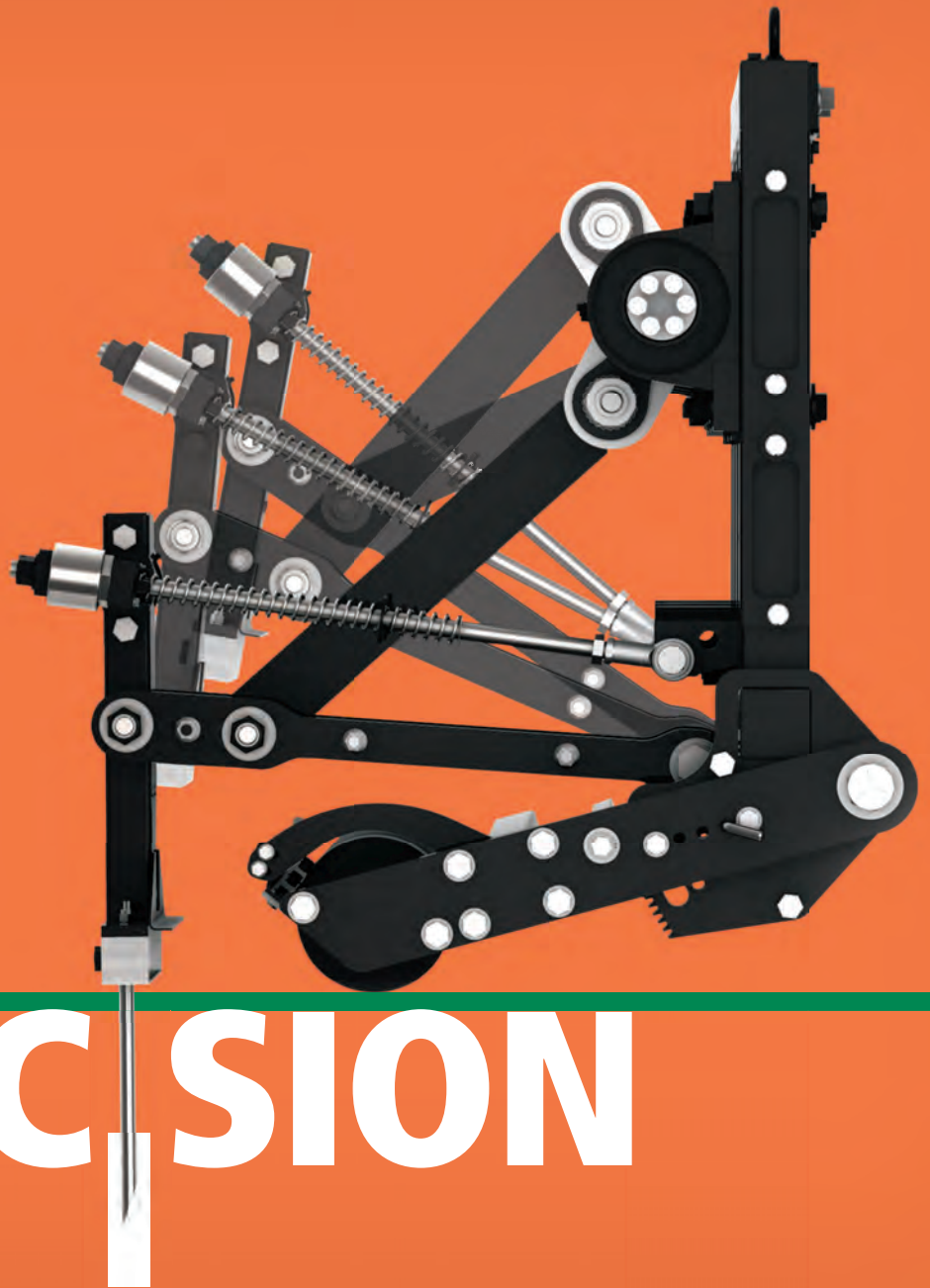
● Allow me to formally introduce our newest columnist, Mr. Joe Gulotti, “The Walking Greenkeeper.”

Joe is a superintendent in Delaware and the author of a hilarious blog that you can check out at thewalkinggreenkeeper.com.

Associate Editor Grant “Buddy” Gannon discovered Joe when he was cruising on Twitter and saw Joe tweet out a link to his blog. Buddy told me he thought Joe’s writing style would fit in nicely with *Golfdom*. I read through the blog and had to agree. I got him on the phone and we quickly snatched him up. Good news: According to Joe, *Golfdom* is his favorite turf publication. So, we really do make a good match.

Joe’s first column appears on page 14. Welcome to the pages of *Golfdom*, Joe!

Email Jones at sjones@northcoastmedia.net or send him a tweet to @SethAJones.



PRECISION

Get perfection from every tine.

Every Jacobsen® GA™ Series Aerator features PerfectStrike™ technology, which ensures tines enter and exit the turf vertically on every strike, delivering unrivaled hole quality that competitors can't match. From fairways to greens, Jacobsen GA Series Aerators are specifically designed to allow turf to recover more quickly and thrive.



GA600

72" Width
12" Tine Depth



GA580

70" Width
8" Tine Depth



GA450

54" Width
8" Tine Depth



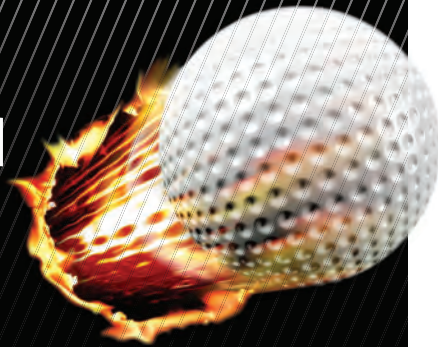
1.888.922.TURF | www.jacobsen.com

TEXTRONGOLF

© 2017 Textron Specialized Vehicles Inc. All rights reserved.

Starter

NEWS, NOTES AND QUOTES



Tom Watson chats with students at Twin Oaks Golf Complex following an impromptu lesson from the World Golf Hall of Famer.

// LIVING LEGENDS

// TWO-FOR-ONE

EWING IRRIGATION AND UPSTART PRODUCTS MERGE

Ewing Irrigation & Landscape Supply and Upstart Products, Inc. have merged, expanding their product offerings and services to superintendents.

“Upstart and its unique golf agronomic product range provides a complementary offering to Ewing’s golf customers,” said Douglas W. York, Ewing president and CEO. “And Ewing’s and Upstart’s shared dedication to industry professionals creates more sustainable and profitable solutions for our customers.”

Ewing’s diverse product offerings in the golf sector will become even more robust with the addition of Upstart’s products. Upstart has served the golf industry in Florida with sustainable fertilizers, soil amendments, plant nutrients and more for more than 20 years.

The Upstart proprietary blends of liquid nutrients and water-soluble fertilizers, along with its wide range of high-quality branded turf products, will add a golf agronomics element to Ewing’s product offerings to fully support golf courses in Florida and throughout Ewing’s national footprint, the company said.

// SHARP-DRESSED MAN

AT FMC, Z.Z. IS TOP

FMC Corp. announced that Zack Zaki has been named business director for FMC Global Specialty Solutions (GSS). Zaki assumes the role from Pramod Thota, who recently was named FMC’s India country president and Agricultural Solutions business director.

In this role, Zaki is responsible for managing all aspects of the business and will lead the GSS team. With a focus on growing GSS business in domestic and international specialty markets, Zaki will drive new strategies to enhance the presence of the business while expanding its customer base.

“Since I joined the GSS team, I have seen how dynamic the industry is across all segments,” noted Zaki. “I look forward to leading the GSS team as we continue to partner with customers and meet their evolving needs.”

IT’S ELEMENTARY, MY DEAR WATSON

BY SETH JONES // Editor-in-Chief

➔ Most often, we travel to the story. Sometimes the story comes to us.

That’s what happened when World Golf Hall of Famer Tom Watson recently surprised 24 children at Twin Oaks Golf Complex in Eudora, Kan. (a mere 4 miles from *Golfdom* editorial headquarters) who were wrapping up their summer First Tee of Kansas City session with coaches Jeff Burey, Robert Sweeney and Andrew Clark.

The students were treated to some special benefits courtesy of the Midwest PGA Section and Callaway Golf. Along with an in-person coaching session from the eight-time major winner, students who completed the seven-week class and wrote a 100-word essay on the topic, “What I have learned at First Tee and about golf,” received a

complimentary Callaway golf bag and complete set of golf clubs.

“Golf is not just a sport, it is a life lesson. You can learn how to swing, but also about respect, confidence and courtesy,” student Addison Braden wrote in her essay. “Golf is like life, if you want to, you can really enjoy it. Your attitude about it is your choice.”

While a legend like Watson isn’t available to every market, it’s Burey’s hope that other groups try to find their own local celebrity to add excitement to the First Tee experience.

“Having Tom Watson attend our first First Tee session was invaluable,” Burey said. “The kids enjoyed it and the parents enjoyed it. He was so gracious to stay and sign autographs and pose for photos with the kids. He helped us make memories out there.”

// MAKE IT A DATE

PGA Championship moves to May

➔ The PGA of America and the PGA Tour announced that beginning in 2019, the PGA Championship will be played in May — while The Players Championship will be contested in March at TPC Sawgrass in Ponte Vedra Beach, Fla.

“These changes... will greatly enhance the professional golf calendar,” said PGA Tour Commissioner Jay Monahan. “The calendar for the PGA Tour season is among the most important and challenging aspects of our business, and the changes we’re unveiling give significant flexibility to create a schedule, including the FedExCup Playoffs, that is in the best interests of players, fans, tournaments, communities and our partners.”

“The PGA of America’s key objectives were to promote the best interests



of our signature spectator championship, do what is best for the game and its players, and find the most advantageous platform to fulfill our mission of serving our PGA professionals and growing the game,” said PGA of America CEO Pete Bevacqua. “Our analysis began in 2013 and included an extensive list of factors, including

having to shift the date every four years to accommodate the Olympic Games. We determined that playing the PGA Championship the week prior to Memorial Day in May, making it the second major championship of the golf calendar, will achieve those three objectives.”

The change will begin with the 2019 PGA Championship at Bethpage Black in Farmingdale, N.Y. Next year’s PGA Championship at Bellerive CC in St. Louis, Mo., will remain in August.

// OUTSTANDING CAREER

WILL HOLROYD NAMED CAROLINAS DSA WINNER

The Carolinas GCSA announced that Will Holroyd, superintendent at Musgrove Mill GC in Clinton, S.C., will receive the association’s highest honor, the Distinguished Service Award.

Holroyd has been superintendent at Musgrove Mill since the course’s inception. Along with his reputation as an outstanding superintendent, Musgrove is also known as a mentor and supporter of Clemson University.

Bruce Martin, Ph.D., and Bert McCarty, Ph.D., credit Holroyd with helping get them established in the turfgrass program at Clemson. As a founder and long-serving president of the South Carolina Turfgrass Foundation, Holroyd helped secure new and recurrent funding for Clemson by lobbying legislators in Columbia, the state capital.

“Without the leadership of Will, Clemson would never have pushed turf to a higher level (that we still enjoy) in the College of Agriculture,” Martin said.



Will Holroyd

// THANK YOU FOR YOUR SERVICE

DISABLED VETS GET PGA TOUR VIP TREATMENT



Disabled Veterans Appreciation Day (DVAD) at the PGA Tour’s BMW Championship will be Sept. 12. About 50 wounded veterans from the Chicago area will be present during the practice round at Conway Farms Golf Club in Lake Forest, Ill.

The soldiers will view golf demonstrations and receive tips from Tour pros. The vets also will enjoy a “meet and greet” with the pros and get the opportunity to watch their favorite players practice. It is a day to let vets with special needs know that golf still can be a fun, fulfilling part of their lives.

Hosted by the Freedom Golf Association (fgagolf.org) in conjunction with the Western Golf Association, FGA is an Illinois-based non-profit that is helping spearhead the movement to make golf accessible to impaired persons.

“We are thrilled to honor our veterans at this great BMW Championship,” said E.Q. Sylvester, a triple-amputee who founded FGA and is a director of the WGA. “We have found that these amazing people who have taken up the great

game of golf have seen wonderful improvements in their lives resulting from the social, therapeutic and rehabilitative benefits of this game.”

IT'S TIME
TO TAKE
YOUR TURF
BACK

Next-Generation Nematicide Brings Game-Changing Control & Flexibility to Superintendents

Indemnify® offers fast-acting, long-lasting nematode control with flexible application strategy

The game of golf requires superintendents to push their turf to the utmost limit. “Add nematodes to the mix, and you’ll find yourself with weak-rooted turfgrass that can’t withstand the stresses of the season,” said Derek Settle, PhD, Bayer Green Solutions Team Specialist.

With Indemnify, superintendents have access to a new mode of action that marks the next generation of nematode control.

Indemnify moves through the soil all the way down to the root tips to help protect turf from key plant parasitic nematodes, such as sting, root knot, ring and others. In as little as one application, Indemnify controls nematodes on contact and continues to work throughout the root zone to offer visible, long-lasting improvement in turfgrass quality for up to six months.

According to Settle, one of the most valuable benefits of Indemnify is that it includes curative spot application recommendations on its label.

“Indemnify can deliver strong results in as little as one application with the flexibility to apply up to four times per year.”

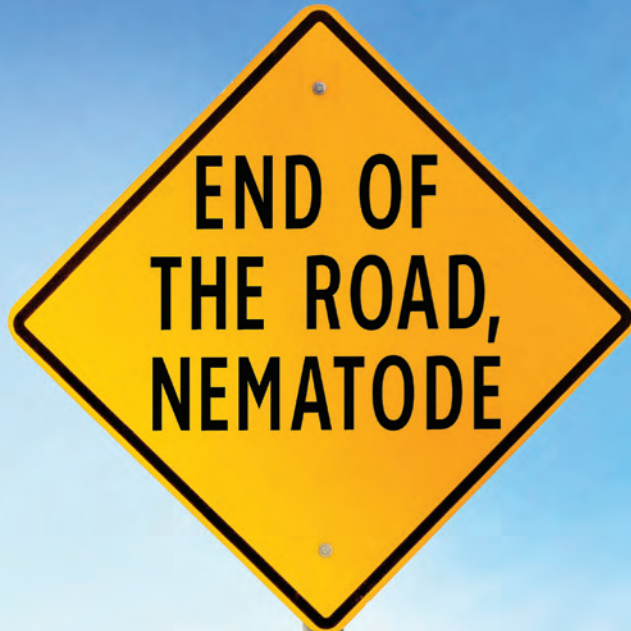
– Derek Settle, PhD, Bayer Green Solutions Team Specialist

“When it comes to Indemnify, a little bit of active ingredient goes a long way. It is highly concentrated, and it is safe on all turf types,” Settle said. “Indemnify can deliver strong results in as little as one application with the flexibility to apply up to four times per year.”

With Indemnify, superintendents have a next-generation solution offering optimal nematode control and application flexibility – making it that much easier to leave nematode woes behind and take turf back for good.



Indemnify®



Indemnify[®]



IT'S TIME TO TAKE YOUR TURF BACK

Indemnify[®] is a ground breaking product that controls nematodes and improves root health. With results that have to be seen to be believed, Indemnify puts you in the fast lane to success.

Save big on Indemnify with Fall Solutions at backedbybayer.com/indemnify

 @BayerGolf

Golfdom Gallery



1 What's for lunch? Four-time major championship winner Rory McIlroy spends some time signing autographs for fans after a practice round. In this moment McIlroy was probably wondering what they were serving for lunch in the clubhouse.



2 He has the meats Kyle Phillips, groundsman for the AAA baseball Charlotte Knights, said, "No, thanks," to the fruit and eggs for breakfast in the hospitality tent, and went straight for the meat.



3 ZJ's quick workout Zach Johnson bet a junior golfer during a practice round at Quail Hollow, Charlotte, N.C., that he couldn't hit a 15-foot putt on the 9th hole. The kid sank the putt, and ZJ was happy to pay up with some push-ups.



4 Take your pick (L to R) Quail Hollow Assistant Superintendent Shane Omann tells brothers John Robinson, greenskeeper at The Cape Club, Falmouth, Mass., and Kevin Robinson, grounds crew at Quail Hollow, all the equipment the light touches... are the ones that they can use during the week.



5 Charlotte connection Ryan Stores, crew member at Quail Hollow, and Matt Claunch, Carolina Golf Club, Charlotte, N.C., assistant superintendent, were hover mower buddies during Monday afternoon maintenance.



6 Eyes on the line Quail Hollow Assistant Superintendent Basil Lowell keeps a close eye on a John Deere 180 SL PrecisionCut Walk Greens Mower's performance.



PHOTOS BY: GRANT B. GANNON



7



8



9



10



12



11



13

7 Final stretch Raking bunkers at the PGA Championship is hard work. Nick Mazzella, Aspen Corp.'s business manager, takes one last reach to smooth out this bunker.

8 Front porch reading There's nothing quite like sitting back and relaxing with your favorite magazine. Or at least that's what (L to R) Josh Wilson, assistant superintendent at Sage Valley, Graniteville, S.C., and Nathan Stevely, assistant superintendent at Chechessee Creek Club, Oaktie, S.C., told us.

9 Pine straw power We later found Wilson laying down pine straw on wet areas outside of the ropes. Quail Hollow saw multiple inches of rain during the week.

10 The marvelous mowing moustache Native Australian Angus Vos, intern at the Robert Trent Jones Golf Club, Gainesville, Va., definitely won the award for best moustache of the week. Must be something in the water Down Under.

11 Pressed for time Eric Dusa, CGCS, director of operations and agronomy at The Traces Golf Club, Florence, S.C., was directed to oversee Tim Kreger, executive director of the Carolina GCSA, as the duo hand-tined tee boxes. Got to give Kreger something easy to handle...

12 Can't keep a good man down It was great to see Kreger, who recently suffered a heart attack, out on the course helping the maintenance team. Kreger helped Quail Hollow Superintendent Keith Wood during Sunday volunteer check-in by passing out goody bags.

13 Cup art Dylan Farber, Quail Hollow grounds crew member, sprays the finishing touches on his latest masterpiece.



“It wasn’t until I arrived at my current gig and started to manage a certain putting surface that I began to seriously question my obsession with root mass.”

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

Roots. Does Size Matter?

I have been a head greenkeeper for nearly 11 seasons, and I used to have a mad obsession with roots.

I longed for dense, gloriously white entrails that delved to the inner core of the Earth to supply my precious plants with the available nutrients needed to survive.

Traditional practices such as core aerating, as well as feeding with the classics — nitrogen, potassium, and of course, phosphorus — became the absolute norm. I also used alternative products like humic acids, chicken turds, sea-plant extracts, shark fins (yeah, I got a guy), a lock of hair from the mane of a unicorn, or any product that is stated to enhance the density of a root zone. I even considered trying a Wiccan spell, but that just seemed way too far out, even for a hippie like me.

It wasn’t until I arrived at my current gig and started to manage a certain putting surface that I began to seriously question my obsession with root mass. This green is straight up different. For one, it’s sand based as op-

posed to the others, which are modified push-ups. The turf on this putting surface pretty much mimics the others throughout the course, and to the untrained eye (I mean “golfer”), not a single one could identify the minute difference in performance. However, I am a trained professional (questionable), and the thing that drove me crazy about this green were the roots.

They’re 1-inch long. On a good day. In spring, summer, fall and winter. One inch. I kid you not.

My first attempt to remedy this rootless wonder was to test its soil. I was pretty sure the results were going to come back totally jacked, but astonishingly, the only nutrient in the “non-optimal” range was

boron. So, I made a logical decision and began adding B. After several applications, I grabbed the trusty cup cutter to have a look-see. I was giddy with anticipation and swelled with feelings of self gratification knowing that when I drove that cup cutter into this troublesome green and pushed out that plug, I was going to witness the most awesome roots I had ever seen because of my diligence and smarts as an extremely awesome greenkeeper.

Those self-assured feelings of confidence and pride quickly vanished as I pushed that plug out. The roots looked no better (or worse) than they did prior to the gazillion applications of boron I applied. They remained 1 inch. Bummed, I

cruised off to my butt hutt (a tree where I’m out of sight of everyone) and fired up a heater, took a long drag off that piece and contemplated the situation.

As I sat underneath that glorious poplar tree, dejected that the boron applications had done nothing, I started to second guess my approach. Perhaps I was overvaluing the importance of root density? Is the game played along a bed of roots? Do we Stimp root surfaces? Am I compensating for my Irish curse?

As these questions raced through my head, I realized something. Roots, although important to the overall health of the plant, aren’t required to be as girthy as John Daly. Size didn’t matter because the 1-inchers I was managing on this green were doing their job. The grass was healthy and performing, and I heard nary a complaint from the peanut gallery (golfers) concerning the playability of this green. It was quite the epiphany, and from that day forward I stopped obsessing over root size.

It’s been quite the load off, but what’s really cool about not fretting over root mass is not having to meet that sketchy dude to score shark fins anymore. He was pretty creepy.

Joe Gulotti, the superintendent at Newark (Del.) CC, is happy to report he recently quit smoking. To read his blog, visit thewalkinggreenkeeper.com. This is his first column for *Golfdom*.

LET'S TALK **UNIFORMITY**

On-course testing consistently reveals
that Hunter outperforms the competition.

THE PERFECT COMBINATION OF POWER, PERFORMANCE, AND SERVICEABILITY.

Powerful - patented gear drive offers the highest torque output of any rotor on the market

21 Nozzles - precision, versatility, and wind-fighting efficiency

Total Top Service - access every component through the top without disturbing the playing surface



G885
TTS SERIES
GOLF ROTOR

GOLF IRRIGATION | *Built on Innovation*
Learn more. Visit hunterindustries.com/golf

Hunter[®]

LESS TURF + BETTER TURF =

In an effort to make golf better for the budget and better for the golfer, courses take a close look at where the green goes.

BY SETH JONES

The California drought, thankfully, is over.

And so is a state program that rewarded California golf courses with thousands of dollars for removing irrigated turfgrass. But that program has still inspired a wave of critical thinking on the way golf courses possibly can save water, labor, energy and money.

“It’s interesting to have these (water

reduction) discussions in Michigan, in Wisconsin, in the Midwest, when I’m used to having them on the West Coast,” says architect Andy Staples, ASGCA, Staples Golf Design. “There’s no question, reducing water has resonated with the courses I’ve worked with.”

“In golf, everything is site-specific — no two golf courses are the same,” says Jay Blasi, ASGCA, Jay Blasi Design. “But the general idea or concept of only watering turf because it’s in play? That translates anywhere. Scotland and Australia figured this out a long time ago. More golf courses are closing than opening. Finding better ways to keep courses irrigated is paramount to the success of the industry.”

Less is more

Los Robles Greens Golf Course in Thousand Oaks, Calif., is known for the mighty oak trees that line the fairways (“los robles” translates to “the oaks” in Spanish). But those out-of-play areas under the oaks were a stumbling block for course Superintendent Ron Kerley.

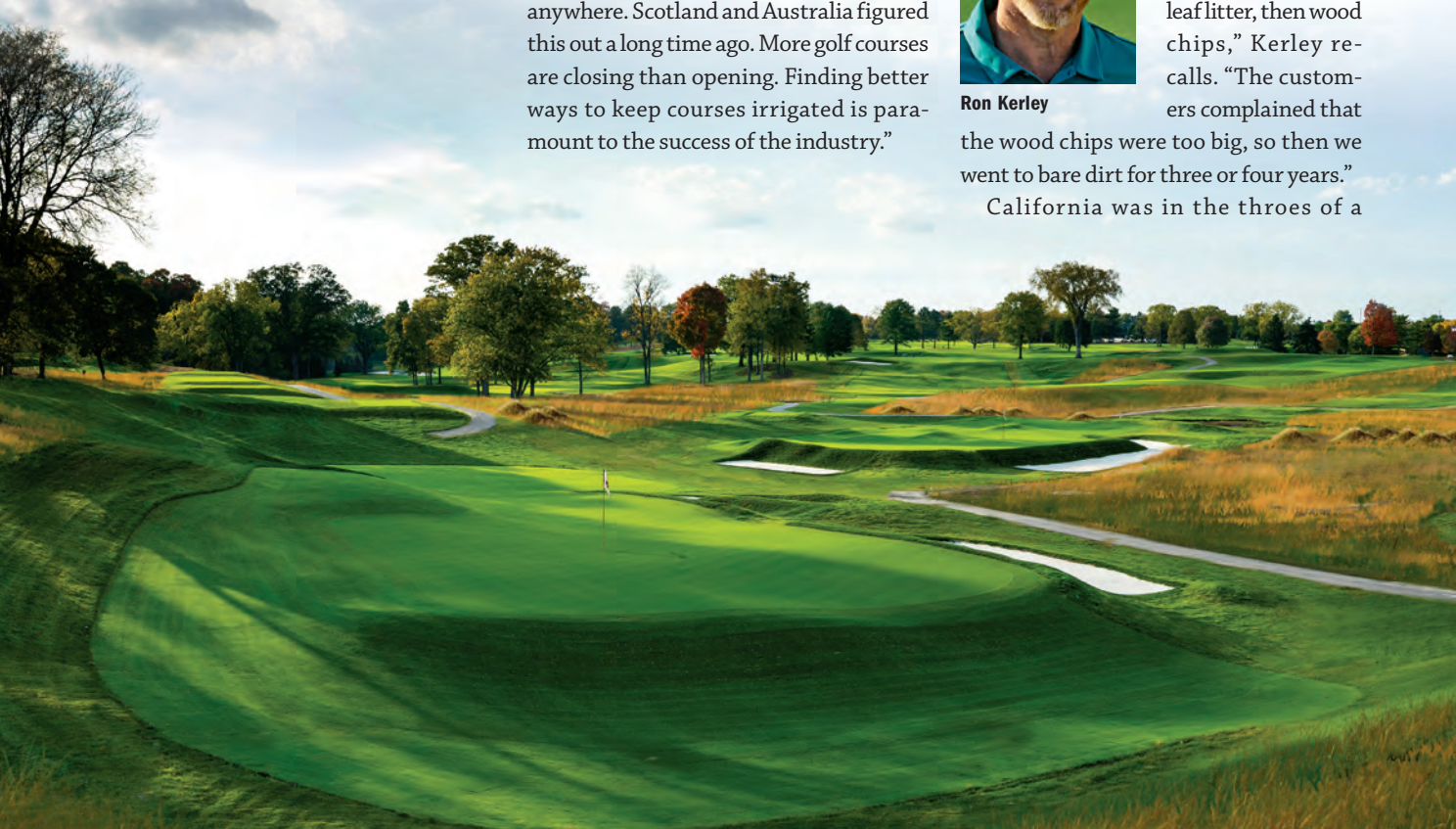


Ron Kerley

“When I came here in 2006 we started maintaining it as xeriscape, first leaf litter, then wood chips,” Kerley recalls. “The customers complained that

the wood chips were too big, so then we went to bare dirt for three or four years.”

California was in the throes of a



Better Golf

drought, so Kerley was looking for a way to make these areas attractive, playable and drought tolerant. It was at the 2015 Golf Industry Show in San Antonio where Kerley met Gary Peterson, president of American golf construction at American Landscape Inc., and plans for a formal renovation starting bouncing around.

Added inspiration came because the course qualified for a turf reduction rebate — barely. The money for privately owned properties already had dried up. Because Los Robles is owned by the city of Thousand Oaks, a municipality, it still was able to apply for a turf-reduction rebate. Kerley and his team submitted the paperwork at 9:30 p.m. on the final day of eligibility. Their project was accepted, and they went to work the next day.

The course, managed by Arcis Golf, applied for a 25-acre rebate, but the metro water district approved only 21 acres. By the end of the project, with the help of Fry/Straka Global Golf Course Design, the

course removed 30 acres of turf, primarily out-of-play areas under trees along fairways.

They scalped the turf with a flail mower, applied pre-emergent and installed new irrigation according to new landscaping lines. Brian Broderson of Broderson Association Landscape Architecture and his team spent a month coaching Kerley's crew on how to plant the new native grasses, a mixture of California Native Fescue and Melic grass (cool-season) and *Sporobolus airoides* and *Muhlenbergia rigens* (warm-season).

The crew had to push hard — much-needed rains caused multiple delays — but the project finished on time. Last fall, a nifty check arrived in the mail.

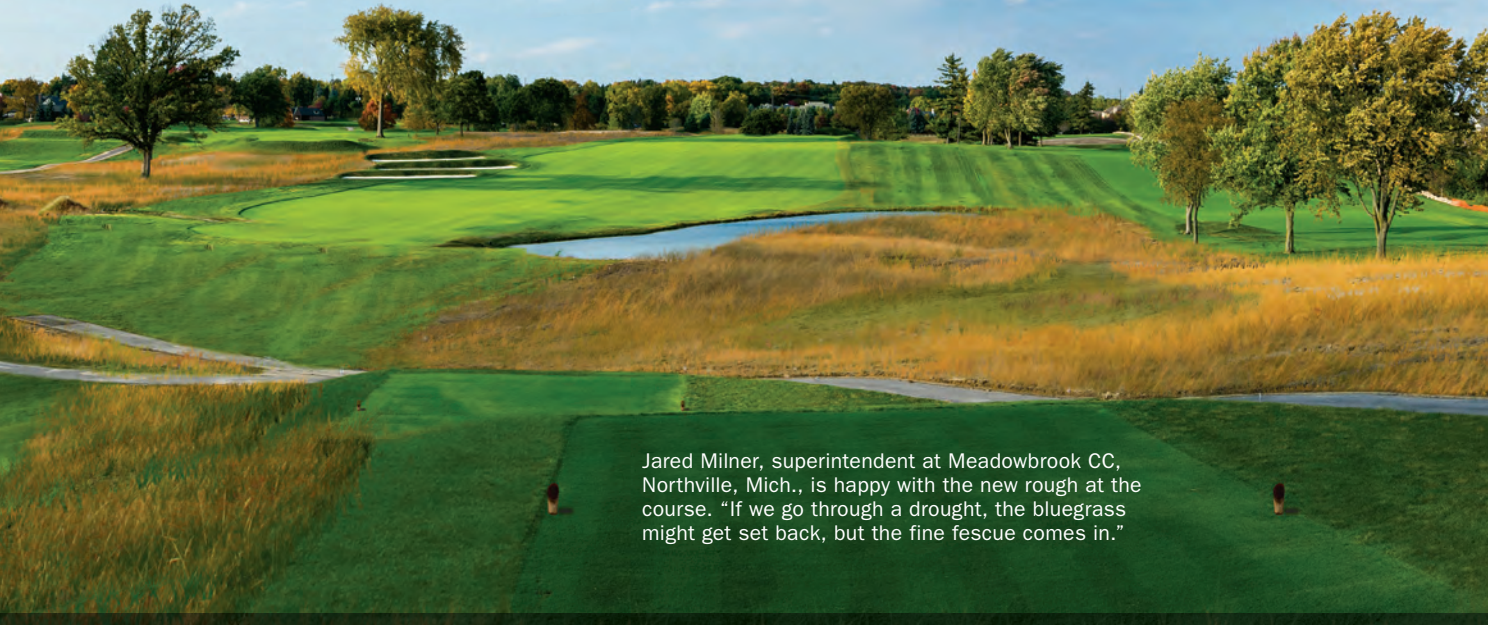
While the project is complete, work to

maintain these new native areas is ongoing.

“Anybody who knows anything about kikuyu grass knows that you can dump gasoline on it, light it on fire, and it'll still come back,” Kerley says. “Guys who have been through this before have told me it takes two or three years. We try to minimize our chemical use, but sometimes we can't help it and we put down a pre-emergent.”

The course keeps a nursery of native grasses and continues to put out new plantings. Kerley says the native grasses look best as the seasons change and they go in and out of dormancy. A native Midwesterner who has worked on golf courses coast to coast, he believes courses outside California could benefit from projects like

Continued on page 18



Jared Milner, superintendent at Meadowbrook CC, Northville, Mich., is happy with the new rough at the course. “If we go through a drought, the bluegrass might get set back, but the fine fescue comes in.”



Architect Jason Straka (inset) discusses the native grasses selected for Los Robles Greens. Straka visited Pinehurst (N.C.) Resort to emulate the work done there.



Continued from page 17
the one they completed.

"I'm from Evansville, Ind. I have some family friends who own a share of a golf course back home," Kerley says. "I was out there just last December for Christmas and we were driving the course together. There were areas that would be perfect for native areas. I think projects like this could benefit courses anywhere."

Better turf, better conditions

Asking tough questions has established Andy Staples as one of the deep thinkers in golf in recent years. His white paper

on the idea of "Community Links" (staplesgolfdesign.com/community-links) — which proposes the golf course as the central gathering point for the local community — has him out talking to municipalities about how they can adapt their courses to be more viable in today's market.

Dairy Creek Golf Course in San Luis Obispo, Calif., is rumored locally to be closing because of the drought. It is not — the county brought in Staples to ask some tough questions about what it might take for the course to survive.

"I was brought on to answer the ques-

tion, 'What if you lose all your water?'" Staples says. "Is that an 18-hole golf course and nothing else? What if you reduce the footprint like they're doing at Dairy Creek, and integrate golf into parks, parks into the golf?"

But Staples is not the grim reaper of turf. And he's not like the Bobs in the movie *Office Space*, a headhunter brought in to find areas where cuts immediately can be made to save the company a quick buck.

"I think it's interesting that 'efficient use of water' has suddenly become 'taking out turf,'" says Staples. "I understand if you have 180 acres of irrigated turf. But I'm not sure the course that has 90 acres should try to reduce to 60. That's like trying to take blood out of a turnip."

At a recent Staples project, Meadowbrook CC in Northville, Mich., the answer was changing turf types. Staples used Tee-2-Green's Pure Distinction bentgrass on greens and Pureformance Blend on fairways and tees. The rough was seeded with a fine fescue/bluegrass blend and irrigation was removed.

"They're using 60 percent less water and it is so much firmer now," Staples

Continued on page 22



Dairy Creek GC in San Luis Obispo, Calif., is grappling with the challenge of removing irrigated turf but keeping the course viable for the community.

Deliver championship conditions one more time

*Lexicon[®] Intrinsic[®] brand fungicide
just earned a fourth application*

BASF has big news. **Lexicon Intrinsic** brand fungicide is now labeled for four applications per year at the highest rate of 0.47 fl oz per 1000 sq ft. Whether you want to increase your rate or extend your window of protection, it's now easier to deliver championship greens.

Visit betterturf.basf.us to learn more.

 **BASF**

We create chemistry

Always read and follow label directions.

Lexicon and Intrinsic are registered trademarks of BASF Corporation. © 2017 BASF Corporation. All rights reserved.

Lexicon® Intrinsic® brand fungicide, for championship performance under pressure

The foundation for championship greens, **Lexicon Intrinsic** brand fungicide delivers peak disease performance under the most challenging conditions. This industry-leading fungicide optimizes disease control and provides plant health benefits for longer, stronger roots, increased growth efficiency, and greater stress tolerance.

- **Powerful residual** – **Lexicon Intrinsic** brand fungicide controls 27* diseases for up to 28 days, providing the confidence that comes with long-lasting control.
- **Broad-spectrum control** – This fungicide provides excellent control of a wide variety of key turf diseases, including fairy ring, dollar spot, brown patch, *Pythium* and *Bipolaris* leaf spot.
- **More resilient greens** – **Lexicon Intrinsic** brand fungicide provides faster recovery from stressors like heat, humidity, drought, heavy play and aeration.

For championship conditions on your greens, all year long, rely on **Lexicon Intrinsic** brand fungicide.

Always read and follow label directions.

Lexicon and Intrinsic are registered trademarks of BASF Corporation. © 2017 BASF Corporation. All rights reserved.

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

To do list:
Renovate course.
Host PGA.
Enjoy Kudos.



*Keith Wood, Superintendent,
and Shane Omann,
Assistant Superintendent,
Quail Hollow Club,
Charlotte, N.C.*

Keith Wood and Quail Hollow took on two of golf's toughest tests: a complete renovation and a major championship. To prepare, Keith applied **Lexicon**[®] **Intrinsic** brand fungicide coursewide. "We came out of dormancy with denser turf, healthy and raring to go," he says. The foundation for championship conditions, this innovative fungicide provides unmatched disease control and plant health benefits. "We have a ton of confidence in **Lexicon Intrinsic** brand fungicide," he adds.

Visit betterturf.basf.us to learn more.

 **BASF**
We create chemistry

// ASKING TURF QUESTIONS

Continued from page 18

says. “And we did open up the conversation of out-of-play areas and converting them to fescue. They had those areas so we converted 25 acres and the results are there — it looks and plays great.”

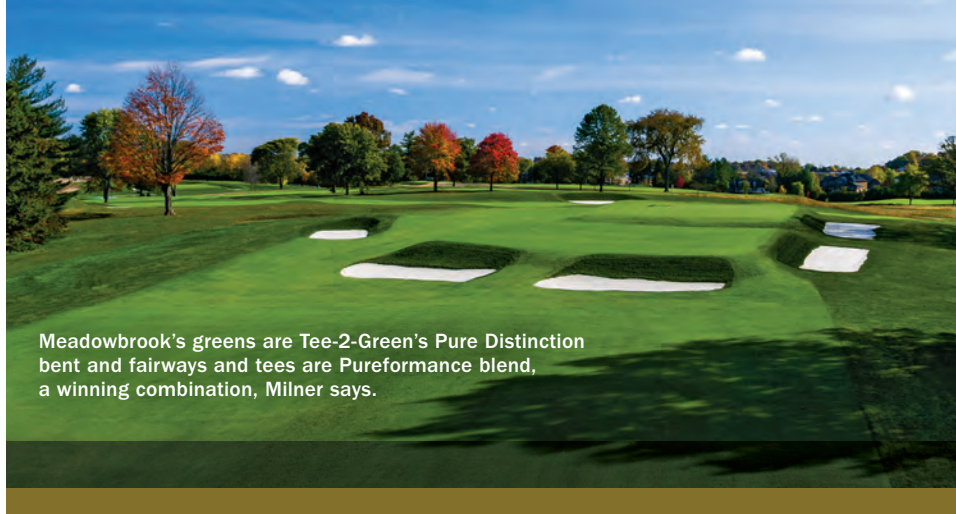
Meadowbrook Superintendent Jared Milner agrees, and says the golfers enjoy the converted course.



Jared Milner

“We pride ourselves on as firm and fast as possible, and a little brown is OK,” Milner says. “The course is much firmer and faster. Some of the ladies over age 60 told me they recently shot their lowest score. It’s because they’re getting more roll in the fairway.”

If the course goes through a drought,



Meadowbrook’s greens are Tee-2-Green’s Pure Distinction bent and fairways and tees are Pureformance blend, a winning combination, Milner says.

Milner says, the bluegrass in the rough might get knocked back, but the fine fescue comes in.

Added labor does come in the areas that are run-off areas for bad golf shots, or for walk-off areas for golfers. Those areas need to be kept tightly mowed. Milner keeps 25 people on the crew to manage the needs of the course.

“For the eye, the course looks tough,” Milner says. “I’m an 18- to 20-handicap and I like the way it plays. It’s a fun golf

course, that’s what you hear the most. A lot of bump-and-run. It’s a unique course for the state of Michigan, even the Midwest.”

Redirecting effort

At last September’s grand reopening of Los Robles Greens, Kerley was presented with a framed before-and-after artist’s rendering of No. 9 at the course. “To Ron Kerley, with our thanks,” reads the plaque. “Words cannot convey our gratitude for

Continued on page 24

PHOTO BY: BRIAN WALTERS PHOTOGRAPHY

TORRENT 2 MAX

TAKES PRODUCTIVITY 2 THE MAX.

NEW OPTION — MagnaPoint™ Technology eliminates guessing with the optimum blower angle every time.



Industry’s fastest nozzle rotation maximizes productivity.

Proven performance for ultimate air flow and backed by a 2-Year Warranty.



Instant Idle Down and Instant Resume runs only when you need it.



Optional Onboard Control keeps you running without the wireless controller.

Rugged hitch adjusts to fit all vehicles.



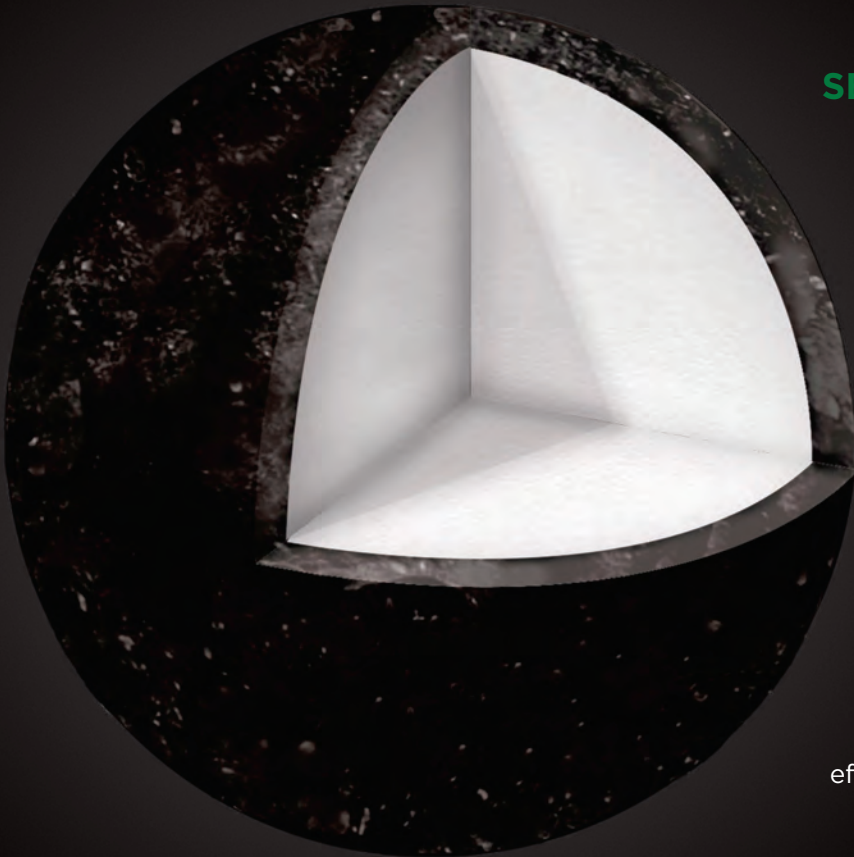
THE LEADER. SINCE 1961.

LEARN WHY ALL OTHER BLOWERS JUST BLOW.
DEMO A TORRENT™ 2 TODAY TO SEE THE DIFFERENCE.
Call 1-800-679-8201, or visit WWW.TURFCO.COM



HUMIC COATED UREA

BLACK IS THE NEW GREEN™



SENSIBLE

Urea-humate fusion technology with fulvic and humic acids provides a rich carbon source for maintaining and improving soil biology.

SPRAYABLE & SPREADABLE

HCU granules are 100% soluble and can be used in spray applications or dry-applied through typical dry spreading equipment.

SUSTAINABLE

With the power of humic acid, HCU granules enhance soil biology and provide turf quality and color that is comparable to enhanced efficiency nitrogen products.



DG/SG BUNDLE PROMOTION

THE MORE YOU BUY, THE GREATER YOUR REWARD
Featuring HCU™, Foltec® SG, Contec DG®, Humic DG™ and more!

For more information visit AndersonsPlantNutrient.com | [@AndersonsTurf](https://twitter.com/AndersonsTurf)

The 
Andersons®

DiscoverHCU.com

Continued from page 22

your hard work.” On the left, the before image, is wall-to-wall dark green grass. On the right, the after, there’s a lot more brown stretching around the green, front and back.

On the before, the sun is burning through a cloudy sky. On the after, a cool blue sky depicts more ideal, superintendent-friendly weather for a more superintendent-friendly course.

“I’ll be honest, (the presentation) meant a lot to me,” Kerley says. “It meant a lot to all of us at Arcis Golf. This is what we wanted, and if it wasn’t for everyone pushing hard, we would have missed the deadline (for the rebate.)

“For me on the superintendent side, I’ve been able to redirect water usage to places where I struggled before... I’ve been able to give the historically drier areas a little more water, even though water prices con-

Is turf reduction or replacement *right for you?*

Before going and ripping out turf at your course, Jay Blasi, ASGCA, Jay Blasi Design, advises every course to consult an architect. But there are some universal commonalities he looks for whenever he visits a course.


Where do golfers hit the ball? Play with some average golfers, Blasi suggests, and note where their shots go. Rarely do even bad golfers hit a ball 30 yards off a tee, or 60 yards left or right of a tee.

Don’t waste labor and effort under trees. Golfers hate playing from under trees, just like the crew hates maintaining these areas. But a tougher question is, what can be put in place that thrives and doesn’t cause lost balls or exorbitant maintenance?

Consider your grass types. If a course is trying to encourage bump-and-run play, it needs to have the appropriate grass for that style. Don’t expect golfers to be successful, or happy, if they’re playing through sticky kikuyu grass.

Golfer education is key. The biggest challenge with putting in native grasses is informing the golfers why it’s being done and what they should expect. Native grass is imperfect and takes a while to establish. If golfers aren’t patient, it could be trouble.

tinue to rise,” says Kerley. “From a player perspective, a lot of the places we took out just weren’t in-play areas. The players love it. Some tell me it’s the best they’ve ever

seen the course. OK, we’ve finally had rain, but beyond that? The course is in really good shape. It’s definitely better than it was two years ago.” 



WATER IN, NO MORE!

Hydration A-Plus & FLOTHRU A-Plus

Watering In Wetting Agents is a thing of the past. Take control of soil moisture and nutrient availability by spoon feeding with A-Plus Wetting Agents. The innovative technology of A-Plus Wetting Agents allows the user to have total control over their water usage and effectiveness at moving and retaining water, as well as reducing bicarbonates. Successful results are evident after applications of A-Plus Wetting Agents at rates as low as 0.7 Oz. per thousand square feet.



PLANT FOOD COMPANY, INC.

For a Distributor near you, Visit us Online or Call us Today. Let's Grow Together!
www.plantfoodgolf.com | 800-562-1291

A Simple Solution to a Complex Issue



Polylast Bunker Liner

Polylast Bunker Liner improves the flow of water through your bunkers by becoming an extension of your drainage system. The porous material allows water to percolate down into the soil at any point of contact which helps to prevent washouts. At the same time, the liner keeps your sand clean from migrating rocks and dirt from the native subsurface.

This unique patent pending solution is made in the USA and prefabricated from 100% recycled rubber which arrives ready to install. Installation is simple, requiring only the placement of the preformed pads, of which the seams are glued together. This liner doesn't require any special heavy equipment or any certified installation crews. The material is flexible, allowing it to easily contour to the curves and dips of your bunkers, while being strong enough to withstand migrating animals or the accidental scrapes from machine rakes.

Along the edges, Polylast™ Bunker Liner can be placed under the turf, creating a seamless edge while allowing the roots to thrive in the porous material. Additionally, trimming turf edges has never been easier.



Polylast Bunker Liner will maintain its strength and flexibility, winter after winter, even in freezing temperatures.

Polylast Bunker Liner is unaffected by cold weather, maintaining its strength and flexibility to -40 Fahrenheit eliminating any concern about breaks or separation from freezing.

10 YEAR WARRANTY... PERIOD!



MULTI-PURPOSE RECYCLED RUBBERIZED FLOORING



Polylast Systems Patent No.: US 8,389,624 B2 issued March 5, 2013.

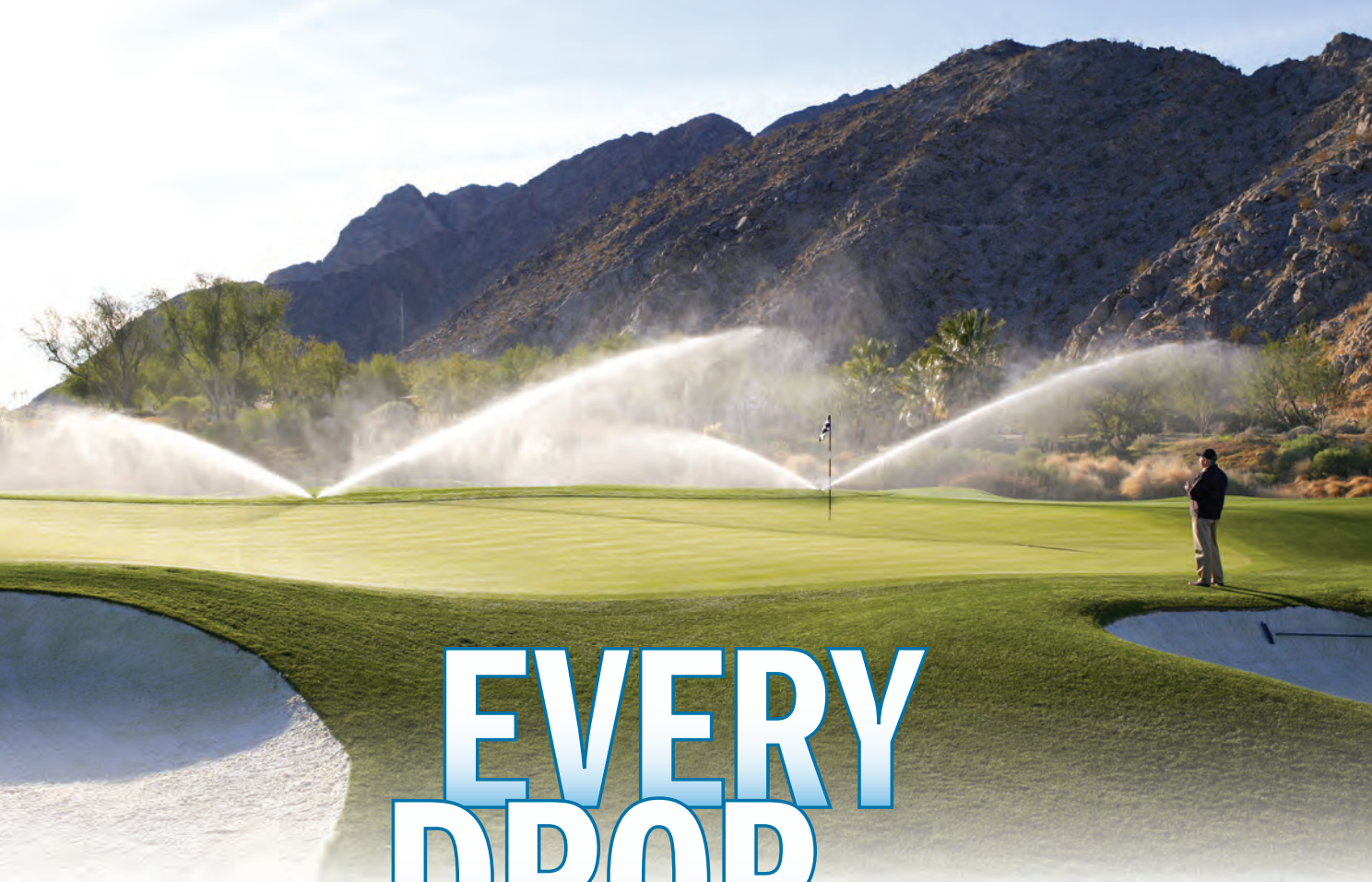
*Patent Pending

www.PolylastSystems.com

(480) 998-3033

MADE IN USA





EVERY DROP COUNTS

BY JOHN WALSH *and* GRANT B. GANNON

For the people who make a living in the irrigation industry, creating the next great innovation is a constant goal.

Superintendents thinking of autonomous technology related to their jobs may see images in their heads of driverless mowers or sprayers, but the most underrated “smart” technologies at their disposal might be the connection between their smart devices and the irrigation systems just below their feet. “No one wants to waste water,” says Steve Snow, director of sales for golf irrigation at Toro. “Efficient water use correlates with producing great turf conditions for golfers. Superintendents are (some) of the best water managers on the planet.”

A professional water audit can estimate the water savings potential for a property. Reducing overuse can save some properties 50,000 to 500,000 gallons a night. But the specific savings are highly dependent on climate and pre-existing equipment.

Manufacturers such as Toro, Rain Bird and Hunter Industries provide various tools — sprinkler heads, valves, control systems, weather stations, pump stations and sensors — to allow irrigation systems to be increasingly more efficient. And there are a slew of companies constantly working to help superintendents get the turf itself to better use the water it receives.

PHOTO COURTESY TORO

Instant decision making

Toro's focus is geared toward developing products based on what users tell them. One thing they hear is that courses are looking for a way to update their irrigation systems, especially those built during the 1990s golf boom, without investing in a complete renovation.

For those customers, Toro offers its conversion assembly, which simply replaces older sprayer "engine," and includes a new set of nozzles. Toro's Snow equates the process to taking the engine out of your car and putting in a more efficient engine that gets twice the gas mileage.

"Pulling one nozzle out and replacing it with another is not a big deal. The conversion assembly can drop into an older Toro sprinkler going back to the '60s, and clubs can improve the sprinkler efficiency by 20 percent to 25 percent just by doing that," he says. "We have guys that have



Toro is developing its irrigation product toward suggestions from the users, including a less expensive option to update an irrigation system, according to Steve Snow, director of sales for golf irrigation at Toro.



pulled out 1,000 old conversions and installed 1,000 new conversions, and they're saving water right off the bat."

Toro nozzles are threaded in, so superintendents don't need to remove many parts to make adjustments. They can take out a nozzle and put in a plug to irrigate a smaller area. The nozzles also feature built-in trajectory adjustment. Most of the sprinklers come with the ability to adjust by 1-degree increments down to 7 degrees

Courses looking for a way to update their irrigation systems without investing in a complete renovation have been turning to Toro's conversion assembly.

Continued on page 28

PHOTO COURTESY TORO

The Progressive Turf Equipment Advantage: We have a rough mower for you!

a 12 foot roller mower with independent deck float and the exclusive Pro Lift-N-Turn™ system

(10 foot) the most popular contour rough mower, thanks to its cut quality, reliability & value

The simplicity and low operating cost of a multi-use utility tractor and a **12 foot** or a **10 foot** is your advantage. Requiring about half the horsepower of a similar width Tier 4 self-contained ride-on, directly translates to significant savings in fuel year-after year. You'll love your roughs all over again!

(800) 668-8873 (519) 527-1080 fax: (519) 527-2275



The Better Built Choice.™

Continued from page 27

— almost flat — up to 30 degrees.

Another way Toro is hearing from irrigation system users is from the Lynx Central Control System's smartphone application. Users have made around 2,500 suggestions in the Lynx app, a technology that Snow calls "probably the most relevant (irrigation innovation) for today's world."

"Lynx is primarily a productivity tool for superintendents, and the more productive they are, the more they are able to get out of the system," Snow adds. "With it, superintendents are able to make decisions instantly. They're out on the golf course, they see something and they want to make a note, they want to make a change, they want to start something, they do all of that stuff now from a smart device."

Because of the suggestions Toro receives, the company updates the technology twice each year to give superintendents more ways to manage their irrigation. Superintendents can access the full Lynx system on any internet-enabled device from home or on the road.

"If you're going to push a million gallons in the evening, you want to do it in the shortest amount of time, and Lynx will run

Continued on page 30



TORO UPDATES LYNX TWICE PER YEAR, IMPLEMENTING THE BEST SUGGESTIONS. USER SUGGESTIONS HAVE RESULTED IN 2,500 IMPROVEMENTS TO THE LYNX APP ALONE.

PHOTO COURTESY TORO

Put Soil Moisture to WORK for Your Golf Course

With Hydretain, soil moisture vapor is no longer a wasted resource. Hydretain captures subsurface water vapor and converts it into plant usable water droplets to sustain healthy turf and plants for longer periods between irrigation cycles. Learn more at hydretain.com

Hydretain
ROOT ZONE MOISTURE MANAGER

LEAVING A PATH OF DESTRUCTION

ANNUAL BLUEGRASS WEEVIL ON THE MOVE

The annual bluegrass weevil (*Listronotus maculicollis*), or ABW, is on the move. What was once a pest specific to the Northeast now has superintendents as far south as North Carolina and west into Ohio anxious that their course could be next.

This turf-destroying insect feeds primarily on *Poa annua* (annual bluegrass), a variety common to golf courses in this part of the country. ABW adults overwinter in protected areas around the course, including tree litter, brush and roughs. In spring, they emerge and migrate to shorter turf (fairways, collars, greens and tees), where they lay eggs between the sheath and stem; the larvae develop and then feed.

The first to third instars are stem borers, moving between turf blades to feed and complete their development. The fourth and fifth instars are more damaging, as they move outside of the plant and forage on the turf crown, killing the plant in the process.

Scott Wunder, golf course superintendent and general manager at Piney Branch Golf Club in Upperco, Maryland, has been battling ABW since 2005, and this year is no exception. The unseasonably warm spring and summer, mixed with excessive humidity, created an ideal breeding ground for ABW.

"This May, we put down MatchPoint insecticide for our first application of the season," he says.

"We were able to apply MatchPoint during a time that worked for our schedule, and we didn't have to worry about watering it in immediately."

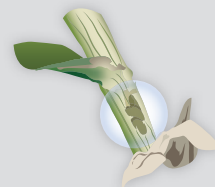
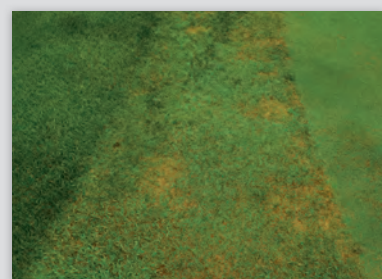
MatchPoint™ insecticide is an innovative solution for ABW control. Created using an advanced lignin formulation, MatchPoint offers enhanced photostability, giving

superintendents more application flexibility, as watering can be delayed up to 24 hours. When applied according to label directions, MatchPoint controls the first to fifth instar larvae and stops ABW feeding immediately.

"We typically make up to six ABW applications each year," Wunder says.

"We were able to apply MatchPoint during a time that worked for our schedule, and we didn't have to worry about watering it in immediately."

— Scott Wunder,
Piney Branch Golf Club



FIRST TO THIRD INSTAR LARVAE are stem borers. They move between the turf plants to feed and complete development, turning the plant brown.



FOURTH AND FIFTH INSTAR LARVAE are the most damaging. They feed on the external turf crown, killing the plant.

"This year I'm hoping to cut out at least one application after seeing the results with MatchPoint."

For more, visit DowProvesIt.com.



Dow AgroSciences

Solutions for the Growing World

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow. MatchPoint is not registered for sale or use in all states. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Always read and follow label directions.
©2016 Dow AgroSciences LLC T45-418-001 (09/16) BR 010-60998 DATOTURF6061



Continued from page 28

all of the algorithms to make that happen,” says Snow. “In the past, if this was something that was going to take superintendents hours to do, they weren’t going to do it. Now with Lynx, it’s going to take a matter of minutes and they’re going to take advantage of that to save water, save time, save energy, (and have) better course conditions because the tools are that much easier to use.”

The right hardware

Discussions on innovation center on control at Rain Bird, considering everything is in order with the irrigation system’s hardware on the golf course.

“You can have the best sprinklers in the world, but if not in the right design or installation, you’re not going to have maximum efficiency,” says Stuart Hackwell, Rain Bird national sales manager. “Given



“Given the system is properly designed and installed, what we are talking about is sprinkler reliability and efficiency, and how do you control the sprinkler operation?” says Stuart Hackwell, Rain Bird national sales manager.

the system is properly designed and installed, what we’re talking about is sprinkler reliability and efficiency, and how do you control the sprinkler operation?”

Rain Bird offers four central control systems, but the most important feature in all of them, according to Hackwell, is ease of use.

PHOTO COURTESY: RAIN BIRD

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

FIND OUT WHY THIS IS THE **#1 BRAND IN TOPDRESSING.**

CHECK OUT THE **WIDESPIN™ 1550.**

With the new WideSpin™ 1550, you’re in complete control of your topdressing program.

- **NEW PATENT-PENDING CONTROLLER** calculates your rates and saves your preferred applications.
- **NEW HYDRAULIC SYSTEM AND SPINNER DESIGN** gives you the greatest range and most even and consistent spread in the industry.
- **20%** greater hopper capacity and **33%** larger hopper opening for easier loading, faster refill and less spillage.

SEE IT IN ACTION.
Call 1-800-679-8201, or visit WWW.TURFCO.COM

“Easy-to-use software means that the superintendent can sit down and in five minutes set up the night watering cycles and with maximum system efficiency,” says Hackwell. “Everybody is pressed for time. The internet and cell phone data transmission are both so much faster that superintendents are using their smartphones and tablets to update their nightly irrigation programs in the field.”

With that increased performance in computing power, Rain Bird’s central control systems can do more things. One function Hackwell brings up specifically is the “pause and resume” during an irrigation cycle. The function allows superintendents to set up a trigger so that the software will automatically pause the irrigation system when it starts to rain. After the rain has passed, the computer will recalculate how much irrigation water it still needs to apply, then complete its cycle.



“Easy-to-use software means the superintendent can sit down for five minutes and set it up for the night and he’s got maximum efficiencies,” says Hackwell.

“So, if it was supposed to irrigate for 20 minutes, but after seven minutes it starts to rain, pauses for a 3-hour rain shower, Continued on page 32

PHOTO COURTESY RAIN BIRD

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

ZLINE
Bunker Systems

Show your bunkers some love with our affordable liner kits!

800-369-8451
www.zlineproducts.com



Continued from page 31

then it recalculates that time it needs to water, applying only the balance of what is needed. It will then water for that remaining time and then shut off,” explains Hackwell. “The irrigation system didn’t have to run the initial full cycle, and the course received the correct amount of water.”

Hackwell and Rain Bird believe that software will drive the future of irrigation systems. If a course invests in the field, the

pipe network, sprinklers and control system, superintendents can just add newly available software to the existing system.

“It’s like having a new app on your phone. It might tie into soil moisture sensors or your pump station, it ties into pressure sensing, and it becomes like one entire device to control the whole system. You’re going to connect a wire, and you’re rolling with the latest hardware or software. That’s something that wasn’t practical five years ago,” says Hackwell. “That’s where we see the future. It’s kind of a fun thing because we are well along the path.”

Water chemistry

Although they’re not in the equipment business, Ecologel, a Florida-based chemistries manufacturer, designs products to help turf perform better overall with the water that is being applied.

For example, the company’s Hydretain

product coats roots and slows water loss by holding moisture in the surrounding soil particles, the company says.

“Hydretain allows plants to go with as little as 50 percent of the water they typically need to get along,” says Jim Spindler, Ecologel’s director of agronomy. “It’ll help superintendent in situations like misses in irrigation systems or slopes that tend to dry out faster. Some of our innovations are starting to bring technologies together.”

Ongoing research from Rutgers University has resulted in success from combining Ecologel’s Hydretain and a technology called Cytogro, an EPA-registered bio-stimulant that comes from seaweed.

“In a drought study at Rutgers, it seems like the combination product has done exceptionally well on bentgrass at fairway height, seeing a 40-percent reduction in water use,” says Spindler. “The second part of the study should start in September.” **G**

PHOTO COURTESY: TORCO

The Original & Most Powerful Turbine Blower

DON'T SETTLE FOR KNOCKOFFS!
Take a side-by-side demo.

NEW EFI MODEL AVAILABLE

- 26.5 HP FUEL INJECTED ENGINE
- ADDITIONAL FUEL SAVINGS UP TO 25%
- FASTER RPM THAN ANY OTHER TURBINE BLOWER
EQUALS MORE VELOCITY & VOLUME
- WIRELESS START/STOP FUNCTION (NO CHOKE REQUIRED)

WIRELESS INSTANT IDLE FEATURE

PTO, Hydraulic & Larger HP Models Available.

ph 716.592.2700
www.buffaloturbine.com
Dealer Inquiries Welcome.
Contact us for local dealer info.

Made in America

BUFFALO TURBINE

SUPERthrive®
Your Essential Turf Tool!

SUPERthrive® ~ the secret to rugged sports turf.

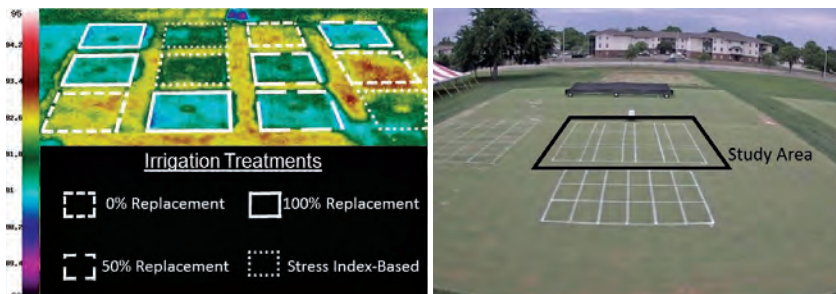
| | |
|-------------------------------------|------------------------------|
| SUPERthrive® Features | SUPERthrive® Benefits |
| • Unique vitamin solution with kelp | • Restores plant vigor |
| • Non-toxic ingredients | • Promotes chemical balance |
| | • Reduces transplant shock |

Always Ahead in Science and Value

Visit our New Website! / www.SUPERthrive.com



Super Science



Above are examples of visual images (left thermal, right visual) captured every 10 minutes. In the left image, warmer, drier treatments show as yellow and red, and cooler, moist treatments show as green and blue.

// THERMAL-WATER VISION

USING HEAT VISION TO AID WATER-USE PREDICTIONS

By Joe Foral and Bill Kreuser, Ph.D.

Thermal, or infrared, camera systems being developed to measure water status in turf have the potential to become an essential tool for precision turfgrass management. As these systems become more accessible, models need to be created to provide clear management decisions. The goal of this study is to create a thermal-imagery assisted algorithm that measures real-time water use in a creeping bentgrass green.

The study area is monitored by a Turf-Vu Hawkeye FLIR (forward-looking infrared) camera system. Thermal and visual images are recorded from the creeping bentgrass research green every 10 minutes. Irrigation treatments include 0-percent, 50-percent and 100-percent water replacement determined by a weighing lysimeter and an experimental stress-index threshold. Water replacement is measured daily by weighing a 9-inch diameter lysimeter embedded in each plot. The lysimeters are 16 inches in depth, and the soil construction matches the USGA profile of the surrounding turf. Each plot is irrigated by hand with a flow meter attached to a nozzle.

The lysimeters allow us to measure daily water use, including water lost to leaching and through evapotranspiration (ET). We are correlating actual water use with estimated water use from an on-site weather station. The difference between the actual and estimated is reflected in the crop coefficient (Kc). While early, we are finding Kc greater than 1 in the 100-percent daily replacement treatment, while the non-irrigated plots have Kc less than 0.7. These plots also are hotter. Over the coming winter we will develop models to relate the increase in canopy temperature with measured water use and crop coefficient.

Joe Foral and Bill Kreuser, Ph.D., University of Nebraska-Lincoln. For more information, you may reach Foral at jforal@unomaha.edu.

NEWS UPDATES

MONTGOMERY COUNTY, MD., PESTICIDE BAN OVERTURNED

The Montgomery County, Md., Circuit Court struck down the county's ban on lawn and garden pesticide use on private property, deeming it unlawful and preempted by Maryland law.

In November 2016, Responsible Industry for a Sound Environment (RISE), along with seven residents, six local businesses and CropLife America, filed a legal challenge to Montgomery County's ban on the application of hundreds of lawn and garden products on private property. A grassroots coalition of more than 400 residents, homeowners and licensed professionals worked together to oppose the ban since it was introduced in 2014.

RISE says it is pleased with the court's decision.

"We are gratified that the court agreed that the county's ban on the use of state- and EPA-approved pesticides on private land is preempted by Maryland state law, which already provides uniform and comprehensive regulation of pesticide use across the state," says RISE President Aaron Hobbs.

The ban originally narrowly passed the County Council, with County Executive Ike Leggett expressing doubt about its legality before allowing it to go into effect without his signature. This grassroots coalition succeeded in laying the groundwork for a successful legal challenge to a contentious and complex ordinance, according to RISE.

EARLY BENTGRASS CULTIVARS HAVE ROOTS IN SOUTH GERMAN MIXED BENTGRASSES THAT WERE INTRODUCED TO THE UNITED STATES IN THE EARLY 1900s."

Keenan Amundsen, Ph.D.
(see story on page 34)

// BENTGRASS BONANZA

Going wild with bentgrass

By Keenan Amundsen, Ph.D.

I recently drove by a billboard promoting nutrition education and it asked if I could name seven kinds of berries. I failed miserably, even being married to a dietitian. I started thinking of other categories, including different turfgrass species. Bermudagrass, buffalograss, creeping bentgrass, Kentucky bluegrass, perennial ryegrass, tall fescue and zoysiagrass quickly came to mind, but I wanted more of a challenge.

I envisioned a billboard showing a picturesque golf course putting green, with the billboard copy asking passersby to name seven different bentgrass species. The bentgrasses represent the *Agrostis* genus, and creeping bentgrass (*Agrostis stolonifera*) often is regarded as the gold standard for a high-quality putting green surface and is the one that most readily comes to mind.

Considering water movement through plants and photosynthetic capacity, it has always amazed me that a plant can tolerate and even thrive when mowed at the exceptionally low heights of cut used on golf course putting greens. Considering the type of stress creeping bentgrass is subjected to as part of its daily use and management on courses, it is among the hardest cool-season grass species grown for turf. The other commonly known bentgrass species, but to a lesser degree than creeping bentgrass, are Colonial bentgrass (*A. capillaris*), Highland bentgrass (*A. castellana*), redbot bentgrass (*A. gigantea*), and Velvet bentgrass (*A. canina*).

Even if you could name those five species, it likely would be difficult to name just two more, even though there are more than 150 different bentgrass species. I was able to rattle off California bent (*A. densiflora*), Northern bent (*A. mertensii*), Dune bent (*A. pallens*), Cloud



Research provided and funded by USGA.

grass (*A. nebulosa*), Idaho redbot (*A. idahoensis*), Clavate bent (*A. clavata*), and Brown bent (*A. vinealis*) along with 10 others, but I am a self-proclaimed bentgrass enthusiast who studied the genus for my Ph.D.

EARLY BENT

Early bentgrass cultivars have roots in South German mixed bentgrasses that were introduced to the United States in the early 1900s. These mixed bentgrasses often consisted of several different species and biotypes. The mixed bentgrass stands would segregate depending on management and environment, and from within stands a few patches were recognized for their characteristics important for golf course putting greens. The best performing patches were selected and ultimately became the first vegetative bentgrass cultivars developed in the United States.

Since these early selections, bentgrass breeders have spent considerable time and effort developing uniform, stable, high-quality bentgrass cultivars. Turf uniformity describes the consistent appearance of the turf, and a stable bentgrass cultivar is one that doesn't change over time.

Development of stable and uniform populations through plant breeding can be challenging in highly outcrossing species such as the bentgrasses. Highly outcrossing species tend to pollinate unrelated plants of the same species,

often regulated by physical or molecular barriers that prevent or reduce the likelihood of self-pollination. Outcrossing increases diversity in bentgrass populations. From a plant-breeding perspective, these heterogeneous populations often are desirable in early breeding steps to increase the chance of combining desirable traits and for finding unique off-type plants. Diverse populations are less desirable at the later breeding stages, when uniformity and stability are more important.

The promiscuous nature of bentgrasses also can be useful for moving traits from one genetic background into another and in bridging species boundaries. Plants of the same genus often are labelled as separate species if they are not sexually compatible. Many grasses don't adhere to these species boundaries and are able to pollinate across the species divide. A great example lies with creeping and Colonial bentgrasses, which have innate differences in disease resistance.

Creeping bentgrass generally is susceptible to dollar spot disease whereas Colonial bentgrass is resistant, and dollar spot is the most economically important disease in golf course management. Hybrids naturally occur between creeping and Colonial bentgrass, and researchers have transferred dollar spot resistance from Colonial bentgrass into experimental creeping bentgrass lines using traditional plant-breeding methods. With more than 150 different bentgrass species adapted to different growing environments and tolerant of a variety of stresses, there are opportunities to identify important traits from wild or non-domesticated bentgrasses and move those traits into elite creeping bentgrass cultivars through conventional plant breeding.

WILD CHALLENGES

Bentgrass breeders have more challenges when working with wild plant material than just overcoming hybridization problems. Because humans have not selected wild bentgrasses, they often carry poor turfgrass-quality traits. For example, when introducing stress tolerance from a wild species, the process also will introduce a sparse canopy, coarse leaf texture, poor traffic tolerance or other traits that would take several generations to remove through traditional plant breeding. As such, many bentgrass breeders who have worked tirelessly to genetically stabilize uniformity and turf quality traits are reluctant to introduce wild material into their breeding programs.

Creeping bentgrass cultivar development already is a long process, typically taking as long as 12 years from the early crosses to a line ready for commercial release, and the introduction of wild material would slow the process and set back breeding efforts. To overcome the challenge of working with wild bentgrasses, a two-year study sponsored by the United States Golf Association was initiated in 2014. The project, titled *Low input performance of Highland, heat, and drought tolerant bentgrasses*, focused on the evaluation of plant introductions from hot and dry climates. The project evaluated the performance of 72 bentgrass accessions (entries) representing nine different species in three separate studies. The purpose of the project was to initially evaluate diverse bentgrass plant material and then establish breeding efforts to improve the genetic background of that material so that bentgrass breeders could take advantage of those unique traits without jeopardizing turf quality in their elite breeding material.

The USGA project obtained seeds from the National Plant Germplasm System (NPGS) for bentgrass accessions collected from Afghanistan, Ethiopia, Iran, Greece, Kenya, Mongolia, Portugal, South Africa, Spain, the United States and Turkey (Figure 1). The NPGS is

FIGURE 1



Collection sites for National Plant Germplasm System bentgrass entries evaluated for turfgrass performance in Mead, Neb.

FIGURE 2



Establishment-rate differences of National Plant Germplasm System bentgrass entries.

part of the USDA-ARS Germplasm Resources Information Network and is a germplasm repository, maintaining the largest collection of publicly available bentgrass accessions. The project evaluated the performance of the bentgrasses when mowed at a fairway (0.5 inch) or lawn (2 inches) height of cut. A third study was established and not mowed to evaluate canopy architecture and timing of seed set. The research was conducted at the University of Nebraska turfgrass research farm near Mead, Neb. Minimal supplemental irrigation was applied to keep plants alive, and 2 pounds of N per 1,000 sq. ft. was applied annually. During the two-year study, plants were evaluated for several important turfgrass characteristics, and Penncross, T-1 and Alpha creeping bentgrass cultivars were included for comparisons with the

NPGS bentgrasses.

EVALUATED CRITERIA

During the establishment year of the project, color, canopy density, leaf texture and establishment rate were evaluated and statistical differences were observed among the bentgrass entries in each rating category (Figure 2). Thirteen plant introductions established as quickly as the named cultivars. Establishment rate is an important characteristic for turfgrass species because it reduces the length of time required to grow in a new turf stand and it can be an indicator of the line's ability to recover from stress or damage. Four plant introductions were as dense as the named cultivars. Increased canopy density helps the turf naturally outcompete weeds

Continued on page 36

ALL PHOTOS COURTESY KEENAN AMUNDSEN

FIGURE 3



Late-season color retention of National Plant Germplasm System bentgrass entries.

Continued from page 35

and is important for golf because it can impact ball roll and lie. Not many differences were observed for color, and 45 entries were as dark green as the named cultivars. There has been a push in the turfgrass industry for darker green cultivars, using Kentucky bluegrass as the model because most turf-type cultivars have dark green color. More recently, the emphasis has been on uniformity of color because a light green turf is recognized for its light color only when dark green plants disrupt its uniformity.

At the end of the establishment year, several entries stayed green late into the fall, while most of the entries turned straw color as they transitioned to winter dormancy (Figure 3). Some of the entries that maintained late-season color did not appear to have the winter dormancy response and suffered from winter injury, evident as reduced-percent plot coverage in the spring of the following year. One entry maintained both late-fall color and good plot coverage the following season, and it may be better equipped to tolerate winter stress while extending the growing season of bentgrasses used on putting greens.

Leaf texture, or the width of the leaf blade, also was visually estimated. Twelve entries had finer leaf texture than the named cultivars and eight had coarser leaf texture. Finer-textured grasses contribute to increased canopy density and improved mowing response, and generally are preferred for golf course putting greens.

We generally don't consider bentgrasses for lawn applications because we

think of creeping bentgrass as the only bentgrass species and it does not do well when managed with a rotary mower. However, entries that have more upright growth and coarse texture may tolerate a 3-inch

mowing height. One entry, a Clavate bentgrass, had a good establishment rate, coarser leaf texture and good quality at the higher mowing height. This entry has potential for use in low-input golf course roughs or lawn areas.

The final measure of importance in this study was stand persistence, measured at the end of the project as a visual estimate of percent-plot coverage. Many bentgrasses are annual types and would not persist in a turf stand. In the fairway study, 16 entries had as much plot coverage as the named entries, and in the lawn-height study nine entries had as much plot coverage as the named cultivars. At the lawn-mowing height, 20 entries had at least 50-percent plot coverage and 26 had at least 50-percent plot coverage at the fairway height of cut. This measure of plot coverage is important, but no one reading this article would be satisfied with 50 percent of his or her lawn being covered by turf. These data, however, give an indication as to which lines under study are likely perennials and which are annuals, which is important information when making crosses to improve the bentgrasses.

GOING FORWARD

Previously, importance was claimed for novel traits from wild bentgrasses and how they could be used to improve bentgrass cultivars, but this study just describes evaluation of traits important for any turf. So, where is the novelty? For wild germplasm to be useful it must be aesthetically and functionally compatible with cultivated bentgrasses. This project

provides the first data of important turf traits from this bentgrass collection, and it was successful because wild extant bentgrass germplasm was shown to be diverse, with potential as a source of stress resistance and other traits of interest. Research still needs to be done to move desirable traits from wild germplasm into stable genetic backgrounds with higher quality that could be used by bentgrass breeders without diminishing quality of the elite plant material.

Co-principal investigators on the USGA project were Bill Kreuser, Ph.D., and Leah Brilman, Ph.D. Kreuser is a turfgrass extension specialist at the University of Nebraska and has considerable experience evaluating turfgrasses in different environments and in response to various treatments. Brilman is a turfgrass breeder working with Seed Research of Oregon. Like me, Brilman is a bentgrass enthusiast and evaluates the commercial appeal of traits and plant material identified in this study. If the next phase of the project is successful and high-quality germplasm is developed, Brilman or another bentgrass breeder could use that material directly to further improve their elite bentgrasses. Our turfgrass breeding program at the University of Nebraska is focused on developing turfgrasses suitable for reduced-management environments. As such, the bentgrass entries that persist with reduced fertility and irrigation or those that perform well at the higher mowing height are of interest to our program. It will be several years before any of this material will be useful to breeding programs, but the project is an important first step for identifying the turf potential of NPGS wild bentgrass accessions.

Acknowledgements

I would like to thank the United States Golf Association for financial support of this project.

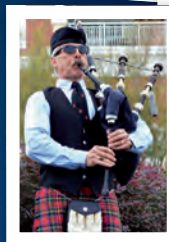
Keenan Amundsen is an assistant professor of turfgrass genetics at the University of Nebraska-Lincoln. You may contact him at kamundsen2@unl.edu.

Golfdom Summit

2016 Highlights

“What a great event! I really believe y’all have found a ‘sweet spot’ in the superintendent community, in that we have generally been limited to big conferences where we have no time or really inclination to meet one-on-one, or a very haphazard meeting with a local sales rep. The *Golfdom Summit* really let me dig a little deeper and think about options/products in a more rigorous and detailed fashion. It goes without saying, the chance to interface with such talented superintendents was icing on the cake.”

—SCOTT EBERS, CGCS, COLONIAL CC, FORT WORTH, TEXAS



“The *Golfdom Summit* was a fantastic experience and like no other event, meeting, seminar or gathering of superintendents that I’ve ever experienced. From learning to networking, from fellowship to bonding, it could not have been better.”

—THAD THOMPSON, TERRY HILLS GC, BATAVIA, NY

“Wow, what a great event! I was thoroughly impressed with all aspects of the Summit and came away educated, energized and full of new ideas I can use to make my course better!”

—JEFF ELDRIDGE, CGCS, LAKE QUIVIRA (KAN.) CC

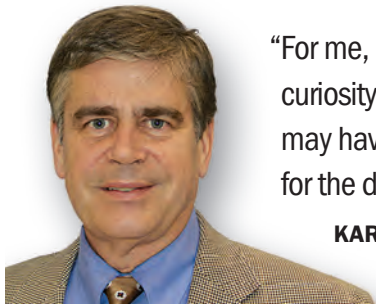
Thank You to Our Sponsors



Golfdom Summit 2017

Nov. 28–Dec. 1

www.GolfdomSummit.com



“For me, it seems like I have lost a degree of curiosity in what I am looking for, and that may have resulted in a loss of appreciation for the depth and breadth of a subject.”

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

Processing information

I store my 1969 Pontiac Firebird in a garage rented from a nearby apartment complex. Like most garages, it's rather devoid of décor besides some vertical 2x4s. To correct this, I began to look at creating “garage art” and decided to decorate the walls with vinyl record albums that featured cars on the cover. Nothing goes together more than cruising with music blaring from the radio.

My first step was to construct a “picture frame” out of plastic tile trim from the local hardware store so I easily could slide the albums in and out. The second step was to find those 50 or so albums I needed to fill the frame.

I anticipated that finding these types of albums would be difficult given the decline of vinyl and the birth of CDs in the 1980s. The demise was so swift that Sony stopped making vinyl records in 1989. Music delivery has continued to evolve further away from vinyl with the advent of iTunes and streaming. I thought I'd be relegated to flea markets and garage sales.

To my surprise I came across several record stores around Columbus. These stores were like throwbacks to the 1960s and '70s. I found vinyl albums from back in the day to current recordings. I quickly realized that vinyl record sales have been growing recently at a

double-digit pace, and in fact Sony has just re-entered the vinyl market.

I preferred searching through the stacks of \$1 albums, because let's face it... they were for a garage. As I've evolved toward being an album collector, however, my price ceiling rose to \$20.

I collected records from musicians from the 1950s to now. If a car was on the cover, I didn't care about the type of music, artist or if the record played (I don't have a turntable). I realized quickly that I needed to identify the car. What credibility would I have if I didn't know?

As I identified the make and model of the cars, I started to become curious about the artists and the music itself. Every album had a story. In a short time, I learned and broadened my music expertise well beyond novice to a music connoisseur... at least for

bands and music that feature cars on the cover.

Collecting albums allowed me to reflect on how I gather information in my own profession. I have evolved from receiving my information originally in an analog form (physical book, journal, magazine, etc.) to digital. I often look for specific digital things online or a quick answer to my question. My searches are done in the moment and often in a hurry. Just give me the answer! For me, it seems like I have lost a degree of curiosity in what I am looking for, and that may have resulted in a loss of appreciation for the depth and breadth of a subject.

In contrast, when I received my information in an analog form through the mail, I would physically handle the journal or magazine and thumb through it, glancing at things that might not be relevant (a study on a different crop or a product advertisement) but might spur an unexpected curiosity. Physically interacting with a journal or magazine seems a much more interactive learning experience for me than a computer screen.

Justifiably, I could be criticized for complaining, which I do, and proclaiming “bring back the old days,” especially in contrast to Millennials, to whom gathering digital information is second nature. However, I'm not quite convinced of that criticism.

Who is driving the resurgent vinyl record market? Millennials. Why? I can't believe it's nostalgia when Millennials were born after the demise of turntables.

A possible reason is that it's more informative and thoughtful to interact with a product that you can touch physically.

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

Defending Our Turf

Congratulations to the *Golfdom* editorial and design teams on another haul of TOCA Awards!

Golfdom

The *Golfdom* team once again led all golf market publications with 16 total Turf & Ornamental Communicators Association (TOCA) awards — matching the number won by GCI, GCM and Superintendent combined!



TOCA First Place Awards

- » **Design**
Printed magazine/two-plus page design, advertising: “Hole of the month”
Grant B. Gannon, Pete Seltzer
- » **Photography, Video And Multimedia**
Best single photo – Use of stock art “The sky is the limit” Pete Seltzer
- » **Photography, Video And Multimedia**
Best single photo – created by a TOCA member or freelancer commissioned by a TOCA member “Pay up or go home,”
Seth Jones
- » **Photography, Video And Multimedia**
Best print magazine cover (stock photos, commissioned art, illustrations, typography, etc.) “So you’re considering the dark side,” James Bennett, Seth Jones, Pete Seltzer
- » **Special Projects**
Writing for special projects “A tribute to the king” Seth Jones, Pete Seltzer, Grant B. Gannon, Mark Woodward, Joel Jackson, Steve Wright, Karl Danneberger
- » **Special Projects**
Miscellaneous special publishing project “The Fall Classic, Early Order Program special” Seth Jones, Pete Seltzer, Grant B. Gannon, Jared Nemitz
- » **Special Projects**
Special Event – Publishing “The Golfdom Summit” Kevin Stoltman, Pat Roberts, Seth Jones, Bill Roddy, Craig MacGregor
- » **Writing**
Turf feature article – commercial publications “The admiral of ultradwarf,”
Seth Jones
- » **Writing**
Product information article – commercial publications “Hidden beneath the GIS waves,” Ed Hiscock, Grant B. Gannon
- » **Writing**
Headline writing – commercial publications “In-tents course management,” Curt Harler



TOCA Merit Awards

- » **Design**
Cover page design – printed magazines
Page 15 – “The sky is the limit,” Pete Seltzer
- » **Photography, Video And Multimedia**
Portrait/Personality (photo of individual or group of individuals) “Game on!,” Pete Seltzer, Matt Hawthorne
- » **Writing**
Series of columns by regular department columnist – commercial publications
“Keeping up with the Jones,” Seth Jones
- » **Writing**
Product information article – commercial publications “What’s new at GIE+Expo,”
Seth Jones
- » **Writing**
Operations profile – commercial publications
“Reverse the Course,” Chris Lewis



Gardner Award – “Best of Show”

Photography, Video and Multimedia – Publishing
“So You’re Considering the Dark Side” *Golfdom*, North Coast Media, James Bennett, Seth Jones, Pete Seltzer

The Shop

// MUST-HAVE NEW EQUIPMENT



1 TL Turf Maintenance Lifts

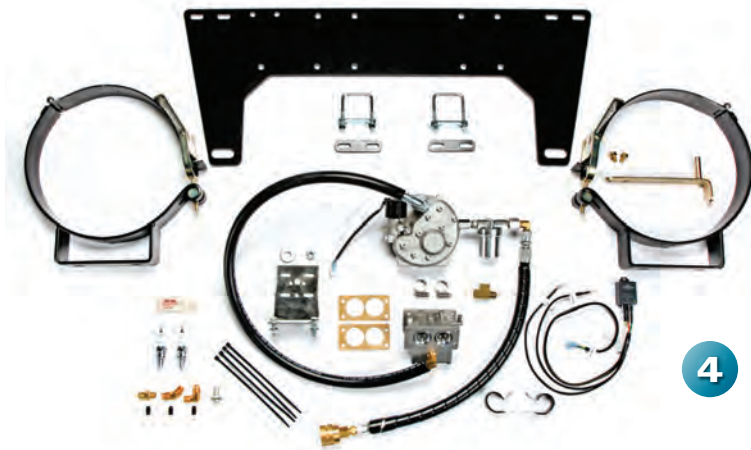
ROTARY's TL line of Turf Maintenance Lifts offers three options for mechanics to choose from: TL07, TL07-EH2 and TL07-EH4. All three models can accommodate both three- and four-wheel turf equipment and feature a 2-hp engine. High-pressure cylinders in each column provides the TL lift its 7,000-lbs. lifting capacity, and the slider block bearings are made with self-lubricating and maintenance-free Tivar 1000 polyethylene. The TL07 can lift equipment up to 68 inches, while the TL07-EH2 and TL07-EH4 have a maximum lift height of 71 inches. rotarylift.com

2 2032 ES scissor lift

With a lift capacity of 800 lbs., **JLG**'s 2032 ES scissor lift allows mechanics to raise various pieces of equipment around the shop. Bob Pruneau, head mechanic at The Links at Brunello, Timberlea, Canada, says on his Bob's Shop blog (golfcoursemechanics.blogspot.com) that an advantage of scissor lifts is their mobility. The lift runs on a zero-emission, 24-volt, 8-hp engine, and comes with 16-inch x 5-inch non-marking solid tires. The platform can reach a height of 20 feet in 28 seconds and then lower in 40 seconds. jlg.com

3 GS-2632 scissor lift

The zero-emission **GENIE** GS-2632 scissor lift from **GENIE** has a platform that starts at a height of 3 feet 10 inches, and can reach 32 feet. Its 89-inch x 32-inch steel platform can lift 500 lbs., and the product runs on four 6-volt, 225-Ah batteries. Bob Pruneau (see item 2) adds on his blog that he was skeptical about how much he would use his scissor lift, but admits he "uses it every day." genielift.com



4



6



5

CHECK OUT MORE NEW EQUIPMENT ONLINE

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

4 Alliance small engines

The propane fuel system from **ALLIANCE SMALL ENGINES** (ASE) is designed for small gasoline utility engines ranging from 1 hp to 45 hp. Each kit comes with all items necessary to install the system and includes OEM-quality components, according to ASE. All conversion kits are EPA certified and tested in an OEM-sanctioned test lab. The chassis brackets are pre-drilled for exact fixture for each application and are tested to five times the typical weight tolerances, according to ASE.

Allianceautogas.com

5 Chipper shredder

The **YARDMAX** 2-in-1 Chipper Shredder, released this summer, features a versatile design and stamped-steel construction to mulch yard waste. This chipper, with its Briggs & Stratton XR Professional Series engine, delivers direct-drive engine power designed to support constant self-feeding chipping with no lag time. Two J-shredder hammers and two rectangular hammers cut wood down to size and mulch yard waste, while two chipping knives add to the performance. According to Yardmax, the product can reduce 10 bags of yard waste into one bag of mulch.

yardmax.com

6 Propane Power Systems

PROPANE POWER SYSTEMS (PPS) offers conversion kits that convert and re-certify CARB and EPA engines to run on propane. Eric Kulaas, equipment tech supervisor at the Vinoy Renaissance St. Petersburg (Fla.) Resort & Golf Club, has converted at least four pieces of equipment using PPS's kit, and on machines with the leak detector they had merely to re-drill the mounting holes for the tank plate. "The system went on with no problems and we were running right away," says Kulaas. Each kit includes the necessary parts for conversion, hard copy and video instructions, a replacement emissions label and an owner's manual.

propanepowersystems.com

The 19th Hole



RICHMOND
EST 1885

David Dore-Smith

SUPERINTENDENT // Copperleaf Golf Club, Bonita Springs, Fla.



What would you like? I'll have a Michelob Ultra in a bottle.



Tell me about your family.

I've been married to my beautiful wife, Christine, for 12 years. She's a first-grade teacher. My beautiful daughter, Brooke, is in the 6th grade, and my son, Brady, is 9 years old, in the 4th grade. He goes to the same school where his mom teaches.

What is your favorite pastime? It's evolved as I've gotten older. It used to be dirt bikes. Now it's playing golf with my friends and hanging out with my family.



Seen any good movies lately? I just watched *Alien: Covenant*, it was really good. I'm a big fan of all the *Alien* movies.

So, what inspired you to move from your native Australia to America?

The women! In Australia you're watching *Baywatch*, 21 Jump Street, Beverly Hills 90210... it turned out not to be true, but it looked good. But in truth, the Ohio State turf program brought me here. I was 23 when I got here, and I ended up staying.

What do you miss the most from back home? The women! No, I'm kidding. I miss my mum and dad, my brothers. I miss the sports. I miss the food.

Any food in particular?

Oh yes, a meat pie with tomato sauce — what you call ketchup.



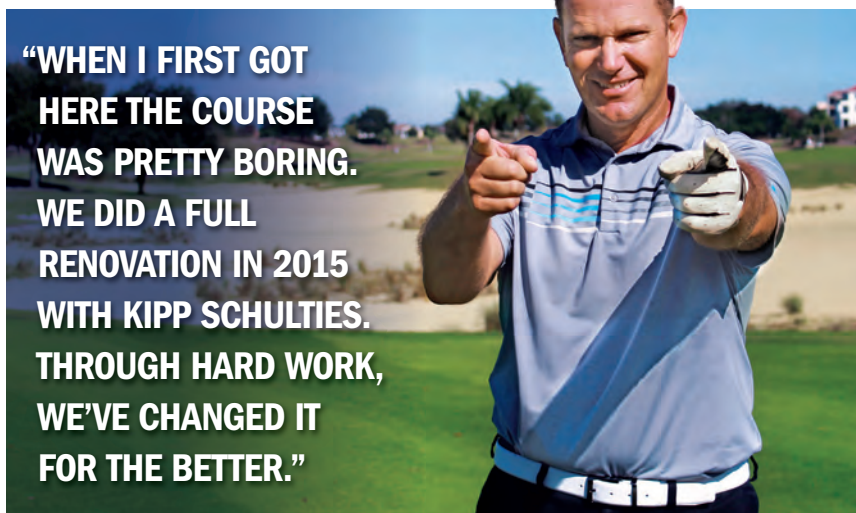
What are your sports teams? I don't follow American sports at all. Australian Rules Football, I'm a Richmond Tigers fan, and I follow Australia's international cricket team.

When did you know you wanted to be a superintendent? I originally wanted to be a landscape builder. I went to school for it. I went out to a golf course to work on their landscaping around the clubhouse and did a decent job. On the very first day, the superintendent stopped to see who I was and told me he had an opening. It was 10-percent unemployment in Australia at the time, so I jumped at it. It turns out, this field has everything I ever wanted to do, it is so rewarding.

How often do you go back to Australia? I've been back a couple times. With a wife and kids, it's expensive. We went a few years ago and it was \$8,600 for the four of us — and that was just the airfare.

When you came to America at age 23, did you think you might be here to stay? March of this year was the 20-year anniversary of me coming to Fort Myers. I didn't know I would stay... but I got hooked up with one of those beautiful American women and it ended up working out that way.

As interviewed by Seth Jones, Aug. 18, 2017.



"WHEN I FIRST GOT HERE THE COURSE WAS PRETTY BORING. WE DID A FULL RENOVATION IN 2015 WITH KIPP SCHULTIES. THROUGH HARD WORK, WE'VE CHANGED IT FOR THE BETTER."

Visit rainbird.com/DefendYourTurf to see how top courses like Old Marsh Golf Club are saving more water with Rain Bird.

Follow us @RainBirdGolf 



Getting more green
from every gallon.
That's intelligent.



Rain Bird innovation helps Old Marsh Golf Club conserve more water.

Carved into the Florida wetlands, this coveted club uses Rain Bird irrigation to preserve a limited water source. Diverse rotor and nozzle options give them precision in both large and small areas—distributing water exactly where they need it. Cirrus™ Central Control with Rain Watch™ mobile control helps optimize water use, giving them the power to defend their turf—and water.

RAIN  BIRD®

FINALLY: A HERO IN THE BATTLE AGAINST DOLLAR SPOT!



KABUTO™: THE DOLLAR SPOT WARRIOR.

Dollar Spot is persistent, resistant, and costs more to control than any other turf disease in the United States. Kabuto™ Fungicide SC is here to end its grip on your turf and your budget.

University research and end-user trials show Kabuto provides both preventative and curative control of Dollar Spot. And Kabuto can be applied up to eight times per year as part of a resistance management program.



GordonsProfessional.com

 **pbi/gordon**
corporation
Employee-Owned

Always read and follow label directions. Gordon's® is a registered trademark of PBI-Gordon Corp. Kabuto™ is a trademark of Ishihara Sangyo Kaisha, Ltd. 9/16 04526