MARCH 2013 golfcourseindustry.com Watch this cover come to life on GCI's new iPhone/iPad app!



SERVING THE BUSINESS OF GOLF COURSE MANAGEME



# AFTER THE FIRE

In 2011, fire consumed FarmLinks maintenance facility. The vital lessons you can learn from their pain.



Hole #17, Stadium Course at TPC \* Sawgrass

Not only do professional players expect the most famous holes in golf to be in perfect condition, they demand it on every hole they play on tour. Which is why John Deere Golf is proud to be the Official Golf Course Equipment Supplier of the PGA TOUR\*. From tee to green, you'll find equipment like our E-Cut\* hybrid fairway and greens mowers on TPC\*courses across the country. Choose the equipment that the most demanding players in the world trust: John Deere Golf equipment. Call your John Deere Golf distributor for a demo today.

1.9% Financing on all new John Deere Golf Equipment ends April 1.\*

#### Trusted by the best courses on Earth.

\*Offer available on purchases of new Golf Equipment made between February 1, 2013 through April 1, 2013. 1.9% Lease Rate for up to 60 Months on Operating Lease or Lease Purchase. Subject to approved lease credit with John Deere Financial. Offers available on new equipment only. See your John Deere Golf distributor for complete details and other financing options.



## **IN THIS ISSUE**

#### COLUMNS

- 14 Irrigation issues Brian Vinchesi: From the Show Floor
- 22 Outside the ropes Tim Moraghan: Less is Definitely Not More
- 32 The Monroe Doctrine Monroe Miller: An Assist from Leopold and Thoreau
  - **Design Concepts** Jeffrey D. Brauer: Better Billy Bunkers

42

Johnny Turf Nerd 54 John Kaminski: The Perfect Circle

- Game plan 60 Henry DeLozier: Sustain the Ripple
- From Dodson, with Love 65 Ron Dodson and Bill Love: Attitude Adjustment
- 74 Parting shots Pat Jones: Purple Cow, Redux

#### DEPARTMENTS

- Teeing off Talking to Myself
- Letters 6
- 10 The Whiteboard 72 Travels with Terry
- Equipment ideas 73 Classifieds
- 73 Ad index

### **AFTER THE FIRE**

In 2011, fire consumed FarmLinks maintenance facility. The hard lessons they learned to build it back.

#### **FEATURES**

#### Turf Health

**BLAME IT ON THE WEATHERMAN** 24 New research out of Wisconsin shows that weather may have an impact on fungicides.

#### Turf Health

#### 34 **DEAD TO RIGHTS**

Don't be fooled. Identify the tell-tale signs of spring dead spot early on so it doesn't become a season-long scourge.

#### Construction

#### HARD HAT REQUIRED BEYOND 44 THIS POINT

Instead of creating a master plan for course renovations, a better approach is to compose smaller, more attainable projects to tackle.

#### Construction

48

56

ARD HAT REQUIRED

THE ROAD TO RECOVERY Summer heat devastated the new tee boxes at Makrav Memorial Golf Club. Superintendent Timothy Christians details his path toward reestablishing even stronger turf.

#### Turf Maintenance

#### **SPRING INTO ACTION**

A comprehensive spring weed control management program begins with preemergent herbicides.



#### Professional Development JOIN. PARTICIPATE. GET INVOLVED. 62

The rewards are many for industry involvement. What's your excuse?

#### Super Solutions

66

68

TWIST AND SHOUT NO MORE Plastic lattice provides a simple solution to overstressed green collars.

#### **Real Science**

#### YES, VIRGINIA, THERE IS A NEW **BACTERIAL DISEASE**

While research - and questions about bacterial wilt continues, some puzzle pieces are falling into place.



GOLF COURSE INDUSTRY (ISN 1054-0644) is published monthly. Copyright 2013 GIE Media Inc., 4020 Kinross Lakes Parkway. #201, Richfield, OH 44286. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One-year subscription rate, \$33 in the United States, \$42 in Canada and Mexico, and \$88 in other foreign countries. One year foreign airmail rate: \$102. Two year subscription rate: \$65. Single issue rate, \$10. Subscriptions and classified advertising should be addressed to the Richfield office. Periodicals postage paid at Richfield, Ohio, and additional mailing offices. Postmaster: Send address changes to GOLF COURSE INDUSTRY 4020 Kinross Lakes Parkway, #201, Richfield, OH 44286. Canada Post: Publications Mail Agreement #40612608 Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2



### TALKING TO MYSELF

S o, Pat, what did you think of the GIS in San Diego? It was fine, Pat.

#### Fine? That's all you got, Mr. Critical?

It was fine. As always, it was a good business platform for us. We were busy as hell. We had lots of great face time with readers and advertisers. We launched our new app. We rocked our hot pink golf shirts and had fun.

#### What about the location?

San Diego is great once you get there. Everything is pretty self-contained and the weather was at least decent. It was fun and relatively

problem-free. Most exhibitors were happy and felt like it was a good investment.

What about lower attendance and "qualified buyers"? Aren't you going to bluster about how the metrics were down?

No, everyone expected it to be down and the numbers were pretty much what I thought they would be. I think the numbers were 15 percent

lower than what the GCSAA had hoped for, but realistically 13,000 isn't bad for a West Coast show. Not everybody likes to fly that far, money is still tight and some people skipped this one to keep their powder dry for Orlando in '14. The numbers will jump up a couple of thousand for Florida because of the concentration of courses within driving distance and the whole Disney/family thing.

### So the trade show is going to grow again and come back?

No, idiot, the show is not coming back. Trade shows in general are eroding, there's no indication courses are going to get flush again anytime soon and, other than the networking, there's no must-attend reason for supers to go every year. Education is cheap and available close to home and, thanks to the Internet, any product on the globe is just a Google search away. Mostly, the biggest companies in the industry are beginning to question the size of the investment, particularly considering there are a zillion other ways to achieve their marketing goals.

#### Like what?

Have I not mentioned our new app?

### You said the show was fun. What was memorable?

Kissing Dennis Lyon on the top of his bald head (see the video on the GCI site). Having people pimp the life-sized cardboard cut-out of me in our booth. Seeing our brand new assistant editor, Katie Tuttle, jump into her first big event with gusto. Swapping Zontek stories with a bunch of other old farts. Watching people's eyes light up when we showed them the new GCI app. Experiencing a great turnout at the Aquatrols booth for our TweetUp and

> social media awards. Getting positive feedback from tons of people that makes me think we're doing things pretty well with the magazine and all of our digital stuff.

And, as always, seeing good friends. That's the best thing about the show.

What stunk about the show? First, time compression. The window to talk with people, see booths, attend meetings

and learn new stuff is just too short.

Second, having way too many nice young people come up and say, "It's an honor to meet you, Mr. Jones." Good god, when did I get so old and respectable?

#### Respectable?

Okay, just old.

### Shall we wrap this up now by asking what grade you'd give this year's show?

Have we written enough words to fill up the column space?

#### Pretty close!

All right then...I'd give this year's show a B. Not bad under the circumstances, nothing terrible happened and people seemed happy enough. It didn't blow me away and it didn't suck.

#### A stunning endorsement...

Did anyone ever tell you you're a crappy interviewer? **GCI** 

### GOLF COURSE

Serving the Business of Golf Course Management

Vol. 25 No. 3

GIE Media, Inc. 4020 Kinross Lakes Pkwy, 2nd floor Richfield, OH 44286 Phone: 800-456-0707 Fax: 330-659-0823

#### EDITORIAL

Pat Jones

Publisher/Editorial director pjones@gie.net

SALES

**Mike Zawacki** Editor mzawacki@gie.net Kyle Brown Associate Editor kbrown@gie.net

Katie Tuttle

Assistant Editor

Bruce Williams Senior contributing editor

**Russell Warner** 

National account

manager

216-236-5802

### ktuttle@gie.net

Martha Corfman Manager, books 330-523-5366

Maria Miller

Conferences manager

**Ted Schuld** Account manager 216-236-5937

330-523-5373 Jodi Shipley Marketing coordinator 330-523-5368

Bonnie Velikonya Classified sales 330-523-5322

#### **GRAPHICS / PRODUCTION**

Andrea Vagas, Creative director Helen Duerr, Production director Heidi Clevinger, Production coordinator

#### CORPORATE STAFF

Richard Foster Chairman Chris Foster President and CEO Dan Moreland Executive Vice President James R. Keefe Executive Vice President Marco Urbanic Director, Integrated Data Systems Andrea Vagas Director, Creative Helen Duerr Director, Production Melody Berendt Director, Circulation Maria Miller Manager, Conferences Kelly Orzech Director, Accounting Irene Sweeney Manager, Corporate Communications Kevin Gilbride Business manager, GIE Ventures

Golf Course Industry is a member of: Golf Course Superintendents Association of America National Golf Foundation Golf Course Builders Association of America The Irrigation Association Responsible Industry for a Sound Environment





Pat Jones Editorial director and publisher

Your Tough Challenges

A knowledgeable local partner can be a valuable resource that can provide the proven products and expertise needed to keep turf healthy and golfers happy.

ant can help stretch maintebudgets by keeping more spray target and improving the effieacy of herbicides, fungicides and insecticides, making your budget go further.

Unique tools are another thing that can set distributors apart. WinField representatives combine local expertise with unique, data-based technology to simplify complex decisions for superintendents. Through soil, water and tissue nutrition testing; plant health f unique ass l™ Turf too Tech 1 arf variety database, xperts offer ased insights eceden ats find the each challenge

> en products periodic service s

face a myriad of challenges on tes off the course with managessures to keep turf in top condition re got a typical season.

> on can be found on courses across ed problems, such as wreak havoc and o

sal part.

who will take the time to understand your operation's specific challenges and work with you to provide in novative, cutting-edge soluti season after season.

Of course it's important find a distributor with a wide rarge cality plant nutries to help ba

I Droplex

#### FEEDBACK

#### Brushing

I really enjoyed the December article in the Golf Course Industry Magazine entitled "Comb Over." The information and opinions of Mr. Vavrek, Mr. Giorgio, and Mr. Triabaugh were very helpful. There is not a lot of information out there in regards to brushing turf and since I just purchased new Toro Flex walking greensmowers with power brushes I found it helpful. Working in the Chicago market, we are always looking for new and different techniques and lately I have noticed a movement toward using

We'd like to

hear from you.



several different brushing methods so I'm excited to try the power brushes for grooming. I'm excited because I hear of a lot of positive

results in other areas of the country with regard to these brushes. From my understanding, after you dial the brushes and heights in and overcome the initial impact of damage, the greens dramatically improve. I

will keep you updated on my findings in case you happen to write a follow-up article in the future. Thanks again for your contribution to GCI.

Scott White Superintendent The Mauh-Nah-Tee-See Country Club Rockford, III.

I recently read the article "Comb Over" by Rob Thomas about brushing and was very disappointed that he was only able to cover the walk-behind mower portion of this technique... This has been a staple in the ultra dwarf Bermuda diet for years.

Enter bit.

ly/115GfKT

into your web

browser to read

"Comb Over."

Kevin Stinnett with Jacobsen was quoted in the article; he lives and works in the

> Southeast and was the best source to ask for other sources in this region. Sorry to be so direct, but this sort of article is just so narrow minded when this technique is so widely used throughout the U.S. and

abroad, and yet the coverage is based on two superintendents and just walk mowing.

We have been brushing with Triplexes for 12 years and manufacture the brush for all models. Try the website brushattachment.com. It tells all about triplex brushing. Thank you for listening to my position on this issue but it is another example of try different sources and get more people involved.

Jeffrey S. Connell Superintendent Fort Jackson Golf Course Fort Jackson, S.C.



#### Solve Your Tough Challenges

n fra packs ship chrongh receip now and then. We appreciate you be oping us on one and we continue tournior for admond perfolutions. in point, the duplication of two completes, paragraphic to the 'Fuzzy forecase' column to the November issue. (entrops in the dignal to with all the spell and grammar check



As you know, golf course superintendents face a myriad of challenges on the course that can cause major difficulties off the course with management and members. Add in budget pressures to keep turf in top condition

ces, and you've got a typical season.

a rytnium can be found on courses across

who will take the time to understand your operation's specific challenges and work with you to provide innovative, cutting-edge solutions, season after season. A knowledgeable local partner can be a valuable resource that can provide the proven products and expertise needed to keep turf healthy and golfers happy.

adjuvant can help stretch maintenance budgets by keeping more spray on target and improving the efficacy of herbicides, fungicides and insecticides, making your budget go further.

Unique tools are another thing that can set distributors apart. WinField representatives combine local expertise with unique, data-based technology to simplify complex decisions for superintendents. Through soil, water and tissue nutrition testing; plant health assessment; and the use of unique tools such as the WinField™ Turf Tech Tool (a searchable turf variety database), WinField experts offer unprecedented, fact-based insights to help superintendents find the best solutions for each challenge they face.

### WINFIELD

W

W

# In our business it's not a green jacket that proves you're a master.

Using our new WinField Insights<sup>™</sup> Tech Kit, we can help pinpoint your challenges and provide the right products to help you look like a master. To learn more, visit **winfield.com/golf** 

WinField and Droplex are trademarks of Winfield Solutions, LLC. © 2013 Winfield Solutions, LLC

FEEDBACK

#### The right stuff

Just read Tim Moraghan's November column "Are You as Healthy as Your Golf Course." Just a great article and I believe a great service to the industry. This is the type of stuff we need.

We'd like to

hear from you.

Fred H. Yelverton, PhD Professor and Extension Specialist Co-Director, Center for Turfgrass Environmental Research & Education North Carolina State University

Enter **bit.ly/12tRQyl** into your web browser to read Tim's November column.

#### Editorial snafu

I feel sure you are probably already aware of this because I feel you are somewhat of a perfectionist, as am I, but I have been seeing some typos in GCI the past several months, something that is out of character for the reputation of the publication. Case in point, the duplication of two complete paragraphs in the "Fuzzy forecast" column in the November issue. Perhaps in the digital age with all the spell and grammar check programs, the art of proof reading may be declining, just as I feel overuse of email is eroding our skills in personal one-on-one communication and human interaction. I bring this to your attention because I feel your magazine is one of the leading publications in the green industry that provides timely and relevant information, often with witty and humorous editorial to keep it fresh and interesting.

E-mail us at gci@gie.net

with your thoughts

and opinions.

Keep up the good work and best of luck in the future.

#### Michael K. Fabrizio, CGCS Director of grounds and golf maintenance Daniel Island Club Charleston, S.C.

The editors respond: Ouch. We hoped you hadn't seen those mistakes. Even the best goalies have an occasional bad game and let a few pucks skip through every now and then. We appreciate you keeping us on our toes, and we continue to strive for editorial perfektion... err... perfection.

#### True believer

I wanted to thank Pat for "You Gotta Believe" (Parting Shots, page 58) in the February issue. Pat summed up our lives about as well as one can! When you love what you do you can live with all of those challenges he mentions. Great job. I always look forward to reading GCI every month and keeping up with you guys on Twitter and your (iPhone/ iPad) app. Thank you for all you do.

Randy Samoff Superintendent Redstone Golf Club Humble, Texas

Enter **bit.ly/Xqr5vu** into your browser to read Pat Jones' "You Gotta Believe" column.



# Who Says Three's a Crowd?

#### Most Admired Company

### There's a Reason why the Top 3 Golf and Utility Manufacturers use Trojan Batteries in their Vehicles.

When you calculate how well we perform against the competition, consider that our battery technology is backed by over **200+ years** of engineering expertise, acknowledge our industry leading performance at **40,000+** tested ampere hours,\* plus the fact that we have been in business since **1925**, it is easy to see why all paths lead to Trojan Battery.

ALSO AVAILABLE IN: Columbia Par Car | Cushman | Eagle | Garia | Melex | Star Car | Tomberlin \*Independent laboratory testing validates the sustained capacity and superior performance of Trojan Batteries. Check out our innovative

Golf Batteries





FOR MORE INFOMATION: (800) 423 - 6569 or +1 (562) 236 - 3000

TROJANBATTERY.COM

# 2013 TURF BOWL WINNERS CROWNED

#### University of Massachusetts Amherst team named winners at the GCSAA Collegiate Turf Bowl

S tudents from more than 35 universities and colleges participated in the 2013 GCSAA Collegiate Turf Bowl Feb 7 at the 2013 Golf Industry Show in San Diego. The competition tested their agronomic skills, turf care knowledge, leadership and ability to think on their feet., since these are the same skills a successful turf student



needs in the golf course industry. The challenges and questions are based on what superintendents might face on a day-to-day basis on the course.

The Turf Bowl has been in existence since 1995. Each year, the exam is looked over and modifications are made to the sections that include essay, multiple choice, identification, short answer and fill in the blank. There is also a hands-on portion. Because of the annual changes and the span of topics covered, the GCSAA provides faculty advisors with a study guide for the participants. There is no limit to the number of participants, but each student must meet all of the eligibility criteria.

The winning team received \$4,000 cash, bragging rights, a trophy and the chance to volunteer at TCP Sawgrass in order to experience firsthand what goes into preparing a course for a PGA tournament. The 2013 winning team was the University of Massachusetts Amherst, whose members included Kevin Shewmaker, Sean Raposa, Peter White, Evan Bradstreet and University of Massachusetts Amherst professor Patricia Vittum. Teams placing second through 10th place also received graduated prize money.

In honor of Stan

If you're reading the issue from front to back, you already know about the Stan Zontek Memorial Scholarship Award. If you're paging your way backward from Parting Shots, we'll just go ahead and stop you right here for a moment. The scholarship is GCI's way of honoring Stan's legacy and passion for the game, with an unrestricted grant of \$2,500

awarded to one outstanding college student with the same fervor and the drive to head into a career in turf. The criteria for the scholarship comes down to academics, recommendations and their personal story with the game of golf.

The application needs to include:

The student's most recent academic transcript or student advisory tracking report

 At least two letters of recommendation from a college professor, employer/mentor, councilor, adviser or clergy

A resume outlining relevant activities, internships and work experience

 1,000-word essay describing the student's personal and professional goals, plus how Stan's accomplishments help them inspire leadership in the golf industry

Applications for the award must be postmarked by Apr. 15, so get them in soon. Use bit.ly/Zontek13app to download the PDF of the application.



### From THE FEED

IS 2013 is in the books, but that doesn't Gmean we're done talking about it online. We heard from plenty of our friends at the show itself and after - and that's not even counting the GCI TweetUp, with our own social media awards. Here



are some of our favorite tweets from the show!

@campbellturf I'm with Pat

Nadeem Zreikat

Dave Wilbur @TurfgrassZealot RT if you think @GCImagazine looked good in Pink today.

#### Andrew Hardy @pheasantturf

@Aquatrols Pounding beers at your booth vesterday. Thank you and thanks for hosting #GCITweetUp13 #kickedoutofthetradeshow.



#### Aquatrols @aquatrols

The turnout for #GCltweetup13 was so big that Pat had to switch to a mic. RIP red bull horn!

#### Ryan Howard @TWRyanHoward

when they come up with a "best blog yet to be started" award my work will be recognized.

#### Greg Shaffer @gtshaffer

Another #LSOT victory. @pheasantturf wins best blog award at @gcimagazine tweetup. #theaward.

#### **Bill Brown @iTurfapps**

Thank you! Big honor following the Dr. Team effort with @hiawathaturf and @URITurf.



Join the conversation on Twitter @GCIMagazine!

### Bringing home a win... for a good cause

To end GIS on a "good" note, members of the golf turf media battled it out in a round of "Superintendent Pyramid: Media for Charity" on Thursday, Feb. 7 at the Golf Industry Show in San Diego. The competition was put on and held at the BASF booth. Two team members from five publications; Superintendent, Golfdom, Golf Course Management, TurfNet and our own Golf Course Industry; picked one of six categories offered in BASF's pyramid. They were then given 30 seconds for one



teammate to describe a word to the other teammate, similar to the game Catchphrase.

When the dust settled, GCI's Kyle Brown and Heather Tunstall came out on top yet again, going six for six and winning \$2,000 for the USO. Golf Course Management and TurfNet each won \$1,750 for the charities Wee One Foundation and Chopin Hall respectively. Superintendent magazine won \$1,350 for Brother's Brother Foundation and Golfdom won \$1,100 for Disabled American Veterans. Overall, BASF donated \$7,950 to various charities.

### Making the move



big "Attaboy!" goes out to Nate Jordan, who recently A informed us that he's been hired as superintendent of Saratoga Lake Golf Club in upstate New York.

You may remember Jordan as one of the assistant superintendents GCI profiled in November's cover story "The Waiting Game." The feature examined assistants' struggles and frustrations vying for superintendent jobs in a recovering economy and beleaguered industry market.

Jordan, who is also a regular contributor to GCI, previously worked as an assistant at Mt. Hawley Country Club in Peoria, III.

> Enter bit.ly/127MHAC into your web browser to read "The Waiting Game."





















# 2013 CELEBRATE YOUR

### AUGUST 1-3, 2013 RAKER TRIAL GARDENS LITCHFIELD, MICHIGAN

me

A 3-day national event celebrating the hard work and entrepreneurial spirit of the independent retailer, grower and supplier that includes:

- Independent garden center trade fair with top industry vendors
- Educational presentations from the most talented minds in the industry
- Music festival format with live bands
- Affordable family oriented fun

Hort Conture.

**GET BACK TO YOUR INDEPENDENT ROOTS AT BLOOMAPALOOZA 2013!** EARLY BIRD REGISTRATION IS NOW OPEN.

aker

BROUGHT TO YOU EXCLUSIVELY BY

# INDEPENDENCE

BloomaPalooza's Five Pillar education program will empower you and your employees with a wealth of ideas to increase profitability in 2014 and beyond! The Five Pillars include:

- **Get Local** Integrate your garden center into the community and enjoy the benefits of a closer relationship with your customers and other local businesses, including increased sales and customer loyalty.
- Go Green Learn how to make your business as green as the plants you're selling through sustainable practices and products.
- Expand Your Expertise Educate yourself and your employees to turn your garden center into a one-stop, problem-solving shop for customers.
- **Differentiate or Die** Stand out from the rest and thrive in the green industry by giving your customers a unique and personalized experience.
- Join the Revolution Connect and collaborate with other independents to strengthen both your IGC and the industry as a whole.

### visit www.BloomaPalooza.com

for a list of speakers and session descriptions.

Michael V. Geary

Sid Raisch

Dr. Charlie Hall

#### **IRRIGATION ISSUES**



Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

### FROM THE SHOW FLOOR

nother Golf Industry Show - where all the new products, industry issues and hot topics were on display for all to see - has come and gone. From an irrigation standpoint, though, it certainly was not very exciting.

Water was a hot topic once again at the conference, with some 23 water-related talks, seminars, panels or presentations. Many of these were presented at the Design and Construction Solutions Center sponsored by the American Society of Golf Course Architects (ASGCA) and the Golf Course Builders Association of America (GCBAA). Pinehurst's Bob Farren and golf course architect and fellow GCI columnist Jeff Bauer discussed "More Heads, Less Water? Or Fewer Heads, Lower Budget?" This presentation centered on Pinehurst No. 2's renovation and conversion to single-row irrigation.

There were two very interesting panel discussions regarding water presented by GCSAA. On Monday, "Got Water? Water availability, reductions and efficiency in the golf industry" was moderated by Greg Lyman; GCSAA's director of environmental programs, and discussed the availability aspects of water for golf. The session included an update on last fall's USGA's Water Summit and speakers from the Los Angeles Department of Water and Power and the Southern Nevada Water Authority who discussed their golf course water-use policies. It concluded with a presentation from Toro on how technology can reduce water use. The discussion's basic conclusion: since all water issues are local, the solution must be local. So GCSAA members need to get involved locally to ensure they will have water.

On Tuesday, "Politics of Water: Golf industry engagement leads to practical public policy" looked at the regulatory side. These presentations and panel featured speakers from Texas, Conn. and Southern Calif. about how their associations got involved and shaped and/or changed regulations that were affecting golf course water use in their region or state. These presentations should

be viewable on the GCSAA website.

On the show floor, both Rain Bird and Toro prominently displayed soil sensing, which is becoming popular with superintendents. Along with interactive booth displays, several talks focused on soil sensing's benefits.

The biggest irrigation news was Hunter's unveiling of its new golf course irrigation products. This includes what is now a complete line of Totally Top Serviceable valve-in-head sprinklers and the addition of a part/full sprinkler in one which

The maximum count on the new controller is 80 stations. It seems that station count keeps growing with every new manufacturer's controller introduction.

is now the industry norm. Hunter introduced their new Pilot control system, which includes completely new central control software on a new platform and its associated field controller or decoder system. The maximum count on the new controller is 80 stations. It seems station count keeps growing with every new manufacturer's controller introduction. As part of the product roll out, Hunter has enhanced its distribution network to sell and service its golf products.

Not exactly irrigation related, but generating buzz was the concept of ultrasonic algae control. These ultrasonic sound waves vibrate through the water, causing the vacuoles inside the algae cells to resonate and break, which over time damages the algae and causes it to die. If you are having trouble managing your irrigation or other ponds, this might be something to try.

While 2013 GIS was nothing special from an irrigation standpoint, it did reiterate water's importance to the industry and that water issues are not going away. GCI

The first name in surfactants. The last you'll need to know.

Aquatrols



### It contains more than you think.

**Better Playability** 

**Better Stress Response** 

Better Root Growth

It's no surprise that Revolution is trusted by so many turf professionals around the world. It's the only soil surfactant that goes beyond water repellency issues, providing comprehensive water management and plant health benefits as well.

Revolution's patented formulation balances air and water in the soil profile, leading to a better root system and improved soil health. By maximizing the potential of your growing environment, Revolution helps turf function more efficiently and perform at consistently higher levels, even under stress.

Try it — and see the benefits for yourself.

Rev Iution®

The World's Leading Soil Surfactant



# **AFTER THE FIRE**

In 2011, fire consumed FarmLinks maintenance facility. The hard lessons they learned to build it back.



#### by Trent Bouts

n the two years since fire razed his headquarters at FarmLinks Golf Club at Pursell Farms in Sylacauga, Ala., golf course superintendent Mark Langner still gets "burned" now and then. Most recently, he was about to dispatch a crew for some tree work when it dawned on him that a critical safety harness had gone up in the blaze. That \$200 to \$300 harness was just one more "little thing" Langner had omitted to claim on insurance. Buying a replacement now meant another nick in the current budget, not to mention delays on the tree project.

"Oh golly, I can't begin to tell you the number of little things, little trinket pieces of equipment, that you might only use once or twice a year that you forget you had in the building," Langner says. Can't begin to tell ... that's no mere figure of speech. By his own admission, Langner's record keeping was incomplete and what he had was fragmented. Of course, even some of what he did have went up in smoke.

In the end, insurers honored more than \$3 million in claims but the payout would and should have been more had Langner known exactly what equipment was lost and what it was worth at the time. Instead, he and his team poured countless hours over weeks and months into pulling together as many pieces of the puzzle as they could find or recreate from vendor records. That sleuthing itself was costly in terms of man-hours and as just as significantly as Langner says, "It takes you away from what you're supposed to be doing."

At this point in the story, most, if not the vast majority, of superintendents should be shifting a little uneasily in their seats. If not, then try this brief exercise Langner recommends: "Just sit for a few minutes and consider where you would be, and where your facility would be, if you suddenly lost everything on your computer, on your bookshelf, in your entire building?"

Check out the iPhone/ iPad app to watch amateur video of fire consuming the FarmLinks maintenance facility. Or, **enter bit.ly/ WwdaAY** into your web browser to access the same video online.





Construction of the new maintenance facility at FarmLinks Golf Club at Pursell Farms in Sylacauga, Ala.





**KPHITE 7LP** Systemic Fungicide Bactericide is proven effective against pythium, dollar spot, brown patch and fungal diseases. KPHITE is EPA labeled, pH neutral and is uniquely formulated to increase plant health and vigor.



TO FIND A DISTRIBUTOR OR LEARN MORE WWW.PLANTFOODSYSTEMS.COM 800.343.7775



The frame of the new maintenance facility as it was under construction.

### Poof!

Gone! It wouldn't have to be fire. It could be a tornado, flood, landslide, earthquake. It could be who knows what, or when. "If you lost it all, what's your plan?" Langner asks. "What's your path for going forward?" Two years out from the fire, he is in a position to offer some recommendations.

It is important to note here that Langner is anything but some novice who has been caught out by his own inexperience. On the contrary, he has more than 20 years in the industry under his belt and carries the formal designation of director of agronomy and applied research at FarmLinks, which remains one of the most forward-thinking facilities in the country. There he manages 10 varieties of turf across 600 acres that provide resort level golf as well as a real-world R&D laboratory. As part of his role he hosts more than 600 superintendents from across the country every year. It is not a job for the timid or the untalented.

For good measure, it's also worth noting that Langner hosted the Alabama State Amateur Championship at FarmLinks just three months after the fire. Reviews from players and officials were uniformly glowing.

Broadly, Langner's recommendations to colleagues go like this: take a complete inventory, make sure your insurance covers what you think it does, maintain a thorough back up of your records and keep it off site, then devise an emergency response plan. On its face, that list seems like simple common sense, because it is.

But as Langner and any other superintendent who makes it through his or her first 24 hours understands, stuff comes up. Schedules and priority lists become what you try and take care of between the unexpected. So while everyone likely appreciates that everything on Langner's list of recommendations is crucial, they could probably rattle off a longer list of more urgent concerns without a second's thought. Until, as was the case at FarmLinks, lightning strikes. Then it's way too late.

# Turf Growth Regulator

Musketeer is the first turf plant growth regulator (PGR) to incorporate three PGR technologies to uniquely and effectively suppress Gibberellic Acid synthesis, leading to superior growth regulation of targeted turfgrasses. Musketeer is the result of SePRO research and based upon the same patented turf PGR synergy technology as SePRO's Legacy\* Turf Growth Regulator. Musketeer is specifically formulated to aggressively target growth suppression of *Poa annua* in cool-season turfgrass species, such as creeping bentgrass, while providing excellent turfgrass enhancement. The result—more bentgrass and less *Poa annua*.



SePRO Corporation Carmel, IN 46032

Trademarks of SePRO Corporation. The synergy derived from the combination of Type IIA and Type IIB PGRs is covered under U.S. Patent No. 7, 135, 435. Always read and follow label directions. © Copyright 2012 SePRO Corporation.

Demolition of the FarmLinks maintenance facility following the 2011 fire. (Inset) the damage done by the fire, which started in the early morning.

### Inventory

In terms of knowing what he had, and proof that he had it, he was in "pretty good shape with the big ticket items," Langner says. But from there the paper trail – whether physical or virtual – frayed and faded to varying degrees. His tip for a quick fix is to walk the entire maintenance facility with a video camera, or these days even a cell phone, filming every inch, high and low. Ironically, Langner remembers his father doing just that at the family home "when VHS first came out" decades earlier and he had even done it at his own home, but never at the golf course.

"That will give you a quick record and it's something you can do once a year to stay up to date," he says. "But the best investment is in a good inventory management system." By chance, Langner had purchased just such a system shortly before the fire but had only just started loading data. You can bet that system is now full of all the new equipment that has rolled in since March, 2011.

A crude but effective alternative could be a scanner which Langner points out can be bought for "\$100 or less" allowing for anything in print to be digitized. At FarmLinks that could have preserved all kinds of data such as soil and tissue test outcomes not to mention decades of research at the property. "I think that's the thing that pains me most is losing a lot of that research that was all on paper," Langner says.

The costs incurred as a result of incomplete records went beyond a shortfall in the insurance claim. "It has created all kinds of inefficiencies because we did not have the tools when we needed them or the data or the knowledge to use in our decision-making," Langner says. "It's hard to put a value on that but you can bet it's been significant. It absolutely sets us back and I wouldn't say we have fully recovered yet."



### Insurance

Having insurance is one thing, but having the right insurance is another thing altogether. Superintendents should make a point of sitting down with their general manager, chief financial officer or comptroller with a copy of their existing policy in front of them, Langner says.

"A lot of times policies are entered into by someone who may not really understand the extent of what needs to be covered and what replacement values are involved," he says. "Being underinsured can be very detrimental to a property."

Again, Langner admits those were conversations he didn't have prior to the fire although he has had "a lot" since. "Take the cost of a Triplex, or a sprayer, or a fairway unit," he says. "Those are items that have increased significantly in cost over the last five years or so. If you find you're \$10,000 or \$15,000 short on coverage then you've got to find that money or get yourself replacement equipment that is older or maybe not of the same quality."

It's not only equipment prices and values that change. Langner notes that the myriad codes and regulations golf course maintenance operations are subject to can also be moving targets. Setting up a new facility to current standards may require a lot more than those that were in place when a policy was written.

### Back-up

It could have been worse. Langner had his entire OSMAC SitePro irrigation program backed-up on a thumb-drive and stored outside the maintenance building. Newer systems provide automatic back-up off-site. But few superintendents have an office outside the maintenance facility like Langner does at FarmLinks. The point being that even if there is a thumb-drive, or any backed-up materials, it must be kept elsewhere to be of any value.

All of Langner's "as built" records were destroyed in the fire, irrigation, drainage, you name it. That's like the 21st-century equivalent of losing the career assistant who was there when the course was built in 1975 and can remember where all sorts of things are under the surface. That's a kind of institutional knowledge that can be immensely valuable ... when you have it. Imagine starting the whole budget process without last year's spreadsheet to work from, let alone a long-term record.

An event doesn't necessarily have to be catastrophic in nature like a fire or a tornado to be extremely damaging, Langner points out. A simple, and far more common, computer crash can be extremely problematic if that computer was sole repository for the information it held. Fully-automated backup services abound today and some are even free.

### Plan

Langner took the call about the fire shortly after 6 a.m. There was definitely a sense of urgency as he made the 40-minute drive to the golf course. It was too late to do anything by the time the blaze was discovered. In effect, Langner was thrust into recovery mode even before reality had a chance to set in. He wasn't speeding to the golf course but he was flying by the seat of his pants, suddenly making it up as he went.

There had to be new answers, not only to where replacement equipment was going to come from, but even to things that were never questions in the past. "Where are you going to store things, where does your crew wash up, that kind of thing," Langner says. "I'd encourage everyone to take one day during winter and sit down with your team and lay it all out. Do you have protocols? What's your plan if you suddenly lost it all? You could look at it as developing BMPs for catastrophic events."

Even though every course has insurance, even though every superintendent knows disasters happen, and even though Langner and his crew had helped colleagues recover from tornadoes only months



before, he admits, "The reality that it can happen to you doesn't become a reality until you're the one it happens to."

There is a YouTube video, easily enough found, that shows the FarmLinks facility aflame. With unnerving regularity the roar of the flames is interrupted by the pop or bang of something exploding. The explosions could be fuel tanks, acetylene, or perhaps the 20 cases of aerosol paint Langner just bought in readiness

I'd encourage everyone to take one day during winter and sit down with your team and lay it all out. Do you have protocols? What's your plan if you suddenly lost it all?



for the State Am. Whatever the source, the danger on display led Langner to take one more important step as FarmLinks rebuilt.

He and the local fire chief now boast a close working relationship. As reconstruction progressed, Langner kept the fire chief informed about what the new facility would be like, what the layout would be and what would be stored where. He has invited the chief for several visits and now both have a solid understanding of how to

help each other -a) avoid a blaze and b) respond should one occur.

"Fortunately no one was injured at the time," Langner says, just as he maintains he was lucky to recover what he did to support the insurance claim. But he knows he won't be that lucky next time. He simply won't have to be. As a result of the lessons learned since, Langner is leaving nothing in the hands of chance. **GCI** 

Trent Bouts is a Greer, S.C.-based writer and a frequent contributor to GCI.

### TARGET Tough Weeds



CONTAINS TRICLOPYR FOR TOUGH WEEDS

- FAST VISUAL RESPONSE
- PERFORMANCE
- ENERGIZED WITH SULFENTRAZONE







An Employee-Owned Company BED.821.7925 PBIGORDON.COM/TZONE

Checkered Flag/Label Design\*, Gordons\* and ProForm\* are registered trademarks of PBI-Gordon Corporation. TZone<sup>TM</sup> is a trademark of PBI-Gordon Corporation. Always read and follow label directions. 3/12 01751 The Power of Mone<sup>TM</sup> is a trademark of Dow. Agrosciences **OUTSIDE THE ROPES** 



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

### LESS IS DEFINITELY NOT MORE

arlier this year, I did the circuit of annual conferences and shows, availing myself of opportunities to hear golf's leaders espouse on the state of our industry. One panelist made a statement that caused me to stop, think, and then get really angry.

The speaker was the editor of a major golf magazine. Asked about the future of maintenance, he said we – by which I assume he means golfers as well as superintendents – have to be willing to accept less than perfectly maintained golf courses.

Consider what that means. He's not suggesting we find smarter ways to marshal resources or protect the environment. What he's telling me, and you, is that we should not do our jobs.

How dare he! Such pronouncements are exactly what's wrong with "environmental sustainability."

Most superintendents I've worked with over the past 30 years are wired to give more, not less, to their courses. So asking the superintendent to do his/her job at less than 100 percent is insulting. It's like asking the general manager, golf professional or owner to provide less service, a poorer selection of merchandise or inferior golf lessons.

And it's the same as telling that editor to produce a publication with poor grammar, incorrect punctuation and blurry images. Would he? I think not, because if he did, we would cancel our subscriptions.

I fully understand, and agree, that we should look for opportunities to reduce maintenance costs, use less pesticide, and conserve water. But to be told that we need to withhold maintenance – usually by saying that our courses should look more like those in Britain – is a broad, sweeping and ill-informed generalization.

For the most part, superintendents

across the pond make less money, have smaller maintenance budgets and hire smaller crews than their U.S. counterparts. Plus, the land and climate over there are more consistent. Firm, fast and brown may work in some regions here, but it's not a one-size-fits-all standard.

Ask yourself an important question:

For the foreseeable future, the two "greens" are going to keep clashing: The green of sustainability versus the green of the almighty dollar.

Are we losing money because golfers are questioning the conditions found on courses? A principle reason golfers choose a course to play is conditioning. And there is no reason we can't reduce pesticide use and water while still offering top-notch playing conditions on the course.

But that won't happen with "less" maintenance. If anything, it probably requires more work from the superintendent and staff. Not only more, but smarter work.

Ask that same editor, whose staff and budgets have been cut, if he's working less, or less intelligently. I doubt it. And ask him why, if he's in favor of our industry and the golfing public accepting less well-maintained courses, why his magazine and the other golf media continue to show photographs and videos of lush, green perfect golf holes.

The golf magazines and other "thought leaders" are instrumental in changing the public's taste. But frankly, if our members and owners expect perfect fairways and healthy rough, that's what we have to give them if we want to keep our jobs.

All that said, we know that the job of a superintendent can be done with less. (I'm sure most of you are already doing just that, and pretty damn well.) I'm fairly certain most superintendents want the game to grow: more courses, more players, more young blood coming out of turf school and able to get jobs.

Growing the game is in our best interest too.

But I'm hearing an awful lot of let's not grow, let's maintain the status quo. I won't – and we can't – accept that.

We should all commit to reducing golf's environmental footprint, tackling climate change, and inspiring others to do so. But we can't do it alone.

And while we're on the subject... What do people mean when they say "sustainability"? It's the hot term in our business, but are we all saying the same thing?

By definition, sustainable means harvesting or using a resource so it is neither depleted nor permanently damaged. Does sustainable necessarily mean reducing maintenance levels?

To me, "protect" and "preserve" mean staying stuck in the past. "Sustain" doesn't equal forward progress.

As superintendents, we are at the forefront of sustainability whether we like it or not. But more than just getting on the train, we must have a voice on where it's going. And we have to be careful not to go backward.

For the foreseeable future, the two "greens" are going to keep clashing: The green of sustainability versus the green of the almighty dollar.

Every course is unique, with its own demands and constraints. What we do on each of them will help set the future course of our industry. But here is a statement that I guarantee is universal: "Less" maintenance is not the answer. **GCI** 

# **THE TO TAK ABOUT YOUR CUP SITUATION?**



## ST2000 SMART-FIT CUPS

# THE PRIMARY REASONS FOR FLAGSTICK AND CUP WEAR...

are sand, grit and constant exposure to wind. When the flagsticks twist, both cup and ferrule wear out. And, shortly after, flagsticks start to lean. (That's when players really take notice.)

#### THE SOLUTION!

PATENTED SMART-FIT CUP AND FERRULE SYSTEM available exclusively from Standard Golf.

#### **NO LEANING!**

The only cup and flagstick system specially engineered to seat the flagstick perfectly every time and proven to minimize wear-and-tear.

#### **NO STICKING!**

Sturdy, gusset-reinforced ribs allow dirt and sand to freely sift through the cup to eliminate sticking.

#### ST2000 SMART-FIT CUPS

- Notched-ferrule flagsticks fall right into place every time without twisting, sticking or sinking.
- Bonderite aluminum cups for maximum life and the most chip-resistant coating around.
- High-strength plastic cups molded with chemicalresistant polymers provide a brilliant, lasting finish.
- Meets all USGA regulations.
- U.S. Patents #5,964,667; #6,113,503 and #7,033,280B.
  European Patent #1024864131.

6" (15 cm) high 4 ¼" (10.8 cm) diameter

18333	8333 Aluminum ST2000 Cup	
18222	Plastic ST2000 Cup	\$8.00
18333P	Aluminum ST2000 Cup-Pink	\$20.00



ST2000 Cup and Ferrule

A AL









Feet on bottom of cup eliminate sinking. (Shown as cutaway for illustrative purposes.)



Bonderite-coated aluminum cups. The most chip-resistant coating around.



High-strength plastic cups, molded with chemical-resistant polymers, provide a brilliant, lasting finish.

#### CHOOSE ALUMINUM OR HIGH-STRENGTH PLASTIC CUPS.

#### SPECIAL EVENT CUPS

- Powder-coated steel cup in 6" (15.2 cm) and 8" (20.3 cm) sizes. Also available in pink plastic.
- ► Fits standard-sized flagsticks.
- Great addition for "big hole" events.
- New and improved shorter-depth 8" (20.3 cm) cup is easily installed with Turf Repairer Tool.



8" (20.3 cm) Cup

	6" (15. 2 CM) STEEL CUP 6" (15 cm) high	8" (20.3 CM) STEEL CUP 3" (8 cm) high	8" (20.3 CM) PLASTIC CUP 3" (8 cm) high
White	18600	18700	18775
Pink	18600P	18700P	18775P
	\$34.00	\$34.00	\$10.00







ST2000 SMART-FIT" CUP

CROWN ALUMINUM TEE MARKER

(ANN)

WHY IGNORE 25% OF YOUR GOLFING MARKET?

**NEW CUSTOM EVENT FLAGS** 

### THINK PINK!

think

Welcome the ladies to your course with a complete line of customized flags, flagsticks, tee markers, cups, special event cups, and more! Now available exclusively from Standard Golf. A PORTION OF THE PROCEEDS GOES TO THE FIGHT AGAINST BREAST CANCER



Real people. Real service. Total customer satisfaction.

#### A HIGHER STANDARD OF SERVICE

Now you have two resources: your preferred Standard Golf Distributor and your SG Express order specialists.

- Talk to experienced, knowledgeable specialists ready to answer your product questions and personally manage your custom orders.
- Visit with art directors who personally walk you through your customized orders.
- Check out our intuitive e-commerce site that allows you to place and track orders online.

### LET'S GET STARTED. CALL TODAY!

1. CALL SG EXPRESS (866-743-9773) or ...

2. ORDER ONLINE. Need help? Call and we will walk you through the process.



Same favorite content at your fingertips anytime you want it

Even more engaging and interactive Download the all-new Golf Course Industry app for FREE in the iTunes app store and Android Marketplace today!

DOWNILOAD

GOLF COURSE

Fad

GCIs new iPhon

\*Current app users must download the new app in order to view 2013 issues of Golf Course Industry



New research out of Wisconsin shows that weather may have an impact on fungicides.

#### By Rob Thomas

ou've sprayed for dollar spot control and, in a perfect world, now you sit back and watch the results take place as the label suggests. This is anything but a perfect world when it comes to Mother Nature, however. What affect does the weather have on the efficacy of that costly fungicide?

Dr. Paul Koch, associate researcher and turfgrass diagnostic lab manager at the University of Wisconsin-Madison, has recently conducted studies that look at the effect of snow cover on the persistence of iprodione and chlorothalonil and the effect of temperature on these same two fungicides.

From the snow-cover study, Koch's team found snow cover itself didn't impact the persistence of either fungicide.

"This suggests that sunlight – or photodegradation – doesn't impact fungicide persistence significantly on turfgrass leaf blades, at least in a winter environment," Koch says. "What we did find was that winter rainfall or snowmelt events did lead to a fairly rapid reduction in fungicide concentration.

In addition, temperature did appear to impact fungicide persistence, as temperatures rose out in the field the fungicides degraded at a faster rate, Koch adds. "This was observed even on non-snow covered plots, so it wasn't just a factor of melting snow," he says.

These results led researchers to look more directly at temperature. Koch sprayed iprodione and chlorothalonil on fairway-height bentgrass, then sampled cores from each plot and placed them in growth chambers set at 10, 20 and 30 degrees C (50, 68 and 86 degrees F) and tested the fungicide concentration weekly over a five-week span.

"We found both fungicides degraded fastest at 30 (degrees C), slightly slower at 20, and slower still at 10," he says. "The degradation rate was linear for chlorothalonil, suggesting potentially that microbial degradation plays the key role in degrading that fungicide."

The degradation rate dropped much faster between seven and 14 days after application

with iprodione, and barely dropped at all at 10C. So Koch is hypothesizing that plant metabolism may be the key degradative agent with that fungicide since it is absorbed into the leaf blade, while chlorothalonil, as a contact, stays on the outer leaf surface.

Additionally, at every time point they tested leaf blades from the growth chamber, they also took samples from the initial field plot sprayed and found that with both fungicides they could not detect any fungicide 14 days after the application.

"This was a much faster rate of degradation than we saw even from the plants in the 30 (degree C) growth chamber, and the temperatures were much cooler than 30 (degrees) out in the field," Koch says. "We hypothesized that the reason for this rapid loss was due to removal by mowing, and that in most situations – at least on fairways – all the fungicide will be removed from the plant within 14 days of application due to mowing."

One way to extend protection, Koch suggests, is to use plant growth regulators (PGRs) so less leaf tissue is removed by mowing – pointing to other studies that have found using plant growth regulators has led to extended durations of disease control.

"I want to stress that just because the fun-

#### KEY POINTS:

- Snow cover on its own doesn't impact the persistence of iprodione and chlorothalonil.
- Winter rainfall or snowmelt does lead to fairly rapid reduction in fungicide concentration.
- Temperature appears to impact fungicide persistence.
- Microbial degradation potentially plays a key role in degrading the fungicide chlorothalonil.



Dollar spot is easily identifiable because of its small, tan circular patches.

gicide is no longer present on the leaf blade it doesn't mean a fungicide cannot control a disease for 21 or 28 days," Koch says. "Fungicides do likely suppress disease by other means besides just residing on the leaf blade, and it likely relates to a fungicide's ability to knock the fungus back out of the turfgrass canopy, which then takes time to grow and reinfect the turfgrass plant."

Mike Salinetti, golf course superintendent at Berkshire Hills Country Club in Pittsfield, Mass., has seen dollar spot occur in all types of weather, but it most commonly impacts his course – located in the state's western mountains – during moist, humid summer nights when the temperatures remain above 60 degrees F.

"This past summer was, by far, the worst for me trying to control dollar spot," Salinetti says. "Typically, we are a very windy course, with good air movement. That was not the case this past summer. I've never had any problems on greens because they get sprayed on a 10-to-14-day schedule with excellent fungicides and spoon-fed fertilizer."

With 34 acres of fairways and tees, Salinetti needs to get the most he can out of each spray.

"Last year, I was only getting eight days control at some points during the summer, spraying good fungicides at the label rate" he says. "Dollar spot was the only disease I had on fairways all year and [was] very difficult to control during hot humid weather, especially after we got a little precipitation."

#### TURF HEALTH

Salinetti believes the best way to counter the effects of weather on battling dollar spot is to have the proper amount of nitrogen feeding the turf throughout the year.

"The past two years I looked at some costsaving approaches by lowering my nitrogen levels on fairways and tees from 3lbs. N/m/ year to 1.5lbs. N/m/year," he says. "I'm a huge fan of polymer-coated slow-release Polyon fertilizer for fairways and tees. My first two years at BHCC I chose the 3-pound rate of nitrogen [and] never had any dollar spot issues, even when the weather was appropriate. Then, once I cut back to the 1.5-pound rate, the dollar spot has gotten worse and worse each year.

"Next season I'll be going back to the

3-pound rate, and if I was a betting man, I'd bet my dollar spot gets cleaned up and hopefully gone," Salinetti adds. "I feel proper nitrogen amounts will aid in dollar spot control, far better than fungicides."



Salinetti

Koch's research has shown fungicides will degrade faster at higher temperatures, but he's not positive on wet vs. dry. His feeling, however, is that fungicides will degrade faster in wet conditions, which he has seen with drops in concentration following winter rainfall and snowmelt events.

"Countering these effects aren't easy unless you can control the weather," he joked. "But probably the most effective way is to shorten the reapplication interval and/or increase the rate of fungicide application.

"In addition to pathogens being more aggressive and plants more susceptible during hot, humid conditions, I think superintendents should also be thinking that their fungicides are degrading more rapidly... and this more rapid degradation could be leading to disease breakthroughs," Koch adds. "I think PGRs can also extend the duration of control as well, as I mentioned before."

Megan Kennelly, associate professor in the department of plant pathology at Kansas State University, has been studying dollar spot since 2006. She says there is myriad research on the disease, including: efficacy

### **Spot on predictions**

As superintendents look for ways to save money, a new model to prevent dollar spot is set to take the place of older, less precise models.

f you want to predict dollar spot on your golf course, there are two models available. Both were tested in the mid-80s and neither is 100 percent accurate.

"They either underpredicted the number of sprays or overpredicted the number of sprays," says Jim Kerns, Ph.D., turfgrass pathologist at North Carolina State University.

Kerns presented his findings at the Golf Industry Show in San Diego, Calif., "Dollar Spot Forecasting – Did It Work in 2012?" discussed his new model for forecasting dollar spot.

This new model is based on research conducted by both Kerns and Damon Smith, Ph.D., assistant professor at the University of Wisconsin-Madison. At the time of their research, Smith was an assistant professor at Oklahoma State University, and he began the initial research. Kerns and Smith then joined forces and did most of their field development at Oklahoma State and The University of Wisconsin-Madison.

The research involved the tedious task of counting dollar spots as they developed each day, seven days a week. They would then correlate the outbreaks back to seven or eight different weather parameters.

"Doing that allowed us to create a statistical model that would predict the probability of dollar spot showing up on any given day," Kerns says. The next step was to pick a reapplication window. After they did that, they didn't have to worry about the disease within 14 to 21 days after application.

The project itself was two-fold. After the initial research, both Kerns and Smith had students conduct research to investigate how temperature influences the pathogen. This research found relative humidity was the most important variable, not temperature as originally believed. For dollar spot to develop, a

mean air temperature above 55 degreesC had to be present, and there had to be 70 percent humidity for five days.

Kerns and Smith conducted a second stage to the research, adding three more locations: Penn State University with John Kaminski, Ph.D.; University of Tennessee with Brandon Horvath, Ph.D.; and Mississippi State with Maria Tomaso-Peterson, Ph.D.

In the past, since dollar spot was linked to temperature, most superintendents didn't concern themselves with the disease when the summer months started getting hotter, Kerns says. Now, with the new finding that humidity plays a major role, it's apparent that the reason for the decline in dollar spot later in the summer is because a rise in temperature indicates a decline in humidity.

Although there have been predictive models on dollar spot in the past, this new / model takes it to the next level.

"None of them were shown to work outside of their place of origin," Kerns says.



This new model has been tested and works through the Midwest and the East Coast. The only place the model has never been tested is the West Coast, but dollar spot isn't their major concern. "This model is most likely going to work for them," he says.

Another reason for the new model was that Kerns and Smith wanted to develop one that was precise. They wanted to do anything to help superintendents save money in this economy. "We found on average almost every year we tested it that there was at least one fungicide saving in almost every location. It's going to help [superintendents] very accurately target their fungicide applications," he says.

They also wanted to provide a scientific justification for making the applications. "We've done the research and it's shown that there are conditions where this disease can develop over a long period of time," he says. As with any model, Kerns knows there is

always room for improvement.

"The statistical components of the model will stay the same," he says. "But what we can tweak is the probability. We can take more of a gamble or less of a gamble, but that will depend more on what the turf manager's expectations are."

Kerns expects to publish his findings later this year. GCI

Katie Tuttle is GCI's assistant editor.





Forget blue or red; the vote goes to **Emerald® fungicide** for the best dollar spot control on turf in every region of the U.S. With a single application, **Emerald fungicide** delivers unsurpassed dollar spot control for 14 to 28 days. And use **Curalan® EG fungicide** for that second application for economical control of dollar spot. For best results, include **Emerald fungicide** in your first application in spring followed by **Curalan EG fungicide**. Then use **Curalan EG fungicide** followed by **Emerald fungicide** for your last two fungicide applications in fall.

betterturf.basf.us

Always read and follow label directions. Curalan and Emerald are registered trademarks of BASF. © 2013 BASF Corporation. All rights reserved.



#### **TURF HEALTH**

of fungicides and fungicide programs, forecasting models to help optimize the timing of applications, studies of which nozzles lead to best performance, and screening the causal fungus for resistance to fungicides. Researchers also are evaluating the susceptibility of different cultivars, she adds.

Kennelly says her area only sees a break during the winter and height of summer. "In Kansas, we most commonly see dollar spot in late spring/early summer, like late May through July," she says. "Then the disease usually decreases significantly during the hottest part of summer. Dollar spot is most severe again in late August through September, sometimes continuing through October. The disease really takes off when we get dewy mornings in late summer/early fall after the heat is done."

A superintendent has to be on alert from spring to fall. Fortunately, dollar spot isn't too difficult to spot, according to Salinetti.

"To the superintendent's eye, dollar spot is



Koch sprayed iprodione and chlorothalonil on fairway-height bentgrass, then sampled cores from each plot and tested the fungicide concentration weekly over a five-week span.

very easy to recognize," he says. "A morning tour of the course in the dog days of summer may reveal white mycelium with straw brown leaf blades underneath. Left untouched, it can spread quite rapidly, especially under moist, humid conditions."

Koch agrees dollar spot is one of the most easily identifiable diseases in the field because no other disease produces such small, tan circular patches. That said, a superintendent can't jump to conclusions. "In certain cases the disease foci can blend together and become difficult to ID, and almost look similar to drought or anthracnose," he says. "In that case, pick out some affected leaf blades and look for bleached-colored lesions with a reddish brown border. These lesions don't have to be circular; sometimes they are encompassing



To learn more call us at 1-800-237-8837 or visit us online at www.otterbine.com/aerating\_fountains

IMAGINE A BIG BLOCK 454 THAT GETS 100 Miles Per Gallon.

INTRODUCING THE G885 GOLF ROTOR The ultimate combination of power and performance.

**Boasting the highest torque** output of any golf rotor available, the G885's patented gear drive will push through anything that gets in its way. With just one rotation of the turret by hand, you can clearly feel this rotor's supreme durability. Throw in Total-Top-Serviceability, a wide range of efficient dual-trajectory nozzles, and Hunter's great reputation for customer support, the G885 becomes the must-have rotor for any golf system, anywhere.



Hunter

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

#### TURF HEALTH

the entire width of the leaf blade."

Fortunately, greens aren't often the diseases target."It's usually most common on fairways or tee boxes, as opposed to putting greens," Koch says. "This might have something to do with a more dense turf canopy on these locations that can hold more moisture relative to the very short height of cut and often sandy conditions on a putting green. But more likely it's related to the more intensive management regime on putting greens compared to fairways or tee boxes."

While Koch acknowledges that dollar spot is possibly the most-studied disease in turf, there has not been a lot of research targeting weather's impact on fungicide efficacy and persistence. In conjunction with his current research, superintendents are going to have to trust their own experience in the field - apply, watch, react. **GCI** 

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



Research found winter rainfall or snowmelt lead to a fairly rapid reduction of fungicide.





### MORE control.

Clover, thistle and over 250 other broadleaf weeds disappear with one application of Millennium<sup>™</sup> Ultra<sup>2</sup>. With 'meltdown' and residual control, it keeps turf clean and pristine for weeks, and can be applied virtually any time for maximum flexibility. That's how Nufarm brings you more control – and more confidence. Ask your distributor for Millennium Ultra<sup>2</sup>.



More where it matters most. www.nufarm.com/usto



©2013 Nufarm. Important: Always read and follow label instructions. Millennium™ is a trademark of Nufarm.

# **MEET THE NEW** LIGHTWEIGHT CHAMPION.

The new Toro® Reelmaster® 3550-D floats effortlessly over contours in fairways and green surrounds. With a productive 82-inch cutting width, turf-friendly tires, the superior traction of a Series/Parallel 3-wheel drive system, and a weight of less than 2,000 pounds,\* the Reelmaster 3550-D is engineered to make a big impression...without leaving one.

#### Reelmaster<sup>®</sup> 3550-D

DO

DR/

\*Gross vehicle weight for standard configuration, including five 18-inch cutting units, with no optional accessories ©2013 The Toro Company. All rights reserved.

TORO. Count on it.



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

### AN ASSIST FROM LEOPOLD AND THOREAU

hen politicians talked incessantly last year about falling off the fiscal cliff, superintendents, farmers and anyone else involved in production agriculture were worried about the moisture cliff we actually did fall off. Drought covered vast areas of the country and wild weather developed everywhere. It was the second costliest year for weather disasters ever, second only to 2005 (Katrina). This year we had Sandy, which was three times larger. Some places even had record flooding and 2012 was the warmest year in America since we started keeping track of such things.

In our town we've had a lot of snow this winter, including a storm that dropped 21.5 inches in one shot. But the water equivalent of snow will not begin to mitigate the moisture deficit we were left with when last year ended. Around here we are beginning to wonder if 2013 will be like 1988.

The velocity of weather changes is what is troubling to me. It happens so quickly – record flooding in 2011; record drought in 2012. The extremes are crazy. Recently, a comedian joke that 90 percent of us believe there are changes in the climate, and the other 10 percent are D.C. politicians! Gosh, even I am starting to realize the weather isn't like it has been most of my life. Maybe global warming is for real. I am not ready to blame it all on America, however.

Four scientists – one from Wisconsin, two from Boston U and one from Harvard – are using their own phenological data along with that from two renown naturalists – Aldo Leopold and Henry David Thoreau – to study the ecological effects of climate change. I am especially interested in their paper; I did a phenology study as part of a course in landscape plants nearly 45 years ago. Phenology is the study of the blooming or flowering date of plants, and my project required two daily trips to the UW arboretum that spring. What I feared was a major pain in my neck became a fascinating and educational experience.

Leopold, author of "A Sand County Almanac," and Thoreau, author of "Walden," were meticulous record keepers. Thoreau's records on blooming dates around Concord, Mass., were made in the middle 1800s. Leopold's flowering dates were taken near his shack in south central Wisconsin, not far from where I live, between 1935 and 1945. His daughter resumed his work in 1977 and continued it until 2011.

The authors used that information

mean spring temperature was 54 degrees F. and the black cherry bloomed as early as May 6th. That's almost a month early.

Before this study was published, plant scientists didn't know if plants could keep blooming earlier and earlier as global warming increased. Controlled warming experiments like those conducted in a growth chamber or a biotron tended to under predict blooming dates when compared to what actually happens in outdoor or natural settings. Now they do know, because of the extreme weather of 2010 and 2012 and especially because Leopold and Throeau.

Phenology may be less important to superintendents than orchard owners, unless you are working at a course like

Phenology may be less important to superintendents than orchard owners, unless you are working at a course like Augusta National Golf Club. For us, beautiful flowers might appear before the course is open, but the game itself won't be affected.

to predict some blooming dates last spring when the temperatures were way above normal. Their predictions were right on the mark.

The take home from that exercise is that these early plant flowering dates were due to the warmer spring temperatures. The record temperatures of late spring led to some record early blooming times.

Out east, around Concord, the study concluded that in an average year some flowers will bloom 11 days earlier than when Henry Thoreau was living in his cabin at Walden Pond. A dramatic example from Leopold's data involves the black cherry (we had two of this large trees on our golf coursé). In 1942 the mean spring temperatures was 48 degrees F. and the black cherry bloomed on May 31st. Last year the Augusta National Golf Club. For us, beautiful flowers might appear before the course is open, but the game itself won't be affected.

However, if fruit trees bloom early and before the bees arrive, there won't be any pollination or fruit. Also, early blossoms are very susceptible to damage by a subsequent frost, something that happened in Door County, Wis., and Traverse City, Mich., last year. The cherry crop was destroyed.

The study I reference here used flowering dates over a 161-year period in the eastern half of the U.S. I have opening day data that covers the last 40 years at my former golf course. I wonder if the warm springs have resulted in earlier openings?

The question might require some statistical analysis . . . GCI


Products That Work, From People Who Care | www.valentpro.com | 800-89-VALENT (898-2536) Read and follow the label instructions before using, Tourney and Products That Work, From People Who Care are registered trademarks of Valent U.S.A. Corporation. @2011 Valent U.S.A. Corporation. All rights reserved. AM/24189.13



eam more about Fourney on tough diseases. Use the martphone ScanLife App or text a picture of the code to 43588.

# WHEN IT COMES TO FIGHTING TOUGH DISEASES, TOUGHNESS IS A VIRTUE.

Nothing takes out tough diseases like Tourney<sup>®</sup> Fungicide. Superintendents can handle the toughest diseases throughout the season with *Tourney* in the tank. It's the go-to solution for controlling a broad spectrum of tough diseases. Learn more at www.valentpro.com/tourney. Tourney FUNGICIDE Tough made easy.

ANTHRACNOSE | BROWN PATCH | SUMMER PATCH | TAKE-ALL PATCH | FAIRY RING DOLLAR SPOT | NECROTIC RING SPOT | GRAY LEAF SPOT | SNOW MOLD | OTHER PATCH DISEASES



Don't be fooled. Identify the tell-tale signs of spring dead spot early on so it doesn't become a season-long scourge.

By Rob Thomas

t has been a long, cold winter. Spring has sprung, turf is exiting dormancy and golfers are chomping at the bit to play. Unfortunately, your course is dotted with unsightly blemishes – spring dead spot (SDS) has reared its ugly head. Spring dead spot is most common in the transition zone where Bermudagrass is grown and subjected to periods of cold temperatures that induce plant dormancy, says Dr. Nathan R. Walker, professor of turfgrass IPM/turfgrass pathology at Oklahoma State University. Depending on location in the United States, the causal agent is a soilborne fungus known as, Ophiosphaerella korrae, Ophiosphaerella herpotricha or Ophiosphaerella narmari.

"For example, in the Southeast and Atlantic coast states, *O. korrae* tends to be more common, while in the plains, *O. herpotricha* is more common," Walker says. "It is not uncommon to have regions where two or three of the species can all be found."

Symptoms of SDS are fairly di-

agnostic – patches from 6 inches up to 18 inches, or even several feet in diameter are present at spring green-up, says Dr. S. Bruce Martin, Jr., professor of entomology, soils and plant sciences at Clemson University.

"Superintendents can probe the soil to examine roots and rhizomes in the affected patches; dark brown to black rotten roots, stolons and rhizomes will be observed, even without a hand lens," Martin says.

SDS is most common in the transition zone or in environ-

# MANAGE YOUR LOUDASSETS

# ADMIRAL<sup>®</sup> BLUE LAKE COLORANT

Ponds, lakes and streams within a golf course help determine aesthetics and more importantly, feed into the overall botanical health of a golf course. Keep your water bodies free of noxious plant growth and algae with Admiral lake colorant. With the highest pure dye content of all EPA registered lake colorants, Admiral imparts a natural, rich blue color on your water bodies, enhancing the aesthetics of your course by providing the differentiating factor that will keep golfers coming back.

For your convenience, both liquid and WSP<sup>®</sup> (water soluble packets) formulations are available.



BEFORE

AFTER



800-232-5907 • beckerunderwood.com

#### TURF HEALTH



Spring dead spot is most common in the transition zone where Bermudagrass is grown and subjected to periods of cold temperatures that induce plant dormancy.

ments where Bermudagrass tends to go semi- to completely dormant, Martin says. In areas where winters are cold enough for Bermuda to go completely dormant, SDS tends to be more severe than in climates with warmer winters.

"Symptoms are prevalent in the spring, but infections actually occur the previous summer and fall and perhaps some infection occurs in the spring," he says. "However, the summer and fall infections are probably the most important as they weaken Bermuda as it is going into dormancy, and this weakened, infected grass is what is ultimately injured or killed by low-temperature stress."

Different turf types are more susceptible to SDS, Walker adds. "It is important to remember the disease triangle here – host (grass), environment and pathogen – all are factors that determine the presence or absence of disease," he says. "Like many diseases, when a plant is grown outside its region of adaptation we see stress and disease. The damage SDS causes can range from low to very severe on different cultivars of common and interspecific hybrid Bermudagrasses. Generally speaking, cold tolerant Bermudagrasses are more tolerant and cold intolerant are more susceptible.

"So take Ultradwarf Bermudagrass, which is becoming more common in the northern region of the transition zone in Oklahoma, we will likely see more SDS on these grasses as they are grown farther north," Walker adds. "So within all the different types of Bermudagrasses there are differences, and these differences can be affected greatly by where and how the grass is grown."

The highest maintained hybrid Bermuda grasses are generally the most susceptible, says Blake Garrett, agronomist at Farm-Links in Sylacauga, Ala. Hybrid Bermudagrasses, which tend to produce excessive thatch, are the most prone to spring dead spot. Conversely, Bermudagrass variet-

MARY ANN HANSEN, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, BUGWOOD.ORG

## WARNING: DON'T BE FOOLED

Superintendents can't be too quick in diagnosing a patch of dead turf as spring dead spot (SDS). It is often confused with pink snow mold because, according to Blake Garrett, agronomist at FarmLinks in Sylacauga, Ala., the two share some similar symptoms, such as bleaching of turf in sunken circular areas that occur after the disease has affected the turf. In addition, both appear after the turf is transitioning out of winter dormancy.

Going beyond the naked eye, any competent diagnostician should be able to differentiate the diseases easily through microscopy, says Dr. S. Bruce Martin, Jr., professor of entomology, soils and plant sciences at Clemson University. "Pink snow mold or michrodochium patch produces abundant two-celled curved spores on infected leaves, while SDS has no spores typically associated with it, but abundant ectotrophic darkly pigmented fungal hyphae on roots, stolons and rhizomes," he says.

"Look at roots, stolons and rhizomes with a good hand lens for the typical rotting associated with SDS," Martin advises. "If they have a microscope, they can incubate foliage overnight in a refrigerator, which should allow growth of microdochium mycelia and spores, then observe through a microscope for the typical curved spores. Otherwise, send an



untreated sample to a diagnostic lab. An answer should be forthcoming quickly."

A ring of salmon- or pink-colored growth is present on the outer edge of pink snow mold patches when the disease is actively developing, Garrett adds. The infected leaves within the patches are usually collapsed and matted down upon themselves.

"Fungicides are effective for control of pink snow mold," he says, if that's what the issue turns out to be. "In the case of pink snow mold, apply fungicides before snow cover to prevent disease development. Mapping and spot-treatment of areas where pink snow mold is most severe can significantly reduce fungicide expenditures. In regions where prolonged snow cover does not occur, apply fungicides when symptoms of microdochium patch are first observed."

na faulgir of bloods sur gales. Anna zyr stand wa between a tab sur gal dag sures and gal dags In glasticatio - partities from 5 Inclusion in pressor bit spans groed-up.

Apply early and the party's over for pests.

A single application of Acelepryn<sup>®</sup> insecticide in April or May gives you season-long control of all key white grub species, plus excellent control of turf caterpillars, European crane fly, annual bluegrass weevil, billbugs and other key turf pests. To learn more about how to use Acelepryn for optimal control of annual bluegrass weevil, visit **WeevilTrak.com**.



syngenta

For a special program offer, scan the QR code or visit **GreenCastOnline.com/Acelepryn** 

© 2013 Syngenta. Important: Always read and follow label instructions before buying or using Syngenta products. The label contains important conditions of sale, including limitations of warranty and remedy. All products may not be registered for sale or use in all states. Please check with your state or local Extension Service before buying or using Syngenta products. Acelepryn<sup>®</sup>, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. Syngenta Customer Center: 1-866-SYNGENT(A) (796-4368). MW 1LG62073-P1 01/13

#### TURF HEALTH



Symptoms of SDS are fairly diagnostic – patches from 6 inches up to 18 inches, or even several feet in diameter are present at spring green-up.

ies with improved cold tolerance are more resistant to SDS. Guymon, Midlawn, Midfield, Midiron, Yukon, Mirage and Sundevil have been shown to have improved resistance to SDS, whereas Arizona Common, Cheyenne, Jackpot, NuMex Sahara, Oasis, Poco Verde, Primavera, Princess, Sonesta, Shanghai, Tifton 10, Tifway, Tifgreen, Tropica, Vamont and Sunturf are all susceptible to SDS.

Based upon its name, one might believe SDS is a season pathenogen, but Garrett says that's not the case... and can present problems for years. "Initial signs and symptoms are visible in the spring, but once the affected Bermudagrass roots and stolons are severely rotted, patches are sunken, generally well defined and circular," he says. "Severely damaged areas may have symptoms that last well into the summer [and] the turf may not recover before fall dormancy.

"They may enlarge over three to four years, often developing into rings and then disappear," Garrett adds. "These spots usually reoccur in the same location over several years if disease-management practices are not put into place."

Unfortunately, the likeliness of SDS appearing is fairly high if conditions are favorable for disease. "It is difficult to avoid the disease, but management practices such as selecting a resistant cultivar, not conducting activities that delay dormancy or spread the fungus can reduce the severity of the disease and likely slow the spread of the disease," Walker says.

Superintendents should be vigilant for early warning signs, Martin says. "Perhaps the appearance of the dull or bleached turf in a patch pattern in fall; however applying a fungicide for control once symptoms appear will be less effective typically than earlier applications, but still may be helpful in late fall, especially on putting greens," he says.

Too late... the disease has been spotted. What now?

"If symptoms occur in a particular spring, then they are more likely to recur the following year if not controlled," Martin says. "Most of my work has been on putting greens where



## Were You Featured In This Issue?



Reprints enable you to reuse your article and simply place it into the hands of your target audience. Having been featured in a well-respected publication adds the credibility of a third-party endorsement to your message.

Give yourself a competitive advantage with reprints.

800-456-0707 reprints@gie.net

# LAYING DOWN A WHOLE NEW STANDARD IN TOPDRESSING CONTROL AND PRECISION.



Topdressing is no longer a guessing game. With the new WideSpin<sup>™</sup> 1550, you're in complete control of your topdressing program. You'll get the application rates you want, when you need them...without leaving the seat.

- NEW CONTROLLER allows you to calculate your rates while also giving you a wider range of rates to choose from. Lock in your favorites using the controller's four presets.
- NEW HYDRAULIC SYSTEM AND SPINNER DESIGN makes the patented WideSpin technology even more versatile while delivering a consistent, even spread. Go from a new, superlight application to heavy, and everything in between.
- NEW HOPPER has 30% greater capacity and the widest opening in the industry—you'll refill faster and spill a lot less when you do.

Whether you use a tow-behind or truck-mount, see why the WideSpin 1550 is the new standard in topdressing. Give us a call and we'll arrange for a head-to-head comparison with your current topdresser.

# TURFCO

#### THE LEADER. SINCE 1961.







CALL 1-800-679-8201 for a FREE on-site demonstration, or VISIT WWW.TURFCO.COM

#### **TURF HEALTH**

the tolerance of the disease is very low. On fairways, a superintendent frequently will opt not to bother with fungicides because control can be expensive and incomplete. This all depends on the budget and tolerance of the damage.

"Preventive approaches with fungicides usually include two applications of fungicides with known efficacy," he adds. "These have included Rubigan (being phased out), Torque, Banner Maxx and Eagle, primarily. Heritage has worked in some cases but not well in other cases, with the same inconsistent results from thiophanate methyl. However, rotations or tank mixes with t-methyl and Torque have shown improved efficacy over Torque alone, in my trials on putting greens."

Patience and smart agronomic practices are factors in winning the war against SDS, Garrett says.

"Spring dead spot can be managed with a multi-pronged approach, implemented over a period of several years," he says. "Management practices that improve the cold-hardiness of Bermudagrass are therefore very effective for SDS management.

"Preventative fungicide applications are an option in highvalue areas or where cultural practices alone do not provide adequate control. Of the fungicides that are labeled for spring dead spot, fenarimol (Rubigan) is most effective," Garrett adds. "The timing of fungicide applications does not appear to be

critical, as long as they are made in the fall before soil temperatures dip below 60 degrees (F). "They may enlarge over three to four years, often developing into rings and then disappear. These spots usually reoccur in the same location over several years if disease-management practices are not put into place."

For best results, applications

should be made at higher water

volumes or watered-in with 0.25

inches of irrigation immediately

after application in two gallons

Walker points to timing. "De-

pending on the situation, it is best

to avoid practices that can spread

the fungus while soil tempera-

tures are cool or delay normal

cool temperature-induced plant

dormancy," he says. "There are

H<sub>2</sub>0/1000 ft<sup>2</sup>."

#### Blake Garrett, FarmLinks

several studies where different fertilizer nutrients or formulations of the nutrient when used decreased the severity of the disease. Excessive nitrogen fertilization can increase the severity of the disease. Lastly, one can use fall applications of fungicides to suppress the disease."

Once diagnosed properly - in-house or via a lab sound agronomic practices are always the best course. GCI



-----

# Protect turf from the stress of summer



- TrueFoliar<sup>®</sup> products are absorbed directly into the foliage, delivering nutrients where they are needed most.
- Increases turf's ability to withstand stress from heat, drought, play and frequent cuttings.
- TrueFoliar products provide nutrition and improve physiological fitness of turfgrass.



Scan here to view video on how it works!

Emerald Isle Solutions TrueFoliar nutrients incorporate seaplant extract, antioxidants, fulvic acids, and amino acids into a complete nutritional approach for superior turf health and vitality. To find out more, call or visit us online.



Best of All Worlds™ www.LebanonTurf.com 1-800-233-0628 **DESIGN** CONCEPTS



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

# **BETTER BILLY BUNKERS**

n 2008, I reviewed several aspects of bunker construction, from style, to drainage to liners. At that time, I covered two basic groups of bunker liners – Fabrics and Hard Surfaces/Soil Binders.

I received a few letters wondering why I didn't discuss the "Billy Bunker." The reason was that I hadn't used them personally yet, and didn't feel comfortable opining on them. Now, I have several courses with bunkers under re-construction with the "Better Billy Bunker" method, including a bunker renovation at Cowboys Golf Club near Dallas, where I originally designed very steep bunkers and where we get some very heavy rain.

The early results have been impressive. Ed Easley, EAGL's construction coordinator in charge of the project says, "We have tried every bunker liner known to mankind....this is the 'silver bullet' of bunker lining."

As I wrote in 2008, I intuitively believe a hard surface liner should be superior to fabric liners, primarily because fabric liners eventually tear and require replacement. However, my experience with hard materials on native soils is that they are prone to cracking, much like non-reinforced concrete. At least, that is my experience here in the shrink-swell soils of Texas.

Those problems make the idea of the Better Billy Bunker method interesting, since its "sticky gravel" method conceptually splits the difference between the hard and soft layer methods. It may be the best of both worlds, although I suppose cynics could claim it's also the worst of both worlds.

The key defining feature is the 2-inch layer of clean gravel, coated with a specialized polymer spray, which is essentially a plastic. It seeps down through the gravel to harden it into a strong-but-flexible surface. This allows water to drain straight through quickly – up to 400 inches per hour, enough for all but rains of biblical proportion. This drainage reduces the erosive forces on the sand surface because the major water movement is 2 inches below it. Wet sand is heavier and more prone to slump. In addition, the spray coating reduces the gravel's porous openings enough to minimize sand migration down and soil migration up. You do need to test the sand and gravel to make sure your two materials adequately "bridge" much like

### It might be the **best of both worlds**, although I suppose cynics could claim it's also the worst of both worlds.

the requirements for a USGA green.

Installation cost using one of the "licensed" Better Billy Bunker installers (which is required) for the polymer is similar to fabrics, ranging from \$1.50-\$1.75 per square foot. However, there is additional cost to procure the gravel, which can vary by locale, so your costs might vary. Here in Dallas/Fort Worth, gravel costs from \$23-\$32 per ton, (and fuel costs are doing nothing but increasing gravel prices) adding about \$0.30 to the cost, making it slightly more expensive. You will likely spend about \$25,000 more on the Better Billy Bunker - always a tough choice in difficult economic times and on major projects.

Like the other methods, we are not sure of longevity, but the first installation of the Better Billy Bunker was eight years ago, and it's still in good shape, according to the company. However, this product should last at least as long as other methods. After all, what lasts longer than gravel and plastic? It probably will last longer. Even with minor damage from soil shifting, it should be easy to repair small sections as required, similar to other hard surface liners.

Has this product changed my advice to superintendents looking to renovate problem bunkers? Well, yes, because it is impressive. And, no, because I have always urged a three part decision-making process.

Therefore, my first advice is to use a bunker liner, any bunker liner. I know without them, your bunkers will likely be a mess in a few short years. Bunkers liners have trickled down from the top clubs to become "standard" at all but the poorest courses. The decision has morphed from "whether to use liners" to "which liner to use."

Second, test them all in your conditions. I've used them all and each works, but you need to evaluate them in terms of your unique conditions. You'll have lesser need if in the desert rather than in Houston. If one method works best in your tests, use it, rather than one that doesn't work well to save a few thousand dollars up front.

Third, consider the longer term, including life cycle and daily labor costs, rather than only initial construction cost. It's easier to machine rake the Better Billy Bunker, if that is important to you. To be fair, newer, stronger bunker liners can also be raked, if carefully, than earlier products. Add in unscheduled sand shoveling after big rains, and the annual labor savings quickly and easily outpace the annual loan cost on initial construction.

At some point, you will need to budget for \$150,000 in bunker liners. Certainly, the old adage is you never skimp on your greens because of their importance. If bunkers now cost as much or more than greens to maintain, then the same adage applies. I urge you to pick the best product for your needs, regardless of cost. **GCI** 

# INTRODUCING DISPLACE 12% Calcium

Displace is a unique combination of readily available calcium and soil surfactant formulated to rapidly displace sodium from the soil and add calcium for improved soil structure and water infiltration. The calcium in Displace will remain in solution and react directly with the soil to displace sodium ions. The specially designed soil surfactant component enhances product infiltration and facilitates uniform placement of the product throughout the soil profile for optimal efficacy when dealing with sodic issues. Displace is intended to rapidly exchange sodium with calcium in critical areas of golf and sports turf.

with a soil wetting agent

- Displace is a convenient and easy to use formulation through the combination of a highly effective form of calcium and a proven wetting agent.
- Proprietary soil surfactant chemistry will improve product placement in difficult soil conditions.
- Displace will increase water infiltration and provide a more uniform wetting front in the soil profile, improving the efficacy of leaching.
- An excellent tool to address hydrophobic soil conditions (localized dry spots).
- Improves soil structure for better root growth, nutrient uptake, water infiltration, soil oxygenation and overall turf vigor.
- An excellent tool for managing bicarbonate accumulation from irrigation water.

GRIGG BROS.

Soil Specialty Product

• Displace is two products in one that saves time and additional mixing.

Toll Free (888) 246-8873 • Fax (208) 673-6342 P.O. Box 128 • Albion, ID 83311 facebook.com/griggbros • www.griggbros.com

# HARD HAT REQUIRED BEYOND THIS POINT

#### By Bob Lohmann

Instead of creating a master plan for course renovations, a better approach is to compose smaller, more attainable projects to tackle.

ometimes, maybe without trying, we stumble upon a bit of insight whose truth is reinforced over and over again by others who may have stumbled upon it at the same time.

This happened late last year when I wrote about renovation scheduling for GCI (Best Laid Plans, December 2012). In this article, I talked about the need for superintendents to formulate asset management plans, as opposed to master plans, so they might efficiently tackle small projects year to year, instead of saving/planning for big, overarching renovations that just aren't so feasible in today's golf economy.

Since that article, we've been approached by about half a dozen projects that are direct results of this kind of asset management planning. In some cases, superintendents and other management types have taken the master plans they have, or had, and simply chopped them up into more manageable pieces that can be scheduled over the course of years.

Maybe someone out there is listening. Or just maybe they independently recognized the same common-sense principals we did. Either way, allow me to tick off three such projects in brief detail to provide some context. I'm confident their examples will strike superintendents as just the sort of efficient planning they can realize at their own facilities.



We had developed a master plan for this private club in the mid-1990s, and much of that plan was implemented. Since that time, however, there's been an ownership change at PVCC. It's a new ownership group, actually, consisting of 25 stakeholders, and there are naturally 25 different ideas about what renovation/upgrade work should be done going forward.

The superintendent asked us to help him organize a plan of attack. He didn't call it an asset management plan (AMP), but that's exactly what it was – a hit list of projects, some of which were never implemented from the old master plan and some which have become a priority in the 17 years since we last worked here. In fact, we're completing the first of these AMP projects this winter: expanding a pond on the 4th hole and using the resulting fill to create bunkering and mounding where PVCC had lost some Ash and evergreen trees.

The funding here is worth noting. Each of these projects has a price tag ranging from less than \$10,000 up to \$100,000. These are good target figures for supers mulling an AMP. These smaller chunks of money can more easily be budgeted.

We now have five to 10 projects in the AMP pipeline at Pine Valley, many of which will be handled by in-house crews as a matter of extended maintenance services. It's hard to argue that this is a very practical way to target, tackle and fund a series of projects that, taken together, could not be tackled and funded in the foreseeable future.

## MT. HAWLEY COUNTRY CLUB, PEORIA,

We have a long history working at this club, as well. We renovated all 18 greens back in 1997, based on a master plan we had done for the club in the early 1990s. Still, because



The 2nd hole of Lake Carroll Golf Course, Lake Carroll, III. before (left) and after the renovation (right).





of the catch-all nature of most master plans, there was plenty that never got done.

The new superintendent at Mt. Hawley, Josh Cull, has identified the need to upgrade the irrigation system, but he smartly came to us this winter so we might go through the old master plan, pluck the jobs that never got done, and create an asset management plan that prioritizes and integrates irrigation needs with other needs (bunker renovation and relocation foremost among them). The AMP we've devised is laid out like a giant menu, giving the club the choice to eat light (small projects) or dive into an entrée, depending on their budgetary appetite. Right now, the latter is appealing, but we're still working through the details.

Another word here about cost: At both PVCC and Mt. Hawley, we're working to keep costs low by enabling the client to execute big chunks of work in-house, where we essentially project manage the work. Back in the 1990s, course-construction firms rarely countenanced the sacrifice of revenue in this manner, mainly because money was abundant and they weren't asked to. But these are different times. Supers should be sure to explore these options when they are pricing out AMP component projects. It can be a huge money-saver.



Truth be told, a lot of our philosophy on AMPs was forged in doing work for this northwest Illinois club. We did a master plan for Lake Carroll GC in 2006, with the intention at one point of tackling the whole thing in three to six \$250,000 to \$1,000,000 phases. We completed Phase I, and then the downturn killed that idea (along with the master plan as a viable planning mechanism, in many cases). However, since that time, we have continued to phase a whole host of meaningful annual upgrades - 18 green-surrounds renovations, in three phases; a new 8th hole; a driving range expansion; two new greens.

Since Phase I, we've never spent more than \$125,000 in any one year, but the impact on the facility has been huge – while the footprint each fall (when we invariably tackle these projects) remains small and unobtrusive. That's the beauty of the asset management plan. Each year the superintendent can adjust his or her priorities according to need and available funding.

LCGC also proved, to us anyway, that the in-house construction model was viable (with the right crews and oversight). Superintendent Tim Throop and his crews do their own rototilling, tree clearing and they buy their own materials, including installation of some of them. This saves them money and they're so good at it now, it's made our work pretty darned efficient: We come in later in the fall and get all our work done in three to four weeks.

There's one thing that has remained utterly constant from the old Master Plan Era through to today's emerging Asset Management Plan Era: Plans change. You'll notice that all three of the AMPs cited here include projects from previous master plans that never got done. The clients at Lake Carroll have long wanted to improve their 17th hole; our original idea was to lengthen it to a par 5 and shorten the 18th. We held on to that idea as long as possible but realized this fall that it would never get done. So we elected to update the surrounds of the existing 17th green instead, and will look to improve the fairway and tee layout as a future phase of the AMP.

That's the beauty of the asset management plan. Each year the superintendent can adjust his or her priorities according to need and available funding. Hell, he or she can revisit those every day, if need be. We all recognize that courses need to reinvest to protect and enhance course value. The AMP lends some much needed flexibility to this process. **GCI** 

Bob Lohmann is founder, president, and principal architect of Lohmann Golf Designs and a frequent GCI contributor. Check out his blog at lohmanncompanies.blogspot.com

# GET FASTER SEDGE RESULTS

# STOP FUTURE POPULATIONS

## Nothing puts you in control of sedges like Dismiss' herbicides.

Why is Dismiss<sup>®</sup> the industry's **number one choice for sedge control**? Dismiss herbicides not only deliver visible results against sedges in just 24–48 hours, they produce a noticeable difference the next season: a significant reduction in new sedge populations.

That's because Dismiss fights yellow nutsedge and green kyllinga underground, impacting reproductive structures to help reduce future generations of weeds. With Dismiss, you're getting the industry's fastest visible results and fewer sedges next season, saving you time and money. To learn more, contact your FMC Market Specialist or local FMC Distributor.



\*I CHOICE FOR SEDGE CONTROLI

Scan this code to see how Dismiss performs against yellow nutsedge in a recent Research Update from FMC Turf Wire.

VIC 🕒 @FMCturf 🐻 FMCTurf fmcprosolutions.com



Always read and follow label directions. FMC and Dismiss are trademarks of FMC Corporation. ©2013 FMC Corporation. All rights reserved.

# The road to RECOVERY

**Summer heat** devastated the new tee boxes at Makray Memorial Golf Club. Superintendent Timothy Christians details his path toward reestablishing even stronger turf.

their finalsquare part development, chine terr tallad besetity on frequent integration to survive. Maning to the valor on supplemental integration, the burf was now resulting to show

#### By Timothy Christians

reflect back at the 2012 growing season and I can't think of any college class, internship or assistant position that prepared me for the extreme growing conditions that I saw. Yet the lessons learned will forever change the way I manage cool-season turfgrass under Mother Nature's wrath.

Seasoned superintendents will speak of the summers of 1988 and 1995, both creating equally yet opposite extremes. The summer of 1988 was one of the driest and hottest summers on record, whereas the summer of 1995 saw record heat combined with record moisture. However, for younger superintendents, in most cases this has been the first summer battling weather extremes of such proportion.

Whether it was your first season as a superintendent or your 35th, it was a tough year to maintain healthy playing surfaces and you most likely lost some turf on areas of your property. For me, in my sixth season as a head golf course superintendent and my fourth season at Makray Memorial Golf Club, we had dramatic decline in the health of our tees. Many factors contributed to this decline, however the sharp increase in summer's extremes was the primary cause for turfgrass loss.

Statistically speaking, this past season was like no other. Drought-like conditions, combined with unprecedented temperatures caused harsh growing conditions that were less than ideal for cool-season grasses and ornamentals. The growing season started with a bang, unprecedented warm temperatures combined with a dry, mild winter brought grass out of dormancy and golfers out in droves. March saw record highs consistently broken along with average rainfall. This was great for root growth as well as the cash registers. This warm weather jump started disease development and had our mowers running earlier than normal. Much of this work had to be done without the assistance of seasonal staff. The spring returned to normal and we were able to catch up with spring clean up prior to the summer rush.

As we moved towards summer, May was

dry and had us reaching for our hoses battling wilt. The temperatures touched the 90's, however disease pressure was low. Then as June came we turned on our wells to keep up with our lack of rain. The grass required frequent supplemental irrigation to keep things green. Like the last two seasons, in the first weekend of July, things got bad – multiple days with triple-digit highs and lows in the 80s. Soil temperatures skyrocketed and turfgrass decline was quick and irreversible. During that time we experienced four consecutive record high temperatures shattered and no relief in sight.

As the summer moved along, we went from dry to drought. Roughs saw the irrigation shut off to preserve water for greens, tees and fairways. Grass went dormant and teetered on irreversible damage, while irrigation pumps ran hard to keep bentgrass and Poa annua alive. It wasn't just golf courses feeling the drought effects. Farmers saw massive crop decline and wildfires were a threat across much of the country. Most of Illinois was in an extreme drought with parts in an exceptional drought. Nationwide, the total cost of the 2012 drought is estimated to be more than \$12 billon.

At Makray Memorial Golf Club, we had just finished reseeding 40 tee boxes the previous fall. The decision to reestablish tees was due to excessive wear with lack of area to promote recovery. We initially decided to switch to the improved variety of Crystal Bluelinks bentgrass with characteristics of quick establishment and improved wear tolerance. Our goal was to utilize this improved variety without having to totally renovate the tees. The warm spring did wonders for establishing good growth and bringing them into play, however they were still immature and did not have an established root system. This would be one of the many factors that spelled doom for these tee boxes going into summer.

As the spring progressed, we decided to open the tee boxes in the middle of May. At the time they were opened for play, the tee boxes showed great health and color. Summer moved along quickly and the tees grew in nicely. However, in June and July we began

No. 13 tee upon completion. You can see a significant difference from the tee prior to construction. Below: Pythium damage on a newly established bentgrass tee box. The picture shows where a mower had spread the disease affecting the entire mowing line.



#### CONSTRUCTION

to back off some of the agronomic practices needed to establish quality tee boxes. We decided to back off our frequent topdressing and light fertilizer applications in fear of overstimulating the turfgrass. This caused the grass to weaken, not getting the essential nutrients needed for healthy growth. During this time we also saw little to no rainfall and triple-digit temperature extremes. With their inadequate root development, these tees relied heavily on frequent irrigation to survive. Having to rely solely on supplemental irrigation, the turf was now starting to show signs of stress. With the dry, hot weather, we were also seeing an unusually high amount of play. The daily wear of foot traffic and divots was too much for our tee boxes and their lack of square footage. We decided to heavily





Corrugated drain lines with pea gravel were installed to move water from the tee surface.

topdress and fertilize the tees during a cool down in August to speed recovery. This decision would be fatal to some tees as the cool down didn't last and the immature tees were covered in sand and overstimulated.

During this stretch of unprecedented summer heat, we were also under high disease pressure. We have used phosphites to control pythium in the past with great success on all turfgrass surfaces. We treated the tees all season with phosphites, expecting to see the same results as the past. However, with an immature plant that is extremely susceptible to pythium, the phosphites would not be enough. We had an outbreak of pythium on many tees and were not able to catch it quick enough to avoid turfgrass loss.

The damage had been done and we had lost grass on our tees. The dog days of summer were behind us and the road to recovery would begin. We were in the prime seeding window of Aug. 15 to Sept. 15, so we made the decision to overseed all the tee boxes. This time rather than mulling over National Turfgrass Evaluation Program (NTEP) data and research articles of which seed would be our best fit, I decided to use the best resource any young superintendent has. I spoke to other superintendents in the area who had seen season after season like this and adapted their agronomic practices to the extremes of summer. After some sound advice from trusted colleagues, the decision was made to use the old standby variety of penncross. Penncross is one of the older and more aggressively stoloniferous varieties and has been well adapted in the Chicagoland area for use on tees.

Prior to reestablishing our tees in the previous fall, we had purchased a Turfco Triwave walk-behind seeder. This seeder came highly recommended and we saw great results with

# It's all teed up and ready to go.





### All the benefits of CIVITAS in an easy-to-use, pre-mixed formulation.

Pre-mixed CIVITAS<sup>™</sup> ONE, makes it even easier to benefit from the many strengths of CIVITAS. Through its research-proven multiple modes of action, CIVITAS boosts the plant's own immunity and overall development, making turf **healthier**, **stronger** and better able to defend itself. Now, with a pre-mixed formulation, it's even easier to empower turf to reach its full potential. CIVITAS ONE provides **effective disease control** and insect suppression, while helping to **maximize turf quality**, wear resistance and appearance. Plus, it **enhances plant efficiencies** meaning less inputs are required to achieve picture perfect turf. CIVITAS ONE is the **Total Turf Health Solution**. **Visit civitasturf.com for more information**.

#### CONSTRUCTION



Left: No. 4, prior to construction, required the removal of a large white oak that had been struck by lightning and was suffering from internal rot. Right: The completed tee box on No. 4, note how much the area opened up after the removal of the large oak.

While the health of the grass on the tee boxes saw improvement through fall, this would **only be the beginning** of what issues really needed to be addressed. We made the decision to fix some of the ongoing issues that had plagued our tees.

establishing grass using the Triwave seeder. The Triwave is designed to create a square groove, rather than a "V" groove, to drop the seed into. The square groove opens up more area for seed to be established. The image to the left shows the lines that are left by the Triwave seeder. We seeded all tees directly into the existing turfgrass stand at two directions at a rate of 1 pound of seed per 1,000 square feet. We then fertilized with a starter fertilizer with the analysis of 12-28-10 at a rate of 0.5 lb. N/M. The tees were heavily topdressed and rolled to create seed to soil contact. The penncross seed was quick to establish and fill the voids of summer's scars. We kept up with necessary agronomic practices to retain healthy turfgrass. This included frequent topdressing and spoon-fed applications of fertilizer.

While the health of the tee boxes grass saw improvement through fall, this would only be the beginning of what issues really needed to be addressed. We made the decision to fix some of the ongoing issues that had plagued our tees. These included contamination from unwanted turfgrass species, uneven teeing surfaces and drainage issues.

Prior seasons the use of other perennial ryegrass had been utilized to increase germination time to speed recovery. The problem was that this species, known as perennial ryegrass, had a very contrasting appearance then the desired creeping bentgrass. While focusing on improving the tees, we stripped and seeded many areas on the tees where encroachment of perennial ryegrass had impacted the playability and aesthetics. We used a growing medium of 70 percent sand, 20 percent peat humus and 10 percent sphagnum peat moss. This mixture is one of the more popular rootzone blends for tee boxes because of the quick drainage and ability to hold required nutrients. We filled the stripped area to grade with existing tee surface and seeded with penncross creeping bentgrass. Overall this process was done to five tee boxes that were heavily contaminated.

Drainage is one of the most important aspects to consider when producing superior turfgrass surfaces. An areas inability to drain water can have devastating effects. Grass, like any living organism, requires oxygen to grow and remain healthy. Anytime water is unable to drain, the grass will undergo a significant decline in health. A few of our tees had drainage issues that required attention. We installed corrugated drain lines with pea gravel to improve drainage.

The square footage of our tees is roughly 1.75 acres. For a golf course that sees well above 25,000 rounds annually, our teeing surfaces were grossly undersized. With a management and ownership invested in providing the best playing conditions, a decision was made to expand tee size and add tees to address our need for greater square footage.

When constructing tee boxes, the philosophy bigger is better couldn't be truer. Divots and traffic wear takes time to heal, seed takes time to establish and creating a larger area to place tee markers can drastically improve the health of tees. Our efforts were focused on the par-3 tee boxes that could not withstand the constant golfer traffic. Where real estate was available, we built a new tee. If the area was landlocked, we created teeing surfaces as large as could be allotted.

On the fourth hole, which has always seen the greatest amount of wear, we agreed on the addition of a new tee box. The loca-



tion of the new tee box would also provide golfers with a different angle into the green. The location required the removal of a large white oak that had been struck by lightning and was suffering from internal rot that had compromised the safety of the tree. The large oak also restricted air movement and blocked sunlight. The tee was constructed with the 7/2/1 rootzone growing medium. The tee was built at a 3-degree pitch from front to back on a base of 8feet. No drainage was needed and irrigation was expanded to provide adequate coverage.

Upon completion of the construction of the tee, we seeded the surface with penncross and fertilized with a starter fertilizer. It was decided to put a turf cover to protect the area through the tough winter months. Winter covering has been a common practice to assist establishment, protect annual bluegrass and prevent winter kill due to desiccation. We also sodded the perimeter of the tee to prevent contamination of seed into the surrounding areas. Once the new tee is open for play, we plan to make improvements to the existing tee



boxes on hole No. 4.

Holes No. 7 and No. 13 created a problem with their need for increased size and lack of area to expand. The goal would be to expand the original tees to a size that would accommodate the high amount of traffic we see throughout the summer. Due to our inability to close the course, we needed to find a way to reduce the downtime of these tees. It was decided that sodding the tees would benefit their ability to be ready for golf earlier in the spring. The process on these tees began by stripping the sod around the existing tee. We were able to use the sod on the perimeter of the tee box on No. 4 and to fill a few voids on the driving range.

Once the existing turfgrass was stripped, we removed the topsoil surrounding the existing teeing ground. This area was then dug out and leveled. We stripped the grass off the tee surface and leveled the entire area with 7/2/1 medium.

After leveling the tee area to desired grade, we seeded some of the tees with penncross creeping bentgrass and sodded tees on No. 13 and No. 7 with penncross creeping bentgrass. The process of sodding wrapped up in late November and we hope to have the tees open for play sometime in early spring.

Losing grass in the heart of summer is never easy to deal with. The key to recovery is to document the damage, communicate with membership/ownership about the loss of turf and put together a plan to repair the damage. It is also good to understand what happened and how it can be avoided in the future. Any seasoned superintendent will tell a young superintendent that they are going to lose grass, and how you deal with it is how you will define yourself as a superintendent. **GCI** 

Timothy Christians is superintendent Makray Memorial Golf Club in Barrington, Ill.



Kills Damaging Turf Insects with Long-Lasting Results
Protects Through Rapid Uptake and Translocation
Allows for Plant Rescue and Future Protection

TURF INSECTICIDE

### Effective On: Chinch Bug • Mole Cricket Annual Bluegrass Weevil • Crane Fly



800.821.7925 • pbigordon.com/zylam20sg Gordon's® and Zylam® are registered trademarks of PBI-Gordon Corporation Always read and follow label directions 2/13 02285 JOHNNY TURF NERD



John E. Kaminski, Ph.D. is an associate professor, Turfgrass Science, and director of the Golf Course Turfgrass Management Program at Penn State University. You can reach him at kaminski@psu.edu.

# THE PERFECT CIRCLE

hose who know me know I'm pretty intense. As a kid I'd get into a lot of trouble at school. Despite this, I maintained high academic standards, played several sports and was involved in other activities. I remember receiving the Presidential Academic Achievement Award in elementary school and my principal stressing "this next recipient is an outstanding scholar, but definitely has fun doing it." Just to round out the scholarly and athletic activities, I also was the one who, at 15, "borrowed" my Dad's Corvette to drive my girlfriend home after school.

As I was completing my Ph.D., I remember my mentor Dr. Dernoeden saying something to the effect of "You take on too much and finish too little." I never took this as an insult. I just do things a little differently.

My philosophy has been to throw 20 things against the wall and see what sticks. Maybe two or three ideas are good ones and get accomplished. I've always looked at those who focused on two things in the hopes one works out as underachievers. Therefore, I'm always on the move.

This continued with me through my days at Maryland, as an assistant professor at UConn, and now in my position at Penn State. For those who follow me on Twitter (or one of the other social networks I post junk on), you know things haven't slowed down.

If I could sum up my early career, I would credit this "Go. Go. Go" phi-

#### Share

As always, John encourages reader comments. Share your #redcircle stories with him on Twitter (@johnkaminski). losophy to much of what I've accomplished so far. I work hard and place extraordinarily high expectations on myself and others within my "circle."

So what's my point? The demands and expectations I put on myself

"circle of control" and the "circle of influence" and their differences.

Since San Diego I've contemplated this "red circle of control" and the positive impact it could have on my professional and personal goals. The

The ability to focus on what you "can" control versus those things which you want to "try" to control is significant.

and ultimately on those individuals, groups and associations around me have swayed my attention and efforts in the wrong direction. Instead of focusing on my own 20 projects (in hopes two or three will stick), I have allowed the projects and work of others to infiltrate my circle of control. And so we've come to the story of the "red circle of control."

At the most recent Golf Industry Show, staff members who I highly respect (let's call them Sarah and Karen) spent about 30 minutes of their busy day listening to me complain about things that were festering in my mind.

After some time, Sarah looked up at an architectural detail in a convention center archway – a red circle with what appeared to be sun rays extending out of it – and said, "Do you see that red circle? That's you. Do you see all of the lines extending out of that red circle? That's everyone else. Focus on the circle. That's the only thing you can control."

In typical Kaminski fashion, I couldn't let it sink in or conceptualize the full meaning and instead got into another 30 minutes of philosophical discussion about the interpretation of the circles and its rays. The story bounced back and forth between the ability to focus on what you "can" control versus those things which you want to "try" to control is significant.

For someone who manages things the way I do, however, it's not easy to ignore the things around me. In San Diego, I expressed my concern that focusing on the "red circle" would mean giving up the desire to contribute to an entire industry. I distinctly felt focusing solely on me would equate to not caring about the big picture.

I've now come to the realization that I'm not as important as I'd once thought I was. It's not my job – or even position – to force my ideas on an entire industry in hopes for change. Focus on the circle.

I've also realized focusing on what I can control doesn't mean I won't have an impact on advancing an industry.

Considering the time I spend on projects and activities, pulling back and focusing on what I can control could result in a significant improvement in my own productivity. Maybe I could throw 30 things at the wall and see four or five of them to completion.

Maybe I'm out on a limb with this, but I doubt it. I wonder if we all focused more on our own red circles would our careers, families and industry ultimately be better off for it? **GCI** 

H PARNIE DANGER

Complete plant nutrition solutions for your fairways and greens has never been easier, with the all new highly efficient **Rx Fairway** and **Rx Green Flowable** formulations from **Redox**.

**Rx Fairway** and **Rx Green** are supremely effective sources of carbon chelated and complexed P & K nutrients, combined with essential micro-nutrients, giving you the power through all seasons to improve and maintain plant vitality without excessive growth. You control the nitrogen inputs based on seasonal and other growth requirements. From the world's leading courses to municipal and local clubs and resorts, **Redox Turf** is fast becoming the brand of choice of superintendents in all types of growing conditions. Now, you can achieve superior results with the industry's top single-package nutrition solutions:



TURFRX Green Flowable Cost effective, safe to handle and easy to mix, the **Redox Turf Flowable** solutions provide powerful, plantavailable nutrients that strengthen plant growth in any growing environment.

Call **Redox Turf** today to learn more about why more and more superintendents are choosing this fast, easy and affordable way of improving turf conditions.



www.redoxturf.com Redox Chemicals, LLC 1-877-503-2207

Redoxtur

# SPRING into action

A comprehensive spring weed control management program begins with preemergent herbicides.

olf course superintendents thinking about spring this year might be wondering if there will even be one. After all, there wasn't one last year, for the most part. Winter seemed to jump right to summer. But we all know that was an aberration and we can most likely expect a return to normal in 2013. With that in mind, superintendents have to consider their spring weed control strategy. Most will probably stick to their tried-and-true methods, while some might consider less conventional approaches to get the results they desire. One of the most basic actions, however, can't



With a normal spring, superintendents have to be thinking about their spring weed control strategy.

#### By Jason Stahl

be ignored: applying preemergent herbicides.

"This is the foundation of all weed control," says Laurence Mudge, technical service manager with Bayer Environmental Science. "It has been that way for 30 years. If you don't do this, you'll fight weeds year-round with post-emergent herbicides, which is much more costly and inefficient."

Steve MacDonald, president of Turfgrass Disease Solutions, says another key is to identify problem plants and know their biology in-and-out. Also, finding herbicides that have turf tolerance for your species.

"Determine which weeds are summer annuals and can effectively be controlled with a preemergent herbicide application in the spring, and determine what weeds are perennials and need to be controlled post-emergently," says MacDonald. "Control of winter annual weeds in the spring can be hit or miss and, in most cases, these will be gone by early summer. Spring time is critical for good weed control programs because soil moisture, moderate air temperatures and vigorous turf growth are optimal when compared to summer time."

Weed control programs in cool-season turf have not changed much in recent years, MacDonald says. But that is not the case in warm-season turf. "There seems to be many more herbicide options that are evolving in warm-season turfgrass," he says. "The newest herbicides we see in the Mid-Atlantic and Northeast regions are niche herbicides that fit in certain scenarios, but not all."

One concept MacDonald says isn't new but is being employed more frequently in recent years is aggressive overseeding of the rough in the autumn and spring.

"Many golf courses are more focused than ever on the improvement of their rough turfgrass, and this can complicate weed control programs," he says. "Because of the need to continually overseed these areas, some superintendents have changed their weed control programs in roughs from a preemergent approach to a spot treatment, post-emergence approach using quinclorac (Drive) or fenoxaprop (Acclaim Extra) for summer annual grassy weeds. The majority of golf courses, however, are still utilizing more conventional preemergent approaches to annual grass control."

Kyle Miller, senior technical specialist with BASF, says one thing superintendents do in parts of the country where there is an extended crabgrass season is to put out two applications of preemergent herbicides, one in spring and one in early summer. Others take a more non-conventional "wait-and-see" approach to weed pressure.

"What some people do is eliminate that first application, then use a product like Drive or Accelerate in combination with a second preemergent application," says Miller. "That controls the weeds that have come up that you didn't control before when you didn't put down that first application. That will also give you some residual control during summer. Plus, you save manpower by eliminating that one application."

As far as post-emergent weed



FOR MORE INFO Check out USGA agronomist Brain Whitlark's article "Weed Control In Non-Overseed Bermudagrass Greens." Whitlark offers some strategies to provide cool-season weed control in non-overseeded

Enter **bit.ly/VUoTyB** into your browser at access Whitlark's article.

Bermudagrass greens.

### **New on the Block**

What new tools are out there to facilitate spring weed control? Not much, says Laurence Mudge, technical service manager with Bayer Environmental Science, at least on the preemergent side.

"A lot of the preemergent herbicides have been around awhile. There is not a lot of new technology," he says. "In fungicides, we've had a lot of new products introduced in the last 10 to 15 years. Insecticides and post-emergent herbicides, too. But for some reason, not preemergent herbicides."

One exception was Bayer's introduction of Spectacle a couple years ago for control of Poa annua in warm-season turf. This preemergent, says Mudge, will be applied starting mid-February in Florida and late February to April in other parts of the South.

"Preemergent herbicides tend to provide annual grass control – crabgrass, goosegrass, Poa, etc. Some preemergents provide some broadleaf weed control. Spectacle offers more broad spectrum control," Mudge says. "There are a lot of weeds on the label, the length of control is good and use rates are extremely low. Current preemergents get applied at a half-pound or pound per acre. Spectacle is applied at less than an ounce per acre."

Steve MacDonald, president of Turfgrass Disease Solutions, says there are two new herbicides superintendents may see on the market in 2013: Pylex, from BASF, and Defendor, from Dow Agrosciences.

Pylex, with the active ingredient topramezone, is in the HPPD inhibiting class of herbicides, which turns

sensitive weeds white. "In our trials, this herbicide has proven to

be a potentially important tool for annual and perennial grassy weed control in cool-season golf course turf," says MacDonald.

Kyle Miller, senior technical specialist with BASF, says Pylex will provide effective postemergent control of goosegrass.

"Goosegrass can be a big problem in cool-season turf in the transition zone," says Miller. "Bermuda can also be a real problem in cool-season turf, and so Pylex, with multiple applications, can do a nice job of suppressing or controlling Bermuda, too. It's a niche product,



but those are two tough weeds we feel it will provide good or better control than what's available today."

Defendor, with the active ingredient florasulam, will be labeled for post-emergent control of various broadleaf weeds.

"Just like any new product, we'll continue to learn about these materials in years to come," MacDonald says.

Monument 75WG, released last year by Syngenta, offers post-emergent control of dandelion, crabgrass, nutsedge, clover and spurge, among other broadleaf and grassy weed, in Bermudagrass and zoysiagrass. It comes in a water-soluble, pre-measured package, and can be broadcast or used for spot treatment.



## "This is the foundation of all weed control. It has been that way for 30 years. If you don't do this, you'll fight weeds year-round with post-emergent herbicides, which is much more costly and inefficient."

control, MacDonald says applications should take place as early in the year as possible to increase herbicides' effectiveness (smaller plant and more conducive weather).

Miller advises to broadcast post-emergent broadleaf herbicides in spring to address henbit, chickweed, speedwell, etc., and

A lot of people see weeds here and there and spot spray, but superintendents will find that there are a lot of weeds that germinate all spring long.

- Laurence Mudge, Bayer Environmental Science

avoid spot spraying unless you historically don't have that much weed pressure.

"A lot of people just see weeds here and there and spot spray, but you'll find that there are a lot of weeds that germinate all spring long – broadleaf weeds you don't see that first time you go out to try to control them," Miller says. "So, as a rule, it makes more sense to broadcast spray, otherwise you're going to have to come back and retreat, which will obviously cost you time and money." Superintendents who were spooked by last year's dry and mild spring should keep an eye on soil temperatures as the ultimate deciding factor on when to apply.

"Last year, our soil temperatures in March were really warm and there was a big concern that people might not be getting their preemergent herbicides down soon enough to control crabgrass. Also, people wondered if it would last as long or would they need to make multiple applications," says Miller. "What I can guarantee for





this year is that you will come out of winter with broadleaf weeds, just like every year, so be prepared to treat for them. Continue to monitor soil temperatures, and if we have a short winter, expect to be out earlier than normal."

It's impossible to predict what type of spring we'll have in 2013. "The winter of 2012/13 has been a rollercoaster ride of cold to cool weather mixed with some warm days," MacDonald says. He suggests superintendents plan their preemergent applications at conventional timing and scout high pressure areas for weed germination. "Flexibility and proper timing in the spring is key to successful weed control." GCI

Jason Stahl is a Cleveland-based freelance writer and frequent GCI contributor.



### **Problem Weeds**

Sedges (nutsedge and Kyllinga spp.) have quickly become one of the most difficult perennial weeds that most superintendents battle. Unfortunately, there are only a few herbicide options for these weeds in cool-season turfgrass, and repeated applications and time are necessary to achieve high levels of success. "Superintendents who had issues with these weeds in 2012 and did not control them successfully will

likely see them again in mid to late spring," says Steve MacDonald, president of Turfgrass Disease Solutions.

Obviously, the weeds a superintendent should target with a post-emergent herbicide depend on where their courses are located. Florida, for instance, has alexandergrass and other weeds that aren't found in other parts of the country.

"And doveweed is becoming a major problem in the south and southwest," adds Laurence Mudge, technical service manager with Bayer Environmental Science.

The four annual grassy weeds that continue to be the most problematic are crabgrass, goosegrass, foxtail and Japanese stiltgrass.

"But a well-timed preemergent application in spring will successfully control these annual weeds," MacDonald says.



**GAME PLAN** 



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

# SUSTAIN THE RIPPLE

The days of wondering whether that was light at the end of the tunnel or a train bearing down on us finally may be over. After attending the PGA Merchandise Show, the Golf Industry Show and the CMAA World Conference, I'm feeling some of the optimism that filled the aisles at those events. But before we get too giddy, let's ask ourselves: "How do we tap into the upswing and how do we make sure the momentum continues to build?"

First, a little reality. Most golf businesses are only beginning their recovery. There will be continued vulnerability and volatility in some segments for some time. The tender nature of this recovery requires that business practices such as golf and club marketing, access (for memberships and tee times) and course conditioning must be kept simple and easy to use.

However, evidence supports a recovery beyond that, which inevitably surfaces at trade shows and conferences. In its 2013 study of golfer consumer attitudes, Sports and Leisure Research Group notes a shift in golfing consumers. "After a postrecession flatness, U.S. golfers appear more poised to play and spend on golf than they have in the past three years," says SLRG president Jon Last.

Manufacturers will be among the beneficiaries. According to Last, irons, balls, apparel and drivers will see an uptick. SLRG also forecasts a favorable swing in sales of shoes and golf bags.

Golf course architects and builders note that new projects finally are hitting the drawing boards. There is no indication that new courses will exceed the number of closures in 2013; it's likely that we will see the eighth consecutive year of decline in golf course supply. But the steepness of the decline is declining, which may be a good or a bad trend, depending on your perspective and how far you think we need to go to restore the supply/demand balance.

Listening to CMAA members at the World Conference in San Diego, it's obvious many are anticipating increased membership demand. In fact, Steven Graves, president of Creative Golf Marketing, notes membership sales at strong clubs increased – with joining fees recalibrated to market rates – throughout 2012. The preferred categories for new members in for each touch point. Turning a surface ripple of opportunity into a genuine wave requires that all stakeholders invite return participation to expand golf's numbers. This is a time during which we all must be engaged in growing the game.

Sustained commitment to recovery is the key. Many influences external to golf and club categories are at work; but people involved in golf-related business will have a direct influence on the continued recovery of golf and

Turning a surface ripple of opportunity into a genuine wave requires that all stakeholders invite return participation to expand golf's numbers.

many clubs are non-equity and nonvoting right-to-use memberships.

While noting that golfers are driving the industry momentum, Last also cautions that time pressures and other ongoing challenges lend a cautionary feel to golf's comeback.

In short, golf must lift itself up by its own bootstraps. But how?

Each of the major trade associations has challenged its members to increase golfer participation. New ideas are abundant in the extreme. Programs such as Golf 2.0, launched by the PGA of America and now supported by the broad assortment of interested parties, are gaining traction.

Every aspect of the user experience is important. Golf professionals must be helpful and friendly to timid newcomers. Superintendents must contribute to course set-ups that promote enjoyment and fun. Foodand-beverage managers must ensure that dining and entertainment options are family-oriented and sensitive to / women's expectations for the health and well-being of their families.

Personal accountability is required

club business categories. Three ingredients fuel continued recovery:

• Personal engagement by managers, golf professionals and course superintendents; customer-facing staff must be friendly, inviting and appreciative

• Smart and patient pricing to see that facilities remain accessible to many people frightened by the recessionary cycle and unwilling to recommit to steadily increasing fee streams. Many customers and members will remain financially cautious for years to come.

• Best reasonable conditions for club and golf facilities. Returning customers have a newfound sense of value. If they tell you they lack the time or the money, they're saying they demand value commensurate to their investment.

It's easy to be optimistic now, when all around us seem to be reading from talking points prepared by golf's chamber of commerce. It will require a diligent effort on everyone's part to make sure we're feeling just as good come December. **GCI** 

## Upgrade Your Turf PGR Program to Legacy.\*



Premiere product for turfgrass enhancement and growth suppression
Improved turfgrass color and quality

- Extended spray intervals
- Reduced "bronzing"
- · Elimination of the "rebound" effect found with trinexapac-ethyl
- Uniform growth regulation on mixed turfgrass spec
- Stops and reduces *Poa annua* populations
  - Saves labor and fuel associated with mowing

# Whether it's for turf enhancement or *Poa* conversion, SePRO has the right turf PGR for your desired objective.

- Selectivity suppresses the growth of *Poa annua* to a greater degree than desirable perennial turfgrasses
- Greater "regrowth" potential on bentgrass vs other growth regulators
   leading to faster conversion
- Poa annua conversion with no disruption to the playability of the turfgrass
- Improved turfgrass quality
- Less impact on bentgrass and Kentucky bluegrass compared to paclobutrazol formulations

## Cutless: The Standard for Poa annua Conversion.

For more information about SePRO turf growth regulators, contact your SePRO Technical Specialist or call **1-800-419-7779**. Visit our web site at **www.sepro.com**.



SePRO Corporation Carmel, IN 46032

KO Corporation. The synergy derived from the combination of type link and wered under U.S. Patent No. 7,135,435. Always read and follow label directions SPDC Comparation.



# Join. Participate. Get involved

The rewards are many for industry involvement. What's your excuse?

#### by Bruce Williams

he golf and turfgrass industries are very well organized thanks to a variety of membership associations and foundations. Each and every one of those groups is led by individuals who have chosen to step up and get involved. It seems like the old adage was never truer with 5 percent of the people in chapters and associations doing the work for the other 95 percent.

I truly believe more people would get involved in leadership positions if they knew the need, the benefits and the purpose of taking on added responsibility. I have yet to see an individual who hasn't prospered from board service and, likewise, organizations that have not prospered from what volunteers have to offer.

HOW DO WE VOLUNTEER? Superintendents often believe they are not worthy of board service. In fact, nothing could be further from the truth. Every superintendent has something to offer. It starts off with a willingness to give time. A commitment to board service takes time. It's easy to calculate the number of chapter meetings and board meetings that any assignment will require. Chapter service, according to my estimates, requires an extra 10 or so hours a month. This will increase if one chooses to continue service at an officer level. So if you can spare the time the fruits of your labor will be bountiful. Yes, some chapters have contested elections and nobody likes to run for a board position and lose. It may take a couple of years to get elected. Hard work and persistence pay off. I have known more than a few individuals who ran three times before being elected to boards including the GCSAA. Some of those individuals went on to become presidents of their respective organizations.

First things first and you need to join professional organizations such as GCSAA chapters and turfgrass foundations. Participate and get involved. Attend as many meetings as possible and communicate the value of such organizations to your employer. While attending all meetings is an admirable goal, it must be realized that we all have family obligations and work commitments that may take precedence during the year. Pick and choose wisely and manage your time well so a balance between work, life and leadership exists.

Once you join an organization and actively attend meetings, it is best to get involved at the committee level. Typical committee involvement requires just a few extra hours per month. Superintendents serve on committees such as tournament, education, trade show, PR, communications and newsletter. Committee service is about getting the job done and making programs better. We are fortunate today to have so many talented chapter executives who carry out the direction offered by committees and boards.

Chapters are always looking for speakers at monthly meetings. They also are always looking for industry pros to write articles for their newsletters. Not only is this a great way to get involved with minimal time commitment, but it also provides exposure for a superintendent and allows other chapter members to see his/ her talents. Many future chapter leaders come from the ranks of speakers and writers.

WHY DO WE VOLUNTEER? There must be some compelling reasons for wanting to step up and volunteer. Not everyone is motivated by the same things, so I hope to outline some good reasons to get involved at a leadership level.

Board service can advance your career. If you are looking to move up the career ladder I can think of no better way than to serve. It is no coincidence that some of the better jobs in your market seek out broadly qualified people. The people who are hiring superintendents are leaders themselves and leaders are attracted to leaders.

A variety of job skills are developed and enhanced through board service. I enjoy seeing the significant improvement of professionalism that grows parallel to board service. Public speaking and writing skills are two notable qualities. Through practice, participation and learning from peers we are all better off after 8-9 years of board service.

Time management becomes a necessity as we take on more commitments. Fellow board members become mentors and show us the way to provide a proper balance personally and professionally.

Other notable learned skills include: budgeting, strategic planning, communication, technology, management and overall leadership.

Lastly, volunteering brings fun and fulfillment to your life. Some of our basic needs include getting involved and having a feeling of being in-the-know on things. Learn to work in a group, promote change, develop consensus and debate outcomes. Have fun while being involved with your fellow board members. Know that each year you serve you will become more fulfilled with the accomplishments that the board, as a group, makes on behalf of its members.

**HOW DO YOU KNOW IF IT IS FOR YOU?** I suggest anyone considering serving their chapter, association or foundation do a little homework before taking the leap. Seek out existing leaders and former board members to see what it has meant to them. A few of the questions that should be asked include:

• How much time commitment was involved at each level of board service?

• What was most difficult about board service?

• If you had it to do over again would you serve?

• List the advantages derived from your board service.

You should quickly see that few have any regrets. There is much more upside than downside. All we can ask for in life is to have win-win scenarios and service provides that opportunity.

#### **Personal ROI**

Volunteering brings a deep sense of return on investment, often at no cost other than of yourself and your time. Here are some additional motivating factors for getting involved.

- Feeling needed
- Sharing a skill
- Demonstrate a commitment to the industry
- · Gain leadership skills
- A sense of accomplishment
- Recognition
- Making an impact
- Learning new things
- To become an insider
- A feeling of pride
- Testing yourself
- Building your resume
- Becoming a change agent
- To stand up and be counted

#### PROFESSIONAL DEVELOPMENT



I have yet to see an individual who hasn't prospered from board service and, likewise, organizations that have not prospered from all volunteers have to offer and give.

While a lot of what I've outlined is focused on superintendents there are opportunities at a variety of organizations. Let's explore a few of those general categories and see what fits you best. Often leaders in one group are sought out for leadership roles in other allied organizations.

There are close to 100 chapters of GCSAA in North America. Each chapter covers a specific geographic area. Some chapters are as small in size and geography as having a 50-mile radius in a metropolitan area while others cover multiple states. Most of these chapters have been around from 50 to 80 years. They are well organized and most have paid chapter managers. Chapter managers carry the heaviest burden and are compensated accordingly. Volunteers for board service will have time commitments, but more importantly they must set the direction for the organization. With approximately 100 chapters and an average of nine board members per chapter, that means roughly 900 superintendent members are theoretically in leadership positions each and every year. Most, but not all, chapter boards require Class-A members, so this does take up approximately 17 percent of eligible volunteers (5,300 GCSAA Class A members). Considering a potential 40-year career in this industry, if no one ever repeated in office, then 68 percent of eligible superintendents would have to serve to cover all the various chapter leadership positions.

Beyond chapters there are a variety of regional associations that include turfgrass foundations and turfgrass associations. Recent years have also seen initiatives in turfgrass research groups and also active university alumni associations. Similar to chapters, most of these groups have paid leaders who carry out the daily and annual tasks of running the organizations. Leadership is charged with setting goals and assisting in driving the programs that make these organizations successful. With the recent economic downturn it is more important than ever before that outside funding assist our research programs at diverse geographic locations throughout the country. Each of these organizations seeks leaders just like chapters. That provides a great opportunity for superintendents and commercial members to work together to support the golf course industry.

The ultimate leadership roles would be with organizations like GCSAA, Canadian GCSA and British International Greenkeepers Association. Prior experience is required. Other than that, those major groups are looking for the same qualities in any individual. They want those superintendents who have the time, desire, talent and proper attitude it takes to make an organization better. As you might imagine, the time commitment increases at this level but so do the benefits to you and your career.

One of the challenges of governance is identifying the leaders of tomorrow. A typical board of nine individuals carries the load of 100 to 600 members. Each year there are normally one or two open positions to serve on such boards. This leaves 90 to 590 potential board members. Most boards look to existing committee members to fill open slots. These people are involved and have shown a commitment to advancing the profession.

It is necessary for each group to encourage and entice members to get involved. Sadly, I see many groups having to go back to former leaders because new blood isn't willing to step up, and get involved. This is a problem in that we are not growing the leaders of tomorrow. However, there is some value to recycling the sage advice of those who have served before, so it is not all bad.

Boards should be diversified. That includes a cross section of low-, middle- and high-budget clubs. It should reflect the ethnic and gender diversity of the membership base. The inclusion of assistant superintendents and commercial members should be considered because they make governing groups stronger. As a side note, seldom do I see an active recruiting program to develop the talent of tomorrow.

Many of us have sat on nominating committees at the local, regional and national level and we have a difficult time coming up with nominees. This has to change. I do believe the development of a recruitment

packet would strongly benefit each organization. If a group were to provide its mission statement, goals and objectives along with a history of the leaders of the group, then that would be a good start. Use the information from this article to cover who can serve and what steps it takes to get involved. Obviously, there are benefits to service. When recruiting people these benefits should be a strong part of the push to get someone involved.

In short, step up and you will not regret it. Make leadership a priority in your career plan. It is the right thing to do. And where we would be in this great industry without all of those who led before us? **GCI** 

# Performing Daily

Meet the Cast of Patented Turf Fertility and Pest Management Products to Maintain Healthy, Stress Tolerant Turf

astilite

Nutrient Use Efficient Fertilizers

KaPrē.

Soil Amendments, Fertilizers & Additives

## Krystal Klear

Chelated Micronutrients



Eco- Fertilizer

Nutrol

**Bio-Pesticide** 

Pennamin

**Amino Acid Fertilizers** 

PRUDENT. Phosphite Fertilizers



ZONE Soil Amendments

# Easy to Apply • Cost Effective

★ ★ ★ ★ "Four Star Performance"



Performance Nutrition is a division of LidoChem, Inc.

LidoChem, Inc. Performance Nutrition Division 20 Village Court Hazlet, NJ 07730 Ph: 732 888 8000 • Fax: 732 264 2751 www.performancefertilizers.com



The use of plastic lattice helps to alleviate stress on putting green collars.

# Twist and shout no more

Plastic lattice provides a simple solution to overstressed green collars.

By Darren Davis

aintaining a good stand of grass on the putting green and collar is perhaps one of the primary responsibilities of today's golf course superintendent. Greens are always priority No. 1, and the reputation of the course and superintendent is often determined by their condition. Amazingly, when the greens are good, most other inconsistencies on the course are usually overlooked.

Technological advancements and research have provided today's golf course superintendent with improved equipment, better techniques and added knowledge, enabling them to better maintain closely cut, heavily trafficked turf. However, when encountering stress in the midst of the winter golf season, such as the extremely cold and cloudy winter of 2010, turfgrass management often involves using whatever means necessary to keep grass alive.

Veteran golf course superintendent Jim Whalen at Calusa Pines in Naples, has worked at some prestigious golf courses in his career. Among them, Augusta National Golf Club and Congressional Country Club are on his resume. Similar to Augusta and Congressional, Calusa Pines prides itself on providing a

## Turning on the lattice alleviates the twisting and subsequent tearing or thinning of the turfgrass in areas that are under the most stress.

challenging golfing experience with lightening fast greens.

At Calusa Pines, due to a very low height of cut and frequency of mowing and rolling, the edges and collars of some greens need a little extra attention. In part, due to the challenging Winter of 2010, Whalen instituted a practice that helps to alleviate stress on his putting green collars.

Whalen purchased a dozen sheets of ½inch by 23½-inch by 95-inch white garden plastic lattice from Home Depot at a cost of \$11.97 each. The greens mowing crews transport the lightweight sheets of plastic lattice each morning in the backs of their utility vehicles. Before mowing, the sheets are laid flat on the collar in areas where the walking mowers normally make their turns. Turning on the lattice alleviates the twisting and subsequent tearing or thinning of the turfgrass in areas that are under the most stress. While at Congressional, Whalen witnessed a similar technique where plywood was used for the same purpose. He feels the lattice is equally effective, more durable and much easier for the crew to handle. **GCI** 

Darren J. Davis is superintendent at Olde Florida Golf Club in Naples, Fla.

#### EDITOR'S NOTE





White plastic garden lattice costs about \$12 each from Home Depot.

# **Advanced Pigment Technology**

If you want complete solar protection, insist on Turf Screen, the first and only true solar and UV protectant designed especially for turf.

Enhanced Solar Protection™

TURF SCREEN

#### Turf Screen is the only pigment product on the market independently verified to:

- Improve overall turf quality and density
- Reduce summer turf canopy temperatures
- Improve fungicide efficacy
- Utilize the only FDA approved, all-natural ingredients for UV protection
- Reduce harmful UV and Infra-Red Radiation

If you want to color your turf spray an ordinary pigment. If you want to protect your turf and improve overall turf quality, **DEMAND TURF SCREEN**.

www.turfscreen.com Scott@Turfscreen.com

267.246.8654

# Real Science

H BY PAUL R. GIORDANO AND JOSEPH M. VARGAS JR.

# Yes, Virginia, there is a new bacterial disease

While research – and questions – about bacterial wilt continues, some puzzle pieces are falling into place.



Typical symptoms of etiolation on an annual bluegrass putting green in late summer.
n article entitled "The Wilt that Wasn't" was published in GCI that attempted to provide insight into the tumultuous world of plant pathology and the academic quarrels that are often encountered in scientific research. That particular article touched on "bacterial wilt" of creeping bentgrass, initially hypothesized to be caused by the bacterium Acidovorax avenae; an issue that has been at the forefront of superintendent's minds for the last few years. At the time of publication, very little research pertaining to Acidovorax in creeping bentgrass had been published. Additionally, anecdotal accounts from various regions around the country made for a noncohesive, convoluted summary that was confusing.

This article is intended to shed a bit of light, rather than heat, on the subject of bacterial etiolation and decline of creeping bentgrass by providing some historical context, and more importantly, empirical evidence of the current and ongoing research with this emerging disease.

In the 1980's, a new disease was identified that changed the way we think about turfgrass pathogens. The disease was bacterial wilt of 'Toronto' creeping bentgrass, caused by a Xanthomonas bacterium. This was important, as it was the first major bacterial disease of amenity turfgrass, and for several years a good deal of controversy surrounded this new disease and its cause. Since then, a few researchers have dedicated much time and effort characterizing that and another closely related Xanthomonas pathogen of annual bluegrass. Today, the vegetative cultivars of creeping bentgrass such as Toronto, and the diseases that affect them are largely a thing of the past; however, bacterial wilt on annual bluegrass greens, tees and fairways is still a common problem every year, all around the country. One distinct characteristic of the disease on annual bluegrass is the yellowing and overgrowth or etiolation (Ee-tee-oh-lay-shun) that is often observed during cooler weather conditions.

As they say, history repeats itself. Nearly 30 years after the 'Toronto' C-15 bacterial wilt scare at Butler National, a new controversy began to emerge with its focal point being a championship golf course in the greater Charlotte, N.C., area. A recurring problem of yellowing, etiolation, and eventual decline of irregularly-shaped areas on the creeping bentgrass putting greens was plaguing the club, and even with an unlimited budget to manage it, nothing seemed to be working. For several years, samples were sent to labs around the country in an attempt to get a disease diagnosis, still nothing seemed to work. In 2009, we received a sample exhibiting unique symptoms with a letter and an overview of management practices. After ruling out the "usual suspects" and having little luck making sense of the situation, our efforts turned to looking for a bacterial pathogen. This notion was based on the similar symp-



A naturally infected creeping bentgrass putting green with symptoms of etiolation and yellowing in irregular areas.

toms in the creeping bentgrass sample to those often seen on annual bluegrass affected with the bacterial wilt pathogen, *Xanthomonas translucens*.

Enough storytelling, how about some science?

To our surprise, when the affected stems of bentgrass were cut into, heavy amounts of bacteria were observed microscopically streaming out of the cut end of the plant. The quantities of bacteria observed in the affected bentgrass plants were alarming and warranted further investigation without a doubt. From that point, research efforts were underway to isolate and characterize this bacterial culprit.

Since there are roughly thousands of different bacterial species that live in turfgrass systems, and all of them are microscopic, the job of discerning which one is truly the problem can be challenging. Measures must be taken to isolate the most prevalent bacterium from the samples. To achieve this we employed a technique known



Disease ratings on tested cultivars of creeping bentgrass subjected to *Acidovorax* inoculations. Disease ratings were taken 14 days after inoculation and incubation at 86° F.

## **Real Science**

Etiolation symptom induced after root-dip inoculation strategy. Note the yellowing and extended growth of the plant.

Etiolation observed on inoculated field plots at Michigan State University. Confirmation of bacterial colonization in plants (top left).

as a serial dilution where samples were diluted up to 1:1,000,000 with sterile water before plating onto agar media. This process selects for organisms in high enough abundance to survive the dilution, and disfavors those that are in low numbers living on or within plants. Once a few viable candidates emerged on plates, they were grown and tested for their ability to infect healthy creeping bentgrass.

The initial tests consisted of dipping sterile scissors into a liquid suspension of each bacterium and trimming plants with the dipped scissors. This allows the bacteria to enter into the open wound created by the fresh cut, and is necessary because unlike fungi, bacteria are unable to directly penetrate plants and require a wound or natural opening to get in. These initial inoculations showed only one of the bacterial culprits to be capable of causing significant disease symptoms; excitingly named MSU1. Once this observation was confirmed with repeated inoculations, the bacterium was re-isolated out of the inoculated turfgrass, and DNA was sequenced to determine its identity. The bacterium was found to be in the *Acidovorax* genus, and had DNA most closely resembling that of Acidovorax avenae subsp. avenae. It was at this point that a "First Report" was published in the journal Plant Disease.

Word spreads fast in the turfgrass industry, and soon a firestorm of discussions and postings related to the new "bacterial wilt" could be found on the web. Rampant speculation and misdiagnoses followed during the infamous summer of 2010, which undoubtedly contributed to the controversial nature of the emerging problem. At this point, the research being conducted on the new bacterial disease was still in its infancy, and any information regarding the disease was largely anecdotal. Researchers around the country were beginning to look further into the matter, and the USGA took proactive measures to address the issue by funding projects at several universities

around the country. MSU's research was undertaken with some specific objectives, many of which require a great deal of time and resources to accomplish. This is yet another factor that perpetuated the speculative nature of the disease; the lack of immediate data or published information. While research is ongoing, pieces of the puzzle are falling into place while progress is lacking on others.

WHAT WE KNOW. The bacterium Acidovorax avenae subsp. avenae is pathogenic on creeping bentgrass; this much we know. An early objective, however, was to determine if the disease was specific to particular bentgrass cultivars. We tested several common cultivars of creeping bentgrass for their susceptibility to Acidovorax infection, and found that all were susceptible to some extent. There were, however, some significant differences in the level of susceptibility of Declaration and Tyee when compared to the other cultivars. Research conducted at the University of Rhode Island by Dr. Nathaniel Mitkowski has confirmed similar results with several other cultivars of creeping bentgrass. These results confirm the non-specific nature of Acidovorax and its ability to infect creeping bentgrass; however, recommendations regarding particular cultivars to turf managers battling the disease are unwarranted until extensive field studies can confirm truly resistant or tolerant cultivars.

We also know that the disease is more widespread than Charlotte, NC, but still relatively sparse. To date, researchers at Universities such as MSU, URI, Clemson, NC State, Purdue and several others have successfully isolated the *Acidovorax* pathogen out of more than 50 infected bentgrass samples from golf courses across the country. A large majority of the samples at MSU have come from the transition zone and Mid-Atlantic regions of the U.S. However, several have come from golf courses in the upper and lower Midwest.

Observations made over the past several seasons have lead to the hypothesis that this new disease may be "stress-related." Since symptoms are most commonly seen on intensively managed putting greens and are often located in highly trafficked or mechanically stressed areas, the pathogen has been considered a bi-product of turfgrass stress. Understand that all pathogens



require some predisposition of the plant in order to infect and cause disease. Whether it is low nitrogen fertility combined with low mowing heights favoring crown rot anthracnose or lack of soil oxygen from rain or over watering combined with high temperatures favoring summer patch, particular conditions must occur in order for a disease to take hold. This "new" disease is no different. Research has shown Acidovorax to be most aggressive on creeping bentgrass at temperatures exceeding 30° C (86° F). Couple high temperatures with low mowing heights and other aggressive cultural practices like double cutting and rolling, and the disease typically worsens in the field.

Most pathologists are recommending alleviating any unnecessary stress, especially during summer months, to discourage the onset of bacterial etiolation and decline. This sounds like a great solution to the problem, but as long as golfers demand "fast greens" for every day play, and even "faster greens" for tournaments, no golf course superintendent is going to raise their greens mowing height to  $\frac{3}{16}$ -inches or add extra nitrogen fertility; at least ones that want to keep their jobs won't.

**WHAT WE DON'T KNOW.** While we are able to incite turfgrass death by inoculating *Acidov*-

orax onto healthy plants in a controlled environment, the symptoms of etiolation have remained somewhat elusive. In July 2012, MSU field studies produced widespread etiolation symptoms after inoculating with Acidovorax during high-temperature periods. By cutting into these plants, it was clear to see the successful colonization of Acidovorax in the plant vascular tissue. This is an important step in confirming all symptomology associated with the disease. Research using alternative strategies to inoculate and encourage bacterial entry into plants have been successful in eliciting consistent plant etiolation. Much work remains regarding the nature of bentgrass etiolation as it pertains to bacterial infection and other potential environmental or chemical triggers.

Remedial treatments, thus far, have been sporadic and unpredictable. Certain antibiotics have shown some promise in controlled environments; however, these results have not necessarily translated well in field trials. Additionally, these products are not labeled for use on turfgrass and are strictly for experimental purposes only. Research regarding products for managing this disease is ongoing and largely inconclusive. There are, however, anecdotal and preliminary treatments that have been reported to

#### What's in a name?

Since the initial description of the disease, much confusion has revolved around the nomenclature of the new disease on creeping bentgrass. Researchers in the U.S. have coined the new disease on creeping bentgrass caused by *Acidovorax avenae* "bacterial etiolation" or "bacterial decline" based on symptoms commonly observed on the affected putting greens. Symptoms of chlorosis and etiolation are common, and the disease can often lead to a general decline of irregular areas of turf. Wilting is not often the dominant symptom associated with *Acidovorax* infection of creeping bentgrass.

Bacterial wilt is a disease of annual bluegrass caused by Xanthomonas translucens. The disease is known for its characteristic wilt symptoms, causing plants to turn bluepurple, twist and wilt from the tips down. Etiolation is a shared symptom, often observed in early stages of bacterial wilt on annual bluegrass.

The minor differences may seem trivial, but when discussing diseases, it is important to distinguish exactly which disease is of concern. Bacterial wilt and bacterial etiolation and decline are caused by two completely different bacterial organisms (*Xanthomonas* and *Acidovorax*, respectively), and occur on two completely different species of turfgrass (annual bluegrass and creeping bentgrass, respectively). Therefore, lumping all bacterial disease under the umbrella of "bacterial wilt" would be erroneous, akin to calling every patch disease affecting turfgrass "take-all patch." Different diseases are favored by different environments and require different management strategies. Therefore, identifying and distinguishing them with the appropriate name is the foundation of proper management.



MSU1 inoculated (left) and non-inoculated control (right) pots after incubation for 14 days at 86° F.

provide some level of symptom control from several trials around the country.

Another interesting facet of this disease is where or how the problem arises. The bacterium can be found all over the world and is likely an organism that naturally occurs in most root zone soils and turfgrass systems. Research has also shown the possibility of other bacterial pathogens being involved or working in tandem with Acidovorax, and it is likely that we are just scratching the surface in characterizing this complex biological phenomenon. This emerging problem has been referred to by some as the "Tournament Disease." Unfortunately, there is not a time in the foreseeable future when PGA, USGA, Invitational or even member/ guest tournaments will cease to exist. With that said, bacterial etiolation and decline is a problem we are going to have to face collectively. GCI

Paul R. Giordano is a graduate research assistant, and Joseph M. Vargas Jr. is a professor of plant pathology at Michigan State University's department of plant, soil and microbial sciences.





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

### Travels With **Terry**

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

## **BALL MARK REPAIR TOOLS**

The fork on the right was made using used flat steel as the base and <sup>5</sup>/<sub>32</sub>-inch diameter concrete nails welded in place. The other two forks were made using used greens mower bed knives with the forks cut out with a metal jigsaw. The Narrow's aerifier tines are <sup>25</sup>/<sub>64</sub>-inch and <sup>5</sup>/<sub>8</sub>-inch diameter, respectively, and are welded to the forks with ¼-inch diameter rounded steel. Two coats of water-soluble acrylic resin coating spray is then applied. These ball-mark tools are placed on the back of the walkbehind greens mower handle and the ball marks are repaired daily prior to mowing. All of the materials were recycled parts in inventory and it took about 30 minutes to make each one. Masaru Shimizu, manager, (chief greenskeeper), at the C.J.P. Kasumigaseki Country Club in Saitama Prefecture, Japan, conceived this great idea. Shimizu's 36-hole club, founded in 1929, is in the planning stages to host the golf competitions for the 2020 Olympics, where Tokyo is a candidate city. The club has previously hosted the Japan Open in 1933, 1956, 1995 and 2006; The World Cup in 1957; the Japan Women's Open in 1999 and the Asian Amateur Championship in 2010.



## **GOLF CART SPRAYER**

his 2001 Yamaha gas-engined golf cart was transformed into a versatile sprayer used for miscellaneous spot spraying of the club property. The rear bumper was extended outwards using 2-inch angle iron and 2-inch square tubing that was also used to make the metal floor. The golf bag rack was removed and a 26-gallon fiberglass tank was mounted with a 2-inch angle-iron frame. A 4.3-hp Kubota gasoline engine powered sprayer (up to 217 psi) was mounted on the rear flooring. A self-contained manually operated hose reel and frame manufactured by Maruyama holding approximately 164 feet of <sup>21</sup>/<sub>64</sub>-inch diameter high-pressure hose was bolted/welded to the bumper frame and windshield mounting. The high-pressure hose from the sprayer to the hose reel is attached with zip strips along the roof frame. A portable marking paint gun is mounted on the rear and safety equipment is easily stored in the front compartments. The parts cost about \$1,000 and it took about 16 hours to complete the project. Masaru Shimizu, Manager, (chief greenskeeper), at the C.J.P. Kasumigaseki Country Club in Saitama Prefecture, Japan, conceived this great idea.





#### FOR SALE

#### Discount **Small Engines & Parts**

Small engines & parts from Briggs & Stratton, Kohler, Tecumseh, Robin and more. www.smallenginesuppliers.com

Also, look up your own parts and buy online at www.smallenginepartssuppliers.com



Earlier spring green-up Faster seed germination Deeper root development Delays dormancy in fall Ideal winter blanket Best for quick turi repairs Available in any size 3, 7 or 10 yr warranty covers

For details call 1-800-387-5808 today!

covermaster.com E-MAIL: info@covermaster.com

AHEAD OF THE GAME COVERMASTER INC., REXDALE, ON, M9V 5C3 TEL 416-745-1811 FAX 416-742-6837

Let us help you get the word out. **Golf Course Industry Article Reprint Services** 

E-mail: reprints@gie.net or call 800-456-0707 to learn more.

#### **MERGERS & ACQUISITIONS**

ATTENTION **OWNERS/BUYERS** Thinking of buying or selling your Golf Course Business/ **Commercial Real Estate?** Specializing In: GOLF COURSES ACQUISITIONS MARINAS CALL: Eddy A. Dingman, CNS Coldwell Banker Commercial NRT **National Golf & Marina** 

**Properties Group** 847-313-4633 www.golfcourseandmarinasales.com

#### SEEDS

NATIVE SEEDS Largest distributor of native seed east of the Mississippi, from Canada to Florida! We specialize in upland to wetland sites, including bioengineering for riparian sites. Your native seed source. Contact ERNST SEEDS today. www.ernstseed.com - 800/873-3321

#### SERVICES

WHAT DO YOUR CALLERS HEAR WHEN PLACED ON HOLD? Promote your services and enhance your image with a customized "on hold" recording by Watt Media. 1-800-250-8233

#### MAXIMIZE YOUR ADVERTISING DOLLARS



Please contact Bonnie Velikonva at 800-456-0707 or bvelikonya@gie.net.

COMPANY	WEBSITE	PAGE
Aquatrols	www.aquatrols.com	15
BASF	www.betterturf.basf.us	27
Becker Underwood	www.beckerunderwood.com	35
Core Outdoor Power	www.coreoutdoorpower.com	6
FMC Corp.	www.fmcprosolutions.com	47
Grigg Brothers	www.griggbros.com	43
Hunter Industries	www.hunterindustries. com/golf	29
Jacobsen	www.jacobsengolf.com	76
John Deere	www.deere.com	2
JWB Marketing	www.birddamage.com	58
Lebanon Turf Products	www.lebanonturf.com	41
Lidochem, Inc.	www.performancefertilizers. com	65
Nufarm	www.nufarm.com	30
Otterbine Barebo	www.otterbine.com/golf	28
PBI/Gordon	www.pbigordon.com	21*, 53
Penn State Outreach Marketing & Communications	www.outreach.psu.edu	59
Petro Canada	www.civitasturf.com	51
Plant Food Systems	www.plantfoodsystems.com	18
Redexim	www.redexim.com	50
Redox Chemicals	www.redoxturf.com	55
SePro Corp.	www.sepro.com	19, 61
Sipcam/Advan	www.sipcamadvan.com	75
SuperBright LEDs	www.superbrightleds.com	40
Superthrive, LP	www.superthrive.com	38
Syngenta Professional Products	www.syngentaprofessional products.com	37
Toro	www.toro.com	31
Trojan Battery Co.	www.trojanbattery.com	9
Turf Diagnostics & Design	www.turfdiag.com	40
Turf Equipment Technicians Association	www.tetac.org	58
Turfco	www.turfco.com	39
TurfMax	www.turfscreen.com	67
Valent	www.valentpro.com	33
Ventrac	www.ventrac.com/golf	8
Winfield Solutions	www.winfield.com	5, 7
	and some state of a state of states of	

#### **PARTING SHOTS**



**Pat Jones** is editorial director and publisher of Golf Course Industry. He can be reached at pjones@gie.net or 216-236-5854.

LASSIELDS

## PURPLE COW, REDUX

t was many moons ago that Dan Carrothers taught me about the purple cow and introduced me to a dude named Seth Godin.

Carrothers is a veteran chemical industry executive who recently returned to the happy world of golf and lawn products in BASF's professional group after being away from the green industry for a while. He's a helluva salesman and, more than a decade ago, he sold me on the idea that the best enterprises have a "purple cow" – something truly unique that sets them apart.

I wrote a column back then about Dan's enthusiasm for creating purple cows in his business life. Dan pretended to like the column so much that he actually had me autograph a copy for his sales team. Some would call this sucking up to the media. I think Dan has excellent taste.

Anyway, I was talking with him at GIS about his new role with BASF and the concept of the purple cow came up again quickly. What can be done in today's crazy environment to create that?

I'd like to say we figured it out over breakfast (we didn't) but it did rekindle my interest in Seth Godin, the marketing guru who brought the purple cow concept to life and who mainly focuses on the larger concept of telling a good story about your business.

As Godin wrote in Forbes a decade ago, "The essence of the Purple Cow – the reason it would shine among a crowd of perfectly competent, even undeniably excellent cows – is that it would be remarkable. Something remarkable is worth talking about, worth paying attention to. Boring stuff quickly becomes invisible."

Telling your story is not about spinning or exaggerating. It's not a sales pitch or a proposal, either. Finally, it's not a big ad campaign or a fancy presentation.

Instead, it's describing what's remarkable about your product and how it solves a problem, addresses a need or fills a void in the customer's world.

So what remarkable story can your golf facility tell? Is it compelling? Is it honest? Is it different? Is there a purple cow lurking somewhere along the way?

Do you have a specific niche? Can you make a statement like this?

We are an affordable course with surprisingly good greens.

• Our membership likes to have fun and doesn't take itself too seriously.

• This is the club to join to connect to serious local power players.

• Friendly people and great customer service for just \$49.50 a round.

• We're all about golf and nothing but golf.

• This course is genuinely welcoming and comfortable for female players of any skill level.

• Play in less than four hours...guaranteed.

• We have smokin' hot clubhouse staff and bev cart attendants.

The last one is hopelessly sexist but, hell, so is Hooters. They sell a zillion bucks worth of something you can get anywhere – draft beer and mediocre chicken wings – by hiring pretty girls and advertising it. It's not rocket science kids – but it is remarkable.

(Note: If you want to see this cart babe strategy executed at a very high level, Google "Walters Golf Par Mates." You will be in awe.)

## Something remarkable is worth talking about, worth paying attention to.

You may be sitting there thinking, "Great Pat, I'll pass this to our marketing and sales person." Go right ahead, but make sure you do it with a recommendation of getting serious about identifying your course's purple cow and making sure everyone who works for you (and your members or customers) can recite your story.

I'm shocked at how many times I'll ask a super or a GM, "What sets this facility apart?" and they say, "Oh, there's a lot of history here at our club" or "We're exclusive" or "It's just a great old place."

Ugh. That's like me answering the same question from a potential advertiser with, "We print useful articles." Absolutely no distinction and nothing to make them WANT to buy ads with us.

Try your hand at telling your story. Do a little informal brainstorming with some of your management team and try to identify key words and ideas that specifically capture why people like you. You could get all fancy and do research with members or daily players but you'd be surprised what you learn just by asking a few "fans" around your place. The point is to identify the remarkable in your operation and leverage it in everything you do.

Why? Because there are 15,500 cows around America mooing for attention and dollars. If you ain't purple, why should they notice you? **GCI** 



# A standout in the tebuconazole crowd.

All tebuconazole fungicides control disease. But only Sipcam Clearscape<sup>®</sup> ETQ<sup>™</sup> – the technology-driven tebuconazole fungicide from SipcamAdvan – elevates disease control to a new level by protecting turf from the negative effects of heat, UV light and other stress factors. Our exclusive ETQ technology improves turf color, strength, density and consistency while the tebuconazole takes charge of anthracnose, brown patch, dollar spot, gray leaf spot, snow molds and other diseases. What does ETQ mean? Enhanced Turf Quality. It's what makes Sipcam Clearscape ETQ rise above the rest.





www.sipcamadvan.com 800-295-0733





The new Jacobsen LF510<sup>™</sup> fairway mower offers affordability from the start, simplified maintenance and a reliable Kubota diesel Tier 4 final engine – making it easy to afford, use and maintain through its entire life. The LF510's clean and consistent quality-of-cut is provided by the new TrueSet<sup>™</sup> cutting units with Classic XP<sup>™</sup> reels that boast an industry-leading 425-lbs. of holding power. Mow your fairways without scalping your budget with the new Jacobsen LF510. See your local Jacobsen dealer for more information.



1.888.922.TURF | www.jacobsen.com