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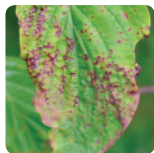
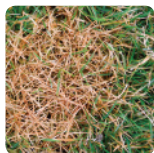
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EDITORIAL

EDITOR-IN-CHIEF Seth Jones

785-690-7047 / sjones@northcoastmedia.net

ASSOCIATE EDITOR Grant B. Gannon

216-363-7928 / ggannon@northcoastmedia.net

EDITOR-AT-LARGE Ed Hiscock

ehiscock@northcoastmedia.net

DIGITAL EDITOR Joelle Harms

216-706-3780 / jharms@northcoastmedia.net

ART DIRECTOR Pete Seltzer

216-706-3737 / pseltzer@northcoastmedia.net

CONTRIBUTING EDITORS

Karl Danneberger (*Science*), Joel Jackson,
Matt Neff, Clark Throssell (*Research*), John Walsh,
Anthony Williams, Mark Woodward, Steven Wright

BUSINESS

CLEVELAND HEADQUARTERS

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

PUBLISHER Patrick Roberts

216-706-3736 / proberts@northcoastmedia.net

ASSOCIATE PUBLISHER Bill Roddy

216-706-3758 / broddy@northcoastmedia.net

NATIONAL ACCOUNT MANAGER Craig MacGregor

216-706-3787 / cmacgregor@northcoastmedia.net

ACCOUNT MANAGER Jake Goodman

216-363-7923 / jgoodman@northcoastmedia.net

SALES ASSISTANT Petra Turko

216-706-3768 / pturko@northcoastmedia.net

MGR., GOLFDOM SUMMIT Ryan Bockmuller

216-706-3772 / rbockmuller@northcoastmedia.net

MGR., PRODUCTION SERVICES Rhonda Sande

216-978-9778 / rsande@northcoastmedia.net

SR. AUDIENCE DEVELOPMENT MANAGER

Antoinette Sanchez-Perkins

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

DIGITAL OPERATIONS MGR. Bethany Chambers

216-706-3771 / bchambers@northcoastmedia.net

WEB DEVELOPER Jesse Malmacher

216-363-7925 / jmalmacher@northcoastmedia.net

MARKETING/MAGAZINE SERVICES

REPRINTS & PERMISSIONS Brett Petillo

877-652-5295 / bpetillo@wrightsmedia.com

SUBSCRIBER, CUSTOMER SERVICE

847-763-4942 / golfdom@halldata.com

CORPORATE

PRESIDENT & CEO Kevin Stoltman

VP OF FINANCE & OPERATIONS Steve Galperin

VP OF GRAPHIC DESIGN & PRODUCTION Pete Seltzer

EDITORIAL DIRECTOR Marty Whitford

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"I regularly have people tell me they want my job, and then they bring up *Golfdom* Gallery, where they saw a photo of me at this golf course or at that meeting. It must be fun, they say, to 'be everywhere.'"

SETH JONES, *Editor-in-Chief*

Reporting from everywhere

Most people hate being summoned for jury duty. But after looking at the wall calendar I'm thinking I should send the Douglas County Court a thank-you note for giving me the 2-week responsibility. I never had to report, but it did give me 2 successive weeks at home.

Since my jury duty time-frame ended I've been racking up the frequent flier miles. Georgia, Florida, Indiana, California, Wisconsin, North Carolina — at one point it was six trips in 5 weeks.

Georgia was mostly for the Masters, but also for a photo shoot and a demo of the Air2G2. Florida was for a product launch from Syngenta. Indiana was for a follow-up visit to Victoria National for this month's cover story. California was for the National Golf Foundation's annual Golf Business Symposium. North Carolina was to speak at Jacobsen's Future Turf Managers meeting and play Carolina Golf Club. And Wisconsin was for, thank-

fully, more golf (Black Wolf Run and Whistling Straits) and a ballgame (Brewers versus Dodgers) as well as the TOCA awards (see page 26 for the results.)

During these recent trips it has become apparent to me that some *Golfdom* readers keep up with my travels. The magazine's monthly *Golfdom* Gallery page, or Twitter (@Golfdom), or reading our blog and our twice-a-month e-newsletter, the *Golfdom* Insider, shows readers where I am each month. Which means that at most times our loyal readers are more in-tune with where I am than my own mother (sorry, Mom.)

The *Golfdom* Gallery page is decorated monthly with pho-

tos of beautiful golf courses (usually with me on them), as well as golf business luminaries (usually with me standing there with them, and somehow I always have a beer in my hand.) This page has given me a reputation (and not just for being a beer, uh, connoisseur.) I regularly have people tell me they want my job, and then they bring up *Golfdom* Gallery, where they saw a photo of me at this golf course or at that meeting.

It must be fun, they say, to "be everywhere."

Something to keep in mind: the *Golfdom* Gallery page pays no attention to the man behind the curtain. You'll never see a photo of the sketchy hotel room I stay in

during Masters week, or of me dictating a photo caption from a moving bus, or of me stuck in an airport, waiting for a delayed (or missed) flight. *Golfdom* Gallery includes only what I want you to see.

I'm not writing this to get your sympathy or to tell you my job isn't as great as it seems (because it's better.)

I enjoy the travel, but I couldn't do it without a great team behind me in the office and at home. In the office I've got a rock star team who keeps the magazine moving toward each deadline. Their names are listed on page 4. At home I've got my wife, Adrienne, who supports my career, and a mother-in-law, Judy, who lives nearby and helps Adrienne with the kids (Evelyn, 8, and Boyd, 3) when I'm away.

When people tell me they "want my job," they don't realize it but they're really saying they "want my team." My team is what enables me to do my job. And if they really wanted my job, they could have it — in this day of Internet bloggers, anyone can claim to be a reporter or journalist.

Hopefully they wouldn't get as good of access as I get, or as good of stories, and hopefully you could tell the difference. But one thing I can definitely tell you: they could never have a team as good as mine.

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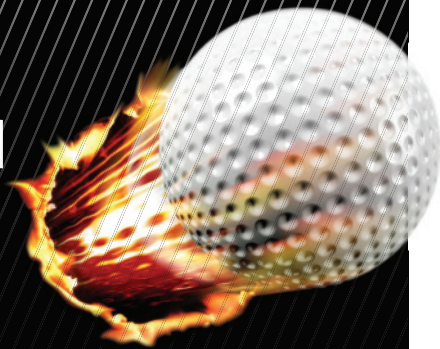
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Starter

NEWS, NOTES AND QUOTES



// FREE TEE TIMES



Memphis, Tenn. municipal golf courses are waving greens fees for all kids under 18 and can even provide the kids clubs at no cost.

MEMPHIS' PLAN TO INVOLVE MORE YOUTH

BY GRANT B. GANNON // Associate Editor

➔ One of the biggest hurdles to get golfers onto the course is the cost associated with playing. For the youth of Memphis, Tenn., that hazard has not just been knocked down, it's been eliminated.

Memphis municipal courses are offering complimentary greens fees for all kids under the age of 18, thanks to Mickey Barker, golf administrator for the city of Memphis.

Barker saw the program as a perfect opportunity to partner with Mayor AC Wharton's Youth Initiative to get young people more active while increasing rounds on the city's eight golf courses.

The program is available on seven of the city's eight courses Monday

through Friday and after noon on the weekends. Barker even has a solution if a child cannot afford to rent clubs.

"We received a large donation of golf clubs, so the juniors do not have to pay for them," says Barker. "This program completely eliminates the financial barrier that many kids have to golf."

At one of the 9-hole courses — the only one with a driving range — Barker and his staff will host several free clinics to teach inner city kids how to play the sport.

"The Parks and Neighborhoods Division really feels like this will be the best way to get kids going to the courses and hopefully make a huge impact on the lives of some of them," Barker says.

// LIKE BAKING BREAD

NGF SAYS U.S. GOLF INTEREST IS ON THE RISE

The National Golf Foundation (NGF) released the 2014 edition of its annual participation numbers, and overall participation stayed steady, but Baby Boomer and Millennial figures show encouraging signs for the industry.

Participation seems to have found its post-recession footing for the third consecutive year, with roughly 25 million people playing at least one round of golf. For the fifth year in a row, rounds per playable day saw an increase.

Despite popular opinion, about 25 percent of the entire U.S. golfer population are Millennials, players 18 to 34 years old.

The impact of Baby Boomers, golfers ages 50 to 64, is gaining momentum after the recent recession. This generation represents another quarter of the golfing population, and accounted for a third of all rounds played last year. When these golfers reach retirement age — nearly 4 million a year for the next 15 years — they will play almost twice as much as they did while a part of the workforce.

// HOTEL REWARDS

MARRIOTT GOLF AWARDS FLORIDA SUPERINTENDENT

Marriott Golf's annual award for golf excellence across the company's portfolio of properties has gone to Scott Corwin, director of grounds at Vinoy Golf Club, located at the Vinoy Renaissance St. Petersburg Resort & Golf Club in St. Petersburg, Fla. He's been named Golf Grounds Manager of the Year.

The recipient of the award is graded on overall turfgrass condition of the golf course throughout the year, loss-prevention efforts, personnel development, operating within budget and efforts in continuing education with active pursuit of certification from the GCSAA.

// GOLFDOM WISDOM

Somewhere someone is cutting the cup for a lifelong golfer's first hole-in-one.

#GolfDomWisdom

//TROPHY TIME

Golfdom takes 16 TOCA awards

➔ Another year at the Turf & Ornamental Communicators Association (TOCA) award show, another armful of awards brought home.

The annual TOCA awards, held this year in Milwaukee, was a success for *Golfdom*, earning an industry-leading 16 awards. The publication's outstanding editorial and design leadership was awarded with one "best in show" Gardner Award for new media, seven first-place awards and eight merit awards.

"The results of the 2015 TOCA Awards reaffirmed that *Golfdom* is at the top of its market," said Kevin Stoltman, president and CEO of North Coast Media.

The Gardner Award was given for *Golfdom's* blog, "The *Golfdom* Daily." This is the fourth year in a row *Golfdom's* blog has won the first-place TOCA award

in the New Media, Publishing category.

Golfdom also demonstrated that it has the best columnists in the industry, winning three of the four individual column-writing TOCAs awarded, and a first-place series award for "Keeping up with the Jones," the monthly column written by *Golfdom's* editor-in-chief, Seth Jones.

For the design of the magazine, Pete

Mark LaFleur of Syngenta presents Seth Jones with a Gardner Award.



Seltzer, vice president of graphic design and production for North Coast Media, received two first-place awards and one merit, including the first-place award for the top print magazine cover for the January 2014 *Golfdom* Report cover.

For a complete list of *Golfdom's* awards — which

also includes not one but two awards for our assistant superintendent columnist, Matt Neff — see page 26.

//MANIFEST DESTINY

THE ANDERSONS ACQUISITION EXPANDS WEST

The Andersons, a plant nutrient company based in Maumee, Ohio, purchased Kay Flo Industries, a manufacturer of liquid starter fertilizers and plant nutrients. Based in North Sioux City, S.D., Kay Flo's Nutra-Flo division serves growers, ranchers and agriculture businesses throughout the western Corn Belt.

The Andersons expects the acquisition will grow its national sales and distribution opportunities and expand its wholesale and specialty fertilizer business.

"We are pleased to have The Andersons carry on our legacy and the relationships we've built with our customers and employees," says Raun Lohry, formerly CFO of Kay Flo, who will stay on as vice president and general operations manager. "We are confident in the opportunities this acquisition will provide to both our employees and our customers."

The purchase includes a research and development laboratory and three plant nutrient manufacturing and distribution assets with more than 100,000 tons of tank storage, the company says.

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Golfdom Gallery



1 Twin Oaks double threat (L to R) Jeff Burey, owner of Twin Oaks Golf Complex in Eudora, Kan., with Mike Marshall, superintendent, Falcon Valley GC, Lenexa, Kan. Some people think *Golfdom* editorial HQ is conveniently located near GCSAA, but in truth, it's conveniently located near Twin Oaks and Falcon Valley.



2 Hey, is that Tom Watson? Todd Bohn, superintendent at Wolfe Creek GC in Olathe, Kan., Tom Watson, World Golf Hall of Famer, and *Golfdom*'s Seth Jones smile for a photo in the Wolf Creek clubhouse. For the complete story, check out last month's Keeping Up with the Jones, or better yet, catch Seth over a drink sometime.



3 Future Turf Managers Twenty students from around the country (and one Aussie — oi, oi, oi!) descended upon Charlotte, N.C., for Jacobsen's annual Future Turf Managers seminar. The students learned from some of the best in the business, including Steven Loughran, Jared Nemitz and Bud Weiser.



4 Blastoff to nowhere Talk about a product launch! Forgive Howard Jaekle, Syngenta, Jones, and Lane Tredway, Ph.D., Syngenta, if they look a little woozy. They had just gotten off a space shuttle launch simulator at Kennedy Space Center.



5 Chillin' by the lake Adam Slick, Jacobsen, Steven Loughran, Rock Ridge CC, Newtown, Conn., and Jared Nemitz, The Peninsula Club, Cornelius, N.C., pictured at Nemitz's course, with beautiful Lake Norman in the background. For more on Loughran, check out the 19th Hole on page 52.



PHOTOS BY: SETH JONES (1, 3, 5)

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"Golf needs a good point man (or point guard.) Sure we have the greats like Arnie, Jack and Gary... they've done their part. Golf could use some extra energy that the POTUS could give it."

STEVEN WRIGHT, CGCS, director of golf course/landscape operations, Boca West CC, Boca Raton, Fla.

An open letter to the POTUS

Here I am working away on National Golf Day 2015 when a couple of social media pings pop up on my phone. Of course I respond or retweet. But it got me to thinking about how I might participate in promoting this great game. I went home that evening, and well, I think you'll figure the rest out.

Dear Sir,

I'm writing this letter to you on National Golf Day 2015. I'm not sure how one goes about inviting the president of the United States to play golf, but I would like to invite you to play golf with me. We might not share the same political views, but it's obvious we both love the game. Golf is a game where people can enjoy time together despite opposing viewpoints or not even knowing each other.

One of my reasons for wanting to play golf with you is to make sure you are having fun. I rarely see photos or videos of you playing golf, and the media seldom show you smiling or having a good round... whatever that

means to you.

We would have fun playing golf together. I'm a 5 handicap and you're an 11... right? Match made in heaven, if you ask me. By the way, you'll get 3 a side.

Mr. President, I might have an agenda because I am a golf course superintendent. I've been around golf courses for more than three decades. I've seen first-hand the good that golf provides. You know, stuff like real jobs — 2 million full-time jobs. Hard working people who work in an industry that contributes \$68.8 billion directly to the national economy.

Did you know that golf's total impact on the economy in the United States has been measured at almost \$200 bil-

lion annually? Some of that \$200 billion — almost \$4 billion — is raised for charitable causes each year.

I believe you know about the great things for which golf is responsible, like environmental stewardship, creating green space in urban environments, excellent water filters, etc. All that, and yet golf is still considered by many as an elitist sport, even though recent statistics state the average cost of a round is now only \$25.

Golf needs a good point man (or point guard.) Sure, we have the greats like Arnie, Jack and Gary... they've done their part. Tiger still energizes the game whenever he is in the hunt. Certainly the new Masters champ, Jordan Spieth, will be a good ambas-

sador for golf. But golf could use the extra energy that the POTUS could give it.

You, sir, could be golf's point guard. We the people of/in/for golf know how much you enjoy the game, because we enjoy the game just like you do. As the "most golfing president" we've had in our country's history, your positive comments could help give golf that boost it needs. Your support of golf could fuel a resurgence for the next 20 years or more.

Maybe I'm assuming too much to think that during or after a round you might share some thoughts with your fellow Americans. Stuff like: "how great the course was," "lots of wildlife," "greens were fast," "enjoyed my time with friends," or "I would recommend everyone get out and enjoy golf."

I know there are a lot of people out there who would be ready to criticize you for this, but there are 28 million Americans who play golf and could relate to you. And remember the 2 million who work in the game of golf.

So what do you think about meeting me for a round of golf? I could meet you halfway. You choose the course. I'll call ahead and see if I can get us on. We'll keep it simple, just a couple of guys teeing it up and enjoying the day on the golf course.

Sincerely yours,

Steven M. Wright, CGCS

Steven Wright, CGCS, is director of golf course/landscape operations at Boca West CC in Boca Raton, Fla. He can be reached at swright@bocawestcc.org or followed at [@wrightsteve19](https://twitter.com/wrightsteve19).



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“When you receive multiple applications from the same guy who has already failed to show up for an interview or his first day of work, there’s probably a pretty good chance he’s sketchy.”

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

Man, does this annoy me

Staffing is one of the most common challenges we face in this industry. It’s not always easy to find people who are willing to be at work at the crack of dawn to do a labor-intensive job, often for less than they can make in retail or at a fast food restaurant.

But what has blown my mind over the last few years is the number of people who apply for seasonal positions and either never show up for the interview or, if hired, don’t show up for their first day. Not that this hasn’t happened before, but it never seemed to happen with the frequency it has lately.

Some of these guys may have found other jobs or simply decided they were no longer interested in the position before their scheduled interview or first day of work. While common courtesy dictates a phone call or e-mail to inform the employer of this change, many decide that just not showing up is the best way to handle it.

In my opinion a number of would-be hires apply for jobs solely to fulfill the job seeking requirements for their

unemployment benefits with no intentions of actually going back to work until their benefits run out. The easiest way to not get hired is to not go to interviews.

When you receive multiple applications from the same guy who has already failed to show up for an interview or his first day of work, there’s probably a pretty good chance he’s sketchy. There’s an even better chance when his work history has more gaps than the New England Patriots’ (literally unfathomable) response to the Wells Report.

Apparently this “job seeker” has decided to go with the carpet bombing approach of applying for jobs and has no chance of keeping track of who he has replied to. He just fills out the required number of applications every week and hands

in his stack of attempts to the poor soul overseeing his unemployment claim.

I can just imagine the message board conversations at www.unemploymentfraudissweet.com or wherever these guys share their trade secrets.

Hatestoworkguy: *DESPERATE EMPLOYER ALERT. Whatever you do DO NOT APPLY TO A GOLF COURSE RIGHT NOW. They might hire you — almost happened to me today.*

Lovesnottoworkguy: *Good tip bro. Supposed to be interviewing at a course in an hour. Think I’ll just hammer this bag of Doritos instead. BTW, sweet username hahahaha*

Hatestoworkguy: *hahahaha. Hey, wanna play some Xbox?*

While the lack of consideration for someone else’s time is annoying, it isn’t really the issue. Aside from the

legality of not truly trying to find a job, the real problem is that they are taking money from people who actually need it while also contributing to the stigma that can unfortunately be attached to being on unemployment.

Many people who genuinely need unemployment assistance want nothing more than to get back to work. They are using unemployment benefits to help them keep their heads above water until they can find another job or weather a layoff from a seasonal occupation. Even so, the extent to which it’s possible to stay afloat financially during this time is debatable because a claimant receives only a fraction of their working wage. If some people weren’t exerting so much energy gaming the system, the people who truly need unemployment assistance might be able to receive a livable sum each week.

I should probably be used to this by now, but I still find myself shaking my head when an interview or first day no-show happens. This is partly because of the inconvenience, but more so because I’ll never understand how anyone can think just bailing on a job interview or first day of work is acceptable, regardless of their unemployment status.

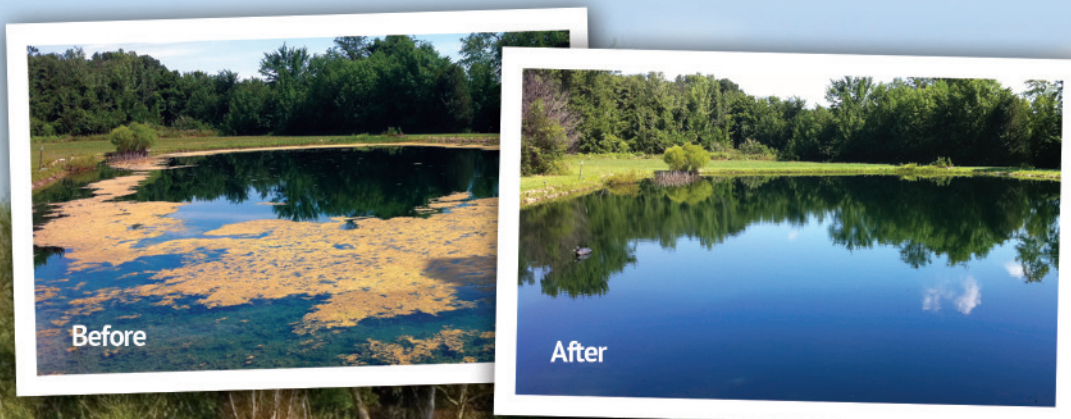
I guess I should just be glad I’m not the guy at the unemployment office who has to deal with dozens of these fraudulent idiots every day.

Matt Neff (mneff4@yahoo.com) is assistant superintendent at Wedgewood G&CC in Powell, Ohio.

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My Second Office

BECAUSE THE COURSE
IS YOUR FIRST

About our host

Tacoma Country & Golf Club, Lakewood, Wash., is located less than 10 miles from 2015 U.S. Open host Chambers Bay. **JOEL KACHMAREK**, superintendent at Tacoma C&GC, and his crew are preparing for the hordes of golf fans who will be taking over the area.

"The buzz is in the air. Wherever you go around here all people can talk about is the championship," he says.

Kachmarek has been at the members-owned club for more than 20 years. TC&GC was established in 1894 and claims the title of oldest private golf club

west of the Mississippi. Although he might have won only one individual award in his life (read more below), Kachmarek was proud that the course was awarded the top U.S. renovation under \$1 million from *Golf Inc.* magazine last summer.



"I have a lot of unique art in my office, but you have to keep everything the kids make."

1 K9 RELIEF That's my Australian labradoodle, Boo. She's 5 years old and comes to work with me every day. I can't get her to chase geese, but she goes after every other living creature on the planet. Mainly she is my buddy on the course that I can confide in.

2 LONE AWARD It's the first trophy I ever got in my life and, unfortunately, I might have to say it's the

only trophy I have ever won. I won some golf tournament when I was 7 years old and I still have it. I think I shot a 47 on some rinky-dink 9-hole course.

3 CAFFEINE CRAVER I drink a lot of coffee from that mug and usually drink at least eight cups a day. I have a Keurig at home and then at work we run two pots on a commercial brewer that just crank out cups for the crew.

There's a sign in our break room that says 'No coffee, no workee.' If I run out of coffee I'm done.

4 FAMILY MAN Those are pictures of my family. I have two kids from a previous marriage — Simon, 18, and Lily, 16. My wife, Ann and I have been married for 12 years and there's a picture of us walking on the beach together. We have two children, Claire, 11, and Avery, 8.

5 BEAVER BELIEVER I'm a graduate from Oregon State University so I'm a big Beaver fan. I decided I wanted a stuffed beaver. So I just searched and sure enough you can just get one on eBay. I didn't go out and shoot or trap that thing — just mail ordered it.

WORDS BY GRANT B. GANNON // PHOTO BY SETH JONES

Proud of your second office? Email us a photo of you in it to sjones@northeastmedia.net, and we may feature you and your office in an upcoming issue of *Golfdom*.

PLANT HEALTH

PART 2 OF A 3-PART SERIES

Golfdom is proud to once again partner with BASF Professional Turf & Ornamentals to bring readers the three-part Plant Health Series. In part one of the series, we looked at what plant health means to superintendents across the country. For part two, presented here, *Golfdom*'s editor-in-chief Seth Jones took two trips to Newburgh, Ind., to learn about the practices of Victoria National Golf Club and how Superintendent Kyle Callahan utilizes plant health at the course.

Come back to this section next month as we wrap up the series with part three. In the meantime, your friends at *Golfdom* and BASF wish you the best in plant health as the golf season gets into full swing.

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BY JEFF VANNOY

Digging deeper:

The science behind root growth

Day after day, your turf tells a story. You know if it's been affected by drought or overwatering, temperature swings, lower fertilizer rates or heavy traffic. With a strong root system, your turf can withstand the daily and seasonal changes that occur in your environment.

The question is: Has science found a way to help build strong root systems? And if so, are there research studies that validate this approach? The answers are "yes" and "yes."

Our last plant health article discussed disease control. This issue we'll dig into the science behind true plant health and stronger root growth. In turf, as in every plant, a better root system is directly related to photosynthesis. As plants capture the energy from the sun in the chlorophyll within the leaf tissue, they're able to assimilate carbon, the building block for plant metabolism. However, to get through the night cycle, plants go through a process called respiration, an energy-consuming activity that uses carbon assimilates made during the day.

Fortunately, BASF has a solution. **Lexicon® Intrinsic®** brand fungicide interacts in the respiration cycle, having a positive effect on net photosynthesis and an increase in carbon and nitrogen assimilation.



Root systems of turf treated with Lexicon Intrinsic compared with untreated turf and turf treated with competitive products.*

"The result is turf that consistently puts out stronger roots, grows through stressful conditions and has greater recuperative power," says Kathie Kalmowitz, Ph.D., a member of the BASF technical team.

To validate these results, BASF sampled root systems from turf that's been treated with Lexicon Intrinsic brand fungicide and grown under various environmental conditions. The studies used recognized research evaluation methods to show how this innovative fungicide increases photosynthesis efficiency, provides excellent disease control and produces stronger, longer roots than leading industry competitors.

To strengthen your turf from the roots up during the tough summer season, follow the BASF Holiday Spray Program schedule. Apply Lexicon Intrinsic brand fungicide on greens 1 to 2 weeks before Memorial Day, July 4th and Labor

Day in cool-season turf. For better spring green-up and healthier growth in warm-season turf, apply Lexicon Intrinsic brand fungicide in the late fall and early winter.

Next issue, we'll talk about helping your turf withstand stress — one more way our focus on science will help you keep your cool all summer long.

Jeff Vannoy is Senior Product Manager, BASF Professional Turf & Ornamentals.

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**Demonstrations conducted in a greenhouse under greenhouse conditions. All treatments were made at the manufacturer's recommended labeled rates.*



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Golfers competing in the 2015 Big Ten Men's Golf Championship warm up on the morning of the first round at the practice range of Victoria National.



PLANT HEALTH

PART 2

READY FOR PLAY

With the Big 10 Championship one week, the Web.com Tour visiting the next, Indiana's Victoria National maximizes plant health to get the course dialed-in and ready.

BY SETH JONES

A-one, a-two, a-three. Just how many licks does it take to get to the bottom of a practice bunker? The Big 10 men seem determined to find out.

It's late April in Southern Indiana and golfers are milling about the practice range like ants. Every one of them is dressed in his school colors (Penn State, Ohio State, Michigan State, Nebraska, Rutgers, Minnesota, Purdue, Wisconsin — is this the Big 10 Championship or a GCSAA Turf Bowl?) Shot after shot on the range, putt after putt on the practice green, it's the definition of a busy golf course.

Victoria National Superintendent Kyle Callahan drives by on his Gator and admires all the activity. A four-leaf clover on his hat, he's not above hoping Lady Luck is on his side these next 2 weeks. Immediately following the Big 10 Championship (eventually won by Illinois) is the Web.com Tour's United Leasing Championship.

Back-to-back tournaments are no easy feat; just ask the crew at Pinehurst No. 2. While this comparison lacks the mammoth crowds, stadium seating and TV towers of a U.S. Open, it does offer its own unique challenges in its early season timing, cool season turf and unpredictable weather.

But with a determined team and the right program, Callahan believes anything is possible.

Top 100

Victoria National Golf Club, located in Newburgh, Ind., was built in 1998 by Tom Fazio and the late Terry Friedman. Friedman, the owner, and Fazio, the architect, had as their canvas an old coal strip mine, abandoned in 1977. Friedman wanted to make something special in his hometown. Special it is. Upon opening in 1999 it was named America's best new private course by *Golf Digest*.

"If we were located outside Chicago, we'd be a top-20 club without a doubt," says Nate Herman, senior assistant superintendent. With a résumé that includes Pine Valley, Baltusrol, Oakland Hills and Crooked Stick, he's seen enough great golf to make broad, bold statements. "Fazio had a great vision with this property. He didn't force anything. The topography and the layout of the course are spectacular."

Some of the course's luster did wear off since it was named *Golf Digest*'s No. 21 course in America in 2005. Falling to No. 45 is nothing to be ashamed of, but it was the desire of the new owners (Friedman passed in 2004)

Continued on page 22

PLANT HEALTH

PART 2

Continued from page 21

to get the course back to its top-25 ranking — or maybe even better.

“This course has always been well-kept, whomever the superintendent was,” says Callahan, who came to the course in February of 2014. “My main goal is to take all those fundamentals from the previous superintendents and work on the details, especially the native (areas). The native looks untouched, maybe unkempt.

The raters see that.”

The challenge of getting a course back to its best is what appealed to Callahan. A graduate of Oklahoma State University, Callahan has been determined to be a top-100 superintendent at a top-100 course since reading an online article by Paul B. Latshaw who wrote, “If you don’t want to be a top-100 superintendent, don’t come here.”

He did want to be a top-100 superintendent — so he

went there. In fact, he moved wherever he thought he should get the best experience, including three moves in 10 months when he went from spray technician under Latshaw at Muirfield Village GC in Dublin, Ohio, to assistant superintendent at the Club at Carlton Woods in The Woodlands, Texas, to first assistant at Crooked Stick GC in Carmel, Ind.

That’s a lot of packing and unpacking. There’s a key to doing that, Callahan says, especially if you’re a family man. “You have to have a wife who lets you follow your dreams and goals,” he says. “My wife is super-supportive. She gets what I’m trying to do.”

And so, apparently, does his staff. Callahan, 32, has been at the course for a little more than a year, but he’s hired seven staffers since arriving — all kids younger than him and cut from the same cloth.

“These guys are all young, but the common denominator is they all want to be top-100 superintendents,” Callahan says proudly. “We’re (currently) No. 47 but we want to be top-25. If we achieve that, that’s something you can’t take off their résumés. I tell them, ‘Let’s get the course back to the top 25... then let’s get you a job (like mine.)’”

The saying Callahan uses is ‘Different roles, similar goals.’ Ask any of the crew what the goal is, and they all know it by heart — it’s getting the course back into the top 25.

And, oh, yeah... surviving

these two stressful weeks in spring of 2015.

Stay cool

“If you can grow grass here in southern Indiana, you can about grow grass anywhere,” Callahan says.

Victoria National’s greens, fairways and tees are bentgrass. The rough is a mix of Kentucky bluegrass and fescue. Many of the courses in the area have switched to zoysia. Victoria National’s cool-season turf in its transition zone locale makes things interesting for Callahan and his crew.

“We’re further south than St. Louis and Louisville, yet we still have the bent,” Callahan says. “I like the challenge (but) there’s a reason everyone out here has converted to zoysia fairways and minimized how much bent they’re managing. When we’re managing 40-plus acres of bentgrass and everyone else is managing 4 acres — that gives us 10 times the disease pressure.”

The different challenges offered at “The Vic” also appeal to the crew, eager to learn anything and everything about maintaining turf at its highest level.

“You learn from this course because of its location and the cool-season grass,” says Mike Nowicki, assistant in training. “If you’re interested in becoming a top-100 superintendent, this is among the best places in the country to be.”

“The learning experience here is awesome,” says Casey

Continued on page 24

“FOR SOME REASON I DON’T SEE GROWTH, I JUST SEE THE PLANT RESPOND,” CALLAHAN SAYS. “IT TURNS A LITTLE BIT GREENER, A LITTLE BIT HEALTHIER LOOKING.”



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John Jeffreys

Superintendent, Pinehurst No. 2
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Continued from page 22

Underwood, a 24-year-old assistant in training. "I told (Callahan) I wanted irrigation experience; he threw me right into it. You give him your set of goals, and he throws you right into it."

Plant health protection

Not that the team at Victoria National doesn't appreciate the Big 10 Championship, but they realize what that means for their course: More than 70 kids — guys even younger than the crew — hitting three shots into every green.

Then follow that up with more than 150 Web.com players getting practice in Monday through Wednesday before their tournament starts. Callahan and Assistant Superintendent Gerald Smith say they couldn't get through it all with-

out plant health.

"The big thing with Lexicon, Honor and Insignia — you do see plant health," Callahan says. "We've done several checks out here; you see a difference in color. You see a difference in turgidity. But you don't see growth. That's huge to me, to make sure I'm not getting growth. I just see the plant respond. It turns a little bit greener, a little bit healthier looking."

Smith credits the tournament being moved up in the year, from June to May, especially considering the bentgrass. But he agrees that plant health is key.

"We try to keep a healthy plant. Going into tournament, we didn't stress it out or push it as much as we might with normal member play," Smith says. "We wanted to make sure

it was healthy as possible with 10 days of tournament golf."

"It gets difficult here in July and August," Callahan continues. "Having two tournaments back to back this early in the season, we have to make sure the turf is healthy and stays healthy after the tournaments."

Goal-driven

The 2 weeks went fast for the Victoria National team. After a stormy start to the Big 10 Championship, the weather dried out and it was all smiles for the United Leasing Championship (won by Smylie Kaufman at 10-under.)

"The tournament was a success, I felt like every player and coach said it was the best course they played all year, and were excited to play it again next year," Smith says. "We were tired by the end, but


nothing unexpected. Having 20 volunteers come in gave us the energy to get us through the week."

Odds are that Callahan met some new disciples among those volunteers — young guys driven to make it to the top of the profession. For those who want to join him on this journey, be ready.

"As long as you're willing to put in the effort, he's going to give it back to you twofold," says Michigan State alumnus Aaron Deloof, spray technician. "He involves everyone, and he's all about teaching."

"Kyle is a passionate, goal-driven individual who wants to be the best," says Nate Herman, senior assistant superintendent. "He attracts guys who share that mentality and philosophy, and who will work just as hard (as him.) Everybody's extremely goal oriented, and that's crucial."

Callahan says he doesn't really care who the person is or where they came from. When they get to Victoria National, they just need to be ready to buy in to the program, be ready to learn and be ready to work.

"Paul B. Latshaw told me one time, 'I can pretty much teach anything, but I can't teach drive and passion,'" Callahan recalls. "It may take a little longer with some people, but as long as I know where their heart is, it's easy. It's not where they've been and what they've done. I'll pick up anyone off the street... if they have drive and passion." 

(L to R) Seth English, irrigation technician, Nate Herman, senior assistant, Kyle Callahan, superintendent and Aaron Deloof, spray technician at the start of their two-week journey.



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BY MIKE HIRVELA
Fungicide Product Manager
Bayer CropScience

At any given moment, turfgrass plants are pushed to the very brink of their performance capabilities by abiotic and biotic stressors — factors like harsh weather and environmental conditions; damage from heavy equipment, foot traffic and typical wear; mowing and maintenance activities; as well as biotic influencers like insects and animals or disease. Coupled with high demands during important events like tournaments, achieving peak performance can be a trying task.

At Bayer, we are fully committed to understanding the countless challenges superintendents face and to providing them solutions and the technical expertise to help ensure that turf plants are as healthy and as playable as possible. With innovation at the core of our business, we are proud to have been the pioneer in plant health. In fact, we have invested nearly 20 years in the development and testing of products as part of an ongoing effort to propel future generations of plant health solutions.

More importantly, however, we are proud to support this important fungicides supplement and are thrilled to work with *Golfdom*, which is recognized for delivering helpful materials that assist superintendents in making the right decisions to fit their management needs.

When it comes to fungicides, just like in humans, optimal plant health extends far beyond living without disease. And

it's that distinction that often is considered as a dividing line between the good and the greats among fungicides.

Good fungicides deliver solid results when it comes to fighting disease, but great fungicides help eliminate disease while delivering additional plant health benefits, such as: selective radiation management, photosynthesis enhancement, oxidative stress reduction, color enhancement, increased turf safety and plant defense induction. We pride ourselves on developing products that deliver those results. But regardless of the product or treatment strategy you implement, improved plant health can mean fewer turf management problems today and in the future.

The heart of this supplement is maximizing your turf management strategy, particularly as we approach the heat of summer and the tournament season. In the pages of this supplement, you can expect to explore the following themes:

Spotlighting a Superintendent: To open the supplement, *Golfdom*'s Seth Jones sits down with Tony Gustaitis, superintendent at Whitemarsh Valley Country Club in Lafayette Hill, Pa., to discuss the always-important member/guest. Gustaitis and his team also discuss core challenges and go-to strategies in an effort to maintain tournament-ready turf performance at all times.

Surveying the Fungicide Customer: In May 2015, *Golfdom* distributed a sur-

vey to its readers. The results, outlined on pages FS8-FS14, identify common themes affecting the industry as well as various approaches to building an effective fungicide program.

Recovering from the U.S. Open:

The 2015 U.S. Open is scheduled to be played June 15-21 at Chambers Bay Golf Course in University Place, Wash. On page FS15, Eric Johnson, director of agronomy, discusses strategies on how the course will recover from the tournament post-event.

High profile events, ranging from major tournaments to member/guests, mark some of the most trying times for turf plants. With stakes that high, ensuring prime performance leading up to and during a tournament can be taxing on everyone involved with the business. In cases like these, the importance of recovering as quickly and as optimally as possible cannot be understated.

Thank you for reading, and on behalf of Bayer, I hope this content is as useful and as informative to you as possible.

Sincerely,
Mike Hirvela

Mike Hirvela is fungicide product manager at Environmental Science, a division of BayerCropScience LP, with the responsibility to manage Bayer's fungicide portfolio and brands across all relevant T&O market segments. To learn more about plant health, tournament readiness and Bayer solutions, please visit www.BackedByBayer.com.

The Mighty Member/Guest

All across the country, private clubs like Whitemarsh Valley CC are gearing up for their own version of the U.S. Open.

BY SETH JONES

Assistant Superintendent Jerry Stockmal has been working at Whitemarsh Valley CC near Philadelphia for 27 years. By now he knows the drill. ¶ “When you’re a kid, you think it’s just another weekend event for the members,” he says. “It’s a seasoned crew here. We know it’s a big deal. If we have to stay late, we stay late. For the member/guest... it’s whatever it takes — no holds barred.”

The mighty member/guest is still 6 weeks away, but every employee of the course already is gearing up for it.

“From our kitchen staff and the servers to my team in the pro shop and Tony’s team in maintenance, everyone has bought into it,” says David Pagett, head PGA professional at the course. “That’s why we’ve established ourselves as having one of the premier member/guests in Philadelphia.”

Pagett, who has been at the course 8 years, still remembers the feeling he had looking at the scoreboard at Canoe Brook CC in New Jersey 20 years ago. Written in old English calligraphy, it was “First class all the way,” he says. Now he’s trying to give members that same feeling at

Whitemarsh Valley.

“They really say that this is their U.S. Open,” Pagett says of the 375 members at Whitemarsh Valley. “We get guys from all over the country, and we have everything turned up 10 percent. It’s our chance to make our mark and do what we do.”

Meet Tony G.

“It’s like a mini professional tournament because you have to do everything every day — cut greens, cut tees, roll greens, cups, bunkers...” Superintendent Tony Gustaitis says. “You have to provide the best possible conditions. It’s like a small professional tournament, but for amateurs.”

Meet Tony Gustaitis, CGCS. He’s been at the course for 27 years and has seen his fair share of member/guests by now.

Gustaitis’ career in the industry started unexpectedly as he was wearing a dishwasher’s apron. He was 16 and working as a busboy when a friend came into the restaurant. This friend worked on the crew for his father, the superintendent of a local course. He and the crew were grabbing



Tony Gustaitis, CGCS (left) with assistant Jerry Stockmal.



PGA Golf Professional David Pagett says Gustaitis and his team have Whitmarsh Valley CC looking the best he's ever seen it. "The members here are so proud of the course," he says.

breakfast after their morning shift while Gustaitis was clearing plates.

"I heard them saying they were looking for someone to join the crew, and I said, 'Hey, I'd be interested in doing that,'" he recalls.

After graduating from the University of Maryland in 1980 with a degree in turfgrass management he worked a few courses in the Mid-Atlantic, including a 3-year stint as an assistant at Aronomink, before taking the job at Whitmarsh Valley in 1988.

As many member/guests as he's been through at Whitmarsh Valley, he's been through a lot more floods. As the name implies, Whitmarsh Valley sits in a floodplain. Any significant rainfall upstream means the course will flood, with the floodwater anywhere from 6 inches to 8 feet. Most likely, eight of his greens go underwater.

"I've seen all the hurricanes and tropical storms come through. We've had times where it's so flooded you can't even get to the golf course," he says. "The only thing you can try to do is get the water off as quickly as possible."

Demonstrator course

When he isn't battling floods or preparing for big tournaments, Gustaitis is crunching numbers. Before he decided to get into turf he spent a year pursuing a degree in accounting.

He says that year has paid off, as he now has a spreadsheet for everything.

"I know what my budget numbers are at the end of each month before the accounting team knows," he says. "Likewise, I have spreadsheets that tell me what I need to have done 2 weeks out from the member/guest, because those are the things I know will hold out for the tournament."

Being so analytical made Gustaitis and Whitmarsh Valley an easy choice to become a demonstrator course for Bayer Environmental Science. For 2 years Bayer provided product to Whitmarsh Valley that could then be applied and analyzed by Gustaitis and his team.

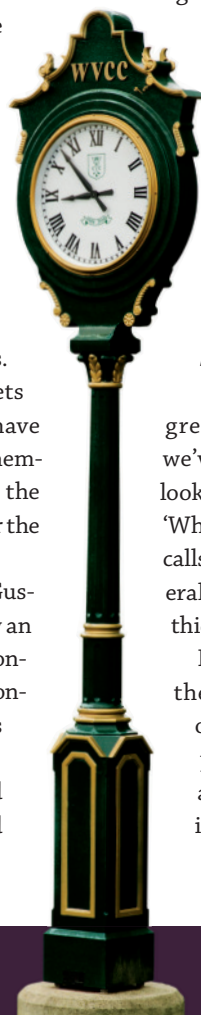
The program they decided to analyze involved Chipco Signature fungicide. They chose six greens that would get Signature every spray, while the other greens would get whatever chemical rotation Gustaitis was using for that specific disease-pressure application.

Gustaitis didn't bother telling his members about the program. Then, at a greens committee meeting, his members ended up telling him.

"A couple members of the greens committee said, 'Tony, we've noticed that some greens look different than others.' I said, 'What do you mean?'" Gustaitis recalls. "They told me there were several greens that looked healthier, thicker... just better."

It was then that Gustaitis told the committee about the demonstrator program and how it promoted plant health as well as preventing disease. He also issued them an interesting chal-

Continued on page FS6



Focus on FUNGICIDES

Continued from page FS5

lenge. He gave them a month to try to figure out which greens they thought looked healthier than the others.

"Most of them picked five out of the six (Signature greens)," Gustaitis says. "And then they asked me why I don't just spray all 18 with it?"

Gustaitis explained that his commitment to the demonstrator course project needed to go a little longer so he could chart more data, but once it was finished he would expand it to all 18 greens.

"I'm doing at least every other spray on greens with Signature because of the results we've achieved," Gustaitis says. "It was great that it wasn't me telling these members that those greens looked better — it was the members telling me."

Practice to practice

The member/guest begins the second week of July at Whitmarsh. Sometimes the weather is ideal, sometimes it's sweltering.

"There's been years when it's pretty pleasant," Stockmal says, "but there's also been years where it's 99 degrees, 55 percent humidity and the mem-



During the summer months, the crew at Whitmarsh Valley expands to 21 people. A handful have worked at the course for more than 20 years.

bers give us a look that says, 'Why am I even out here?'"

Right now, Stockmal says they have time on their side. May was too dry, but they're caught up on their spray applications and trimming.

"It's the little things — everything needs to be trimmed, everything cut, no trash," Stockmal says. "It's a group effort."

Even though the first practice round is on a Thursday, Gustaitis tells the crew — 21 strong in peak season


— to have the course member/guest-ready by Wednesday morning.

"Thursday is the practice round, but we have guys come in on Wednesday to get a practice to the practice round," Gustaitis says. "You know what they say about first impressions. This place has to be perfect for that first impression."

Gustaitis describes that as "not a blade of grass out of place." The grass has to look healthy, greens need to be fast, fairways have to be tight and the rough needs to look like rough but still be playable.

It's not unique to Whitmarsh Valley CC. This exact scenario plays out at private clubs around the country.

To be good at it means career success, such as Gustaitis and Stockmal have had, enjoying 27 years at the same course. To be bad at it? Those former superintendents have likely gone on to find new career callings.

"You try to instill upon your crew how important this is... we have 375 members, and they pay a lot of money to be members here," Gustaitis says. "We want them to feel every penny is worth it." 



No. 11 at
Whitmarsh
Valley CC

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The 2015 Fungicide Survey

*Readers agree — today's fungicides are safer,
more effective and easier to use than ever.*

XXXXXXXXXXXXXXXX **BY CHRIS LEWIS AND GRANT B. GANNON** XXXXXXXXXXXXXXXXXXXX

We had questions, our readers had answers.

Last month we sent out a survey, written with the help of our friends at Bayer, asking such questions as “what is the most difficult disease to control?” and “how do you rate the application safety of today’s fungicides?” We received almost 300 responses to the survey, and as a thank you, we randomly selected two participants and sent them both a \$100 gift card (Jamie Kizer and Rick Miles, drinks are on you.)

Some of the things we learned: About half of the respondents say they make fungicide applications “occasionally” while 40 percent said they apply fungicides “as often as the label allows.” Most respondents are looking to make their fungicide purchases in the fall, and almost everyone agreed that today’s fungicides have made their jobs easier.

Spotlighted here are six of the survey responses we found most interesting. We also reached out to superintendents across the country, as well as a few Ph.D.s, to get them to add some insight.

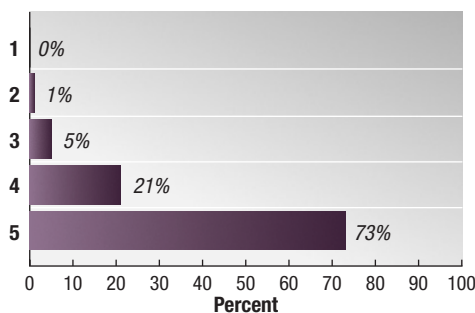


The Club at Indian Springs in Broken Arrow, Okla., features two 18-hole courses. General Manager Mark Barrett advises his superintendents that “it’s not always about dollars... Purchase the best products now (and) avoid turf damage later on.”

On a scale of 1 to 5 (1 being not at all important, 5 being highly important), how important is “plant health” to your turf management strategy?

“Plant health is by far the most important aspect of my job,” says Joe Lucas, vice president of greens and grounds at Saratoga National Golf Club in Saratoga Springs, N.Y. “If I have a healthy plant I am able to push my management practices to the edge without the fear of detrimental effects to the plant or the playing conditions.”

To achieve optimum plant health, Lucas uses a three-pronged approach; fertilizer and amendments, judicious water management and a broad-spectrum fungicide program.



“I want to make sure my greens, tees and fairways have the best environment so that they thrive under heavy play and aggressive maintenance practices such as aeration, topdressing and daily mowing,” he says. “As long as the growing environment encourages a healthy plant, it will perform and recover better from each of these practices.”

Continued on page FS10

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With this in mind, Travis Blamires, golf course superintendent at Tonto Verde Golf Club in Rio



Travis Blamires

Verde, Ariz., advises superintendents to apply fungicides preventatively to increase plants' defenses against pathogens. He also bases fungicide applications upon previous years' diseases, then adjusts according to current weather

conditions and course maintenance practices.

"An example would be the application of a broad-spectrum fungicide to greens prior to aerification to better increase the plant's ability to battle pathogens during a stressful period," he says. "The plant needs all the help it can get since the soil is opened up and the turf and grass leaves are torn by dragging sand around on the surface."

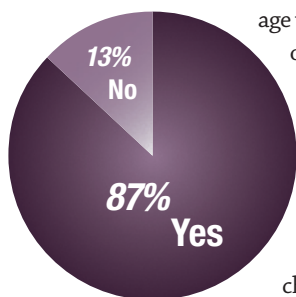
Although pathogen defense remains the primary goal, Lucas also predicts superintendents' turf management strategies in the near future will steadily evolve with development of new fungicide ingredients.

"As manufacturers continue to create new chemistries geared toward a healthier plant, superintendents may soon be able to apply their fungicides every 3 weeks rather than every 2," he says. "The need for curative sprays also may be eliminated, leading to some serious cost savings at the end of the season."

Have you tried generic or post-patent products?

"I know generics are a cost-effective way to manage turf pathogens," says Blamires, "and they are often made with the same ingredients as non-generics, but I feel non-generics have a bit more efficacy since they are developed by the chemical manufacturer."

Because of the time and money invested by chemical manufacturers to test and register products, Blamires says he always purchases non-generics. In fact, he includes himself among the 13 percent of respondents who has never used generic or post-patent products.



Scott McArthur, superintendent at Cleveland Country Club in Shelby, N.C., agrees entirely with Blamires, even though he has purchased some generics in the past.

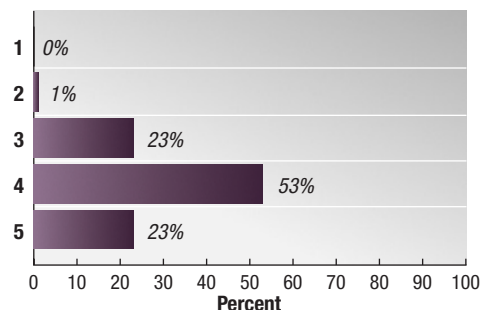
"Generics usually deliver the same ingredients, but they're not researched as well as non-generics. In my opinion, it is worth spending the extra money to have well-researched products," he says.

However, Blamires notes that "I do recommend generics to anyone who might have budget constraints. But they also should remember that once a fungicide has reached the generic stage, the original product will typically come down in price anyway."

Also advising superintendents to be mindful of the future as they consider fungicide purchases is Mark Barrett, CCM and general manager of The Club at Indian Springs, in Broken Arrow, Okla.

"It's not always about dollars when it comes to fungicides," he says. "If superintendents purchase the best quality products now they will likely avoid the repercussions of turf damage later on."

Considering all the fungicides available on the market today, how do you think they rate in regard to application convenience (1 being poor, 5 being excellent)?



"I would say the application convenience of today's fungicides is off-the-charts good, compared to what it used to be," says Cleveland CC's McArthur.

Continued on page FS12



STRESSFUL MOMENT #22: SUMMER '03

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Continued from page FS10

McArthur believes fungicide's liquid formulations and water-dispersible granules are much easier to handle and mix now, as powders and granulars are no longer poured into buckets and stirred and mixed before being dispensed into sprayers.



Scott McArthur

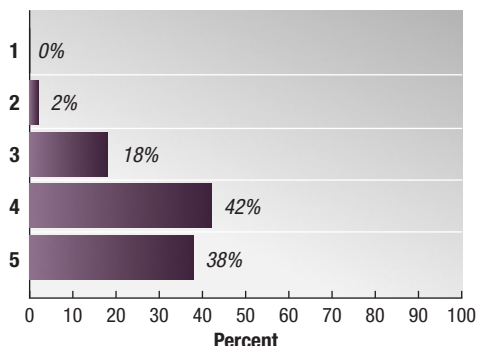
"Superintendents don't have to worry about clogging up their filters or sprayers now," he says. "All they have to do is mix their products and apply them to their plants."

In addition, a majority of fungicides presently are formulated together, so they don't have to be purchased separately and then mixed together.

"Even the bottles and packaging are easier to handle because low-use rates have led to smaller, lighter packaging," McArthur says.

Gavin Miller, superintendent at Stonebridge Golf Links and Country Club in Smithtown, N.Y., agrees with McArthur. "Formulation-wise" he notes, "fungicides have come a long way. Concentrated liquids provide superintendents much less product to measure than wettable powders ever have, so they are definitely much easier for the end user. Since fewer products need to be poured, the likelihood for mistakes with regard to measurements is much lower now than in the past."

Considering all the fungicides available on the market today, how do you rate them with regard to safety (1 being unsafe, 5 being exceptionally safe)?



"The ease of handling and packing fungicides has really increased the safety aspects of the products, as it seems manufacturers are taking superintendents' well-being into consideration," says Saratoga National GC's Lucas. "A lot of new fungicides have a broad range of disease control, which in turn decreases superintendents' exposure to multiple products."



Mark Barrett

Some of the products that superintendents were previously exposed to have been banned in recent years by the EPA for being harmful to the environment and humans, says Mark Barrett. Echoing that

is Travis Blamires. "Although they were very effective at treating pathogens, some of these products were mercury-based," he notes. "Application rates were high and the testing on products — to see how they harm the environment as well as the applicators — was not as good as it is today."

Back in the day, one fungicide product was a cure-all. Now, they're much more specialized.

Blamires believes the low-use rates of current fungicides, along with the decline in active ingredients, have reduced harmful exposure. "They are not only safer for applicants to handle, they also have fewer harsh effects on the environment as a whole," he says.

In the past, powders were easily inhaled, especially when they were poured into buckets or sprayers. But thanks to today's liquid formulations, fungicides are no longer airborne as often as before.

"Anytime superintendents can limit their exposure to chemicals, they have a win-win," says Stonebridge's Miller. "Not only do they reduce the amount of product that they use, but they also protect themselves in the meantime."

Continued on page FS14



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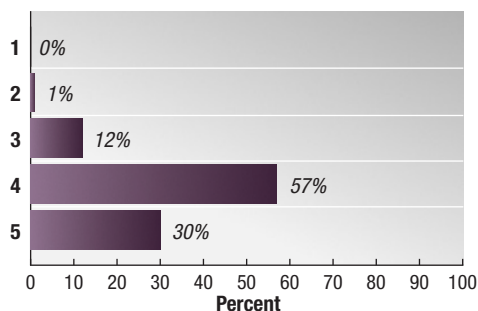
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Continued from page FS12

Considering all the fungicides available on the market today, how do you think they rate on a scale of 1 to 5 with regard to effectiveness (1 being poor, 5 being excellent)?



“Back in the day, one fungicide product was a cure-all,” says Mark Barrett. “Now, fungicides are much more specialized in what they treat, so superintendents can focus on specific types of diseases, whether it be fairy ring or dollar spot, without causing nearly as much damage to their turf.”

This specialization is a direct result of manufacturers’ investment in research and development, especially in recent years.

“Due to better research and testing, chemical manufacturers have determined which rates and application times are best to ensure products work as they should,” says Blamires. “In respect to plant health, I don’t think fungicides were applied at the right time in years past. And certain products were used all the time, resulting in resistance.”

Although resistance is still an issue for superintendents and new diseases tend to arise every year, today’s wide selection of fungicides offer superintendents the options they need, as long as they are used properly.

“Manufacturers have also done a lot to get the word out on new products and how they should be used,” Blamires says. “The new fungicides, when applied correctly and at the right time, are very effective for whichever issues superintendents encounter, from droughts to humidity.”

What is the most difficult disease to control?

Answer: **Anthracnose**

Turf diseases are almost impossible to avoid because no matter how diligent superintendents are, they can still be caused by weather extremes or other stress. In our survey, anthracnose was voted most difficult disease to control by garnering 22 percent of respondents’ vote (others receiving multiple votes include dollar spot, fairy ring and snow mold. And a tip of the cap to the respondent who nominated “human error disease.”)

The Turf Doc himself, Karl Danneberger, Ph.D., gave us a free consultation on anthracnose.

“I’m not surprised that the survey shows anthracnose ranks high because it can occur any time greens are under stress,” Danneberger says. “If the winter is extremely stressful, greens may appear an orange-ish color and the same symptoms can occur on greens during summer stress. If the leaf sheaths are darkened or black, this is a good sign basal rot anthracnose is severe.”

Anthracnose was not limited to one region of the country, with superintendents from New England to the Pacific region agreeing that it is the most difficult to control.

“There has been considerable research done on the disease so there are some good management practices and fungicides that can help,” adds Danneberger.

To prevent the disease, Bayer recommends superintendents promote plant health by simply following sound agronomic practices and timely use of preventative fungicide programs. For those courses with anthracnose on its turf, Bayer has multiple products to assist the treatment.

“Like humans, stress can affect turf’s health, and to relieve that stress we advise superintendents use Signature combined with Daconil for the most affective results,” says Zac Reicher, Ph.D., Green Solutions Specialist for Bayer CropScience. “Alternatives are Mirage with StressGard Technology or our Tartan fungicide.” ☺

All the right moves

Once the big show departs Chambers Bay it becomes time to focus on recovery

BY SETH JONES

It took months of hard work to get Chambers Bay Golf Course in University Place, Wash., ready for the U.S. Open. A combination of hard work, ideal weather and the right expertise has led them to this moment.

Rob Golembiewski, Ph.D., Green Solutions Specialist for Bayer Crop-Science, says that the team at Chambers Bay did an exceptional job getting the fine fescue turf ready for the world's best players.

"Both Josh (Lewis, superintendent) and Eric (Johnson, director of agronomy) have done a phenomenal job over the last year gearing up for this Open, making sure the course is ready," he says. "I had the opportunity to be there last fall, and they were doing everything right — the course was looking phenomenal."

While Golembiewski was there, he discussed with Lewis — a former student of his at Oregon State University — his concerns for the winter. Together they devised a program utilizing Bayer Environmental Science's active ingredients with StressGard technology, primarily to overcome the threat of microdochium patch. The StressGard Formulation Technology served a dual purpose, Golembiewski says: to control the disease as well as to help the turf with overall plant health.

"It's a great location and a great time of the year to host a U.S. Open," Golem-

biewski says. "We had a lot of research that we went through. Overall we were really happy with the results. Mother Nature was very good to them."

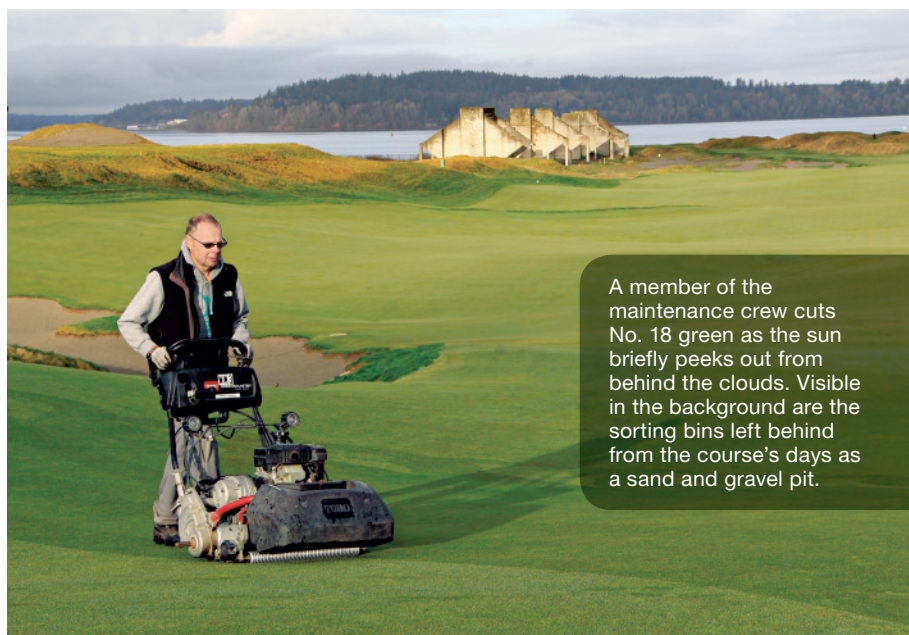
As the tournament ends, the crew at Chambers Bay readies for even more hard work. But instead of preparing the course for the U.S. Open, it'll be about recovering from the U.S. Open.

"Once the tournament ends, we get

three days of being closed," Johnson says. "It's a short window, but we'll get as much done as we can, like getting all the ropes down."

Johnson says they'll keep the fairway lines for a year, maybe even longer, for those who want to play a similar course to what the U.S. Open's competitors played. But he promises the rough will get cut down from its tournament height of 6 inches.

"We'll put out a little fertilizer and a wetting agent to try to get (the course) back into health," Johnson says. "It'll be a long process — probably longer than anyone wants to envision." **G**



A member of the maintenance crew cuts No. 18 green as the sun briefly peeks out from behind the clouds. Visible in the background are the sorting bins left behind from the course's days as a sand and gravel pit.

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Super Science

// EXCESSIVE SHOOT GROWTH

SUPPRESSION OF CREEPING BENTGRASS WITH SEQUENTIAL APPLICATIONS OF PGRs

By Ramzi White and Joseph Young, Ph.D.

Some superintendents in Texas struggle with excessive shoot growth of creeping bentgrass (*Agrostis stolonifera* L.) in the summer, resulting in poor performance. Plant Growth Regulators (PGRs) are commonly used on greens to limit this.

The objectives of this study were to determine the growth suppression potential of sequential applications on creeping bentgrass putting greens and to evaluate putting green performance. Moderate rates of PGRs were applied in April 2014. The products containing paclobutrazol resulted in severe phytotoxicity that reduced turf quality and green cover below 50 percent. Heavy rainfall and warmer temperatures in May increased growth rates, and all treatments receiving paclobutrazol recovered quickly, becoming similar to untreated controls and other PGRs.

Additional applications of PGRs containing paclobutrazol never resulted in green cover diminishing below 85 percent. These same products significantly increased dark green color index throughout the study. Sequential applications were made every 2 weeks, but growth suppression from applications was not observed for 2-4 days following application.

Rebound effects were observed in June and July when applying the lowest label rates of PGRs. The application of PGRs at the lowest label rate to rebounded turf suppressed growth by 30 to 40 percent as

expected, but will only reduce clipping yields to the level of the untreated control unless higher rates of PGRs are used. Increased shoot growth in July and August warranted higher application rates that increased suppression. The moderate rates applied every 2 weeks sustained 20- to 50-percent suppression compared to untreated controls.

We found that low rates of PGRs during moderate growth periods effectively suppressed shoot growth with limited quality and cover reductions. However, in order to maintain acceptable quality and playing conditions, moderate rates were required every 2 weeks when growth rates increased later in the summer months.

Ramzi White and Joseph Young, Ph.D., are at Texas Tech University. For more information, White can be reached at ramzi.white@ttu.edu, and Young at joey.young@ttu.edu.



Image from Aug. 13, 2014, illustrating the darker green color observed with applications of plant growth regulators containing paclobutrazol compared with other products or control treatments.

NEWS UPDATES

WINTER WEATHER EXTREMES KILL TURF AND FORCE COURSE CLOSURES

Golf courses in parts of the Carolinas are having to get by with "ground under repair" rules as new turf grows in and some are being forced to close altogether because of turf loss caused by cold weather extremes that occurred months ago. The damage spans from central North Carolina to Myrtle Beach in South Carolina and it is the region's most severe and widespread incidence of winterkill since 1994.

"There is really nothing a golf course superintendent can do to prevent it short of using covers on the entire golf course, and that's a physical and financial impossibility," says Michael Shoun, director of agronomy for McConnell Golf, which owns or operates 11 private courses across the Carolinas. "The worst of the damage shows up on areas that see a lot of shade, have high traffic, are north-facing or that stay wetter."

Demand for bermudagrass sod has soared pushing prices to nearly double in some cases. Some superintendents report that a square foot of 410 bermudagrass sod which cost 17 to 19 cents in 2014 is now costing as much as 32 cents. Fortunately, sod farms have been able to provide a healthy product.

"Golfers should know our members are doing all they possibly can to get courses back to their best as soon as their club can afford and Mother Nature's conditions will allow," says Tim Kreger, executive director of the Carolinas Golf Course Superintendents Association.

“THESE RESERVE CARBOHYDRATES MAKE CONTROLLING DALLISGRASS EXTREMELY DIFFICULT, EVEN WITH SYSTEMIC HERBICIDE APPLICATIONS.”

Matthew Elmore, Ph.D.

(see story on page 44)

//TIMING IS EVERYTHING

Dallisgrass growth, identification and control

By Matthew Elmore, Ph.D.

Dallisgrass (*Paspalum dilatatum* Poir.) is a warm-season perennial grass native to South America that was introduced to the United States in the late 1800s. Tolerance to close mowing allows it to proliferate in golf course roughs and fairways. It is best adapted to the warm climates and high soil moisture commonly found in the mid-Atlantic and Southeast, but it can survive in more arid climates.

Dallisgrass is identified by a characteristic seedhead that often escapes the mower reel, a bunch-type growth habit, coarse texture and rapid vertical growth compared to bermudagrass (*Cynodon* spp.) (Figure 1). Unlike most bunch-type grasses, dallisgrass produces short rhizomes that increase the diameter of the plant and store

carbohydrates. These reserve carbohydrates make controlling dallisgrass extremely difficult, even with systemic herbicide applications.

PREVIOUS RESEARCH

There are several herbicide options for dallisgrass control. Regardless of the herbicide combination, several sequential applications usually are required for complete control. Several applications of MSMA can be applied on 5- to 7-day intervals at 1-2 lbs./A during the summer. As of this writing, MSMA is still permitted for use on golf courses, but applications are restricted to spot treatments.

The addition of Sencor (metribuzin) to MSMA will improve control, but this combination causes short-term bermudagrass injury. Two or three sequential applications of the sulfonylurea

herbicide Revolver (foramsulfuron) alone or tank-mixed with MSMA can improve control compared to MSMA alone, with little to no bermudagrass injury. Alternatively, pre-treating dallisgrass with MSMA 2 weeks before a Revolver application improves Revolver efficacy. Revolver is registered for use on bermudagrass and zoysiagrass but will cause severe injury or death to cool-season turfgrasses.

Herbicide application timing is important. When evaluating Revolver alone or in combination with MSMA, previous research found that early fall applications often provided better control than summer applications. Research evaluating fluazifop (Fusilade II or Ornamec) determined that spring applications provided better control than early summer applications. Fluazifop will cause severe bermudagrass injury, but it can be applied to zoysiagrass (*Zoysia* spp.) and tall fescue (*Lolium arundinaceum* (Schreb.)

Growing degree-day (GDD) accumulation is commonly used to quantify the influence of air temperature on plant development throughout a growing season. In turfgrass, superintendents can use GDD accumulation to target applications of annual bluegrass seedhead suppressants as well as herbicides for pre-emergence crabgrass and post-emergence dandelion control. While GDD measures atmospheric heat accumulation above a certain threshold (average daily temperatures above 50 degrees F in experiments reported here), we also used cooling degree-days (CDD) to measure cumulative effects of atmospheric cooling below a certain threshold (average daily temperatures

FIGURE 1



Dallisgrass growth habit in bermudagrass turf and characteristic drooping seedhead (inset).

PHOTO BY: MATTHEW ELMORE

below 72 degrees F in experiments reported here), when dallisgrass growth begins to slow.

OBJECTIVE

Given the seasonal variability in dallisgrass control reported with Revolver and fluazifop, our first objective was to evaluate the efficacy of single-herbicide applications made at various GDD- and CDD-based application timings. Our second objective was to investigate sequential application programs using newer herbicide chemistries registered for use in bermudagrass and zoysiagrass at application timings identified in the first study.

MATERIALS AND METHODS

Experiments presented here were replicated and arranged in a randomized complete block design and conducted from 2010 to 2013 in Knoxville, Tenn. Treatments were applied using standard small-plot application equipment at 30 GPA.

Experiment 1: GDD- and CDD-based application timings

Single applications of Fusilade II at 6 fl. oz./A were applied at five GDD- or CDD-based application timings: 115, 270, 580, 1200 GDD or 10 CDD. Growing- and cooling-degree-day accumulation was calculated using equation 1 and equation 2, respectively.

$$\text{GDD} = [(T_{\max} - T_{\min})/2] - T_{\text{base}}$$

$$\text{CDD} = T_{\text{base}} - [(T_{\max} - T_{\min})/2]$$

In these equations, T_{\max} represents the daily maximum air temperature, T_{\min} represents the daily minimum air temperature and T_{base} is the threshold temperature. GDD accumulation began on Jan. 1 and continued until July 1. CDD accumulation began on July 1 and continued to Dec. 31. Calendar dates for each application are listed in Table 1.

Fusilade II treatments were applied to a stand of Kentucky 31 and Coyote

TABLE 1

Calendar dates corresponding to herbicide treatment application at GDD- and CDD-based application timings in 2010 and 2011.

Experiment 1 - GDD- and CDD ^a -based application timings		
Application Timing	2010	2011
115 GDD ^b	April 7	March 22
270 GDD	April 22	April 14
580 GDD	May 18	May 12
1200 GDD	June 15	June 13
10 CDD	Sept. 8	Sept. 9
Experiment 2 - CDD-based application timings		
10 CDD	Sept. 8	Sept. 9
40 CDD	Sept. 30	Sept. 16
195 CDD	Oct. 18	Oct. 13

^aGDD = growing degree-day; CDD = cooling degree-day

^bAll treatments were applied with non-ionic surfactant at 0.25% v/v.

TABLE 2

Dallisgrass control results with Tribute Total

Application Timing	Dallisgrass Control (%)
10 CDD fb ^a 4 wk later fb 210 GDD ^b	79 a
10 CDD fb 4 wk later fb 300 GDD	84 a
10 CDD fb 4 wk later fb 470 GDD	88 a
10 CDD fb 4 wk later	56 b

^afb = followed by

^bAll treatments were applied with ammonium sulfate (3 lb./A) and methylated seed oil (0.5% v/v). Applications made at 10 CDD were made on Sept. 11, 2012. Treatments applied at 210, 300, or 470 GDD were applied on April 17, May 1 and May 16 2013, respectively.

Dallisgrass control 41 weeks after initial treatment with sequential applications of Tribute Total (thiencarbazone + foramsulfuron + halosulfuron) at 3.2 fl. oz./A. Treatments were initiated at 10 CDD in the fall of 2012. A second application of Tribute Total was applied 4 weeks later. Certain treatments received a third application of Tribute Total in the spring of 2013 at 210, 300, or 470 GDD.

II tall fescue mowed at 3 inches and naturally infested with dallisgrass. Plots were split and subjected to three interseeding treatments: spring, fall or no interseeding at 7 lbs./A of pure live turf-type tall fescue seed.

Visible dallisgrass control was assessed on a 0 (no control) to 100 percent (complete control) scale at 2, 4, 8 and 18 weeks after treatment. Grid counts quantitatively assessed dallisgrass control at 52 weeks after treatment. All comparisons were made

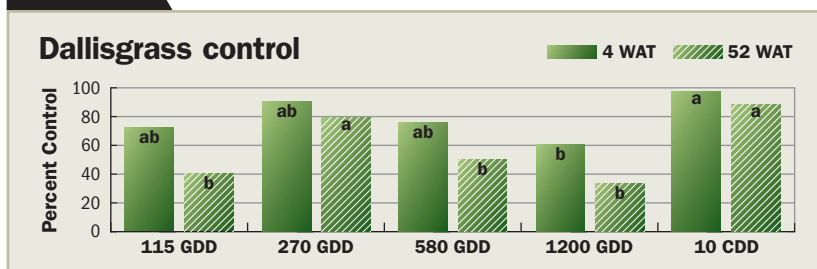
to a non-treated control. Data were analyzed in SAS, and Fisher's least significant difference test was used to separate means.

Experiment 2: Fall Application Timings

Experiment 1 evaluated only one fall application timing. To explore efficacy of several fall application timings, Fusilade II applications were made at 10, 40 or 200 CDD in 2011 and 2012. Calendar dates for each application are listed in Table 1.

Continued on page 46

FIGURE 2



Dallisgrass control 4 and 52 weeks after treatment (WAT) with Fusilade II at 6 fl. oz./A at various growing or cooling degree-day (GDD or CDD) based application timings in 2010. When compared within rating date (4 or 52 WAT), bars with the same letter are not different. Fusilade II was applied with non-ionic surfactant at 0.25 percent v/v.

Continued from page 45

Applications were made and evaluated using the same methods described above, except that interseeding was not evaluated in this experiment.

Experiment 3: Tribute Total Programs

Previous experiments evaluated single applications of the acetyl-CoA carboxylase (ACCase) inhibiting herbicide fluazifop. However, fluazifop is not an option for dallisgrass control in bermudagrass and can cause transient injury to zoysiagrass. Tribute Total was released in 2012 and is registered for use in bermudagrass and zoysiagrass. Tribute Total contains three acetolactate synthase (ALS) inhibiting herbicides (thiencarbazone + foramsulfuron + halosulfuron). ALS-inhibiting herbicides usually are less effective against dallisgrass than ACCase inhibitors like fluazifop, so sequential applications usually are required.

The objective of this experiment was to evaluate sequential application programs with Tribute Total at 3.2 fl. oz./A for dallisgrass control. Treatments were initiated at 10 CDD and followed by sequential applications 4 weeks later. The following spring, Tribute Total was applied at either 210, 300, 470 GDD or not at all. Dallisgrass control was evaluated at 41 weeks after initial treatment.

RESULTS

Experiment 1: GDD- and CDD-based application timings

The effect of application timing on

Fusilade II efficacy was most apparent at 52 weeks after treatment as applications at 270 GDD and 10 CDD provided greater than 75 percent control in 2010 (Figure 2). Other application timings in 2010 provided less than 50 percent control. In 2011, trends were similar, as applications made at 270 GDD and 10 CDD provided 83 percent and 93 percent control, respectively (data not presented). In both years, when

treatments were evaluated 4 or 8 weeks after treatment, differences were not as apparent as they were at 52 weeks after treatment, highlighting the importance of long-term evaluations of herbicidal efficacy for perennial weed control.

Tall fescue interseeding in the fall further increased dallisgrass control provided by applications made at 270 GDD. This emphasizes the value of management practices that increase competition from healthy turfgrass in combination with herbicides.

Experiment 2: Fall Application Timings

When evaluated 52 weeks after treatment, single Fusilade II applications at 10, 40 or 200 CDD provided greater than 80 percent dallisgrass control (data not presented). Control was not affected by application timing, indicating that unlike spring applications, there is greater flexibility for superintendents to time fall Fusilade II applications.

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Experiment 3: Tribute Total Programs

Sequential application programs that involved two fall applications followed by one spring application provided the greatest dallisgrass control (79 to 88 percent) at 41 weeks after initial treatment; the timing of the spring application did not affect control. Dallisgrass was controlled less than 50 percent when a spring application was not made.

Superintendents initiating dallisgrass control programs with Tribute Total in the fall should plan for a spring application as well. Programs initiated in the fall offer greater flexibility for spring application timing; applications between 200 and 500 GDD are suggested.

CONCLUSIONS

Successful dallisgrass control still requires multiple herbicide applications. However, proper seasonal timing can reduce the total number of herbicide applications

required for acceptable, long-term control. Using GDD and CDD to target applications may be preferable to calendar date. More recent research indicates that superintendents should begin calculating CDDs on Sept. 1 instead of July 1 to prevent abnormally cool temperatures from initiating an application.

The most successful programs begin in late summer or early fall (see specific application timings below). The objective is to make the application while dallisgrass is still actively growing, but approaching dormancy. This may interrupt processes involved in cold acclimation prior to winter dormancy, making dallisgrass more susceptible to cold injury.

In bermudagrass and zoysiagrass, programs with three applications of products containing the ALS-inhibitors foramsulfuron and/or thienclazuron-methyl, such as Tribute Total at 3.2 fl.

oz./A, have been successful. Making the first application at 10 CDDs and another 4-6 weeks later (early September to early October followed by mid-October to early November, depending on climate), followed by a spring application at 270 GDDs (late March to mid-April; highly dependent on spring temperatures) is suggested.

For dallisgrass control in tall fescue, a single application of Fusilade II at 6 fl. oz./A or Ornamec at 20 fl. oz./A between 10 and 200 CDDs (typically mid-September through mid-October in the transition zone) followed by another application in early spring at 270 GDDs (typically late March to mid-April; highly dependent on spring temperatures) is suggested. Spring applications are more likely to cause injury than fall applications; apply as a spot treatment to reduce injury risk.

Continued on page 48

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Continued from page 47

Avoid summer applications.

Some product labels have instructions for spot treatments that recommend the herbicide solution be applied until the weeds are wet. Because this “spray-to-wet” volume is higher than typical broadcast application volumes of 40-80 GPA and the herbicide solution concentration is similar for both application techniques, the herbicide rate can be higher for spot treatments. While this may improve control, it also increases the potential for desirable turfgrass injury.

For all products, defer to the label for more information on application rates and adjuvants. Apply Tribute Total to bermudagrass and zoysia-grass only, as it will cause severe injury or death to cool-season species. Don't apply Fluazifop II to bermudagrass as severe injury will occur.

Acknowledgments

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Elmore, M.T., J.T. Brosnan, D.A. Kopsell, T.C. Mueller, B.J. Horvath and G.K. Breeden. 2013. Seasonal application timings affect dallisgrass (*Paspalum dilatatum*) control in tall fescue. *Weed Technology* 27:557-564. *Mention of herbicide trade names is only for the purpose of providing information and does not imply recommendation or endorsement. The label always takes precedence over the recommendations found in this article.*

Mathew Elmore, Ph.D., is an Assistant Professor and Extension Turfgrass Specialist at Texas A&M University. He can be reached at elmore@ag.tamu.edu for more information.

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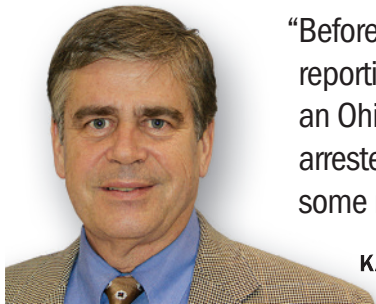
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"Before I left for Egypt, local news was reporting on unrest in the area and on an Ohio State alumnus who had been arrested and placed in prison. So with some nervousness I headed to Egypt."

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

An eye on golf maintenance in Egypt

In a March 2011 column in this magazine I wrote about the Arab Spring. Feb. 11, 2011 resonated with many Egyptian students here at The Ohio State University, as well as with other international students. This past April — just slightly more than four years later — I had the opportunity to visit golf courses in Egypt and to speak in the country's capital, Cairo.

Before I left for Egypt, local news was reporting on unrest in the area and on an Ohio State alumnus who had been arrested and placed in prison. So with some nervousness I headed to Egypt, hoping that I would not wind up appearing on CNN.

The place where I stayed reminded me of Orlando and Disney World, with kids and families saturating the area. Like many places to which I have traveled for the first time, my expectations did not match my actual experience.

The vast majority of golf courses in Egypt were built in a 20-year period from the 1990s through 2010. Many of these golf course resorts are associated with housing developments and are of exceptional quality. However, new golf course development ceased with the Arab Spring and the turmoil that followed, a time in which tourism dropped 50 percent. Most of the golf courses built prior to 2000 fea-

ture all Tifway fairways and roughs, with Tifdwarf greens. After 2000, the courses were established with seashore *paspalum*. Water availability and quality are an issue around Cairo, which should be no surprise given that Egypt sits in the largest desert in the world. The quality of irrigation water varies from relatively clean effluent to water with high salt concentrations.

Safe weed control is a major agroeconomic problem. Weeds are an issue in both bermudagrass and seashore *paspalum*, but products available for control are formulated for agriculture. That is changing as safer and more effective turf-formulated and labeled products are now entering the market. The introduction of these new turf products is a hopeful sign that companies see Egypt as a viable market.

The golf courses that I visited were maintained at a level comparable to what you see here in the United States.

Daily green speeds were in the range of 10.5 to 11 at the high-end courses. The superintendents with whom I spoke are predominantly Egyptian, and use Dubai golf courses as their measuring stick. Many expatriate superintendents left the country after the Arab Spring, but much of their influence remains. I asked one superintendent if he was mowing his fairways at 12 or 13 mm. He replied, "One-half inch."

My turf seminar presentation was simultaneously translated into Arabic, but I was surprised by how many Egyptian superintendents possessed a working knowledge of English. It often is easy to communicate one-on-one. I found the Egyptian superintendents and assistant superintendents to be much like their U.S. counterparts. Their dress and mannerism are similar to superintendents in the U.S., and I really enjoyed their sense of humor. They also are driven to learn as much as they can about turf. Education is highly valued.

Space considerations allow me just a few more quick observations:

- Family is extremely important and interwoven in Egyptian society. Generations live together or in very close proximity. Children will go to school and read from diaries of their relatives who fought in the Mahdist War (1881-1899) or even further back in time.

- Egyptian food is great.

- An incredible amount of construction is occurring on the outskirts of Cairo. Entire towns — I would call them cities — are being built.

- In a city of about 20 million people, Cairo appears to have one traffic light. There is no way you can drive around Cairo yourself. I asked my driver how people manage to drive, and the reply was, "By eye contact." I've been a lot of places, but I have never before seen traffic like Cairo traffic.

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

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superintendents with their staff members, regardless of location. Superintendents can see each member of the crew in real time, as well as assign specific individual tasks today, tomorrow or next month, with notes, files and photographs. When jobs are completed they are uploaded to the Cloud and stored to make generating reports easier. There is also a "panic button" feature that informs everyone of an emergency and its exact location the moment it happens.

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What are you drinking? I love the Brooklyn Summer Ale this time of year.

Tell me about Rock Ridge CC? It's a nice private 9-hole course in beautiful Newtown. Very family oriented. It's a pretty special golf course — a beautiful design, and even though it's 9-holes, you go through it twice and you see many different shots.

And you recently rebuilt a green?

We rebuilt the 9th green. Prior to rebuilding, it was severely pitched from back to front, not many pin locations. Back in the '50s, when the green was mowed at higher cuts, you could get away with it.

Favorite club in your bag? My driver, a 913 Titleist D3, 9.5-degree. It's a stick.

Are you getting out there to play as much as you'd like?

I get to play a lot of golf at my club with my membership — it's my public relations night. It's one thing to send out an email blast, another to go play golf with the members. That's where you really get to answer questions, and it's an easier setting.

And your family — you and Amanda became parents



“AS A SUPERINTENDENT, YOU’RE LOOKED AT TO BE A PROBLEM-SOLVER IN MANY DIFFERENT ASPECTS, NOT ONLY IN TURF.”

recently? We have a 7-month-old baby girl named MacKenzie.

Getting any sleep? Not anymore since she just started teething. It's fun though, she's starting to laugh, giggle, crawl all over the place, she's a very happy baby.

What are your teams? I'm a New Yorker through and through. Born and raised in Staten Island, so I'm a Yankees fan, a Rangers fan, a Giants fan.

Did you enjoy speaking to the students at Jacobsen's Future Turf Managers event? It brought me back to when I was there (as a student) in 2007. It was nice to see a lot of young faces, just to pass along a little of my experiences as an assistant and now a superintendent.

They were eager to get the most of the situation.

Fill in the blank: I know it is a good day at work when I see ____?

Green grass! Honestly it's a great day at work when I'm doing my last lap, and I see a lot of the members out playing and enjoying the course, smiling and waving back. If they stop waving, you know there's a problem.

If you could play golf with any person living or dead, who would it be and why? My father. He taught both my brothers to play golf, and they both taught me how to play golf. He passed away when I was 6, so I never got to play a full round of golf with him. I'd love to tee it up with him.

As interviewed by Seth Jones, June 2nd, 2015.



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