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

GOIGOID 2021 State of the Industry

Despite new challenges, the world of golf continues to thrive

Plus 2021 research recap Top tweets of the year Ed Hiscock's HOF career

A NORTH COAST MEDIA PUBLICATION VOL. 77 // NO. 12

LESS TIME CHANGING NOZZLES, More time spraying turf.

√ TECHNOLOGY

With solenoid controlled tips applying 20 pulses per second, **pulse width modulation (PWM)** eliminates the risk of overspray, drift, and inconsistencies.

√ SIMPLICITY

Three-stage nozzle variation and on-screen droplet selection allows for immediate variations when applying product.

√ PRECISION

Consistent droplet size throughout the entire application.

↓ EFFICIENCY

Use fewer spray tips to cover a wider-range of spraying applications, immediately improving productivity.

Smithco's Star Command II offers the best GPS technology available, integrated from the agriculture industry and manufactured by our friends at TeeJet Technologies, DynaJet® uses PWM solenoids located at the nozzle body to adjust spray-tip flow rate when changes in speed are detected. These spray tips are paired with PWM controls to serve two main purposes - the formation of the spray pattern and fingertipcontrolled droplet size. Allowing for nothing short of the best!

Based on a combination of field and laboratory testing, PWM approved spray tips must meet the following criteria at a variety of duty-cycles:

- Superb spray distribution across the boom
- Skip-free application
- Excellent spray distribution in the direction of travel
- Rapid and complete spray pattern formation
- Droplet size consistency

Smithco | WE TAKE YOUR TURF SERIOUSLY

Desired Level of Technology Including the Deadly GPS Accuracy with Dyna-Jet™ 6

1

STAR CONVAND INCLUDED IN THE SPRAY STAR 3180

SEE IT IN ACTION!

00



Spray Star 3180

121 DEALERS IN 62 COUNTRIES 50 years of exceptional service and products smithco.com

Golfdom//12.21

VOL. 77 // NO. 12

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

f 🗾 in 🖪

2021 State of the Industry

Despite new challenges, the world of golf continues to thrive

(begins after page 18)



A Hall of Fame Career

Ed Hiscock, longtime industry journalist, reflects on 30 years of reporting on the business of golf // 16



COLUMNS

- //6 Keeping up with The Jones—Seth Jones Jones closes out the year with a look back at 2021 and a look forward to 2022
- // 42 **The Turf Doc**–Karl Danneberger, Ph.D. Danneberger discusses the importance of ensuring turfgrass is ready for winter stressors
- // **47 Off the Record**—Mike Kenna, Ph.D. Kenna reflects on William Bengeyfield's contributions to the USGA and the turfgrass industry

DEPARTMENTS

- // 8 Starter
- $//\,14\,$ The Golfdom Files
- // 50 The Shop
- // 52 The 19th Hole



SUPER SCIENCE

- //41 The art of yesterday the science of today
- //43 A year in review
- // 48 Winter desiccation

An investment in your ponds pays dividends.

An investment in PondHawk[®] pays them for years to come.



As you set budget priorities, are your ponds at the top of the list? They should be! You don't want golfers making a stink about your stinky ponds. PondHawk, our solar-powered subsurface aeration system, transforms unsightly, stagnant ponds into healthy water features that golfers notice. With no need for electricity, it cuts expenses, too. An investment in PondHawk really pays off!



Visit PondHawk.com to learn more, or call 888-755-1950 for a customized quote.



olfdom

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

FDITORIAL

EDITORIAL DIRECTOR, EDITOR-IN-CHIEF & ASSOCIATE PUBLISHER Seth Jones 785-542-2627 / siones@northcoastmedia



EDITOR Christina Herrick 216-675-6009 / cherrick@northcoastmedia.net MANAGING EDITOR Sarah Webb 216-363-7932 / swebb@northcoastmedia.net

DIGITAL EDITOR JOEY Ciccolini 216-363-7925 / jciccolini@northcoastmedia.net ART DIRECTOR Pete Seltzer 216-706-3737 / pseltzer@northcoastmedia

CONTRIBUTING EDITORS Karl Danneberger (*Science*), Alan FitzGerald, Joe Gulotti, Mike Kenna (*Research*), Matt Neff, Mark Woodward

BUSINESS

CLEVELAND HEADQUARTERS 1360 EAST 9TH ST, 10TH FLOOR, CLEVELAND, OH 44114 GROUP PUBLISHER Bill Roddy 216-706-3758 / broddy@northcoastmedia.net PUBLISHER Craig MacGregor

216-706-3787 / cmacgregor@northcoa dia net WESTERN REGIONAL SALES MANAGER Jake Goodman 216-363-7923 / jgoodman@northcoas

EASTERN REGIONAL SALES MANAGER Dan Hannan 216-363-7937 / dhan ACCOUNT MANAGER Chloe Scoular 216-363-7929 / cscoular@northcoastmedia.ne

EXECUTIVE SALES ASSISTANT Petra Turko 216-706-3768 / pturko@northe

DIRECTOR OF MARKETING & EVENTS Michelle Mitchell 216-363-7922 / mmitchell@northcoastmedia.ne

MARKETING & EVENT MANAGER Allison Blong

216-363-7936 / ablong@northcoastmedia.ne SR. MGR., PRODUCTION SERVICES Rhonda Sande 216-978-9778 / rsande@northcoastmedia.net

AUDIENCE MARKETING MANAGER Hillary Blaser 216-440-0411 / hblaser@northcod

SR. AUDIENCE DEVELOPMENT MANAGER Antoinette Sanchez-Perkins

216-706-3750 / asanchez-perkins@northcoastmedia.net

MARKETING/MAGAZINE SERVICES

SUBSCRIBER, CUSTOMER SERVICE

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

REPRINTS & PERMISSIONS Wright's Reprints

CORPORATE

PRESIDENT & CEO Kevin Stoltman VP OF FINANCE & OPERATIONS Steve Galperin VP OF CONTENT Marty Whitford **VP OF MARKETING** Michelle Mitchell

VP OF GRAPHIC DESIGN & PRODUCTION Pete Seltzer

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. The views and opinions expressed by Golfdom's contributors are those of the authors and do not necessarily reflect the official policy or position of Golfdom or North Caast Media.

Gol/dom 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 noun coast mean 202 provides creating to asoline contract one (solin as classified in an end) and an end) addition as classified in a soliton and the soliton

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 558.95 print and digital: No 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 **POSTMASTEP**. **Decent** and additional

and advanced maming ounces. POSTMASTER: Pleases send address change to GOLFDOM, PO Box 2090, Skokie, IL 60076. Printed in the U.S.A. Copyright 2021 North Coast Media, LLC, All rights reserved. No part of this publication may be reproduced or trans-mitted 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 dother 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.



A OI OF THE NAME!



AND<u>MARK</u> GOLF COURSE PRODUCTS

Your #1 Tee Box Resource

A good tee box should be as inviting as it is informative—and furnishings from Landmark Golf Course Products can help you achieve both.

Rinowood.com • 1-888-337-7677



Tee Signs and Monuments: From displaying hole layouts to pars and distances, these products are as helpful as they are beautiful.

Ball Washers: With customizable designs, Landmark's washers can help give golfers a fresh start on every hole.

Tee Markers: Available in different material, color, and design options, our markers make branding easy and consistent throughout your entire course.

Our greatest invention.

Creating a perfectly breathtaking course requires your passion and knowledge. It also takes something you don't always have: Time. At Turfco, we're always looking for ways to free-up your time. Ways like saving up to two hours per day with the Torrent 2 Debris Blower. Reducing up to 720 passes on your greens per year with the WideSpin Topdresser. And seeding more quickly to achieve better results with the TriWave Overseeder. We bring innovative technologies that improve performance, while giving you back what matters most. Your day.

Torrent[®]2

TURFCO

It's worth your time to see the difference. Schedule your demo today at www.turfco.com or call 800.679.8201

WideSpin 1550 BROADCAST TOPDRESSER

TRIWAVE 45



Schedule your demo today at **www.turfco.com** or call **800.679.8201**



TURF

Keeping up with **The Jones**



"Supply chain issues. Price inflation. 'The Great Resignation.' ... From the looks of things we're going to have a whole slate of important fresh topics to tackle in the new year."

SETH JONES, Editor-in-Chief & Associate Publisher

TOOL, "THIRD EYE

'21 spun me around

here is so much to digest, and I'm not just talking about having a normal Thanksgiving for the first time in 24 months. It's hard to believe we're putting a bow on 2021 with this issue's State of the Industry Report, and at the same time looking forward to 2022 with our annual Underdogs of Turf Calendar.

Special thanks to Nufarm for sponsoring our State of the Industry Report and to John Deere and Rain Bird for sponsoring our popular pup calendar. And thanks to the record-setting 139 of you who sent us great photos of your golf course dogs — there are some really great pics in this year's calendar. Those two linchpins of this issue made my head spin. One of the reasons we went with a golf-ballas-the-sun cover with many planets orbiting it is a nod to the myriad issues affecting the game and the business or perhaps the many balls we're all trying to juggle.

We spoke to a dozen chapter presidents about the year that was, heard some interesting stories with some common themes and also got some great leads on 2022 story angles we should be pursuing. As we were compiling this issue, we were also receiving our 2022 Golfdom Report surveys back from our most dedicated readers (thanks to those who took the time — we are donating \$1 to the Wee One Foundation for each completed survey). As those surveys were coming in, it made us hungry to get to work on our 2022 content.

Supply chain issues. Price inflation. "The Great Resignation." We'll have our regular feature stories you've come to expect in *Golfdom* next year like our U.S. Open and PGA Championship previews, but from the looks of things we're also going to have a whole slate of important fresh topics to tackle in the new year.

Before I set sail on 2021, here's a quick look back at my high and my low of 2021:

My low was trying to host a virtual Friends of Golfdom (FOG) party in honor of Rick Mooney, vice president of maintenance and development, Shore Lodge | Whitetail Club, McCall, Idaho. Mooney was named Herb Graffis Businessperson of the Year in 2020, and we tried to celebrate it during the 2021 virtual Golf Industry show. That whole week was a nightmare. Our Zoom party with Rick was fine, but if you know Mooney you know that would have been so much more fun in person, and it would have been an amazing turnout. Instead, it was those awkward moments of people talking over each other, wondering how long they should sit in front of their computer screen on a Wednesday afternoon in February.

I'm so excited to return to an in-person GCSAA Conference & Show in San Diego in early February. I hope to see many of you there, and hopefully I get a chance at a make-good with Mooney and the FOG.

My high was speaking at the joint chapter event of the Southern Illinois and Mississippi Valley GCSA chapters back in May, at beautiful St. Claire CC in Belleville, Ill., and enjoying a day on the golf course with a great group. I played like a dog but this was the first chapter event I'd been able to attend in months, and it turned out to be the beginning of me getting out there and seeing our readers again. As of this writing, my spreader is set to WFO, and I just did a spell of six of the last eight days on the road visiting folks in the industry.

I want to thank you all for your support this year. 2021 was a phenomenal year for our humble publication, made possible by you, the reader, by our industry partners and by our team here at North Coast Media. Happy New Year. I'll see you in 2022. **G**

Email Jones at: sjones@northcoastmedia.net.

NEW PRODUCT

QUALI-PRO

Fungicide

Net Contents: 20 Ounce

GATEWAY

Control Solutions Inc.

GATEWAYTM Fungicide

Exceptional Control for Pythium

Powered by Cyazofamid

Exceptional Control for Pythium on Turf Areas!

- Active ingredient: 34.5% Cyazofamid
- Provides protection against listed diseases for a period of 7 to 28 days.
- For Golf courses (greens, tees, and fairways), sod farms, seed farms, sports fields, residential and commercial lawns.
- Effective against: Pythium blight, Pythium damping-off, Pythium root dysfunction, and Pythium root rot.



QUALI-PRO.COM





Bob Farren, CGCS, Pinehurst Resort, talks to attendees of the 2021 Green Start Academy about the origins of The Cradle, the resort's new short course.

A FRESH START FOR GREEN START

BY SETH JONES // Editor-in-Chief

For the first time in its 15-year history, Green Start Academy was hosted at Pinehurst Resort. Bob Farren, CGCS, director of golf course and grounds management, Pinehurst (N.C.) Resort and Country Club, welcomed the group of 50 assistant superintendents and told them how happy he was to see the group on his home turf.

"I've been involved in Green Start Academy for a number of years, and I've always dreamed of having it here at Pinehurst, I really have," Farren told *Golfdom.* "I come away from it every year being encouraged by what the future holds for our industry."

The event, sponsored by Bayer Environmental Science, John Deere and Rain Bird, is meant for assistant superintendents looking to advance in their careers. It was previously held at the Bayer Development and Training Center in Clayton, N.C., the John Deere Turf Care Facility in Fuquay-Varina, N.C., and the John Deere headquarters in Cary, N.C.

With the new location came additional programming for attendees. A more robust group of veteran superintendent speakers came to Pinehurst to mentor this year's crop *Continued on page 10*

//TEAMING UP

SUBAIR SYSTEMS AND SOIL SCOUT JOIN FORCES

U.S.-based SubAir Sports Systems partnered with wireless underground soil moisture sensor startup Soil Scout to give turf managers unprecedented control over their operations and turf with automated subsurface monitoring and ventilation.

Soil Scout's sensor transmits moisture, temperature and salinity data in real time from up to 2 meters below the surface, while SubAir's subsurface aeration and moisture removal units guarantee ideal conditions, automatically adjusting the moisture levels of the turf according to live, real-time soil conditions. In a sudden downpour, the vacuum systems activate to eliminate excess moisture in the soil profile, with 36 times faster drainage than natural drainage alone.

//THREE'S COMPANY

ASGCA WELCOMES 3 NEW MEMBERS

The American Society of Golf Course Architects (ASGCA) welcomed three new members to its ranks: Gary Browning, Kipp Schulties and Joel Weiman.

Browning is the founding principal of Browning Design, a landscape architectural and golf design firm. Browning's 30-plus years of experience have included award winning "minimalist" designs in the Western Canadian Rocky Mountains, including a full restoration of the 36-hole, famed Robert Trent Jones Sr.'s Kananaskis Country Golf Course.

Schulties began his design career with the Couples/Bates Golf Design firm after earning his civil engineering degree from Purdue University. A year after finishing an MBA in finance at the University of Miami (Florida), he opened his own firm, Kipp Schulties Golf Design.

Weiman is a landscape architecture graduate of Cornell University and has been senior designer with McDonald Design Group since 1998. Weiman provides a design-build approach to golf course design and construction that is inspired, responsive, thorough and cost effective.



//HELPING OUT

Superintendents help launch flood relief efforts at Springdale

With the promise of more to come, superintendents and the owners at Springdale at Cold Mountain have raised \$13,000 for relief efforts in the wake of flooding that devastated the tiny community of Cruso in western North Carolina.

Members of the Western North Carolina Turfgrass Association raised half the amount through a golf tournament at Springdale in late October. Resort owners, Zan and Lex West, donated the use of the course, then doubled the gift by matching the money raised.

On top of that, the Wests have also pledged to donate 50 percent of all golf revenues between now and Dec. 25.

Six people died and nearly 100 others had to be rescued as a result of flooding and mudslides when remnants of Tropical Storm Fred struck Haywood County in August. Water levels in some places exceeded previous records by as much as 7 feet. Cruso was the hardest hit of several communities that sustained heavy damage.

"I'm incredibly grateful to my col-

leagues in the golf industry for coming out in such a generous showing of support," said Springdale at Cold Mountain Superintendent Jeremy Boone, CGCS. "And for our owners to double up on that support and give half of all golf revenues, for basically two months, further underlines their commitment to this community."

Boone was born and raised near what was formerly Springdale Country Club and played on the course growing up. His mother, father and grandmother also worked there. He came back to the club as golf course superintendent in 2019. Months after the flooding, he can still see areas of devastation from the golf course.

"I've been around this community my whole life. I had family members who were affected by the flooding, and I had friends affected," Boone said. "Yes, it's very personal, which is why I'm appealing to anyone who enjoys golf to find the time to play a round at Springdale before Christmas. It just might be the most appreciated and meaningful gift they give this year."



From left, Jeremy Boone, CGCS, with Springdale General Manager Buddy Lawrence and Assistant Superintendent Ryan Ponder.

//MAKING MOVES

PETER KENT HIRED AS CLUBCORP'S CHIEF COMMERCIAL OFFICER

ClubCorp named Peter Kent, known in the industry for his global sales and business development efforts, as its new chief commercial officer.

Before joining ClubCorp, Kent served as chief commercial officer for Iltich Sports and Entertainment, managing commercial aspects of the Detroit Red Wings, Detroit Tigers, 313 Presents and Olympia Development. At Ilitch Sports, Kent managed all aspects of sales, pricing, revenue management, strategic partnerships, sponsorship sales and more. Kent also spent 11 years with the PGA Tour as senior vice president of global business development tournament revenue.

"ClubCorp is known in the industry for its vast portfolio of premier and familyfocused clubs, innovative benefits and services and experiential lifestyle," Kent said. "With the footprint of ClubCorp and the work they are doing to diversify and increase participation in the game, along with the variety of experiences that ClubCorp makes available through golf and country clubs, city clubs, stadium clubs and Big Shots Golf, ClubCorp is set for accelerated growth in all areas of the business, and I couldn't be more thrilled to join the already impressive team."

//WELL-DESERVED RETIREMENT

ED GOWAN TO RETIRE

Ed Gowan, longtime executive director of The Arizona Golf Association (AGA), will retire in February 2022. After 36 years at the helm of the AGA, Gowan has decided the time is right to pass along the reins of one of the premier amateur golf associations in the country.

Gowan has served in his current role since June 1985, when the AGA had a staff of two people serving 120 clubs and 23,000 members throughout the Grand Canyon State. Fast forward to the present, and Gowan is set to leave his post having increased staffing to 23 employees serving more than 600 clubs and more than 90,000 members.

A noted Rules of Golf expert, Gowan has officiated at 35 US Opens, 119 USGA Championships, the Masters and dozens of other international events, both professional and amateur. He is also a Founder of the Arizona Golf Foundation, the charitable arm of the AGA and is the co-founder of the Patriot All-America Invitational collegiate golf showcase.



//UPPING THE EFFICIENCY

CALAMP AND FAIRWAYIQ PARTNER

CalAmp, a connected intelligence company helping businesses and people track, monitor and recover vital assets with real-time visibility and insights, will provide its CalAmp Telematics Cloud and computing devices to enhance FAIRWAYiQ's golf course operations and golf cart fleet management platform.

The partnership enables FAIRWAYiQ to provide course operators with real-time visibility over game play and operations — connected intelligence at the edge to optimize course maintenance and player pace of play.

"I recognized CalAmp as a leader in the internet of things that could readily provide the connectivity and visibility we needed, as well as enhance our platform's functionality," said Dave Vanslette, founder and CEO of FAIRWAYiQ. "CalAmp has delivered a solution that met our specific use cases in less than two months and has become an integral part of our business."

//FROM MAILROOM TO BOARDROOM

EWING PROMOTES JACK YORK

Ewing Irrigation & Landscape Supply promoted Jack York to director of product line management.

York, the son of Ewing President and CEO Douglas W. York, rejoined the company in November 2018. He served as a branch manager in New York state before relocating to Ewing's home office in Phoenix in November 2020 to become national irrigation product manager.

In his new role of director of product line management, York will lead and support Ewing's product management efforts, including working with product managers on vendor relations, sales and marketing strategies. He will support the product management team in defining and executing growth initiatives and will continue to serve on Ewing's executive management team. He also will continue to serve as irrigation product manager for the time being.

The fourth generation of family members at Ewing, York grew up as part of the company, working in the mailroom and at various Phoenix branches as a service professional and truck driver. During college, he interned as a buyer in the purchasing department and in the finance and accounting departments. He holds a bachelor's of science degree in economics with a concentration in finance from the University of Pennsylvania.

Continued from page 8

of Green Start Academy attendees. Just to name a few, Seth Miller, Troon CC, Scottsdale, Ariz., teamed up with Lukus Harvey, Atlanta Athletic Club, Johns Creek, Ga., to speak on the importance of diversity as well as how to handle pressure; Matt Fauerbach, agronomist for

Indigo Golf Partners, spoke on the future of the golf industry; and Pat Finlen, CGCS, Winchester CC, Meadow Vista, Calif., gave a talk on the digital transformation of the golf industry.

And for a break in the intellectual programming, attendees were shuttled to the Pinehurst Clubhouse to enjoy a round on the facility's new short course, The Cradle.

Bayer's Jennifer Poore said that partnering with John Deere and Rain Bird to host the Green Start Academy fit in with the company's long-term vision and goals.

"As a company, we're really passionate about professional development, so it's natural we would give back to the industry in this way," Poore said. "Every year, my predecessors would tell me that someone who had participated in a past program would come up and thank them for their involvement and tell them that it made a difference and helped move them to the next level."

Evan McFadden, assistant superintendent at Martis Camp Club in Truckee, Calif., said he was happy to be learning material at Green Start Academy that he couldn't get from a textbook.

"I'm always trying to propel my career, and this was a great opportunity to get some professional development," McFadden said. "I get to work on some softer skills that I want to build. I want to get the other intangibles that we don't get on

the golf course every day."

Farren was happy to serve as the welcoming speaker, a leader on a panel discussion and the starter on The Cradle. Bert Schmidt, global manager of market development and strategy, John Deere, said

that Farren serving as the master of ceremonies was the ideal scenario for Green Start Academy.

"We couldn't have a better supporter than Bob Farren," Schmidt said. "He's been with the Green Start Program for more than a decade, and he's wanted to host this, so I'm glad we were able to make it a reality."

Farren added that he wasn't just helping Green Start Academy attendees, but that they were helping him as well.

"When you see the people who are selected to be here, they are passionate about the industry and confident in it. It gives me confidence going forward," Farren said. "Bayer and John Deere have been investing in it for years, and I think they can see the tangible benefits of their investments, and with Rain Bird coming in, it adds another layer of effort."



//A NEW STANDARD

OSHA suspends temporary standard on vaccination, testing



Following a decision by the U.S. Court of Appeals for the Fifth Circuit on Nov. 12, the Occupational Safety and Health Administration (OSHA) said it has suspended implementation and enforcement of the emergency temporary standard on vaccination and testing.

"While OSHA remains confident in its authority to protect workers in emergencies, OSHA has suspended activities related to the implementation and enforcement of the ETS pending future developments in the litigation," the organization said in a brief statement.

The original temporary standard called for:

- Employers with at least 100 employees would be required to adopt a mandatory vaccination policy unless they adopt a policy requiring unvaccinated workers to undergo weekly testing and wear a face covering at work.
- 2 Covered employers would have to provide paid time for workers to get the COVID-19 vaccine and ensure workers have paid sick leave to recover from any side effects that prevent them from working.
- Employers would have to comply with most provisions by 30 days after the date of publication in the Federal Register and comply with the testing requirement by 60 days after the date of publication in the Federal Register.
- 4 Businesses that did not comply may face significant OSHA fines.

// A UNICORN

NC State university releases new turfgrass

BGBLUE / DIGITALVISION VECTORS / GETTY IMAGES (NEEDLE-VIRUS)

North Carolina State University's Turfgrass Breeding and Genetics program, under the direction of Susana Milla-Lewis, Ph.D., has released Lobo Zoysiagrass (experimental name XZ 14069). Researchers said they selected Lobo from hundreds of nursery mates for its unusual combination of aggressive establishment and stress tolerance. These traits were later confirmed by six years of multilocation trials under low input conditions.

"This medium-fine zoysiagrass cultivar is simultaneously well adapted for infrequently managed areas like golf course roughs, roadsides and airport infields," said Milla-Lewis. "But also for commercial landscapes and golf course fairways where aesthetics are equally important as maintenance. It's truly a unicorn."

Lobo Zoysia has been a consistent top performer in roadside trials by the North Carolina Department of Transportation and also a National Turfgrass Evaluation Program (NTEP) specialty trial. These United States Golf Association- funded NTEP trials are currently conducted at eight sites from Florida to New Mexico. The trials include other warm-season grass species like bermudagrass and buffalograss. Lobo repeatedly received top performance marks at these climatically diverse locations.

//WHAT'S NEXT

NBC SPORTS NEXT, TROON EXTEND PARTNERSHIP

NBC Sports Next and its golf technology and services brand GolfNow have extended their longstanding, enterprisewide partnership with Troon.

"We're thrilled to continue our longstanding collaboration with NBC Sports Next, which is an important part of our clients' success," said Tim Schantz, president and CEO of Troon. "With NBC Sports Next's innovative technology, distribution and support, Troon is well-positioned to provide both current and future clients with the tools they need to provide golfers a tremendous experience and to move their businesses in the right direction."

Within the new, multiyear agreement, NBC Sports Next will remain a preferred partner for the more than 590 Troon locations around the world, which will have access to a full menu of innovative technology solutions and services offered by GolfNow and its subsidiary brands, including EZLinks Golf, G1, GolfPass and more. Highlights of the extended partnership include:

- Point-of-sale technology
- Booking engines and electronic tee sheets
- A large tee-time distribution portal
- Proprietary revenue management and benchmarking technologies
- Expanded national/global marketing via GOLF Channel and GolfPass

//NEW LEADERSHIP

LISA PUCILLO TO SERVE AS PREZ, CFO OF LIDOCHEM

Lisa Pucillo has been named acting president and CFO of LidoChem.

She assumes the leadership role held by her longtime business partner, Don Pucillo, who passed away in October.

"Despite the loss of one of LidoChem founding members, the company will move forward," said Lisa Pucillo. "We all share the same vision and passion for delivering value to customers and will honor Don's memory by continuing with the work that he loved so much. No words can adequately express our sadness over Don's death. He was a true visionary and an amazing human being. Our entire team is committed to continuing the company's values and success in his memory." ADVERTORIAL

Welcome to the Azores!

Recently voted the top adventure destination in Europe for 2021 at the World Travel Awards, the Azores offer pure nature. Located off Portugal, this archipelago of 9 islands is as surprising as it is unknown. Its volcanic origin gives the archipelago a wild nature, as raw as it is lush. From the top of Mount Pico to the depths of its coastline, a playground for diving enthusiasts, the 9 islands offer a postcard decor, rich and refined gastronomy and 3 golf courses, spread over 2 islands: São Miguel and Terceira.



VISITAZORES.COM



FURNAS GOLF CLUB

In São Miguel, the Furnas Golf Course is an extraordinary par course, located in the mountains, 500m above sea level, with beautiful lakes, fairways surrounded by tall trees and small undulating greens. Designed by the famous Scottish architect McKenzie Ross in 1936 and extended to 18 holes (1988) PAR 72, by Came Ron & Powell, the golf course covers 46 hectares, 6560 meters in length. The training facilities include 2 putting greens and a chipping and pitching area.

Contact: info@azoresgolfislands.com

BATALHA GOLF CLUB

Batalha Golf Course is a fantastic 27-hole championship and challenge golf course, spread over 120 hectares, on the island of São Miguel. Designed by Scottish architects Cameron & Powell in 1986 and opened to the public in 1993, it offers a mix of links and woodland courses, offering beautiful views of the Atlantic on the first nine holes and extraordinary scenery on the next nine. On the third nine, you will find a mix of nature and views of the ocean and the north coast of the island.

A + B PAR 72 white tees Length 6435m 0 B + C PAR 72 white tees Length 6309m 0 C + A PAR 72 white tees Length 6483m 0

Contact: info@azoresgolfislands.com



TERCEIRA GOLF CLUB

Hills, valleys and lakes, hydrangeas and azaleas, sea and land but above all, golf, lots of golf. All the holes offer a privileged view of a nature capable of helping to improve your swing and your peace of mind. Located on the island of Terceira, a few kilometers from the towns of Angra do Heroismo and Praia da Vitória, the course has a Club House with a restaurant, a bar and a Pro-Shop.

Contact: reservas@terceiragolf.com



The Golfdom

FROM THE ARCHIVE

With the labor crisis, increased golf traffic and unpredictable weather events hitting the golf course world this year, it's hard not to feel overwhelmed. To get a feel for the lighter side of life, we selected this article from the October 1953 issue of *Golfdom* on all things holiday shopping. To read the full article, visit **Golfdom.com/archives.** Enjoy, and happy holidays!

Christmas gift campaign ideas pay pros

olf Christmas gift business has benefitted pros more than by the holiday seasonal sales volume. Several pros have commented that the comparison of advertising and sales methods that is possible during the Christmas sales campaign tips off effective methods to use the rest of the selling year.

Floyd Farley at Meridian GC, Oklahoma City, Okla., says that he and Fred Schindler, who is associated with Farley, start the Christmas selling right after Thanksgiving by telephoning several members each day. Floyd says he's tried every way that has been suggested and has found the selling instrument that covers all the territory and gets the best results is the telephone.



"By phone you get a chance to learn what the member's shopping problems are and can make definite suggestions. It is a helpful, personalized service, instead of being just a general broadcast for business," says Farley. "Pro study of what a member and his family need in golf merchandise not only is valuable market surveying for Christmas business but indicates to the pro what he should be supplying for best service to his market the rest of the year."

Jimmy Gauntt, pro at Oklahoma City's Twin Hills G&CC, also makes good use of the telephone in campaigning for Christmas business. Jimmy puts his shop and home telephone number on a letter that opens his campaign for

> the golf Christmas gift business. The home number gets Jimmy a lot of calls that can be handled outside the rush and crush of Christmas shopping. He will talk over what the member wants to buy then, and if the member or his wife wants to see some merchandise, Gauntt will take some stock around for inspection. Gauntt has found that mention of a wide price



range of golf Christmas gifts accounts for a considerable volume of business.

Gauntt has found that it's the member's wives who do a great deal of the shopping personally or keep pushing their husbands, so they buy, instead of stalling, man-fashion, until five minutes before midnight Christmas eve. Jimmy sends the following letter to the wives of all his members:

"WIN YOUR GOLFER'S HEART THIS CHRISTMAS WITH SOMETHING FOR HIS GAME HERE IN THE PRO SHOP.

"We've assembled, for your inspection, an outstanding selection of the very latest and newest in golfing equipment, apparel and accessories ... whether it be an inexpensive accessory, smart apparel, complete sets of the latest in woods and irons. You'll find the perfect gift for your golfer in our wide variety of the game's most practical and popular items.

"We'll help you win your golfer's heart this Christmas, with something useful and practical, something sure to please, something they'll remember you by. Why don't you call me, I'll be happy to help you get your Christmas worries off your mind." •

LIFE IS BETTER



YOU HAVE BETTER THINGS TO DO THAN WORRY ABOUT IRRIGATION.

Superintendents face countless tasks each day on and off the course. From powerful rotors to intuitive control, best-in-class Hunter Golf products deliver top performance to keep irrigation running reliably and efficiently in the background where it belongs, so you get more time back to do what you love. Choose a future-ready approach to golf irrigation designed to improve your life on the course and beyond.





Contact us today to learn how to simplify watering and ensure healthy, playable turf.

https://hunter.info/lifeisbetter

TTS-800 Series Golf Rotors Pilot® Pilot Command Integrated Hub Center Software





A hall of fame career

Ed Hiscock, longtime industry journalist, reflects on 30 years of reporting on the business of golf maintenance and its people

BY SETH JONES



Journalist Ed Hiscock is well known in the industry after three decades of work with Golf Course Management magazine (GCM), Golfdom and Grounds Maintenance magazine (now defunct).



t was 1991 when Ed Hiscock accepted a job with *Grounds Maintenance* magazine. Little did he think at the time that he was embarking on a 30year journey that would take him to two more industry publications — *Golf Course Management (GCM)* magazine and *Golfdom* — and then induction into the Turf and Ornamental Communicators Association's (TOCA) Hall of Fame, an honor bestowed upon him in September.

Golfdom chatted with the longtime editor-in-chief of *GCM* and recent editor-atlarge for *Golfdom*, about his fond memories from his career, what he's learned about his readers and who his favorite intern was.

Seth Jones: Ed, congratulations on being inducted into the TOCA Hall of Fame. Give me some background on your career and where you got your start.

Ed Hiscock: I had gone to graduate school at the University of Kansas. Then I did some newspaper and wire service work in Kansas City. Then I ended up at *Grounds Maintenance* magazine, as managing editor in 1991. *Grounds Maintenance* was for the people who maintained any kind of grounds or corporate entities, but also about 40 percent of our readership was superintendents.

Jones: Did you think at the time that your career path was set? That you'd be in this niche of golf course maintenance journalism for the rest of your career?

Hiscock: I had no idea how long I'd be in the market. Starting off (at *Grounds Maintenance*), the market was bifurcated since 40 percent were superintendents and the others were folks who managed the grounds. The opportunity at GCSAA came up, and it seemed like a good fit. I thought I knew the market.

Jones: What did you learn about readers over the years?

Hiscock: I realized that you don't want

Hiscock was recently inducted into the Turf and Ornamental Communicators Association's Hall of Fame. Golfdom Group Publisher Bill Roddy (left) and Editor-in-Chief Seth Jones (right) attended the ceremony along with Hiscock's wife, Pat. to get in front of readers too far, and you can't afford to get behind the readers. Basically, I learned that superintendents are pretty savvy about what is going on technologically. Technology is part and parcel of their daily lives. The way they wanted to consume the information that we had for them, we had to follow their needs rather than say, 'Here, we'll give you this package.' As digital (media) took over, the main takeaway is they wanted to consume information however they could, whenever they wanted to, however they wanted to. The magazine had to offer all those platforms. We had *Continued on page 18*

TECHNOLOGY THAT DRIVES CONSISTENT PLAYING CONDITIONS

Manage Water and Reduce Operating Costs

The FieldScout® TDR 350 Meter is the industry leading portable technology for measuring soil moisture, soil EC, and soil temperature. • Quick and easy measurements to validate your cultural practices • Save time and labor when hand-watering greens • Now available FieldScout® TDR 250 Economy Meter

Firm, Fast, Flawless Turf

0 0

The patented TruFirm[®] system simulates golf ball impacts and provides objective data measurements to better manage compacted surfaces that interfere with infiltration of water and root zone conditions.

- Better playing conditions and fewer ball marks
- Fairway landing areas that produce longer drives
- Green approach areas that sustain chip and run play
- Bunker sands at desired firmness

Real-Time, On-Location Weather Data

The WatchDog[®] 3000 Wireless ET Weather Station provides real-time, site-specific weather data on your smartphone for optimal irrigation scheduling and pest management.

Monitors temperature, relative humidity, rainfall, wind/speed direction and solar radiation

All-in-one design with smartphone setup for easy installation

Spectrum Technologies, Inc.

800-248-8873

www.specmeters.com

To Measure Is to Know.



// HERE'S TO ED





It's all about accuracy, productivity, reliability, and comfort! Accuracy with Ninja GPS spray control. Productivity with dual nozzle system and 30' boom. Toro® reliability; and the comfort of a climate controlled cab. The best way to maximize your Outcross investment!



▲ Hiscock, Jones and Golf Course Management magazine's Scott Hollister (with Teresa Carson in the foreground) when they all worked together for GCSAA in the 2000s. All four keep in touch and remain longtime friends.

Continued from page 17 to become "platform agnostic." We couldn't be concerned with being a magazine or a website. We had to be concerned with the content on all of those.

Jones: What were some of your favorite moments that stick out in your mind from your years working for GCSAA?

Hiscock: One of the things I remember the most, one of the first things I did when I joined (*GCM*), is I went out to do a story on a tribal golf course. I sent the story to the superintendent because I wanted to make sure everything was right. He called me and said, "The tribal elders would like to know ... we're 40 miles outside of town, and they'd like to know if you could

make it 20 miles instead?" I wish I had that power.

Also coming to mind is 9/11. That was the 75th anniversary of GCSAA. We had a yearlong program in place. We were bringing members into the headquarters for a celebration that was supposed to happen on the 12th of September. I remember we had members who couldn't get out of town because all the airports were closed. That will always stick out in my mind about my time at GCSAA.

There's another one, you might have been involved, when the statue of Old Tom Morris was created to stand out in front of the headquarters. It took up residence for a while in the multipurpose room. It *Continued on page 35* A SUPPLEMENT TO







2021 State of the Industry

Despite new challenges, the world of golf continues to thrive

A NORTH COAST MEDIA PUBLICATION

Pinpoint Traction

DOLLAR SPOT DESTRUCTION

Stay in command of dollar spot, even SDHI resistant, with Nufarm-exclusive Pinpoint and Traction – the must-have MOAs in your fungicide rotation.

[NUFARM.COM/USTURF]



©2020 Nufarm, Traction™ is a trademark of Nufarm. Pinpoint® is a trademark of Valent U.S.A. LLC.



A WORD FROM OUR SPONSOR

The future of golf is looking good

Happy New Year from all of us at Nufarm. As I get back to traveling to see customers, I'm

encouraged to see that

many clubs are doing

quite well at this point

in the year. Rounds are

up, and with increased

play comes increased revenue. The future of

Here at Nufarm, we

golf looks good!



Cam Copley remain committed to innovation and reliability. We continue to test and gather data for the Anuew™ Plant Growth Regulator that prove its strength in supporting turf density and overall durability. With possibilities now opening to lawn care and sports turf, Anuew is showing itself to be

more versatile than ever. Nufarm is also launching a new fungicide in 2022 in partnership with Nichino America. Decide[™] Fungicide features a novel active ingredient and application flexibility to control multiple challenging turfgrass diseases, including dollar spot, brown patch and anthracnose. We were excited by the potential shown at field trials this summer across both warm- and cool-season turf.

We just welcomed a new class into the Excel Leadership Program, in partnership with the Golf Course Superintendents Association

of America. Participants will join existing classes for three years of training dedicated to personal, industry and community leadership, as well as professional development. The training touches everything from community involvement to personal finance. This investment into the future of the golf industry is near and dear to our hearts, and we're honored to be involved in helping tomorrow's leaders be the best they can be.

As always, our first priority is you, our customer. The last two years have had their ups and downs, but we're proud to be here, like we have been for more than 100 years, weathering the storm, improving the course and evolving the game with you.

Kind regards,

Cam Copley

Cam Copley Golf National Accounts Manager



No new normal

Packed tee boxes amid the pandemic, a labor crisis, an equipment shortage, an unusual winter storm, fall armyworm — nothing is normal in golf maintenance

By the Golfdom Staff

Go back in time and think of a kid sitting in a college classroom, hopeful to someday be a superintendent. This was the time to study, think ahead and prepare for the challenges that await.

Maintenance budgets, turf insects, soil compaction, disgruntled greens committee chairmen. There was nothing that student wasn't preparing for.

Did that student ever consider the effect a global pandemic might have on golf? Or how a company called Amazon, so convenient to life at first, would then become the enemy when it comes to hiring a crew?

Forget the new normal — there is nothing normal in golf maintenance anymore. In our 2021 State of the Industry report, sponsored by Nufarm, the team at *Golfdom* spoke to numerous Golf Course Superintendents Association of America (GCSAA) chapter presidents around the country to learn what the year was like in their region. To read additional reports from chapter presidents, visit **Golfdom.com**.

Tim Glorioso

PRESIDENT, Northwest Ohio GCSA DIRECTOR OF GOLF OPERATIONS, The Toledo Country Club

How was the golf season in your region?

2020 sucked, and 2021 sucked even worse. We've had more rounds than ever and more members, but labor and weather have been really tough this year.

We're just doing whatever we can to stretch the day. We never needed lights before, but I've ordered new carts with lights on them so we can go out after dark. We had guys raking bunkers with the flashlights on their phones.

How was the weather in your area this year?

We've had heavy rains all summer. It seems like we never dried out.

How was your experience with labor this year?

Early in the year, labor was a massive problem because people didn't want to work. Then, labor competition heated up tremendously in northern Ohio. Cedar Point in Sandusky began offering \$20 per hour to hire hundreds of people to staff the amusement park, drawing people from the entire northern half of the state. Our biggest problem is two Amazon warehouses really close to us. They're offering high wages, and a lot of people want to work indoors. I gave the whole staff a \$2 raise because I didn't want to lose anyone. My budget is going up, but the course looks good, so I can handle that.

Were there notable success stories from your area/chapter this year?

The golf has been fantastic. We gained 100 members over last year. (The pandemic) has gotten people really interested in the game of golf again.

What are your expectations for 2022?

Increased membership and traffic have limited our ability to service the course. I used to be able to sneak out onto the course and do things — we called it Maintenance Mondays. Now, we have events every Monday, so I can't go out and spot-treat anything. I'm hoping to get that back next year, even if it's just one day a month.

— Robert Schoenberger

Kurtis Wolford

PRESIDENT, California GCSA **SUPERINTENDENT**, Woodbridge G&CC, Woodbridge, Calif.

2021 State THE Industry



How was the golf season in your region?

Chaotic. With the boom that golf has had in California due to COVID and a lot of people rediscovering golf, it's been extremely busy.

Our facility has had three times the play that we normally have, which is great for us financially, but we're not staffed accordingly to provide the level of service we normally do.

How was the weather in your area this year?

For the valley, it was very hot. We had an extremely hot summer, which had its challenges. The weather in CaliforAdequate rain and mild temperatures this summer led to less turf stress for many courses in the Carolinas.

nia is always a roller coaster. You never know what you're going to get.

Right now, everyone is keyed up with what's going on with the drought because in California, there are more water restrictions. That's been one of the biggest challenges and one of the biggest things on our radar.

This year was somewhat of a challenge with the restrictions that we had. Everyone is watching the weather with the utmost attention going into next year. Because of where our water levels are at in California this year, we are anticipating having restrictions next year.

How was your experience with labor this year?

It was the most challenging time in my career to date dealing with labor. There just wasn't the labor available. Trying to find quality employees and attract people to apply was very challenging this year.

It was hard all across the board from every department — the restaurant to the maintenance to the outside service to our fitness. We were all short on employees. For our course, we had a lot of success with going to job fairs and trying to get *Continued on page SOI6*

Continued from page SOI5

the word out about how good of an industry this is to work in. On the maintenance side of the house, I was somewhat successful reaching out to some of the graduates of Future Farmers of America programs from high schools for younger workers.

Were there notable success stories from your area/chapter this year?

The California chapter is working really hard to get courses to adopt the best management practices (BMPs) documents. Getting golf courses on the best management practices is one of our key goals. We're trying to get golf courses to craft and adopt those documents.

What are your expectations for 2022?

I think labor will slowly start to come back, where we're still short-staffed but we're anticipating getting back to normal staffing levels, which we need because of how busy the golf course has been.

— Sarah Webb

Paul Richmond

PRESIDENT, Maine GCSA

SUPERINTENDENT, The Meadows Golf Club, Lichfield, Maine

How was the golf season in your region?

We were up from last year, which was up from previous years, play wise. It was a great year for golf in Maine. With everything going on in the rest of the world, golf seemed to be one of the few safe havens that people could go to.

How was the weather in your area this year?

We had one of the rainiest summers. Right now, we are a little over 10 inches ahead of average. We're going to have to do more fungicides. We'll end up doing a lot more repair work. Because of the extra traffic and the soft conditions, the course really took a beating.

How was your experience with labor this year?

We were OK. We had enough people. Inside was very difficult. It was a similar story at other courses in our region. I got lucky with the grounds crew and hired one guy who had a bunch of buddies. Most of the courses had issues with labor.

Were there notable success stories from your area/chapter this year?

Financially, we're doing fantastic. Also, the GCSAA National had its board of directors meeting up here recently, which was a big deal for us. They hadn't been up here in a while. That was nice to get those guys up here. We moved forward on the best management practices. Maine has fully adopted that, and it's in place, and we're looking to start the facility-specific items now. Next fall, we'll have a dozen or so facility-specific items in place, where other crews can come and look at and replicate for their clubs as well. It was a huge process.

What are your expectations for 2022?

I'm hoping with the COVID restrictions going down and as vaccinations get going, we're able to get a little more help in the labor department, especially for the restaurant side of the business. We have really struggled there.

— S.W.

Brian Stiehler, CGCS, MG

PRESIDENT, Carolinas GCSA SUPERINTENDENT, Highlands (N.C.) CC

How was the golf season in your region?

Golf continues to be very strong in the Carolinas. Daily fee facilities are continuing to report higher than normal rounds, and so are private facilities. COVID continues to be a challenge for many, with cases wreaking havoc with maintenance crews, requiring staff to miss two weeks or more of work. Golf course renovation work and capital projects continue to be hot in the Carolinas, with many clubs investing in infrastructure.

How was the weather in your area this year?

The Carolinas are such a vast area, so the weather was different depending on the region. In western parts of North Caro-



lina and South Carolina, it was definitively a bentgrass summer—with mild temperatures and adequate rainfall— and that got to be excessive at times.

Brian Stiehler

Coastal South Carolina can be summed up as very wet.

How was your experience with labor this year?

Labor continues to be a major challenge for all. This is clearly a national issue that I don't think will be getting any easier in the future. Pay rates are on the rise, and it's not uncommon to hear superintendents paying staff more than \$18 to \$20 an hour in order to retain staff.

Were there notable success stories from your area/chapter this year?

There are always great stories out of the Carolinas. In the past year, sev-*Continued on page SOI8*

PLAYABLE + NATURALIZED AREAS, GROWING HARMONY

Naturalized areas can be both beautiful as well as beneficial to your bottom line. However, it is important to remember that naturalized areas do require some level of maintenance to prevent takeover by undesirable weeds. Our line of herbicides will help you achieve optimum balance between naturalized, yet managed, landscape settings and our team of golf experts will guide you every step of the way.

ASK YOUR LOCAL NUFARM REP ABOUT OUR NATURALIZED AREAS PROGRAM



NUFARM.COM/USTURF





Grow a better tomorrow

Continued from page SOI6

eral facilities and their golf course maintenance teams gained national attention. In early May, Quail Hollow once again hosted the Wells Fargo Championship. The golf course was a great test for the world's best, thanks to the hard work of Keith Wood and his team.

Speaking of a great test, the team at the Ocean Course at Kiawah Island had their facility ready to go for the 2021 PGA Championship. Congratulations to Jeff Stone and his team for successfully hosting the second major of the 2021 season! Finally, the week prior to the U.S. Open, Congaree Club hosted its first big event in its short history. Thanks to the team led by John Lavelle and David Barrett, the Carolinas were once again showcased for the world to see.

What are your expectations for 2022?

I suspect golf rounds will remain up and popular in the Carolinas. Hopefully, we can distance ourselves from the COVID Era to a time when more folks are comfortable traveling. — Christina Herrick

Andrew Jorgensen, CGCS

PRESIDENT, Florida GCSA DIRECTOR, GOLF MAINTENANCE OPERATIONS, On Top of the World Communities & Related Entities, Ocala, Fla.

How was the golf season in your region?

Golf was fantastic. We have seen a record number of rounds across the state thanks in part to the COVID "bump" continuing through 2021. This meant increased traffic issues from the additional play and stresses for the clubs that still utilized the one-personper-cart rule. Fortunately, lots of clubs have used the extra revenue toward much-needed course improvements.

How was the weather in your area this year?

Like always, Florida had a normal wet summer with the typical tropical threats. Some clubs have reported record rainfall amounts.

How was your experience with labor this year?

Labor continues to be troublesome for everybody. Florida is seeing a huge economic boom with drastic growth statewide. This means golf courses are competing with other industries for



labor across the board. Superintendents are having to prioritize maintenance practices using a reduced labor force. Fortunately, superintendents excel

Andrew Jorgensen

at adapting to the challenges that affect their operations. We all expect this labor trend to continue into 2022.

Were there notable success stories from your area/chapter this year?

As our local chapters returned to in-person events, we saw increased attendance and sponsorship across the board. I think people just want to get out and network with their peers and friends.

What are your expectations for 2022?

We expect the coming year to be much of the same. Rounds through the roof and labor issues to continue.

— С.Н.

Joe Kinlin

PRESIDENT, Golf Course Superintendent's Association of New Jersey

SUPERINTENDENT, Bey Lea GC, Toms River, N.J.

How was the golf season in your region?

We have had a very busy golf season. Rounds are up slightly from last year's COVID surge but have slowed down with some weather-related issues starting in August.

How was the weather in your area this year?

Weather was generally good until August brought significant rain with tropical storms Henri and Ida. There was significant flooding in the northern half of the state.

How was your experience with labor this year?

Labor was probably the greatest challenge. Finding crew members and assistant superintendents has been a problem for several years now.

Were there notable success stories from your area/chapter this year?

One notable success story is that we completed our GCSAA Best Management Practices document. Another thing that makes me most proud as chapter president is how our membership met all the challenges COVID, Mother Nature and a difficult labor market threw at them and delivered a great golf product to the golf community. The talents and abilities of our superintendents and our suppliers always seem to create awesome playing conditions.

What are your expectations for 2022?

2021 State THE Industry



In 2021, fall armyworm caught some superintendents off guard with how far and wide it spread. Fall armyworm damage occurred overnight at Williamsburg (Va.) GC, much to the dismay of Jeff Whitmire, CGCS. "The worms moved from the treeline and absolutely decimated the bermudagrass, marching until they hit the zoysiagrass. There was no damage to the zoysiagrass."

In 2022, I expect supply chain and labor issues to drive the cost of golf up, and courses that don't account for this in their budgeting process could have some serious issues. I also expect that in a competitive industry like ours, the strong will rise to the top. -C.H.

Jeffrey Whitmire, CGCS

PRESIDENT, Virginia GCSA SUPERINTENDENT, Williamsburg (Va.) GC

How was the golf season in your region?

Golf is up everywhere; it's very popular. A lot of clubs in Hampton Roads, the Virginia Beach area, Richmond, northern Virginia, the private clubs ... it was a very good year for golf. If they're playing the game, they're enjoying the game — golf courses are full. The challenge is labor and getting equipment.

Continued on page SOI10



Virginia GCSA board members (from left) Jay Wade, Mark Cote, Josh Peters and Jeffrey Whitmire meet with Virginia's 96th district delegate Amanda Chase (center).

Continued from page SOI9

How was the weather in your area?

I don't know how to define a normal year. It's funny in Virginia, the western part of the state has drought, and the eastern part was wet, almost too much rain. Most golf courses came through in pretty good shape. Some cool-season courses had some issues. Warm-season golf courses came through really well.

How was your experience with labor this year?

Labor is a huge challenge. We went through the season six people short,

and I think that's pretty common. That's about 35 to 40 percent down from my normal staffing levels. A lot of people are going to triplex mowing and machine raking bunkers to eliminate the hand labor and try to save money, but then the challenge is equipment — if you can't get equipment, that's a challenge as well.

Were there notable success stories from your area/chapter this year?

We raised more than \$50,000 for turf research at Virginia Tech. Over the past five years, we've raised more than \$250,000 for turf research at Virginia Tech. We're very proud of that. We completed the Virlina Cup, and we defeated the Carolinas. We were very happy about that. We have to brag.



Jeffrey Whitmire

would ban neonicotinoids. We had some success there and were able to keep use on golf courses. We're getting ready to face another year in the general assembly, although we had a year

We are the only state association to have a fulltime lobbyist. So we were able to give some input on a neonicotinoid bill that was going to be passed that

2021 State THE Industry

where the Republicans were elected. That was big news. Maybe it'll be a little easier here because of that.

What are your expectations for 2022?

I think this raw material shortage, this equipment shortage, is going to be huge. Labor is going to continue to be an issue. People are going to have to figure out what is important and what isn't important on golf courses. For the last 30 years, people have been moving to more hand mowing, more hand raking, more labor-intensive practices. We're seeing a reversal of that. Even though your budgets are up, you have to pay people more. And you have to pay more for equipment. I think most members, most golfers, are understanding of the challenges we have. They just want nice tees, greens and fairways. And I've seen that at a lot of places.

- Seth Jones

Anthony Williams, CGCS

PRESIDENT, North Texas GCSA DIRECTOR OF GOLF COURSE AND LANDSCAPE OPERATIONS, TPC Four Seasons Golf and Sports Club, Dallas at Las Colinas

How was golf season for your year?

Rounds were up. One of the big things this year was an epic winter storm in February. There was a significant loss of some turf but a lot of trees and shrubs. It was an unprecedented agronomic loss. So, everyone started the 2021 season thinking, COVID is kind of behind us but it's still lingering, and while we all experienced more rounds, the recovery lasted throughout the season and will likely impact us next year. There's still a lot of large trees that are damaged. Nursery stock, shrubbery, flowers — we all lost a lot of product and prices were up and expectations were the same. We were dealing with the weather event on the tail end of a pandemic with record rounds.

We tried to put in a recommendation for early and constant communication. We gave our members tools

to engage the stakeholders, everyone from greens committees to random golfers to owners. A big push for us educationally and for the greater good



Anthony Williams

was to make sure everyone understood it wasn't just one golf course, but the brotherhood of superintendents rose up, and everyone was working together to help everyone find the resources needed.

The supply chain issue also came along later in the season. You just couldn't get replacement parts. Even if you ordered new equipment, it was delayed because of the lack of microchips or the lack of inventory in general. That was a sneaky impact from COVID where a lot of manufacturing and shipping was impacted by the closures. None of us recognized the impact that would have.

Add with that the rising cost of fuel, everything we did was more expensive, so it was about being able to communicate all that as quickly as possible so you could adjust. The good news is rounds were significantly up, so revenue was also up.

How has the weather been? It was bearable, but North Texas is famous for weather extremes. The week of the storm — the Valentine's Day storm — it was minus 2 degrees that Wednesday, and by the next week, we had a warm front that brought 3 inches of rain and heavy lightning and a high of 82 degrees, so within a week, we had a temperature swing of 80 degrees. I've seen a lot of weather events, both from the cold side and all the way through, but this impacted every piece of the golf course operation.

The soils were so contracted with the bitter cold since it was below freezing for five days, but then they expanded so we saw concrete retaining walls fail because of the extreme. None of those things are free, and they all have to be done for the facility to function.

What was your experience like with labor this year?

It's always tough to get people to show up at 4:30 in the morning, especially at the entry level. This was the worst year in history because a lot of people were not wanting to come back to work. We were competing with construction and restaurants. There was a lot more work to be done than people to do it.

We were doing flex scheduling. We tried to commit to our core group, which voted during COVID to not furlough anyone from maintenance. Everyone took fewer hours so we could keep the full crew, and then everyone came back as things improved.

That helped initially, but a lot of courses struggled because the labor pool had dried up. The guys that did work were working more hours, which puts more pressure on them. The guys got creative with chemistries, so plant growth regulator sales were up because if we weren't restricting growth in the fairways, we weren't able to keep up. *Continued on page SOI12*





Overcoming increased rounds, supply chain issues and an intense February storm showed the resiliency of the crew at Four Seasons Golf and Sports Club.

Continued from page SOI11

Everyone had to be almost perfect with all of the programs to create labor savings and constantly think of ways to cast a bigger net to find the labor that is out there. I think that will be the same for the foreseeable future.

We were able to get some interns, and if we hadn't been so vigilant of turning over every stone, I don't know that we would have survived, and not every golf course in North Texas can say that.

Were there notable success stories from your area/chapter this year?

Everywhere, the resilience to take

that winter storm right out of the gate and then dealing with North Texas summers with heat indexes of 106, 107. Even the ones who struggled a bit, everyone made more money than the year before it seems.

I could give you individual stories of success, but I think overwhelmingly, it was the way the superintendents of North Texas came together. When the world was absolutely at its worst, our crew members were at their best.

When I look back on the last two years, it's a testament to the dedication of the men and women who do this for a living that despite all the negatives, they find the silver lining in it. It keeps all of us going, that desire to take responsibility. When a lot of people make excuses, our industry rose up and made the changes. You have to be impressed with the resilience of our industry over the last two years.

What are your expectations for 2022?

As COVID hit, we were in a race. And then, it became clear that that race was going to be a marathon. Now, I think it's an ultramarathon. We're still in the race, and we realize it's not just 26.2 miles. We've got a lot of things ahead of us. We're several years away from a shift.

For 2022, you have to communicate more, be even more creative. As all the other industries raise their minimum pay, we're going to have to at least *Continued on page SOI14*

NATURALIZED AREAS Q&A WITH AARON HATHAWAY

Technical Services Manager, Turf & Ornamental, Nufarm



Questions regarding naturalized areas or reduced input areas don't only cover how to increase aesthetic quality or increase playability but how to accomplish these things with the fewest inputs as possible. This means thinking about the relative cost of inputs, the time it takes to provide an input, and which inputs are worth that time and money. In the end, the goal is to provide the beauty of contrasting tan colors and inflorescence in the summer with few inputs. However, success will be accomplished by developing a plan to include the most necessary inputs.

WHICH INPUTS ARE MOST IMPORTANT IN NATURALIZED AREAS?

Because these areas aren't mowed regularly, weeds can get out of hand quickly. Herbicide applications are the most important input to maintain pure stands of whatever was established. When perennial weeds with vast networks of vegetative reproductive parts, like common milkweed and Canada thistle, are left untreated they get stronger and multiply quickly. Turf managers should make time to treat these areas at least once per year; it won't make a huge difference whether it is in the spring when weeds wake up or in the fall as they prepare for winter – consistency is key because weed pressure is constant.

2 WHICH HERBICIDES WILL BE MOST VALUABLE IN NATURALIZED AREAS?

Millennium Ultra[®] 2 is a broad-spectrum herbicide that consistently provides great broadleaf weed control on golf courses, including in naturalized areas. Some weeds emerge late and some areas have high weed pressure and require some spot treatments mid-season. Sure Power® will burndown these weeds quickly and provides activity on a range of mid-season weeds including broadleaves, annual grasses, and many sedges. Those who have established these areas with fine fescues have a huge advantage when it comes to control of perennial grasses - sethoxydim and fluazifop can be applied over the top of fine fescue species to provide selective control of many perennial grassy weeds like quackgrass, reed canarygrass, etc.

B HOW ARE NATURALIZED AREAS ESTABLISHED AROUND IN-PLAY AREAS?

At establishment, seeding grasses at a low rate is key. A playable naturalized area may have 1 large plant per 1 square foot of area. This is a huge difference from the hundreds or thousands of grass plants in the same area mowed from 0.125 – 4 inches, and may call for a vast departure from what we are used to. Accomplishing such a sparse stand of plants is easier said than done, but here are some tips.

- Choose plant species that are clump-forming and won't spread via stolons, rhizomes, or other vegetative structures into open voids. If you are seeding fine fescue species, this may include hard and sheep fescues versus creeping red fescues.
- 2 Decrease your seeding rate. For fine fescues, 10 lbs of seed per acre, or even less, may be sufficient. Set up a few test plots and compare a few low rates so you become comfortable with rates much lower than commonly used.
- 3 Add some annual ryegrass to the mix to provide some quick cover and competition for your desired species – this is a good way to ensure a thinner stand.

HOW CAN ESTABLISHED NATURALIZED AREAS BE THINNED TO INCREASE PLAYABILITY?

Once these areas are established, they become much more difficult to thin out, so starting thin is key. These options for stand thinning should be tested as research in small areas as they are few and inconclusive. Keeping these areas thin will help increase plant aesthetics because they aren't competing as much with each other, but thin stands increase the likelihood of weed infiltration, so, again, weed control is key.

- Use PGRs. There is anecdotal evidence of superintendents using PGRs such as trinexapac-ethyl and prohexadione-Ca (Anuew™) to thin stands, but little conclusive research. PGRs are used in grass seed production fields to reduce lodging (plants falling over) and increase seed production, but not necessarily to thin turf stands.
- 2 Use preemergence herbicides. Because naturalized areas produce seed each and every year, a huge amount of seed is being added to the soil seed bank. If these seeds are allowed to germinate and recruit, they may increase density over time. A preemergence herbicide application may limit survival.
- 3 Nonselective herbicides like glyphosate or glufosinate (Cheetah® Pro) could possibly be used in creative ways to thin out naturalized areas. Perhaps a boom sprayer could be used with every other nozzle turned off and a random pattern through the areas. This may seem like an odd method, but it would get the job done quickly.



Grow a better tomorrow

NUFARM.COM/USTURF

©2020 Nufarm. Important: Always read and follow label instructions. Anuew™, Cheetah®, Millennium Ultra® and Sure Power® are trademarks of Nufarm.

Continued from page SOI12

match it. We'll have to get creative with flex scheduling. We recruit a lot of younger folks and retirees as well.

For a successful operation, all of that is not only going to be critical, it'll be necessary going into 2022 and even 2023. Successful operations are the ones who can adapt and move quickly to address all the issues.

Superintendents are going to need to put on a life coach hat and do some deeper work to keep these guys engaged and staying within the operation.

— S.W.

Scott Delpiere

VICE PRESIDENT, Southern Nevada GCSA

SUPERINTENDENT, Cascata Golf Club, Boulder City, Nev.

How was the golf season in your region?

It's been never-ending for us. All year, it's been nonstop, even in the summer months when we usually slow down to just local traffic.

With the cost of all of our essentials really high, keeping revenue going was really important. So, if people wanted to play, we'd just do whatever we could to follow behind them to treat areas.

In the summer, the last tee time is 11:30 a.m. because it gets too hot to safely play in Las Vegas after that. So, crews often went out in the early afternoon to maintain areas, but the heat kept things challenging.

This year was a mess. We had nematodes, and the moisture caused all sorts of problems. We had a lot of turf loss.

How was the weather in your area this year?

It was a miserable summer, hot and humid. Our monsoon season, when it

gets really humid, is usually a month or a month-and-a-half. This year, it stretched on for two-and-a-half or three months.

High humidity in Las Vegas is only about 30 percent, but couple that with 106-degree temperatures, and it feels worse than Florida in August.

How was your experience with labor this year?

We didn't lose any employees. We ran short-staffed for a week or two in the summer, but that's pretty typical. We increased wages and starting pay to keep everyone we could.

Existing workers got \$3 to \$3.50 raises, and starting wages went to about \$15.50 from as low as \$12 per hour.

We really need assistants, and they have been really hard to find. We've had job listings starting at \$65,000, and we haven't gotten much interest.

Were there notable success stories from your area/chapter this year?

There weren't a lot of things going right for us from the Fourth of July until we overseeded at the end of September.

What are your expectations for 2022?

I'm expecting more of the same, huge numbers of rounds played, higher starting wages and challenging weather. I hope that the labor market improves, but I expect higher wages to stick around.

I don't think golf is going to slow down here at all until July or August, and it might not even happen then. People really want to play golf in Vegas right now. -R.S.

Paul Sibley

PRESIDENT, Rocky Mountain GCSA **SUPERINTENDENT**, Walnut Creek Golf Preserve, Westminster, Colo.

How was the golf season in your region?

Golf was through the roof. We had a huge surge of new golfers. We had a lot of returning golfers. It was huge; we'll more than likely break round and revenue records for 2021. It's hard to get a tee time here.

How was the weather in your area this year?

Springtime was pretty good. Being on the front range of Denver, we got a lot of heat, and it lasted longer than normal. Pretty much midway through June through August and September, we had record heat. Here we are in November, and we're looking at 73 degrees — so it's been warm.

How was your experience with labor this year?

Talking with the guys on the board, we're all not getting the number (of workers) we're used to and we're barely scraping by. People are coming in wanting to be part time only. On average, we hire 25 people a season. This year, we had 18. I think wages need to improve, not just at my facility but



Paul Sibley

industrywide. When you see fast food chains paying \$16, \$17 an hour to start, and we're \$14.50? It's a hard market. At the city I work for, they're re-

ally looking into how we can become competitive in our local market. It still

2021 State THE Industry

has to go through city council, but it looks like this coming season we'll be \$2 higher an hour than what we were this season. That should help.

Were there notable success stories from your area/chapter this year?

We held our third annual Rocky Mountain Superintendents Association Conference this year. Our conference committee and board of directors put a lot of time into making it a great show. We had a great slate of speakers from all over the country, including Matteo Serena, (Ph.D., UC Riverside) and Karl Danneberger (Ph.D., The Ohio State University). It was very diversified. For our board of directors, 2021 was a good year rebounding from what everyone went through in 2020. We really got innovative in our education. A lot of it is virtual now. We're seeing a lot more participation. And we were able to recruit golf courses to allow us to do outings and education so we could get out and about and see each other again.

What are your expectations for 2022?

I think we're going to surpass rounds and revenues again. Even coming into late fall, our tee sheets are still packed. I expect to see golf here along the front range and around the country to keep moving forward. Hopefully, it lasts a long time. I won't say 'on the downside,' but I'm starting to experience an increase in the cost of the products that we buy. Fertilizer, chemical prices are going through the roof. It seems like everything, topdressing sand, there's a 10 to 20 percent increase coming our way. I'm hoping the uptick will get some budgets moving in the right direction so we can keep providing good playing conditions on a daily basis.

— S. J.

Melvin Waldron III, CGCS

SECRETARY/TREASURER, Ozark Turf Association

SUPERINTENDENT, Horton Smith GC, Springfield, Mo.

How was the golf season in your region?

Our state and our area had strong rounds again. Our rounds were solid, and weather for the most part was good. A few months were above average on rainfall, while a few months were below average. The wet months didn't seem to hurt our rounds overall. I will say, a few courses did notice a slight drop in rounds this year compared to last when schools went into session in August. Some thought that slight drop might have been due to some events allowing more spectators and activities increased from last year, taking some of the rounds away.

How was the weather in your area this year?

We did have a couple of months that pretty wet, March, May and October, about double the amount of average rain, but rounds didn't seem to suffer. March had temperatures way above average, while the rest of the golf season temperatures were average. We did suffer from the deep freeze in February but didn't suffer any damage because of snow cover. I know October was wetter than normal, but September and August were drier than normal. I think a lot of temperatures were average. We haven't hit 100 degrees since 2016, but we have had above monthly averages.

How was your experience with labor this year?

Everyone seemed to have trouble reaching the numbers of staffing that we have had in the past. Many guys did seem to notice that the staff that we did have — especially seasonal help seemed to be overall more quality help compared to quantity. The one problem some superintendents had was losing longtime assistants to other green industries or trouble finding assistants.

Were there notable success stories from your area/chapter this year?

Our OTA member superintendents seemed to host more state golf association events, either that, or I just paid more attention this year. I covered many on our OTA website, **OzarkTurf.**



org. Highland Springs Country Club hosted another Korn Ferry event, the Price Cutter Charity Championship, the 31st edition. It was one of the original stops

Melvin Waldron

when the tour first started as the Ben Hogan Tour. I believe that was 1990. Our course hosted the U.S. Speed Golf Championship, even having a world record set.

What are your expectations for 2022?

For 2022, everyone is expecting that rounds will continue to be strong, but there are some uncertainties as pay levels are going up, will it keep pace with costs. Projects seem to still be a go, as courses keep working on improvements to keep golfers engaged. \bigcirc — *C. H.*

WORTH THE SWITCH



3 REASONS ANUEW[™] PGR PERFORMS BETTER ON BENTGRASS - TRIAL PERFORMANCE VS THE COMPETITION -

> Long-lasting and more active at lower application rates

Only late-stage inhibitor to evenly regulate Poa in mixed stands

Fast improvement of turfgrass density and appearance

SEE RESULTS AT NUFARM.COM/USTURF/ANUEW



INVESTING IN THE FUTURE FOUNDED BY NUFARM AND GCSAA

©2020 Nufarm. Important: Always read and follow label instructions. Anuew™ is a trademark of Nufarm.




Continued from page 18 came time to get Old Tom to the stand where he was going to spend the rest of his life. We had about six guys like pallbearers carry Old Tom out the front door to the stand. I think you might have taken a picture of that, or you were one of the pallbearers.

Jones: That would be like me to volunteer to take the photo while you guys do the heavy lifting! Ed, you hired me as an intern in 2000, but you waited until a few years after I was full time to tell me that I was your second choice for that internship ... your top choice turned down the job. What the heck? Did I interview poorly? Who was the top choice?

Hiscock: You know, you were so great at the job that it has completely been wiped from my memory. I just want you to know that you will always be the No. 1 intern in my heart.

Jones: That makes me feel

better. Tell me this, how do you see the health of golf and, more specifically, the health of being in the industry of making magazines for people who work in the game?

Hiscock: It proves to me that after all this time if no one wanted something in print, you wouldn't be printing Golfdom right now. This goes back to the mid '90s, when I started at GCSAA, we were hearing all the time that print was near death. I think it was given about five years in the mid '90s. Again it goes to don't get out in front of your readers, don't get behind them. You find out what they want. What they told us loud and clear was they wanted to consume what you have in every way possible. They want it on their phone, their laptop, their desk. I'm not as doom and gloom about print as some people are because it's still around. Go to the grocery store and look at how many magazines there are. I doubt,

"Never stop asking about everything, all the time. Never think that you know more about what your readers want than the readers do. That will set you straight real quick."

Seth, if you've ever been in a superintendents' office that didn't have copy after copy of magazines on their desk, on the shelf. The evidence is there that magazines are going to be around for a long time.

Jones: What advice do you have for me and my team to have the kind of successful career in the industry that you had?

Hiscock: Never stop asking. Never stop asking about everything, all the time. Every time you're out on the course, talk to all the people, not just the superintendent, talk to the assistant, to the crew. Ask them what they'd like to see. I know people get tired of surveys, but surveys are absolutely indispensable for letting you know what the readers want to see. Keep asking all the time. Never think that you know more about what your readers want than the readers do. That will set you straight real quick. **@**



Softhe year

BY TURF TWITTER

2021 saw some great tweets, but which one was the best?



For the past year, in partnership with Syngenta, *Golfdom* has recognized a tweet that stood out as especially poignant, impactful or just downright funny, in each issue. Now we ask ... what was the best of the year?

Visit **Golfdom.com** or look for our poll on Twitter (**@Golfdom**) to vote. The winner will be honored with a couple of fun prizes from our magazine and our friends at Syngenta.

Rob Andrews

@andrews_rp Assistant Superintendent Ansley Golf Club at Settindown Creek Atlanta "Mysterious alien monolith found at the golf course."

Travis Olson

@travisolson86 Superintendent at Kamloops G&CC Kamloops, British Columbia, Canada "Golfers don't see many of the things that go into the playing conditions. I'm sure we could add about 100 more things to this Golf Superintendent Iceberg."

Travis Olson @travisolson86

Golfers don't see many of the things that go into the playing conditions. I'm sure we could add about 100 more things to this Golf Superintendent Iceberg.

Playing conditions Playing conditions Organizing staff Developing fertility program Developing short + long term plan Developing short + long term plan Developing short + long term plan Developing and redeveloping staff Valuating and redeveloping staff Subusting and developing staff Subusting and redeveloping staff Subusting water, environmental impacts Orgoing feedback from players and golf pros Coordinating equipment maintenance + needs Complex profissional developement and metoration Developing for resources + improvements to course and infrastructure

Graeme McDowell @Graeme_McDowell

Professional Golfer 2010 U.S. Open champion

"Proud of what you have achieved at @LakeNonaGCC, brother. When passion and talent come together in any line of business, great things happen."

// TWITTER GOLD

Graeme McDowell

Proud of what you have achieved at @LakeNonaGCC brother. When passion and talent come together in any line of business, great things happen.

Brandon Richey @BKRichey - Feb 18
 Special thanks to @FGCSA and everyone involved with The Florida Green for
 their consideration to be featured in the Winter 2021 issue, amongst so many
 deserving individuals in our industry.

It has given me the chance to expose our wonderful Association to some of my favorites.



Brandon Richey @BKRichey

Superintendent, Lake Nona Golf and Country Club, Orlando, Fla.

"Special thanks to @FGCSA and everyone involved with The Florida Green for their consideration to be featured in the Winter 2021 issue, among so many deserving individuals in our industry. It has given me the chance to expose our wonderful association to some of my favorites."

Chad Price

@CgcChad

President, Carolina Green Corp., Carolina Green Sod, GameOn Grass, Monroe, N.C.

"Had a legend on the farm last week, Dr. Trey Rogers, mentor to many. I really enjoyed our time talking turf and life in general."



Greg Niendorf @gregniendorf

Best time to be on the golf course.



Greg Niendorf @gregniendorf Superintendent, Shadow Creek GC, Las Vegas

Presented in partnership with:



Sally Jones

@sallym321

Superintendent / General Manager Benson (Minn.) Golf Club "Thank you @KayCockerill,

@marissalmar, Dr. Pat Cornett, Linda Segre and Shannon
Roullard for visiting with the
#WomenInTurf maintenance
volunteers at #USWomensOpen
today! Your support not only for
your maintenance staff but also
for Women in Turf is inspiring.
@TheOlympicClub"

Sally Jones @sallym32

Thank you @KayCockerill, @marissalmar, Dr. Pat Cornett, Linda Segre, and Shannon Roullard for visiting with the #womeninturf maintenance volunteers at #USWomensOpen at today. Your support not only for your maintenance staff but also for Women in Turf is inspiring. @TheOlympicClub



Continued on page 38

// TWITTER GOLD

Continued from page 37

Colin Fulks

@Fulksy41
Assistant Superintendent
The Ledges Country Club, Huntsville, Ala.
"Intern vs assistant: hose rolling
edition."

Ross Niewola @NiewolaRoss Superintendent, Sherwood CC Thousand Oaks, Calif. "New city. New course. New grasses. New crew ... Still the best office!"

Ross Niewola @NiewolaRoss

New city. New course. New grasses. New crew

Still the best office!



Andrew Getty @Andrew_Getty Superintendent, The Prairie Club (Dunes Course), Valentine, Neb. "Our first real taste of autumn came today with a high in the mid-60s. The turf is absolutely loving life





Intern vs assistant: hose rolling edition



#TurfTweetoftheMonth

Follow us @Golfdom



Matthew Herrmann @Herrmann_GCS

It's the little things in life



Matthew Herrmann @Herrmann_GCS Superintendent, Green Valley CC, Lafayette Hill, Pa. Presented in partnership with: syngenta®

Continued on page 40

...

...



The revolutionary DryJect service is now even more flexible. Our most recent innovation allows you to use dry sand OR wet sand and achieve the same remarkable results.

DryJect will no longer be limited to the use of only kiln dried sand! Through extensive research and development, we have engineered a special hopper configuration that includes rotating agitation and staged screening with vibratory assistance to assure affective flow of anywhere from slightly damp sand to wet sand.



Wet Sand, Damp Sand, Dry Sand, No Problem



Rain or Shine Capabilities





Injection that Aerates, Topdresses, and Amends in One Pass



// TWITTER GOLD

Continued from page 38 right now. Just three more weeks until closing day."

Riley Wales

@RiGrassGuy
Assistant Superintendent
The Shore Club, Rio Grande, N.J.
"Dear fall,
Thank you for finally arriving.
Love,
Every turf manager in the
Northeast."

Tristan Martin @TristanM1999

First Assistant Superintendent Royal Cinque Ports GC South East, England With Siouxsie's level 2 exam coming up, we are going through the basics of hole changing. @RCPgolfclub



Dear fall,

Thank you for finally arriving.

Love, Every turf manager in the northeast









Hosted by Mike Kenna, Ph.D. | mpkenna@gmail.com

Super Science

// HOW MUCH HAS CHANGED

THE ART OF YESTERDAY — THE SCIENCE OF TODAY

By the late William H. Bengeyfield

t is one of the fascinating paradoxes of our profession. Turfgrass management — for golf — is indeed both an art and a science. It was always meant to be so. The keeper-of-the-green profession has a heritage going back 400, perhaps 500 years. Science has changed it. And yet, paradoxically, how little it has changed. It is still basically an art form. The thoughts that follow are mostly concerned with science, but my real message is about art.

Science and the Stimpmeter. "Science" has even developed a little stick we now roll a ball down to test the speed of the green. The Stimpmeter is designed to establish speed criteria. Those who condemn the Stimpmeter overlook the fact that there is an art in using it. The speed of any particular set of greens must surely be at that level best suited for the membership and the conditions that prevail.

Science and soils. Science has given us specifications for putting green construction. The Green Section Specifications, written in the early 1960s, is officially entitled "A Method of Putting Green Construction." No one in a responsible position with the Green Section ever said or claimed they would produce the perfect foolproof green. It is up to us to execute, to use the data, to make it work. An artist does that.

Science and research. Now a new era of research, to be sponsored by the USGA Green Section, lies just ahead. Conceived by Al Radko, a long-range, multimillion-dollar research project on minimal maintenance turfgrasses will soon be underway. The objective is to develop turfgrasses that will have greater winter hardiness, wear resistance, drought and temperature tolerance, disease and insect resistance, salt tolerance, require lower fertility levels and still produce superior playing qualities. Once the work is complete, an intensive plant breeding program will begin. Genetic selections will be made by advanced computer analysis that cuts years off of previous plant breeding techniques. The full study will take at least 10 years.

Science and irrigation. Science has also given us improved methods of irrigation. Who among us will disagree that automatic irrigation is not AUTOMATIC? Any type of irrigation is, at best, an inexact science. There are so many variables: wind, cloud cover, temperature, soil types, humidity, cutting height, type of grass, shade factors, etc. The more variables one must deal with, the greater the "art" becomes.

Science and computers. Computers have been mentioned, and they are indeed a



This project was funded in part by the USGA Green Section. new "science." They are going to affect our professional and private lives immeasurably in the immediate future. Dr. V. B. Youngner, University of California, Riverside, recently said, "Computers are an unbelievably fast and unbelievably accurate machine. They are also incredibly dumb. Man, on the other hand, is an extremely slow and

NEWS UPDATES

PURSELL HIRES NEW DIRECTOR OF AGRONOMY

Pursell Agri-Tech has expanded its team with the addition of Eric Ellison, an experienced broadacre and specialty crop agronomist and researcher.

Ellison will work closely with the Pursell Agri-Tech team to improve understanding of product applications at the field level and to support R&D efforts, commercial strategies and key partnerships.

Ellison's experience includes work in both academia and industry, focused on research, education and product development. His educational background includes a bachelor's degree in soil science and doctorate in chemistry. For the past 15 years, Ellison has worked as an industry agronomist, primarily in North American agricultural markets for companies including Nutrien and Koch Agronomic Services, with an emphasis on improving fertilizer use efficiency, plant nutrition and plant health.

"I am excited and extremely grateful for the opportunity Pursell Agri-Tech has afforded me to help establish its innovative, next-generation controlled-release fertilizer technology," Ellison said.

inaccurate machine. However, he is brilliant. Bring these three forces together, and there is no limit to what may be accomplished." Notice, if you will, it is man's brilliance, his art, that makes the difference. He makes the computer work.

And so it is in turfgrass management, in just about any pursuit in life. You can have all the science in the world, but if you don't have that certain ability, that perception, that art, to bring it all together in the right manner — if you don't have that "touch" — You don't have very much! **G**

Reference

Adapted from the article by William H. Bengeyfield. 1982. The Art of Yesterday – The Science of Today. USGA Green Section Record, 20(2):2-3.





"Even though winter may appear to be the slow part of the season, continue to monitor turf. If extreme enough, cold temperatures cause turf stress." KARL DANNEBERGER, PH.D., Science Editor

Cold hardiness

t this time of the year, worrying about your turf takes a back seat to the holiday season. This is especially true with cool-season turfgrasses but also with warm-season grasses. Growth has slowed or stopped, and looking across a winter golf course, it is easy to think the turfgrasses have gone on "holiday," too.

Since early fall, both cool- and warm-season turfgrasses have used this time to prepare for winter by switching physiologically to be more cold hardy. December and January is the time that turfgrasses are in their most cold-hardened state.

In general terms, cold hardiness occurs when plant cells, primarily those associated with growth, start to dehydrate. Water moves from the intracellular area within the cell to areas outside or between cells. The loss of cell water is described as desiccation. The plant cells remain in this desiccated state for the remainder of the winter. Once late winter or early spring arrives, cold hardiness is lost as cells hydrate and growth begins.

Cold hardiness is gained through an acclimation process. For example, in studies where wheat is grown at warm temperatures (80 degrees F) and then exposed to cold temperatures (23 degrees F), the plants die. However, when those wheat plants growing at 80 degrees F are exposed to cool, nonfreezing temperatures (< 50 degrees F), they survive at -4 degrees F. Acclimation is the ability of plants to become adapted to the gradual reduction in temperatures. Turfgrasses exposed to cool temperatures (< 50 degrees F) for a relatively short time (three to seven days) initiate cold acclimation.

Plants that are growing in sunny conditions appear to acclimate to cold better than shaded plants. Frequently, golf course turf that suffers freeze injury is found in low-lying areas that are shaded. Factors besides reduction in light could affect the cold tolerance of turfgrasses like reduction in carbohydrate levels due to reduction in photosynthesis or colder temperatures associated with winter shaded areas.

At a molecular level, plants going through acclimation activate cold regulating genes, which encode for proteins that potentially provide the cold tolerance in plants. These genes are induced by temperature and light. Although temperature is a critical factor in acclimation and cold hardiness, recognizing the importance of light in the acclimation process is often overlooked or forgotten.

The most common freeze injury is expansion-induced lysis, often

referred to as freeze/thaw injury that occurs in late winter/early spring when temperatures are cool (25 to 28 degrees F) and moisture is present. The turf is beginning to break hardiness as the cells in the crown area begin to rehydrate. Wet conditions are present, and often, the soil is saturated. Rain arrives, and a rapid drop in temperature often causes ice to form. Once temperatures rise again, the turf may initially appear healthy, but it rapidly dies within a few days. Cell rehydration followed by rapid freezing around the growing point has resulted in cell death.

At cooler temperatures (14 to 25 degrees F), plants can undergo differential membrane dehydration that can result in changes in cellular membrane fluidity and structure. As temperatures drop into this 14 to 25 degrees F range, the fatty acid makeup can shift to more saturated fatty acids. Saturated fatty acids are more "rigid" at colder temperatures than unsaturated. With breeding efforts of warm-season turfgrasses like seashore paspalum, looking at variety differences in the fatty acid composition at low temperatures may be a mechanism for screening for coldtolerant varieties.

The final level of freeze injury occurs below 14 degrees F. Under these conditions, severe dehydration occurs. This kind of freeze injury most likely occurs at higher elevations.

Achieving cold hardiness is an annual occurrence in turfgrasses during the holiday season. Injury, however, can occur 1) if moisture levels remain high in and around the plant or 2) if severe dehydration/desiccation occurs at low temperatures. Even though winter may appear to be the slow part of the season, continue to monitor the turf. If extreme enough, cold temperatures cause turf stress. **G**

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

//YEAR IN REVIEW

Looking back on 2021

olf has done well during the COVID-19 pandemic, and there's been a slow return to business as usual, but managing golf courses continues to be a challenge with changing climate, drought and the pest problems invading turfgrass. Again, it is time to look back on the research articles we covered in *Golfdom* during 2021.

Covers and batting to increase winter soil temperatures on ultradwarf bermudagrass putting greens

By Mike Richardson, Ph.D., Eric DeBoer, Doug Karcher, Ph.D., and Thomas Walton, University of Arkansas, Department of Horticulture

• Covers on ultradwarf putting greens prevent winter damage.

• Reducing the predicted low temperature to cover greens from 25

degrees F to 15 degrees F does not significantly reduce winter survival.

• Winterkill patterns suggest that cover thickness or the presence of air under the covers improve winter survival.

• Batting increased the 1-inch (2.5-cm) depth soil temperature by 4 to 5 degrees F (2 to 3 degrees C) compared to the cover-only control on some dates; however, there are no statistical differences among the batting weight treatments (Figure 1).

Contact Mike Richardson at mricha@uark.edu for more information

FIGURE 2





Effect of protective covers and various weights of batting fabric on the morning and afternoon soil temperature of an ultradwarf bermudagrass green on two dates in 2019. Different letters within each bar grouping indicate a significant difference.

Pyraclostrobin residue data from a sample core collected 14 days after treatment. Percent of applied data is converted to ppm at each depth. An *in vitro evaluation of Gaeumannomyces graminis* on pyraclostrobin-amended media demonstrated that 1 ppm completely inhibits fungal growth.

Factors affecting fungicide performance on golf course turf

By James P. Kerns, Ph.D., Travis W. Gannon, Ph.D. and Cameron M. Stephens, North Carolina State University

• We found very little fungicide within removed clippings when delaying mowing events.

• It is challenging to move fungicide past the remaining verdure and thatch, regardless of irrigation treatment.

• Immediate irrigation resulted in more fungicide movement past the above-ground vegetation.

Continued on page 44

Super Science

PHOTO 1



Damage caused by ground pearls on a bermudagrass putting green. Symptoms often include initial thinning and texture changes, followed by loss of turf in the forms of straw or bare soil.

Continued from page 43

• Small differences in fungicide movement could dramatically impact the efficacy of fungicides on golf course putting greens (Figure 2).

Contact Kerns at jpkerns@ncsu.edu.

Control of ground pearls using application sequences of different insecticides

By David Kopec, Ph.D., a retired extension specialist in Turfgrass Science and Management from the University of Arizona in Tucson, Ariz. (1985–2018)

• Ground pearls have become extremely problematic to control on golf courses because of removing many older turfgrass insecticides with environmental issues (Photo 1).

• Ground pearl adults (when they are exposed as nonencysted egg-laying females) were severely reduced in numbers by rotational and closely spaced single applications of Zylam, Avid and Ference under desert conditions.

• This research presents a protocol of

product use sequences to achieve significantly enhanced ground pearl control.

David Kopec can be contacted at dmk@email. arizona.edu.

Preventive fungicide applications for the control of dollar spot at fairway height

By Paul Koch, Ph.D., and Kurt Hockemeyer, University of Wisconsin some level of control relative to the nontreated plot.None of the treatments were

• None of the treatments were phytotoxic to creeping bentgrass maintained as a golf course fairway.

• Twelve of the 21 treatments provided effective seasonlong dollar spot control (less than five spots per plot).

• Recently released Posterity, Xzemplar, Maxtima and the combination product Traction provided effective dollar spot control. (Photo 2)

Contact Koch plkoch@wisc.edu.

Guiding PGR applications by growing degree days

By William C. Kreuser, Ph.D., assistant professor, extension turfgrass specialist at the University of Nebraska

• We tested a model to estimate the amount of PGR remaining in the plant when the PGRs were applied before their ideal reapplication interval. A half-life approach model was used to schedule the PGR application rate. The model tested resulted in an intensification of clipping yield suppression and increased phytotoxicity over time. The results indicate the models were too aggressive.

• A new PGR-GDD model accounts for the clipping yield suppression of multiple PGR and DMI fungicide applications. The model was developed from a combination of various datasets





Recently released Posterity, Xzemplar and Maxtima provided effective dollar spot control.

// YEAR IN REVIEW



The impact of different PGR reapplication models on the relative clipping yield suppression of a creeping bentgrass fairway mowed at 0.400 inch.

and had an R2 value of 0.763.

• In 2020, the new PGR model was used to evaluate putting green performance when PGR ingredients were mixed. Mixing Primo with Trimmit increased green speed by 8.4 inches compared to the nontreated control. This mixture combined with higher levels of nitrogen fertilizer sustained high putting green stand density and acceptable color. We are replicating this experiment in 2021 (Figure 3).

If you would like to learn more about PGR models or the Greenkeeper application, you can reach Kreuser at bill@greenkeeperapp.com.

Light and frequent topdressing programs

By Brian Whitlark, an agronomist in the USGA Green Section West Region, and Cole Thompson, Ph.D., assistant director of USGA Green Section Research

• Sand topdressing is the most important cultural practice for managing the organic matter.

• Recent research confirms the benefits of light and frequent sand topdressing programs that provide less

immediate disruption, better playing conditions and better rootzone characteristics over time.

• It is critical to assess putting green performance and the quality of the rootzone to determine if circumstances warrant an accelerated program for improvement beyond what is possible with light and frequent topdressing.

• Regardless of the selected topdressing program, silica sand is preferred because of its tolerance to weathering.

• Aeration backfill should closely match the physical characteristics of the sand used at construction. Still, routine topdressing sand can be somewhat less coarse to ease incorporation and reduce wear on mowers. Ongoing research suggests that this will not impede infiltration or cause an overly wet surface.

• Regardless of the selected topdressing program, it is wise to assess rootzone physical properties regularly by submitting core samples to a soiltesting laboratory (Photo 3).

The bizarro snow mold year

By Paul Koch, Ph.D., University of Wisconsin

• The conditions were perfect for snow mold to develop across Chicago and much of the southern Great Lakes. In January, a deep and insulating snowpack prevented the February cold Continued on page 46

РНОТО 3



Visible water squeezed from a putting green's surface layer is a good indication that more sand is required to dilute thatch and organic matter.

// YEAR IN REVIEW

РНОТО 4



Snow mold pressure in southern Great Lakes locations like Madison, Wis., was severe in 2021.

Continued from page 45

snap from affecting fungal growth at the turf surface.

• In January and February, the snow machine never kicked on in Wausau and much of the northern Great Lakes. The February cold snap killed off most of the snow mold fungi and prevented snow mold from developing (Photo 4).

• Despite the spotty snow mold development across the region, last winter's University of Wisconsin snow mold research still provided excellent product evaluation results on pink snow mold (*Microdochium nivale*) from our Madison, Wis., location and on gray snow mold (*Typhula incarnata*) from our Marquette, Minn., location.

Contact Koch via email at plkoch@wisc.edu.

Crabgrass weed suppression in fine fescues

By Florence Breuillin-Sessoms, Dominic P. Petrella, Jon M. Trappe, Nicole T. Mihelich, Aaron J. Patton and Eric Watkins

• Festuca rubra taxa are more crabgrass suppressive than F. ovina.

• There is considerable variability in weed suppression across entries within

each fine fescue taxon.

• Opportunities exist for plant breeders to develop new weed suppressive cultivars.

• Future studies should aim to separate allelopathic effects from plant competition.

For more information, contact Florence Breuillin-Sessoms, Ph.D., University of Minnesota, fsessoms@umn.edu.

Pythium in golf course putting greens

By Jim Kerns, Ph.D., professor and extension specialist in Turfgrass Pathology at North Carolina State University

• Identification of *Pythium* species during the summer months is challenging as most isolates recovered were nonpathogenic species such as *Pythium torulosum*.

• Based on the limited data thus far, we hypothesize that *Pythium* infection precedes symptom development in creeping bentgrass.

• *P. torulosum* growth was only inhibited by cyazofamid (Segway), fluazinam (Secure) and Terrazole (etridiazole) (Figure 4).

• In vitro sensitivity varied among Pythium species, but all were extremely sensitive to cyazofamid. ③

Jim Kerns can be reached at jpkems@ncsu.edu.



Efficacy of preventive cyazofamid applications for *Pythium* root rot in creeping bentgrass. Applications started in either March, April, May, June or July and were reapplied monthly until August. All applications were irrigated immediately with 1/8 inch of water, and cyazofamid was applied at 0.45 fl oz/1000 ft².





"I could hear (William) Bengeyfield's booming baritone voice when I read his article about the art and science of course management."

MIKE KENNA, PH.D., Research Editor

Science and us

get a little nostalgic at the end of the year looking back on turfgrass research covered in the Super Science section of *Golfdom.* Planning for 2022, while reviewing past USGA Green Section articles from the *Bulletin, Timely Turf Topics* and *Record,* I found an article from William H. (Bill) Bengeyfield, former USGA Green Section agronomist and national director, who passed away on June 3, 2020, at the age of 97.

Bengeyfield's leadership still has a far-reaching impact on the golf industry and the USGA. From 1955 to 1978, he was a Green Section agronomist. After leaving the USGA, he became the director of golf courses and park maintenance at Industry Hills Golf Club in Southern California. He rejoined the Green Section in 1981 and served as national director from 1982 until his retirement in 1990.

Bengeyfield believed that science should be the foundation of recommendations and information provided by the USGA Green Section. As chairman of the USGA Turfgrass Research Committee, he established what is now known as the USGA Mike Davis Program for Advancing Golf Course Management (formerly the Turfgrass and Environmental Research Program).

Bengeyfield's 34-year career positively impacted golf course agronomy, which is better today because of his leadership. His prophetic 1982 article, "The art of yesterday the science of today," sets a tone for so much that has happened in the last 40 years. Bengeyfield and the research committee established long-range



I could hear Bengeyfield's booming baritone voice when I read his article

objectives to

golf today.

address a lot of the

problems facing

William Bengeyfield

about the art and science of course management. I want to start here with his concluding remarks in the "Science and us" section, which sets a tone for the future:

"Perhaps one of the greatest gospels you and I can preach today in turfgrass management is that 'green does not necessarily equal good.' This story should be told over and over again, especially to American golfers. Now, I have heard the quick voices of dissent among us regarding this philosophy. There are always quick voices of dissent, but before we agree to argue about it, let's first be sure we understand what is being said. No one has said, 'Green golf courses are bad!' That's foolishness, but the demand by some for a green, green, green golf course, overly watered, overly fertilized, not properly mowed for good playing conditions (but mowed instead for a good green appearance) does NOT make it a good golf course for golf.

Our concern, our job today, is much the same as it was for the 'keeper of the green' 500 years ago. It is to provide the best possible playing surfaces for the game of golf, not necessarily the greenest ones.

Science will help us immeasurably in our work, but it takes more than science. It takes that special, magical ingredient known as YOU. It is you who makes it all come together. You make it happen. You are the artist. Please, don't ever forget that!"

You can read the rest of Bengeyfield's 1982 article in the "Super Science Intro" section on page 41. It is not only prophetic but very entertaining to read. There is a constant theme focusing on the implementation of science that the superintendent can only make.

I recently read an article by a U.S. Department of Agriculture scientist who mentioned the "Valley of Death," or where he thought scientific research often ends up. It is more important to communicate and educate practitioners in any field on using research results and the potential benefits.

The USGA Green Section, from its beginning in the 1920s, has made getting information in the hands of course decision-makers a priority. Bengeyfield insisted on prioritizing this through the USGA Green Section Record, the Course Consulting Service and university extension programs. **G**

Mike Kenna, Ph.D., is the retired director of research, USGA Green Section. Contact him at mpkenna@gmail.com.

Super Science // EXPERTS' INSIGHTS



Desiccation on turfgrass occurs in late winter months due to lack of moisture.

Dry conditions are the enemy

Make sure your turf is healthy and moist going into the winter season to prevent desiccation

By Christina Herrick

Desiccation on turfgrass tends to become a problem in the later winter months, January or February, says Bill Kreuser, Ph.D. He studied desiccation extensively during his time with the University of Nebraska.

Superintendents in drier winter climates often lightly water greens or high-value surfaces during those months to keep turfgrass alive.

Kreuser says desiccation is on one extreme of winter injury — the lack of moisture — and crown hydration injury is on the opposite end of the spectrum with too much moisture.

"Grass plants dry out going into winter to make them hardier," he says. "And if grasses like annual bluegrass absorb

too much water, like during a January rainfall event, then there's too much water in the plant, and when it freezes, it dies. Desiccation is the same thing. It's just on the other side of dry. So, if it gets too dry, then a cold snap can kill it."

Desiccation is more problematic for bentgrasses, ryegrasses, rough bluegrasses and even bermudagrasses in the South, but, as Kreuser mentions, annual bluegrass is also susceptible in the right conditions.

Prevention of desiccation from too little moisture starts in the fall, ensuring the turf has some moisture, especially in those areas of the course where there are drier patches. Deploying wetting agents can help in those problematic areas. Turf covers can also help protect turf, too.

"A blanket of sand is really important in those high-value areas, even in the Southeast on bermudagrass greens," he says. "Protecting those crowns is really crucial."

Kreuser says shady areas on turf are more susceptible to any type of winter injury or stress as the shade makes it more difficult for the turf to harden off for winter, and the turf is most likely weaker in those shady areas.

Green Jacket

GARRY SULLIVAN Vice president of sales



Turf Covers for desiccation? Which type: impermeable or

permeable? Green Jacket is an impermeable cover that provides a barrier of protection to the crown of the plant. High winds that cause desiccation simply hit and bounce off the impermeable cover while it holds in moisture the green and soil contained before being covered for the winter season. Studies by well-known universities confirm that by keeping the moisture away from the turf crown, we can increase positive results needed to avoid crown hydration, ice damage and desiccation. GreenJacket has a calculated light transmission property (UV resistant) that blocks out approximately 30 percent of the sunlight. This helps to keep turf dormant during the temperature fluctuations that have become more the norm than the exception.

Evergreen Turf Covers

BILL THOMPSON Sales manager

The ever-changing weather patterns have made it more critical than ever before to protect your greens — your investment — and to sustain your expected level of play with



no interruptions. The ravaging effects of sustained freeze temperatures on warm-weather grasses were evident in many parts of the South with lasting effects. In addition, wind desiccation throughout the Midwest and Northern states were also impacted with similar results. In these areas, it was the proactive superintendents who were able to survive and move forward with no injuries to their turf. Whether it's wind desiccation or extended freeze conditions, turf covers' insulation characteristics provide the insulating barrier and protect from the effects of Mother Nature. The loss of play and the cost to get your greens ready for play far outweigh the investment of a cover.

Sand Hills Golf Club, Mullen, Neb.

KYLE HEGLAND Superintendent



Sand Hills Golf Club is in the very middle of the Nebraska Sandhills, the only native prairie grassland left in North America. At 3,300 feet of elevation, our temperatures fluctuate very dramatically during the summer and even in the winter. Summer brings on average 30-plus days of 100-plus degree heat, while the winter temps dip well below 0 degrees F. Huge temperature swings in the winter are what cause desiccation on our turfgrass. We have huge warmups (daytime highs in the 60s), while only a couple of days later, we can be below 0 (not counting wind chill). The Sandhills of Nebraska is one of the windest places in the country. Desiccation means warm daytime temps coupled with high winds.

When this happens, there is a small window of time to get moisture to the plant that desperately needs it. If we do not have an action plan in order, we are going to see desiccation. Mother Nature is undefeated, and some years, despite the best-laid plans, we will still see the effects of desiccation and winter injury. Our main objective is to have our grass plants as healthy as possible leading into winter. Prior to our irrigation blowout, we make sure all playing surfaces have as much moisture as possible, focusing on greens. We are a semiarid climate, averaging 18.5 inches of moisture per year, with relatively little moisture coming from December to February. We do have a frost-free winter watering system, which allows us to irrigate when the temperatures get above freezing. Any days in the winter where we are dry and above freezing, we irrigate as needed. Like any superintendent, we focus on greens first, and we deal with a lot of dead grass on fairways before we can deal with any dead grass on greens. Plant health is a big factor in minimizing desiccation. We aerify and take care of our cultural practices during the growing season. We also feel it's important to bury the crowns of our turf in sand. For us, it is cheap and easy to apply and offers another layer of protection from the harsh winter climate.

MUST-HAVE NEW PRODUCTS





1 | Target Specialty Products Infinite

TARGET SPECIALTY PRODUCTS' Infinite includes multiple ingredients, designed to manage both soil moisture, plant stress and recovery. A multiple polymer product, it's fortified with two novel technologies: DiuTuron and Templar. Patent-pending DiuTuron polymer technology improves the longevity and residual of the product in the soil. DiuTuron allows for lower use rates. Infinite also includes Templar, which reduces the stress associated with heat and drought by enhancing the plants' natural defense mechanisms. Target-Specialty.com

2 | 2750 E-Cut Hybrid Triplex Mower

JOHN DEERE's 2750 E-Cut Hybrid Triplex Mower provides a high-quality cut and features a 62-inch mowing width and mowing speeds of up to six mph. The passcode-protected TechControl system enables managers and technicians to input commands, controlling nearly everything regarding the operator's performance. The three-axis lift system provides up to 18 degrees of steering and 42 degrees of contour following. The open-platform frame design with a low center of gravity results in excellent stability, according to the company. Deere.com

3 Standard Golf Litter Mate

STANDARD GOLF's new and improved Litter Mate will ease superintendents' minds with no dents and no rust. It comes in three color selections (green, red and black) in UV-resistant polyethylene. It is accented with a tough molded black lid, and it mounts to any 2.375-inch OD. Post. Additionally, the Litter Mate includes a liner with a trash opening lid and hardware. **StandardGolf.com**



CHECK OUT MORE NEW EQUIPMENT ONLINE To stay up to date on all the latest products and services, visit golfdom.com/ category/ products





4 Hydretain ES Plus

HYDRETAIN ES Plus is a water management technology that converts soil moisture vapor into plant-usable water droplets. By making use of moisture that would otherwise be lost to evaporation, Hydretain reduces watering requirements by up to 50 percent or more, according to the company. Hydretain ES Plus combines the Hydretain technology with an advanced non-ionic surfactant for improved penetration of Hydretain into and throughout hard-to-wet soils.

Hydretain.com

5 653 Accu-Master Reel Grinder

The 653 Accu-Master Reel Grinder from FOLEY CO. hands-free relief system does more than just spin grind. Foley's automation of infeeds and the patented autoindex improve productivity, and a completely enclosed system provides maximum sound protection and dust collection. The Accu-Touch 3 control makes grinding easy and fast. Users can spin grind in just minutes. FoleyCo.com

6 Echo DPB-2500 Cordless Handled Blower

Quiet and powerful, the new **ECHO** DPB-2500 Cordless Handled Blower is ideal for golf courses. Part of Echo's new eForce 56-volt Battery System, this commercial-grade handheld blower is powered by a 56-volt lithium-ion battery, featuring a maintenance-free brushless motor that provides blowing force of up to 549 CFM. Additionally, the DPB-2500 comes equipped with a turbo button, variable speed control and a cruise control feature. It will be available in early 2022.

Echo-USA.com

The 19th Loce

Sam Samuelson

SUPERINTENDENT // WildHawk GC, Sacramento, Calif.

After 18 holes, what can I get you? I usually go with a blanco tequila on the rocks, por favor. Casa Noble is my favorite.

Tell me about your family. I have a wonderful wife, Katherine, from the great state of Maine. She's a special education teacher. She's great at it, and the kids love her. I've got two sons: Jack, 22, just graduated last spring from Willamette University in Oregon, and Will, 20, is a junior at Sonoma State University.

Thanks for letting us take a photo of your dog for the calendar cover! How old is she? Molly is a 7-year-old yellow lab. She goes to work with me almost every day. The only time she doesn't come to work is when Grandma

(Katherine's mom) is in town from Maine. She loves to sit on the couch and watch Netflix with "Nanny." It's kind of fitting (she's on the calendar cover). Our golf course is unique in that we allow golfers to bring their dogs on the golf course.

What's your favorite tool in the shop? My trusty coffee cup. I get up at 3:30 in the morning every day.

What's the hardest part about being a superintendent in California?

Water is the issue. We're right in the middle of a severe drought. We're lucky we have groundwater, so we pump our own. We're really efficient with it, we have a nice Rain Bird system, a Nimbus II.

What would be your dream concert? I don't want to age myself, but I've been to my dream concert. I saw the Beatles in '64

> "NEVER MAKE AN IMPORTANT DECISION IF YOU'RE UPSET OR MAD. SLEEP ON IT AND MAKE THAT DECISION THE NEXT DAY."

// BEST ADVICE

at Cincinnati Gardens. It was unbelievable. On came the Beatles and the women screaming. It was an hour of music, and we heard maybe half of it. It's something I'll never forget. My father was really cool, and that was something he took us to.

Any holiday traditions at your house?

My wife is big on having a live Christmas tree. It's a day's adventure to get the right Christmas tree. It's not a Clark Griswold adventure, but we put up a nice tree. It's nice with the whole family around. Usually, Grandma comes from Maine, and it's my two boys, my wife and me. It's nice just sitting around and enjoying the holiday.

What's your outlook for

golf in 2022? It looks good to me. Who would have thought it'd take a pandemic to revitalize golf? We've had the busiest year in the history of our course. We're pushing more than 300 players a day. I think the momentum will continue. Golf is something people can do together outside, without the danger of COVID. A lot of people said, 'Wow, this is fun, this is something I should have been doing all along.'

As interviewed by Seth Jones, Nov. 14, 2021.

BROUGHT TO YOU BY





Natural Crushed Stone Pathway Materials



Mention this ad for a FREE trial of our Wax Polymer Pathway Mix.









kafkagranite.com/golf | 800-852-7415

NO ONE CAN PUTT WHILE PYTHED.

Segway[®] Fungicide SC sinks Pythium disease!



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

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

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

PBIGordonTurf.com



Always read and follow label directions. Segway® is a registered trademark of Ishihara Sangyo Kaisha Ltd. 2/20 05912