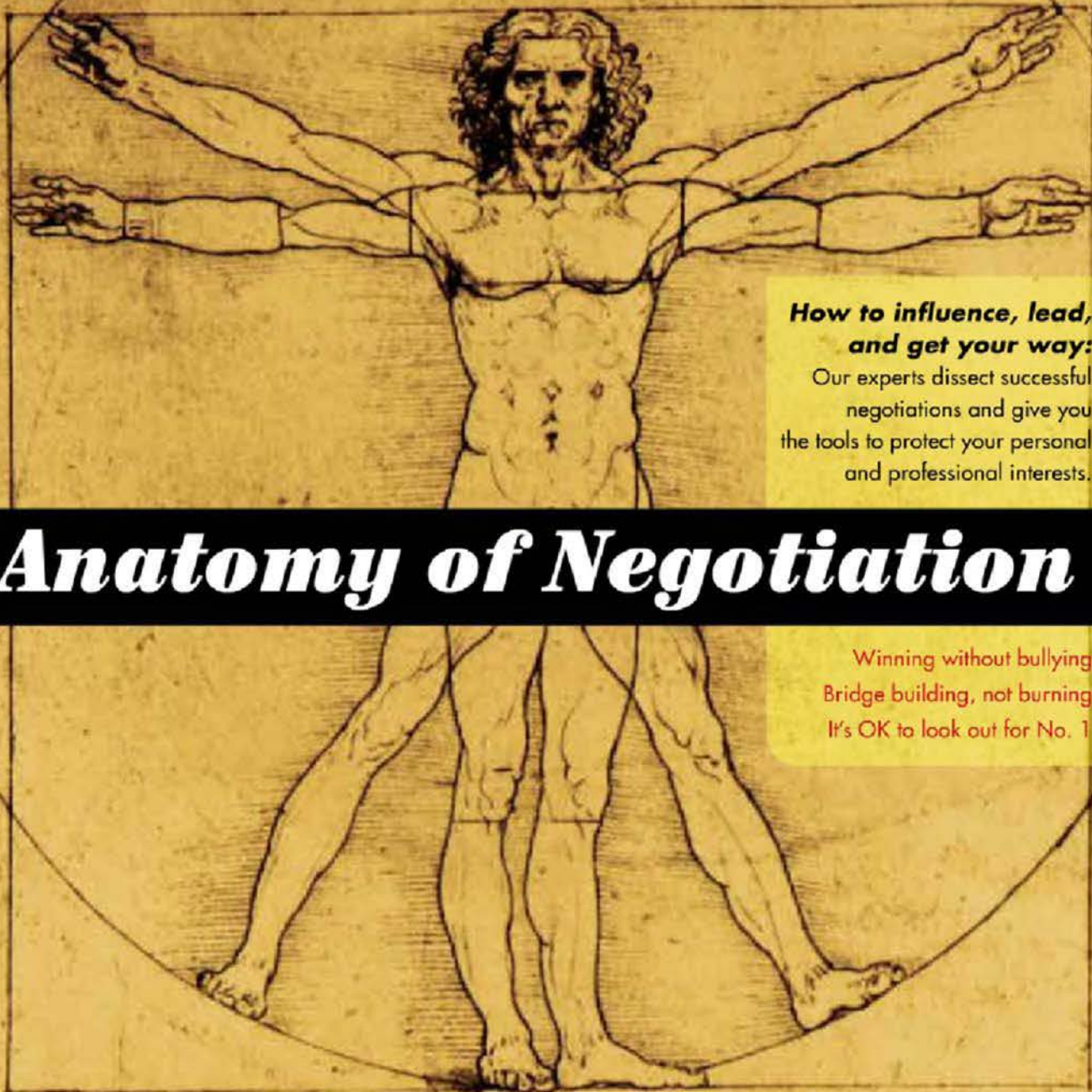


MARCH 2014
golfcourseindustry.com

GOLF COURSE INDUSTRY

SERVING THE BUSINESS
OF GOLF COURSE MANAGEMENT



**How to influence, lead,
and get your way:**

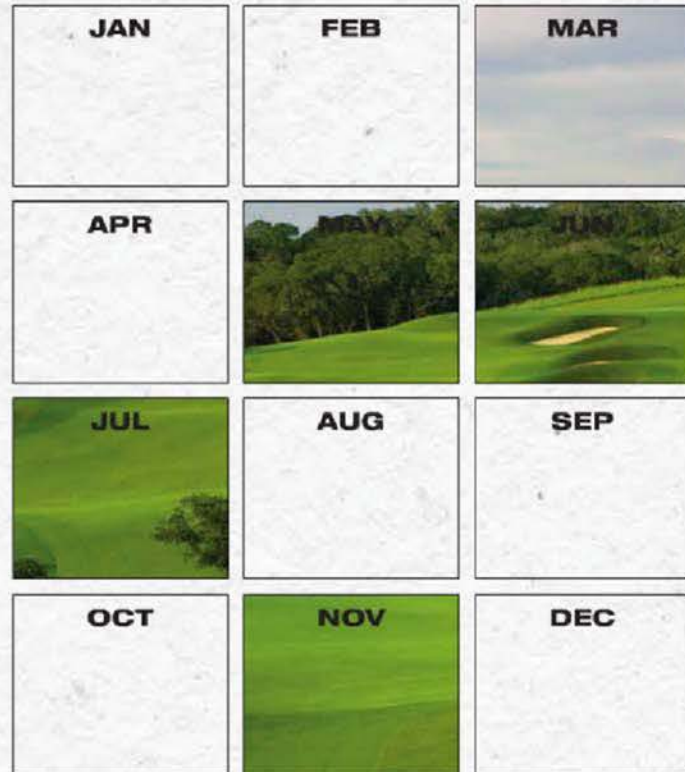
Our experts dissect successful negotiations and give you the tools to protect your personal and professional interests.

Anatomy of Negotiation

Winning without bullying
Bridge building, not burning
It's OK to look out for No. 1

Daconil Action™ fungicide combines the power of Daconil® with a revolutionary turf protein booster that helps turf activate its own natural production of PR proteins. The result is turf that is stronger, healthier, and better able to defend itself. When rotated with Secure, your turf gets complete inside-out protection from disease. To see what superintendents are saying about the turf-boosting power of Daconil Action, visit customer stories on GreenCastOnline.com/DaconilAction.

If you're not rotating two fungicides year-round, you're leaving a gap in your turf's defense.



Daconil Action rotated with a traditional fungicide

multi-site contact you're leaving holes



Daconil Action rotated with Secure fungicide

For more information on Daconil Action and Secure fungicides as part of a complete agronomic program, visit GreenCastOnline.com/programs.

Secure® fungicide is the next-generation, multi-site contact and the first in the golf market in over 45 years. Secure is the ideal rotation partner with Daconil Action™ fungicide for season-long protection against the toughest turf diseases, including fungicide resistant dollar spot. Secure is the only registered fungicide for turf in FRAC group 29, with no known resistance and low risk of future resistance. Now, your systemic fungicide no longer replaces your contact applications but rather complements for inside-out protection.

syngenta®

TM



Official
Golf Course
Equipment
Supplier



It's why John Deere is chosen to cut the most famous green in golf.

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

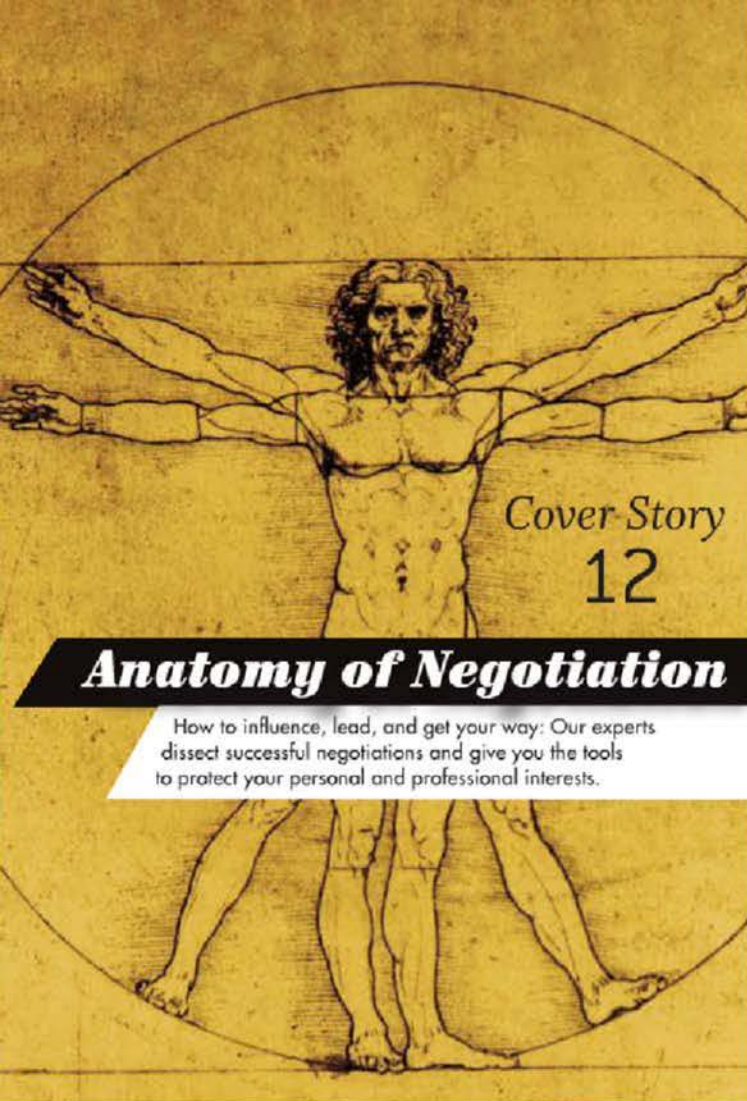


Trusted by the best courses on Earth.



Hole #17, Stadium Course at TPC® Sawgrass





Anatomy of Negotiation

How to influence, lead, and get your way: Our experts dissect successful negotiations and give you the tools to protect your personal and professional interests.

FEATURES

- Cover Story*
12 ANATOMY OF NEGOTIATION
 How to influence, lead, and get your way: Our experts dissect successful negotiation strategies to protect your personal and professional interests.
- Plant Health*
28 2014 WEED ROUND UP
 A region-by-region breakdown of the weeds to keep an eye on this season.
- Disease Management*
36 GET OUT, DAMN SPOT!
 Record lows this winter won't force superintendents to alter their standard dollar spot programs.

- Real Science*
42 DOLLAR SPOT – AN APPROPRIATE NAME FOR A COSTLY NUISANCE DISEASE
 Dollar spot is expensive to control on fairways, but a little tolerance for this nuisance disease can result in significant cost savings at your golf facility.
- Water Management*
46 LOWERING THE CHEMICAL BOOM
 How aquatic dyes are helping superintendents manage and manicure their water.

- Case Study*
52 FLUSH WITH FEATURES
 How an environmentally friendly restroom helped solve some toilet trouble at The Flying Horse Club.



IN THIS ISSUE

COLUMNS

- 10 OUTSIDE THE ROPES**
 Tim Moraghan: Going at things ass backwards
- 26 GAME PLAN**
 Henry DeLozier: Better to be smart than lucky
- 34 JOHNNY TURF NERD**
 John Kaminski: No "fun" in funding
- 50 IRRIGATION ISSUES**
 Brian Vinchesi: GIS recap
- 60 PARTING SHOTS**
 Pat Jones: The Trouble with FOMOs

DEPARTMENTS

- 6 TEEING OFF:** Tell your story
- 8 THE WHITEBOARD**
- 54 TRAVELS WITH TERRY:**
 Equipment ideas
- 59 CLASSIFIEDS**
- 59 AD INDEX**



8

52



No Boundaries

Whether you own a single cart or manage an entire fleet, battery performance matters. And when it comes to deep-cycle batteries, no one goes to the extremes of performance like Trojan. Compared to traditional 8-volt batteries, the **Ranger™ 160** increases travel time by 35% between charges, while the **Traveler™ 8V** delivers over 40% longer life.

We'll keep breaking the boundaries. Where you go after that is up to you.



800-423-6569

| trojanbattery.com

TELL YOUR STORY

Three years ago, we weren't specifically looking to start our own podcasting network – we just had some great interviews from turf experts that didn't quite fit into print. Our multimedia page was the perfect place to showcase those stories, though, and people listened.

From those beginnings, we started the Superintendent Radio Network (SRN) with a focus on education. We wanted to share tips in short, accessible clips a superintendent could listen to on the fly, and even share with crew members. Podcasts are a great media for going in-depth on smaller topics. For example, we teamed up with Erik Sides to tackle the details of frequency of clip (check it out at bit.ly/1yKml2), or picked up the top tips of golf cart maintenance from Randal Crook at Club Car (look here at bit.ly/1y5cEW). Both have plenty of useful info for the start of the season.

But while covering those issues, we also ended up collecting plenty of great stories from around the golf industry. Some of my favorite moments come from interviews with superintendents who took on tough weather or an even bigger challenge. Don't get me wrong, I'm all about seeing your stories in print, but there's just something about hearing it told first-person by the superintendent that makes it even more powerful. Here are a few of my favorite stories direct from you in the last few years:

- Josh Heptig, superintendent at San

Luis Obispo's County Parks Golf Course, used old equipment to build a compost tea system and applied for grants to build one of the first zero-waste golf courses in the U.S. He shares how he did it, and some tips for saving money and building environmentally friendly programs. Look for it at bit.ly/1cSclKj.

- With the Players' Tournament coming up, superintendent Tom Vlach had to face down severe weather that could've undone all his team's hard work at TPC Sawgrass. He talks about how they got proactive to minimize the damage, including handling the media, at bit.ly/1nizOih.

- My favorite story from last year was part of our October "TurfBuds" cover story, when I heard the incredible story of how Bob Kohlstedt dove into

the middle of a flood to save his dog, Gus, on the course. A superintendent does some amazing things on the job, but most of the time it doesn't include something as heroic as risking his life. Listen in at bit.ly/1fr01nP.

We've begun our third year of SRN, and I'm looking forward to gathering even more powerful personal stories from superintendents. Education is always a major focus of what we bring to the podcast, but hearing about what you're doing on turf's frontline makes what we do even more important. Check out these stories, and share some of your own in the upcoming season. GCI



Kyle Brown
Associate Editor



SUPERINTENDENT
R·A·D·I·O N·E·T·W·O·R·K

Subscribing to SRN is
easy and free. Head to
bit.ly/1frSHT and listen in!

GOLF COURSE INDUSTRY

Serving the Business of Golf Course Management

Vol. 26 No. 3

GIE Media, Inc.

4020 Kinross Lakes Pkwy, 2nd floor

Richfield, OH 44286

Phone: 800-456-0707

Fax: 330-659-0823

EDITORIAL

Pat Jones
Publisher/Editorial director
pjones@gie.net

William Olmstead
Assistant Editor
wolmstead@gie.net

Mike Zawacki
Editor
mzawacki@gie.net

Bill Brown
Contributing editor

Kyle Brown
Associate Editor
kbrown@gie.net

Bruce Williams
Senior contributing editor

SALES

Russell Warner
National account manager
216-236-5802

Dave Szy
Account Manager
216-236-5764

Traci Mueller
Account Manager
216-236-5895

Bonnie Velikonja
Classified sales
330-523-5322

Ted Schuld
Account manager
216-236-5937

Maria Miller
Conferences manager
330-523-5373

ADVERTISING/PRODUCTION INQUIRIES

Jodi Shipley jshipley@gie.net, 216-236-5867

GRAPHICS / PRODUCTION

Andrea Vagas, Creative director
Helen Duerr, Production director

CORPORATE

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

Golf Course Industry is a member of:

Golf Course Superintendents

Association of America

National Golf Foundation

Golf Course Builders Association of America

The Irrigation Association

Responsible Industry for a Sound Environment



SePRO Corporation—the leader in aquatic restoration products—has helped golf course superintendents manage and maintain one of the most important aspects of their golf course—water.

Managing golf course ponds and other water features takes the expertise and the right products to control unwanted aquatic plants and algae growth, and maintain the highest water quality possible. SePRO's Guaranteed Aquatic Solutions* program offers an economical package of solutions to effectively manage your ponds for the entire season.

Contact your SePRO Technical Specialist or call **1-800-419-7779** for more information.



SePRO clearly has the solutions to manage your water features.



Sonar® Aquatic Herbicide, Captain® XTR Algaecide and SeClear® Algaecide & Water Quality Enhancer are just 3 of the innovative solutions available from SePRO Corporation. Visit sepro.com

SePRO Corporation Carmel, IN 46032



Always read and follow label directions. *Program not available in Florida or Hawaii. Ask your SePRO Technical Specialist for more information. Sonar, Captain and SeClear are trademarks of SePRO Corporation. ©Copyright 2014 SePRO Corporation.

Never too cold

Temperatures this winter may have hit unprecedented lows throughout the country, but that doesn't mean the work flow needed to freeze up.

Jason Adams, superintendent at Blue Hill Country Club in Canton, Mass., reports that during a typical winter his staff is hard at work removing trees and underbrush throughout the course. Even though they accomplished a tremendous amount, this year's snowfall amounts and extreme cold weather forced them inside at times.

Adams and his crew took advantage of those times by helping the mechanic in his preventative maintenance for the upcoming season, organizing the shop areas to be even more efficient in our daily operations, create pesticide and fertilizer programs, attend agronomic training seminars, refurbish golf course accessories and build budgets just to name a few.

One thing they had been doing is rebuilding old sprinkler parts and testing them.

"You might ask how we can test them without water or water pressure, right?" says Adams, "Assistant superintendent Alex Martin created a sprinkler tester from a prototype idea I had created many years ago as an assistant superintendent. By using some PVC parts, the shop com



Check out Jason Adam's turf maintenance blog by entering bit.ly/MLnSEK into your browser.



It's never too cold to test old sprinkler parts. Here's the testing device assistant superintendent Alex Martin developed.

pressor and a 24-volt transformer we are able to simulate water pressure and electrical signals just like in the field. [Martin] is able to rebuild and test bottom valves, pilot valves and even electric solenoids in the shop. This helps us prepare for the irrigation start-up in the spring and allows us to save money on irrigation inventory."

Say CHEESE!

GCI hit the ground running at the 2014 Golf Industry Show and we took a lot of pictures documenting the entire show. We've posted a few images here on Whiteboard, but you really need to check out the app for an exclusive digital slide show.



View tons of images via our issue app. You just might catch a glimpse of yourself.

From THE FEED



Augusta National's famous Eisenhower Tree, a 100 year old loblolly pine standing at about 65 feet, was cut down in February after suffering severe damage from the ice storms that plagued the southern United States. The course landmark towered over the fairway on the 17th hole and its removal will definitely change the view at this year's Masters Tournament. Check out what industry professionals had to say about the loss of the iconic pine.



Ron Whitten @RonWhittenGD

If a tree falls in the forest, does it make a sound? It does if the tree is the Eisenhower Pine and the forest is Augusta National GC



Luke Elvy @elvisgolf

Ironic that Bubba Watson's win at Riviera is being overshadowed by a tree on the last course he won at. #EisenhowerTree



Augusta.com @AUG_Masters

People are asking me if pieces of Ike's Tree will be sold to the public. I am pretty confident the answer is no. #Masters



Jason Sobel @JasonSobelGC

Adam Scott on the **Eisenhower Tree**: "Anything that lives will eventually die, I guess." Rory Mclroy: "It's a tree." Such sentimentalists.



Rick Reilly @ReillyRick

Will #Augusta replace the **Eisenhower tree**? R you nuts? In 2012, they replaced an entire 1000-sq-ft bathroom in 1 day.



Ted Bishop @tedbishop38pga

@TigerWoods says Honda is the start of new season. Says he won't miss **Eisenhower tree**! #PGATOUR @thepgaofAmerica @PGA_com @MattAdamsFoL



Join the conversation
on Twitter @GCIMagazine!



Check out the app version of this story for an interactive slide show.

2014 Tweet Up & Social Media Awards

Social media brought golf superintendents together offline for the third year running at the Aquatrols booth for this year's Tweetup. Turf pros crowded to talk about their work online as well as enjoy a few cold drinks and music.

We also named this year's winners of our Super Savvy Social Media Awards, a group of superintendents and academics who use social media to improve the game and each other's lives. Here are our favorites for this year. Be sure to check out the app version of this issue to watch videos from some of our winners who couldn't make it to the show.



Pat with "Best Use of Twitter" recipient Justin VanLanduit.

John Kaminski Award for Leadership

Micah Woods
Asian Turfgrass Center
Wanchai, Hong Kong

Overall Social Media Program

Nick Christians
Iowa State University
Ames, Iowa

Adam Ikamas
MIGCSA
Benzonia, Michigan

Best Use of Facebook

Gary Grigg, CGCS MG
Idaho/Florida

Jason Chennault
Turfgrass World
Moscow, Russia

Best Blog

Jason Haines
Pender Harbour Golf Club
Madeira Park, British Columbia

Jason VanBuskirk
Stow Acres Country Club
Stow, Massachusetts

Tom Vlach
TPC Sawgrass
Ponte Vedra Beach, Florida

Best Use of Twitter

Randy Samoff
Champions Golf Club
Houston, Texas

Ellie Parry
TurfJobs
Loughborough, United Kingdom

Justin VanLanduit
Briarwood Country Club
Deerfield, Illinois

Cale Bigelow
Purdue University
West Lafayette, Indiana

Best Multimedia

Adam Garr
Plum Hollow Country Club
Southfield, Michigan

Rick Brandenburg
North Carolina State University
Raleigh, North Carolina



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

GOING AT THINGS ASS BACKWARDS

Tim Moraghan has the answers to fix golf – but will anyone listen?

Have you been in the golf business long enough to remember the Basakwerd putter? Introduced in the 1980s, it was constructed with the shaft entering at the far end of the club head (what we think of as the toe), and was touted as a solution to all our putting problems. But like so many promised miracle cures, it didn't help on the greens and didn't hang around very long.

I was reminded of this aptly named tool on the heels of the three golf-industry gatherings that kicked off 2014: the PGA Merchandise Show, the Golf Industry Show, and the USGA Annual Meeting. At all three, experts talked at length about the problems besetting golf and proposed solutions. In my opinion, most of the special programs, initiatives, best practices, and miracle cures are attacking the problem just the way the Basakwerd putter did: ass backwards.

There are better, and simpler, ways to tackle the challenges.

We should be careful about grasping at gimmicks. While I understand the concept behind 15-inch holes, oversized equipment, bunker bumpers, and kick ball on the course, these are unlikely to have a long-term effect on the game we know and love. Maybe some of those deviations from "real golf" will introduce people to the game and make them "real golfers." Maybe.

Wacky initiatives may get people out to the course once, but what does it take to truly hook people? Non-golfers are intimidated by the game because it's hard and expensive, and they don't want to embarrass themselves (particularly not at \$150 a go). Can you blame them?

What about attracting kids? I agree engaging youngsters is a good reason to modify equipment a little bit, just the way basketball, hockey, soccer, and other sports do. But, eventually kids have to grow into the equipment and need to play by the rules.

Before we go too far afield, let's take another look at the key issues we're dealing with and see if they can be altered just a little bit to make golf more welcoming. (I'll bet many of

of – the nuances of course set-up anyway, why penalize the majority to boost the egos of a few? (Save your tough pin positions for the club championship.)

We also should encourage nine-hole rounds. They get people around faster and are, not surprisingly, more fun. And for most people, enough.

As the experts most concerned with agronomy, how do some popular initiatives affect us?

“Since most average golfers can't appreciate – and can't take advantage of – the nuances of course set-up anyway, why penalize the majority to boost the egos of a few?”

these ideas will be applauded by the current crop of “real golfers,” too.)

Start with pace of play. Do we really need science to help get people around in four hours or less? Do you know what happens when beginners and average players are rushed? They make mistakes, lose balls, whiff, get frustrated, and, you can bet, start disengaging from the game.

And let's not get into the example that Tour players set on TV week after week. Until they are penalized for their excruciatingly slow routines, the rest of us have no reason to speed up ours.

Fixing pace of play is simple, and it's an area where those of us who maintain golf courses can take the lead. On busy days, set up the golf course a little easier. Point tee markers down the middle, trim back the rough, slow down the greens, put holes in accessible places, you get the idea. Since most average golfers can't appreciate – and can't take advantage

of – the nuances of course set-up anyway, why penalize the majority to boost the egos of a few? Reducing water, pesticides, and fertility is good for the environment, no question. But if these reductions negatively impact course conditioning, people may not want to play at a particular club or resort.

Dues-paying members demand good conditions. How dare so-called industry “experts” tell our members that they can't have what they want and are paying for. How dare they tell a superintendent not to do his job.

Native areas on a course are attractive and good for the environment. But they still require maintenance and golfers are still going to hit \$5 balls into them. Which leads to time spent looking for those balls, which leads to more frustration. Even with GPS tracking on golf carts and maintenance equipment that determines where native areas should be placed, golfers are still going to walk into them. So why have native areas at all?

(continued on page 58)

TURFONOMICS™

Chapter 2

TIME ISN'T MONEY. PRODUCTIVITY IS.

The challenge today isn't simply to maintain a beautiful golf course. It's to maintain it on a budget. To succeed, you need to work smarter, more efficiently and more economically than ever before.

It's simple Turfonomics.



toro.com/3550

TOP LINE THINKING

Now you can get the turf-friendly, light footprint you need to maintain tour-quality fairways and green surrounds, without resorting to smaller, less productive mowers.

The Toro® Reelmaster® 3550-D is not only the industry's lightest fairway mower, it's 15-20% lighter than comparably equipped machines. In addition, its five 18-inch wide cutting units provide exceptional ground-following capabilities for an outstanding after-cut appearance, even on undulating fairways.

BOTTOM LINE THINKING

The Reelmaster 3550-D is light in weight, but heavy in cost-saving productivity.

Compared to a standard triplex greens mower, it covers nearly twice as much ground (40% wider and 40% faster) without giving up the quality-of-cut you expect.

Plus it's 10-20% more fuel-efficient than competitive models. That means more than just reduced fuel costs. It also means you can carry less fuel compared to other machines. Less fuel means less weight, and less weight means less stress on your turf.

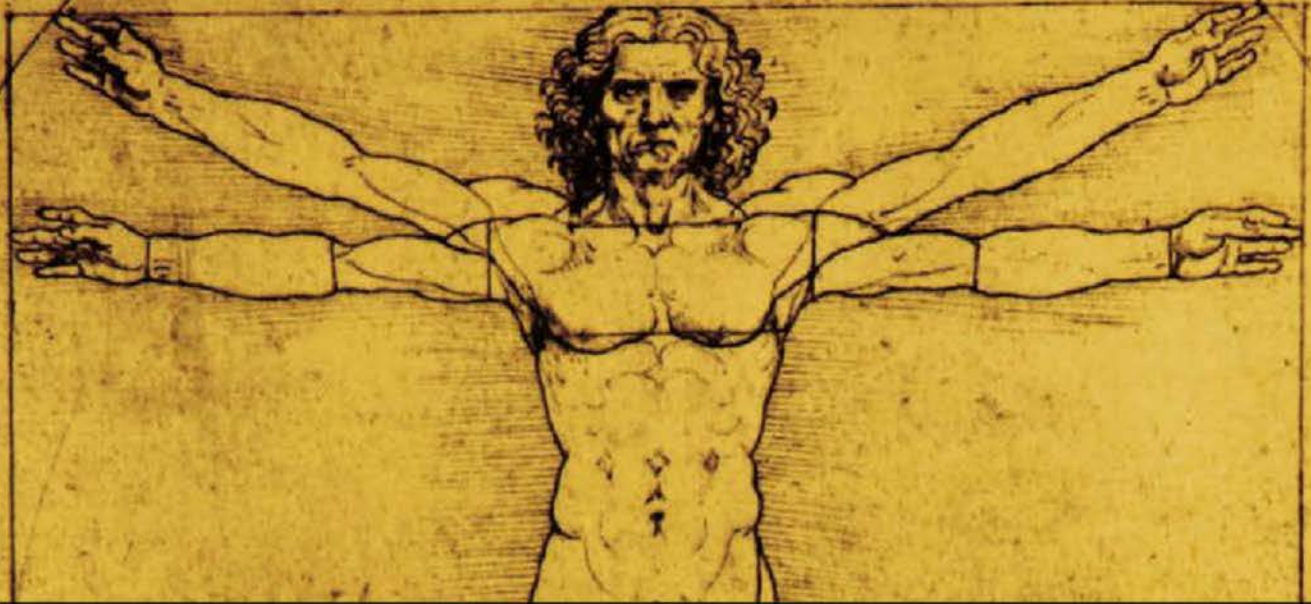
REAL WORLD THINKING

We understand the challenges you face every day. That's why we make innovative equipment that delivers the best overall course conditions combined with budget-friendly total cost of ownership. Then we back every product we build with our industry-leading support network. No one delivers more value than Toro.

It's simple Turfonomics.

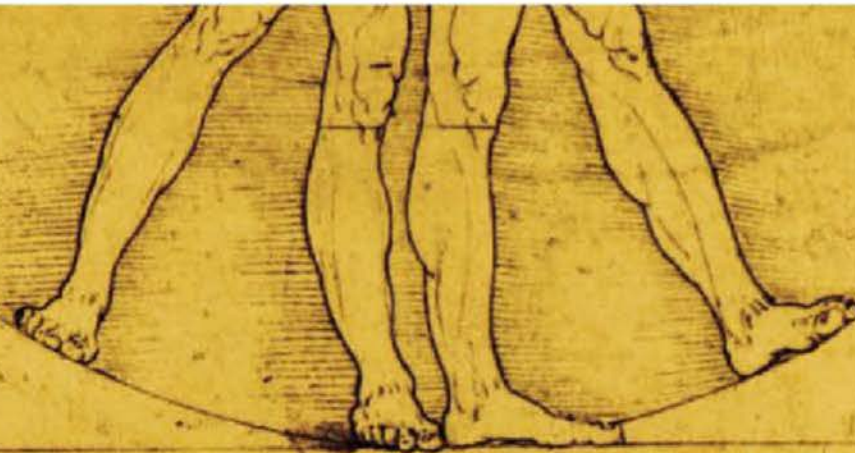


Reelmaster® 3550-D



Anatomy of Negotiation

How to influence, lead, and get your way: Our experts dissect successful negotiation strategies to protect your personal and professional interests.



by Frans Jager

Getting results

Negotiating is part of everyone's life. Only thieves – if they don't get apprehended – get away with getting what they want without negotiating: they just take what they want.

If you are a golf course superintendent, you have a lot of negotiating to do, because you have to interact with a large number of people in different constituencies; and none of these people will always, automatically do what you want to get done. Some might say: everything is a struggle for the superintendent. Maybe that is how it is perceived; certainly the superintendent knows that you don't always get what you want and you certainly do not get what you want without negotiation. No denying that it is a tough job to be golf course superintendent. Almost like being President of the United States: you are being held responsible for anything that happens under your watch and yet, by yourself, you can only do so much and influence the outcome only to a limited extent. You need a lot of cooperation from the weather and from a lot of people, who each have a mind of their own, to arrive at the desired result.

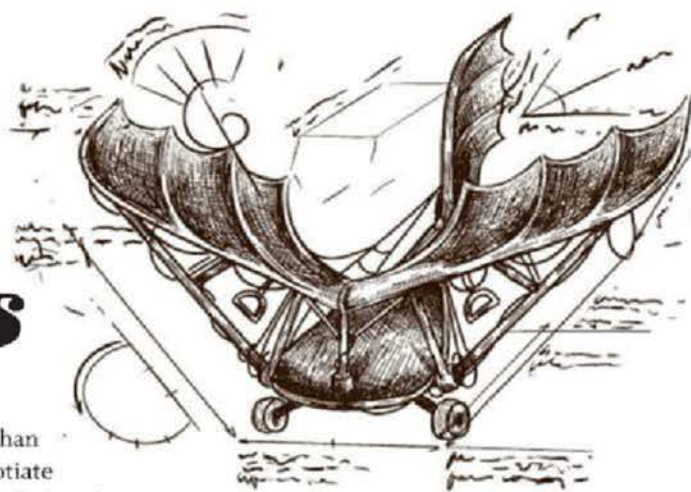
When it comes to negotiation, people automatically think about a buyer/seller relationship. The old fashioned horse trading or deal making. So, the perception is that it is in the procurement process that the superintendent really needs to bring his/her negotiating skills to bear. But is it? The procurement part of the job may, in fact, be one of the simpler ones to negotiate.

Yes, there are situations in which some buying savvy comes in nicely. But not very often. Just like in our personal lives, the buying routine has much more to do with making sure that you get exactly what you want than with getting something at a bottom bargain price. We pride ourselves when we make a "super-good" deal, but if we are honest with ourselves, what did we

really negotiate? More often than not we let the supplier negotiate with himself, knowing full well that if we wait a little longer, the product we want will go on sale. Getting a good deal, even the best deal, is probably more a matter of timing than a matter of negotiation.

The superintendent is in a pretty good buying position. If you are an industry supplier, it is your business to know every superintendent in your market. As superintendent, you are easily identified and

easily located, which means every supplier in the business will come to you and will want to work with you. You can hardly ask for a better competitive scenario. The hardest part of the procurement job of the superintendent is therefore not the negotiation of the best price; it is in separating the chaff from the kernels and determine



BY THE NUMBERS

Interpersonal relations

We queried superintendents about their purchasing philosophies and relationships with suppliers and distributors. Here's how they weighed in:

Number of local/regional suppliers/ reps you purchase products from annually

5

Number of turf-chemical suppliers you purchase from

3

Top 5 criticism of suppliers in your area

1. Only contact me when they need to sell something
2. I feel pressure to do early order
3. Call too often, pester me
4. I feel pressure to buy products I don't need or more than I need
5. (tied) They don't offer agronomic support
5. (tied) They don't understand my needs

Changed who you purchase chemicals/fertilizers from in recent years



Do you have a primary turf-chemical supplier?



Percent of turf-chemical supply purchased from this primary supplier **75%**

Source: GCI research

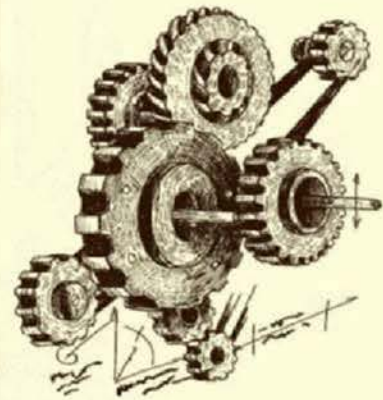
who the suppliers are that have your best interest at heart, that have what it takes to make you and your business successful and are willing to serve you day and night when the chips are down.

The procurement process for the superintendent, like for any other business buyer, has a strategic and a transactional component. The strategic component will consist of determining how many suppliers you want to have involved in your business, who they are and what you expect from them. I have been a buyer long enough and often enough to know that picking the right supply partner addresses most of your challenges. If you pick the right

Rules of engagement

For a superintendent to "negotiate for results" following rules need to be observed:

- Decide what is crucially important (imperative) to you in the procurement process
- Make sure that these imperatives actually serve the business, not you personally
- Let your suppliers know what your imperatives are and invite them to compete on that basis
- Award your business only to suppliers who are able and willing to meet your imperatives
- Hold your suppliers accountable for meeting your imperatives in full, all the time
- Don't deal with any more suppliers than you need to get all of your imperatives met, in every aspect of your operation, all the time
- There is no room in a productive, lasting supply relationship for any dishonesty, half-truths, white lies, or renegeing on a commitment



- The best supply relationship is a two-way street that respects the legitimate interests, including the right to make a profit, of the seller as well as the buyer
- Make sure whatever deal or commitment you make cannot be overruled by a higher authority at either side of the transaction

© MANU_HALF-TUBE | ISTOCK.COM

You Don't Have to Be Green to be Clean...



Otterbine AERATING FOUNTAINS

OFFERING BOTH FUNCTION AND BEAUTY these surface spray aerators are available in multiple patterns, engineered to provide results, and are supported by a 5-year warranty and *Pattern Guarantee*. Used worldwide, Otterbine's Aerating Fountains improve and maintain water quality in ponds and lakes by controlling algae and eliminating odors while providing attractive fountain-like displays.

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



Aerating Fountains
by Otterbine®



You can learn a lot with your head in the dirt.

Our best-in-class products combined with the WinField Insights™ Tech Kit and WinField™ Academy classes can help you look deeper and plan smarter.



VISIT WINFIELD.COM/GOLFINSIGHTS ON YOUR
MOBILE BROWSER, THEN PLACE YOUR PHONE HERE



WINFIELD™

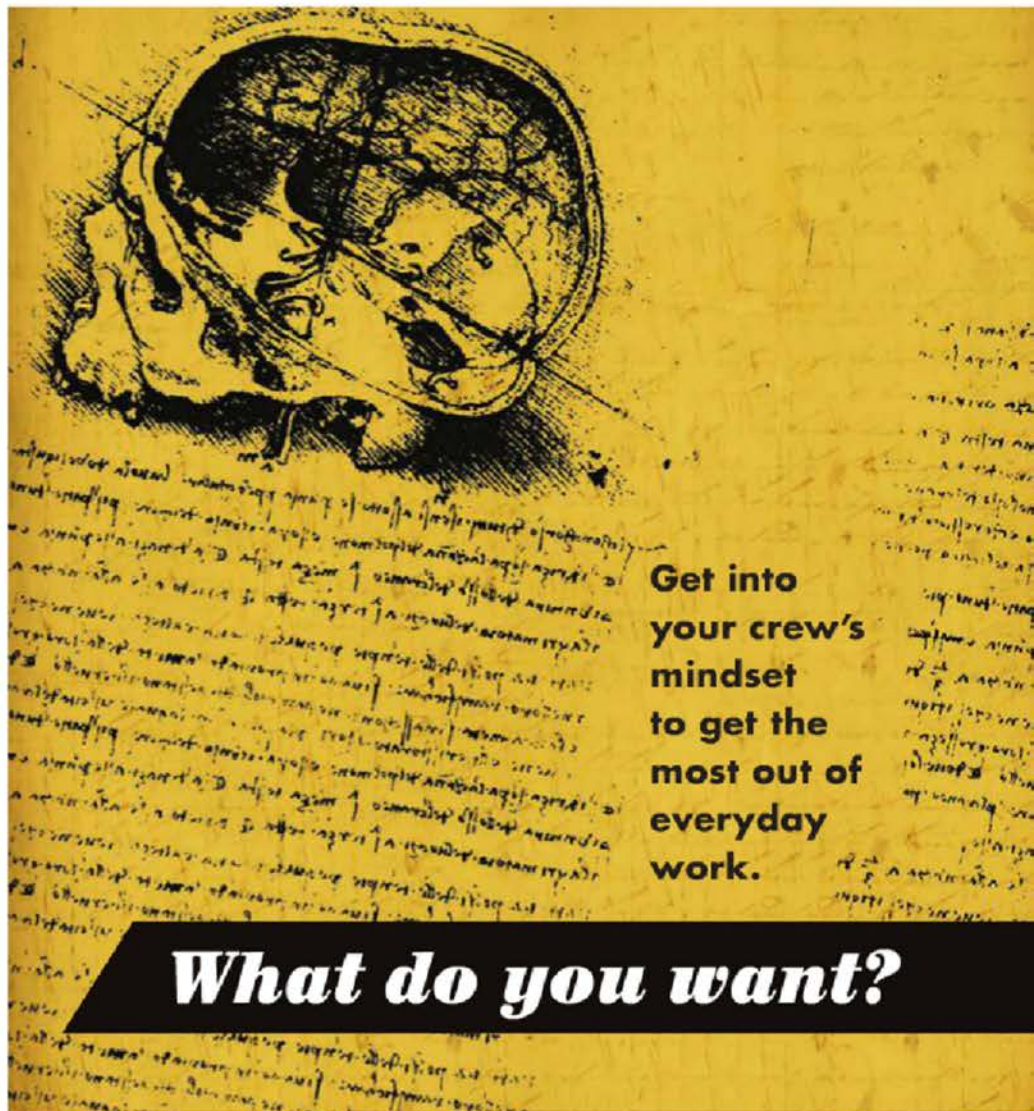
WinField is a trademark of Winfield Solutions, LLC. ©2013 Winfield Solutions, LLC.

partner, you don't have to worry about getting a fair price and you can count on the fact that he will be there for you when it counts most. The strategic component of the procurement process will determine the success or failure of the supply side of your business. You would not want to pick a supply partner who is not willing or able to keep you competitive. You would not want to pick a supply partner you can't count on to come through when it matters most even if he puts the lowest price on the table. You would not want to pick a supply partner who will quickly let you know that he has more important customers than you to take care of.

For the superintendent, the key to successful procurement is in articulating in detail what it is that you expect from your supplier and then sticking to your guns, holding your supplier accountable for one hundred percent fulfillment. I call it "negotiating for results." Negotiating the price may very well be the easiest and least important part of this process. Nowadays, with the internet and the consumer blogs, there is so much price transparency that you have to be lazy or dumb not to have a pretty good feel for where your cost will be shaking out. And it is questionable how well served you are going to be when setting out to find where the bottom is. You may be wasting a lot of time and alienate the supplier who stands ready to service your true needs. "Negotiating for results" cannot be measured by a single price point; only by achieving a competitive price over the long haul with a supplier who meets all of your expectations, all the time.

The transactional component just deals with the detail, including price, payment terms, discounts, rebates, delivery conditions etc. The stuff that shows up on the P/O and the invoice. The transactional component should be routine, emanating from the agreement or understanding the superintendent has reached with his/her supplier and can typically be delegated to an administrative assistant. **GCI**

Frans Jager is principal of Castnet Corp, a business consultant for the green industry and an executive coach. He can be reached at www.castnetcorp.net.



**Get into
your crew's
mindset
to get the
most out of
everyday
work.**

What do you want?

By Kyle Brown

When you're trying to influence an individual or a group to do something that is in both of your best interests, certainly there is negotiating at work.

But there's a certain amount of finesse to get people excited about doing their job well, says Amy Wallis, professor of practice in organizational behavior at the School of Business at Wake Forest University.

"As a supervisor, you can say to someone, 'You have to do this because I said so,' and they'll do it because you have a power dynamic," Wallis says. "But if you want to motivate them to do it well, you've got to think about 'How can I make this a win-win? How can I make this something that the person will be motivated to do well and see the value in?' And that becomes a negotiation. But even further, when you are talking with your employees about things that need to be done, how to get them done as efficiently as possible and how that will benefit them and the organization, you're negotiating with them to figure out how they're going to create the best possible outcome."

WHAT CAN USING NEGOTIATIONS DO TO MOTIVATE YOUR CREW? It can bring peo-



STRENGTH FROM THE GROUND UP

Nothing offers more plant health benefits than DISARM® fungicide. Xylem Pro Technology™ penetrates the leaf tissue fast to stop and prevent diseases. The end result is a greater number of stronger, longer roots and a healthier course overall.

Disarm®

Premium strobilurin protection

ple's highest potential to the workplace. Fundamentally, when you tell someone exactly what to do and how to do it, that old-fashioned model of supervision – here is your job, do it exactly this way – what you get is exactly what you're asking for and typically nothing more and hopefully nothing less. But if you can create a situation where people feel as if you are collaborating, figuring out how to create the best possible solution, then what you get is people who are willing to share their ideas with you, who might actually have a suggestion for how to do it even better than you might've come up with.

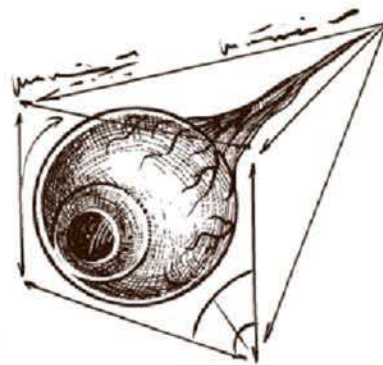
So the old-school model of managing people that says "I'm the boss, I'll tell you what to do and you do it," has the assumption underneath it that "I'm the boss, I know exactly how to do every job the perfectly right way." Rather than, "I know

"Don't kid yourself into thinking that you can treat your employees like employees for a year and then when it comes time to negotiate salary for example that suddenly they're going to be open to negotiating." – **Amy Wallis**

how to do your job, but I respect that you also know how to do your job and you may bring knowledge or skills or inside information to that job that I may not have access to." And creating an environment where people feel comfortable negotiating creates an environment where there is openness to having that kind of conversation. It's creating the best possible result rather than just creating the result you wanted.

HOW CAN YOU WORK NEGOTIATING INTO YOUR MANAGEMENT STYLE?

A lot of it is about asking questions and either asking questions of the individual or simply engaging in a questioning mindset yourself. Asking yourself what motivates these folks? What is it they're trying to get out of this job or this situation? What are the benefits to them of doing what I'm asking them to do?



© MAN, HALF-TURE 11STOCK.COM

We have the national landscape covered.

Target Specialty Products is one of the largest wholesale distribution networks, coast to coast. We provide specialty agricultural and pest control chemicals to any business, anywhere in the U.S.,



large or small, with same day/next day service. Our experienced and highly trained staff can help you to better serve your customers. **Contact us today.**

Fumigation | Golf Courses | Landscape | Nursery | Pest Control | Vector | Vegetation Management



FORE! FIRE ANTS

Fire ants are a big problem on golf courses.
Extinguish[®] Plus Fire Ant Bait is a big solution.

Extinguish[®] Plus Fire Ant Bait combines the killing speed of an adulticide and the long-lasting control of an insect growth regulator (IGR). This two way action destroys visible and hidden fire ant colonies.

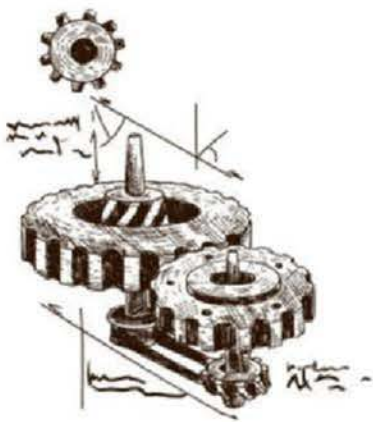
- Long-lasting
- Low cost per acre
- Sterilizes the queen and kills problem worker ants



Extinguish
PLUS

To learn more visit www.extinguishfireants.com/turf,
call 800-248-7763 or contact your distributor.

Always read and follow label directions. Extinguish is registered trademark of Wellmark International. ©2014 Wellmark International.



"A lot of it is about asking questions and either asking questions of the individual or simply engaging in a questioning mindset yourself."
 — Amy Wallis

And if you can start to think about things that way, then you're a lot more likely to be able to offer someone a solution that excites them as much as it excites you.

You can ask them in some situations, "Help me understand what it is what you're trying to accomplish here. Help me understand what you value and what's important to you." But sometimes it's also about simply observing people and taking

a mindset of seeking to understand them and their goals and their desires and then working within that. The examples we use are often pretty simple. If I'm assuming that because I like chocolate cake you must like chocolate cake, and I offer you chocolate cake as a reward for something, you might like lemon pie. And if I'm not paying attention to that, it's harder for me to offer you something that has value to you.

A LOT OF SUPERINTENDENTS HAVE TRIED MOTIVATING THEIR CREWS USING MONEY, BUT THERE'S ONLY SO MUCH THEY CAN OFFER THERE. I think that most people would love to make more money. There's very few people who would say, "No, you're paying me just right, there's no reason for you to give me any more than what I'm getting." So that's a given. And certainly, being able to offer someone money that represents the value they add and that they offer to the organization is important. However, organizations do struggle with reaching a point where there just isn't extra money lying around and so the question is "What do we have that has value?" And in many cases, that is simple. It's things like offering recognition. It's things like creating an environment where people acknowledge what someone else has accomplished and

Golf Course Renovation Testing

Start your renovation with testing from
Turf Diagnostics & Design
"managing the elements through science"

Rootzone Evaluations

- document current course conditions
- demonstrate turf management successes
- define problem areas
- reveal issues with drainage, contamination, soil layering, organic build-up
- establish soil removal depths
- determine proper replacement soils

Sand & Soil Testing

- programs for greens, tees, bunkers and fairways
- evaluate new materials before you buy
- QC programs during construction

Turf Diagnostics & Design's services provide sound scientific data to help guide your maintenance & renovation efforts.

Contact us now at: www.turfdiag.com
 Phone: 913-723-3700 Email: turfdiag@turfdiag.com

NEPTUNE'S HARVEST TURF FORMULA (2-0-2) ZERO PHOSPHORUS

- New product designed for states with zero Phosphorus laws
- High energy mix, shows greening in days
- Increases microbial activity in soil
- Produces strong, healthy, deep roots
- Improves quality of grass and soil
- Safe for the environment

Ingredients:
 Hydrolyzed Fish,
 Molasses,
 Seaweed, Humate,
 and Yucca Extract.
 Available in 1,
 5, 55, and 275
 gallon sizes.

Conventionally
 Grown

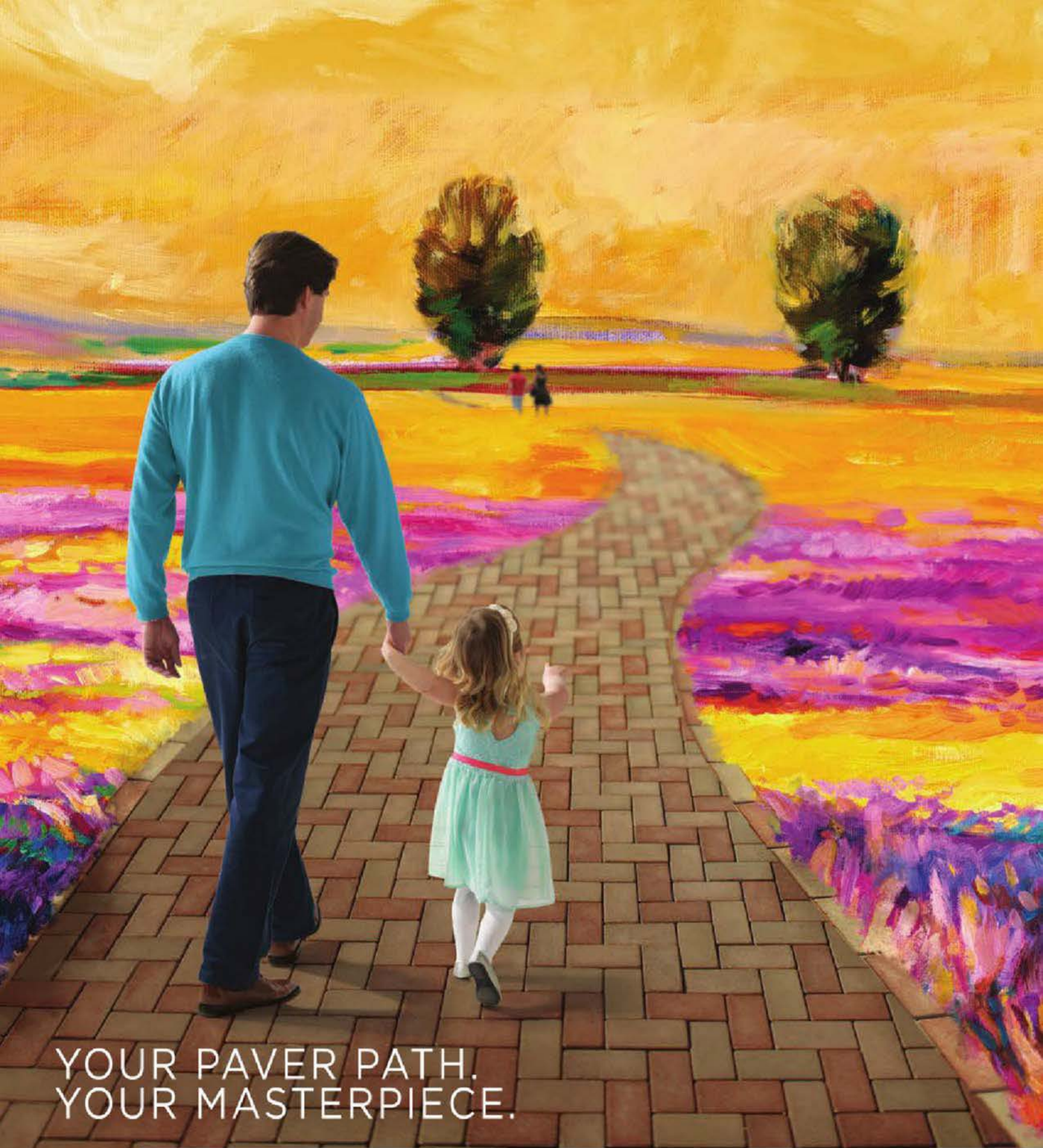
Grown with Neptune's
 Turf Formula



Call for a **FREE SAMPLE** to test for yourself.
(800) 259-4769

www.neptunesharvest.com.

Neptune's Harvest, div. of Ocean Crest Seafoods,
 88 Commercial St., Gloucester, MA 01930



YOUR PAVER PATH. YOUR MASTERPIECE.

Serious style. Minimal maintenance.

Take whatever inspires you and create a patio, drive, walk or path that's a true work of art. Made from 95% recycled material - and available in five authentic natural colors - AZEK Pavers offer a durable, eco-friendly solution for all your home's hardscape spaces. Half the weight of traditional pavers, they install up to three times faster using our patented grid system. So go ahead, express yourself.



makes them feel good about that. A sense of feeling great about the work that you're doing and having that acknowledged knowing that someone's paying attention makes a big difference in people's motivation.

A thank-you note from a manager. Some sort of public acknowledgement. Those kinds of things can make a big difference in motivation.

But also really fundamentally, we find

that people are motivated by having a certain sense of control over the work they do, having the opportunity to make some decisions about the work they're doing. It doesn't necessarily mean that you have to say to someone, "Hey, you get to make all the decisions, go do whatever you think is right." But to say, "Here's what we're trying to accomplish, what suggestions do you have for how we can do that?" or "Hey, do you have any ideas on how we can improve upon this?" It's incredibly motivating for people to feel like they have a sense of some control about the work they get done and how they get it done.

To revert to the old-school model that says "I will tell you exactly how to do everything, exactly how much time it should take to do everything, exactly what the end result should look like and check in on you frequently," is essentially reducing someone to a machine in a sense. To say, "You're going to do the things I control," versus being engaged in figuring out the process with you and deciding and making suggestions which tends to create a much more human work environment and again often results in better results than you would've done on your own.

SO WE'RE TALKING OPENING THE FLOOR DURING THE MORNING MEETINGS? That can certainly be a place to do it, though one of the things you want to be careful of is, you can lose a lot of time and momentum by engaging too many people in that discussion. So if the people in the room are all stakeholders in a particular project then having them all involved in the discussion will be helpful. In that case it probably makes more sense to consult with the team leader, have the team leader have that discussion with their employees and to sort of separate out, even get out there with the team, say "OK guys, here's what I'm trying to tackle, what ideas do you all have?" It's difficult to have a bunch of people in the discussion that don't really have skin in the game. So you really need to figure out who are the stakeholders, who you need to be engaged in the process and then conduct those discussions individually or in small groups.



Innovation For Superior Turf and Better Soil Health



NutriSmart's Advantages

- ★ Fixes nitrogen from the atmosphere for up to 5 months
- ★ Provides consistent, uniform slow-release of nitrogen
- ★ Can effectively replace 10 – 25% of soil-applied fertilizer
- ★ Releases "locked up" P & K in soil
- ★ Contains no chemical components



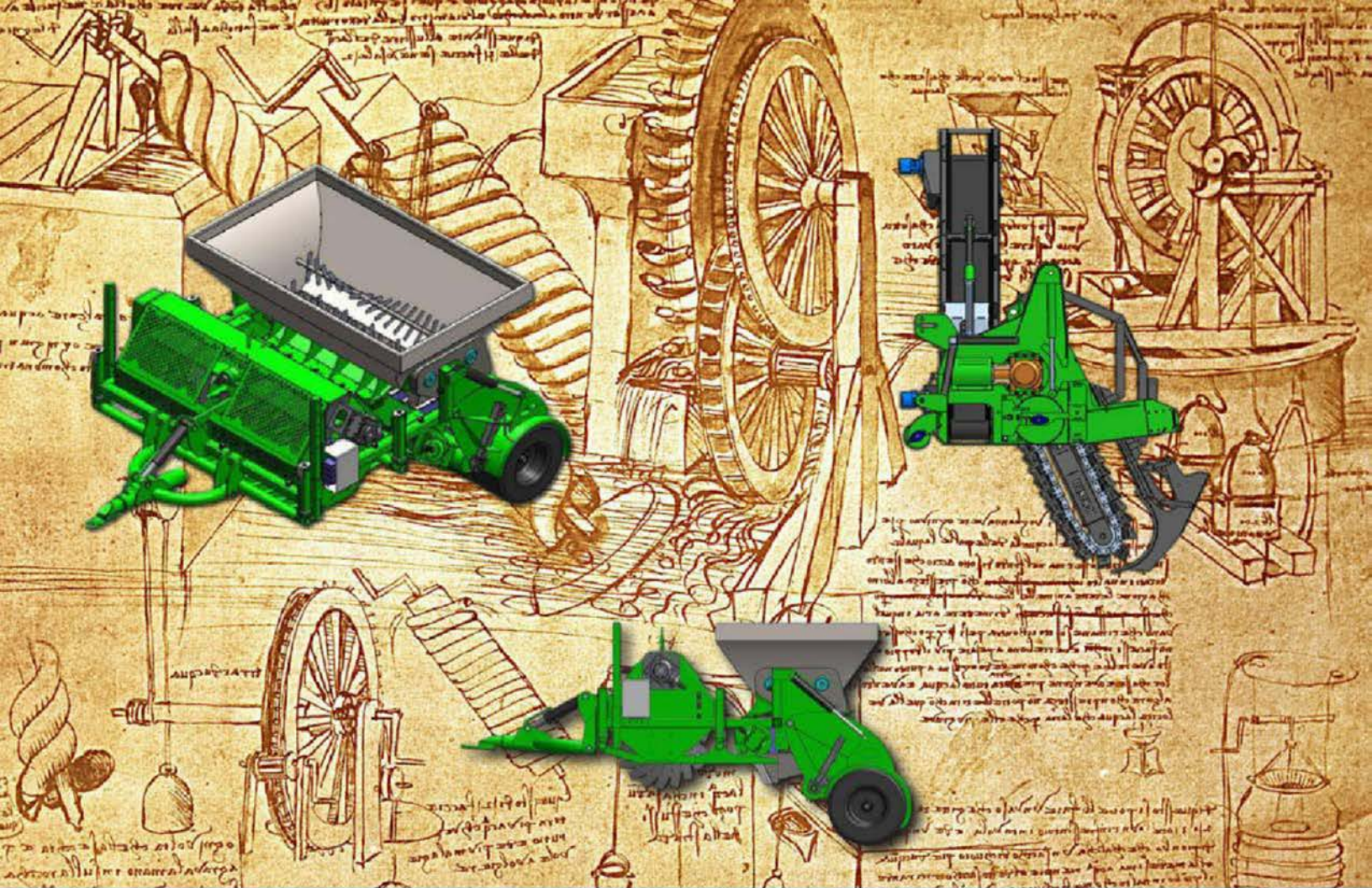
www.PNfertilizers.com

Performance Nutrition, a division of LidoChem, Inc.
(732) 888-8000 • info@lidochem.com
©2014 LidoChem, Inc.

NutriSmart is a registered Trademark of CK Life Sciences

PERFORMANCE
NUTRITION

Performance Nutrition is a division of LidoChem, Inc.



Da Vinci was ahead of his time...

We are too.

The latest equipment innovations are at
www.stecequipment.com

1-888-325-2532
sales@stecequipment.com

STEC
SPECIALIZED TURF EQUIPMENT COMPANY

 Follow us
[@STEC_Equipment](https://twitter.com/STEC_Equipment)

NEW from
Quali-Pro®...



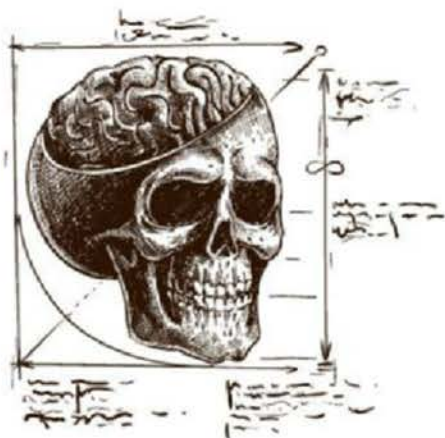
2DQ Herbicide

Containing three active ingredients that provide weed control of annual and perennial broadleaf weeds in warm-season and cool-season turf grasses. 2DQ is for use on ornamental turf lawns (residential, industrial, and institutional), parks, cemeteries, athletic fields, sod farms, golf courses (fairways, aprons, tees, and roughs), and similar turf areas to control clover, dandelion, henbit, plantains, wild onion and many other broadleaf weeds.

QUALI-PRO

For more information on our wide selection of turf and ornamental products, visit quali-pro.com or call 800-242-5562

COVER STORY



SO IS EVERYTHING WE DO A NEGOTIATION?

I think it's important to recognize that every interaction you have is setting you up for some future negotiation. Some people would say every interaction is a negotiation to some degree. And I don't think that's entirely true, and I think sometimes we're just having a conversation. But I think that one of the fundamental things that we know about negotiation is that having a strong relationship already enhances your ability to have a successful negotiation. Don't kid yourself into thinking that you can treat your employees like employees for a year and then when it comes time to negotiate salary for example that suddenly they're going to be open to negotiating. Build the relationships throughout and build that collaborative mindset and collaborative mentality every day as you have your day-to-day discussions and meetings and interactions so that when the time comes that when you need something and you are entering into a negotiation, you've already got the relationship established. You've got the goodwill and you've got the mutual trust. In a sense, everything that we're doing day-to-day is preparing us for a potential high-stakes negotiation in the future.

WHAT ARE SOME MISTAKES WE CAN MAKE

IN GETTING STARTED? Making an abrupt, complete change in your work style is actually going to undermine trust, even if it's a positive change. People will be looking at you, going "What the heck happened to you?" And it makes it difficult for them to trust you. So what you want to start with is setting a goal of changing something about the way you interact that's going to get you closer to that

integrative bargaining kind of mindset. So rewarding people and acknowledging people for the work they're doing, asking a few people each day for their input into something, or demonstrating to people that you're willing to offer some kind of reward for working with you and working collaboratively.

And if you can start putting down those kinds of foundational building blocks, then over time you can set goals of gradually changing your own behavior and you're going to find that it also gradually changes your team's behavior so you get what we call a "virtuous cycle." So that I do something that helps you to feel good about your job, and that gives you that little bit of extra kick so that you're willing to put in a couple extra minutes or a couple extra hours when needed to get something done and that means we accomplish something even bigger. We've got success to build upon. Starting to create that virtuous cycle and then gradually adding more collaborative behaviors into it is the way to do it, though you probably want to do it over a series of months and not try to change everything all at once because we know that trying to change everything all at once just doesn't work. You can't lose weight, quit smoking, quit drinking and start exercising on the same day and think that you're going to be successful at all of those things.

One last important thing: If you are going to commit to what we're talking about, you've got to be willing to let people make mistakes, and you've got to be willing to say, "When you make a mistake, I've got your back and we're going to work through this together." If you expect people to immediately know exactly how to do everything and you don't give them any opportunity to make mistakes, then this is going to fail because the moment that a stressful situation arises, you're going to step in and go back to your old management style. You've got to be willing to accept that mistakes are going to happen and that helping people to learn from that is going to enhance everybody's ability to do their jobs.

Kyle Brown is GCI's associate editor.

by Bruce Williams, CGCS

You can always get what you want...

... you just need to negotiate. Bruce Williams outlines the aspects of your professional life where you should wheel and deal and how to come out on top.

Every day of our lives we are involved in negotiation of some type. It may be with families, employees, employers or our members. Highly successful superintendents embrace negotiating because these skills serve them well in many areas of the profession.

COMPENSATION. There is an old adage that you should get an honest day's pay for an honest day's work. While it's doubtful anyone would refute this notion, the real question is how to position yourself financially in a vast market of superintendents.

First, know your market. What are the highest paid positions, the lowest paid positions and the median? What was the compensation of the former superintendent at your facility? What is the compensation of the pro, manager and any other key employees? Knowledge is power in any negotiation. Don't guess. Some of the best compensated areas for turf managers have had decades of sharing information between superintendents.

Timing is everything. Why would you want to negotiate a contract in the winter months if you are in Chicago? Pick your high season when golfers and employers most value your skills and negotiate then and when the course is in top condition.

If your course is one of the top courses in the area, state, or country then use the GCSAA Compensation Survey data to back up your side of the negotiation. Once you convince your employer that you are not being paid a fair and reasonable wage beginning working on the right number. Just like in football, don't try to go 95 yards on one play. Instead, develop a strategy to

get where you should be over a couple of years. If you are \$30,000 behind the average, then consider a \$10K per year raise over three years. If they balk, then indicate the out-of-pocket cost of this raise will be absorbed into the overall budget.

Remember, compensation is not always about money. It includes benefits, too. Don't overlook non-cash compensation. I have negotiated housing allowances for superintendents and even equity in homes to lock them into long-term agreements. If your club indicates they are not giving out raises and you counter with taking another month of paid vacation in lieu of a raise, then imagine the value of an extra month off during the length of your contract.

CONTRACTS. Contracts, when properly written, protect both the superintendent and the employer. Contracts should specify the details of employment and, most importantly, the length of employment. If you have a 3-year contract that expires in 30 days, then you have a 30-day contract. Add an automatic rollover into your contract so if neither party chooses to end the contract, it will roll over for another year or more. In essence, this gives you a year's notice of any end to the contract.

If the club doesn't do contracts, then know that as many as 80 percent of club managers reported to CMAA that they had contracts. So if you work at a private club it is likely the club has at least one contract and should be willing to have one with you.

Clubs and lawyers don't tend to like the word "contract," so an alternative is letter of agreement. Remember, it is best to have a document indicating separation terms should this occur down the road. It's always

best to negotiate severance when you are hired rather than when you are fired.

BUDGET. A budget is a guide for the cost to run the golf course. It dictates the course's overall plan and conditioning. All too often I visit clubs with champagne dreams and a beer budget. The budget must mirror your ability to provide the desired conditions. If all are to be happy, it is imperative to either raise budgets or lower expectations.

Consider programmatic budgeting. When trimming the budget it is difficult to trim programs than to trim dollars. When asked to eliminate a couple of full-time employees counter with the fact that X-amount of annual man-hours will be lost and that will be visible in specific areas.

Superintendents are great at doing more with less. However, there comes a time when there is no more fat to cut. If a you doesn't negotiate what you need to get the job done, then it is a matter of time before someone new fills your spot and the budget he needs to please members.

NEEDS FOR THE GOLF COURSE. Undoubtedly you will find occasions in which you will need to work with other departments at your facility. The kitchen wants an 8 a.m. shotgun so they can serve lunch at 12:30. The pro shop wants it even earlier so they can turn another group out at 1 p.m. and maximize tee times for the best revenue. What matters most is the success of the facility and not any one department.

Can you get the course ready by 7:30 a.m.? Where there is a will there is a way. Find ways to make things happen and negotiate the purchase of equipment or extra manpower and equipment to accommodate the needs of other departments.

Each day provides an opportunity for superintendents to negotiate. If you find yourself coming up on the short end of such negotiations, then it is time to learn how to walk away with a win-win outcome in most negotiations. Read a book, watch a video or take a seminar on negotiation. If you only come away with a few ideas, then you still are much better off in the long run. **GCI**

Bruce Williams, CGCS, is GCI's senior contributing editor.



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

BETTER TO BE SMART THAN LUCKY

Capitalizing on the top factors influencing golf development and operation.

Golf is experiencing dramatic change as the economy recovers and as people attracted to the game revise their list of wants and needs. While the changes create anxiety, the alert and savvy see opportunities to seize the moment.

Remember the question Dirty Harry Callahan posed, "Do you feel lucky today?" You should feel lucky because the three primary factors influencing golf development and operation are easy to recognize.

HOUSING'S EBB AND FLOW. The expansion and contraction of the housing industry largely influences the macro-economic characteristics of golf. Almost all top 100 metropolitan statistical areas are over-supplied with golf courses and country clubs. Like Harry Potter's Sorting Hat, the end-game for most golf businesses hinges on the choices they make. Wise choices will yield satisfying results; poor choices will leave you in Slytherin House with the Dark Wizards.

The National Association of Homebuilders forecasts favorable growth patterns from the housing sector, which accounts for 17 percent of the Gross Domestic Product. Based on population growth, the NAHB estimates that 17 million additional new homes will be built over next decade.

Golf will prosper in markets with steady growth prospects. Phoenix, Sacramento, San Diego, San Francisco and parts of greater Los Angeles will have a good run in the West. Dallas, Houston and San Antonio will continue their favorable trends in the Southwest. In Florida, Naples and Vero Beach on the east coast and Ocala and Tampa on the west are growth markets. Golf also will grow

where there's a convergence of state capitals and state universities. Austin, Texas; Lincoln, Neb.; and Madison, Wis. are examples of places where stable local economies are fueled by steady employment statistics.

WOMEN HOLD THE PURSE STRINGS. The second change involves customers. In the past, courses and most country clubs benefitted from a work culture driven mostly by men who received club memberships as an employment perk. Now, women are the primary customers. In her book "Marketing to Women," Martha Barletta notes that 91 percent of home-purchase decisions – which often dictate school

lifestyle. Lifestyle speaks to wellness, inclusivity, safety and security. Golf has long sought to define itself in terms of exclusivity and tradition.

Consider the lifestyle at your facility. Does it welcome children, women and families? Do you emphasize responsible environmental stewardship? Does the staff – from the GM down through the ranks – demonstrate that they offer a safe haven for children and families? Is the junior program – for all sports and interests – integrated into the club's overall activity plan?

BENEFITING FROM CURRENT TRENDS. Here are three tactics to help you tap

“ Understanding change helps golf business leaders anticipate and plan next steps.”

districts and club memberships – are made by a woman.

If you're selling memberships, golf leagues, weddings and special events, your customer is a woman. As more women take their places on club and corporate boards, the influence of women on golf will grow steadily.

Golfers seek fun and friendship in their memberships. They want fitness and fresh air, too. Women also want to see their families accommodated. Therefore, focus on communicating and consistently supporting the needs and values of the changing customer base. Those who do will grow stronger and increase their capture of wallet and market share.

LIFESTYLE IS A BAROMETER OF SUCCESS. Finally, the term to describe what people want from golf is

into the changing marketplace.

- Make the course interesting and fresh in the eyes of golfers. Maximize their engagement by conducting focus groups and town hall discussions to determine what improvements and changes will be most beneficial.

- Integrate interesting and engaging short courses within the existing course to signal your commitment to children and families. Invest in the equipment, scorecards and tee markers to demonstrate a commitment to these critical audience segments.

- Update the practice area with short game target greens for pitching and chipping. People with extra time on their hands can practice with or without friends. Short-game practice is popular with more than 60 percent of the respondents to the latest Del Webb survey of baby boomers. **GCI**

LAYING DOWN A WHOLE NEW
STANDARD IN TOPDRESSING

CONTROL AND PRECISION.



THE LEADER. SINCE 1961.

INTRODUCING THE **WIDESPIN™ 1550.**

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

- ▶ **NEW PATENT-PENDING CONTROLLER** allows you to calculate your rates while also giving you a wider range of rates to choose from. Lock in your favorites using the controller's four presets.
- ▶ **NEW HYDRAULIC SYSTEM AND SPINNER DESIGN** makes the patented WideSpin technology even more versatile while delivering a consistent, even spread. Go from a new, superlight application to heavy, and everything in between.
- ▶ **NEW HOPPER** has 20% greater capacity and the widest opening in the industry—you'll refill faster and spill a lot less when you do.



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



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



2014 WEED ROUND UP

A region-by-region breakdown of the weeds to keep an eye on this season.

By Rob Thomas

Humorist Dave Barry once said that crabgrass has the uncanny ability to grow on a bowling ball in an airless room with no way to kill it other than nuclear weapons. It's a funny assessment, and it might be true, but it's no laughing matter for turf professionals.

While romantics may simply view weeds as plants with a desire to grow, superintendents see them as Public Enemy No. 1. Luckily, the experts are here with their predictions on this season's weed pressure.



CUSHMAN
LET'S WORK.



The Bear's Club was designed by Jack Nicklaus to offer the finest possible golf experience. To maintain such a lofty standard, they use a fleet of Cushman Haulers. Available with 13.5-hp gas, 48V DC or 72V AC electric powertrains, the Hauler delivers proven Cushman reliability and up to 1,200 pounds of load capacity. So when you're chasing perfection before dawn and after dusk, your vehicles will be working as hard as you do.

See the Bear's Club's story at Cushman.com/BearsClub.

**“OUR CUSHMAN HAULERS
WORK EVERY DAY AND THEY
NEVER LET US DOWN.”**

JOHN KATTERHEINRICH
Superintendent
The Bear's Club



Southwest

Bowling balls aside, crabgrass is the real problem in the Southwest, says Kai Umeda, turfgrass extension agent for the University of Arizona. In the low-desert region, crabgrass and southwest cupgrass begin appearing between March and May. Nutsedge will start appearing as early as February in warmer, more exposed areas.

"It takes close inspection to confirm what you are dealing with," says Umeda.

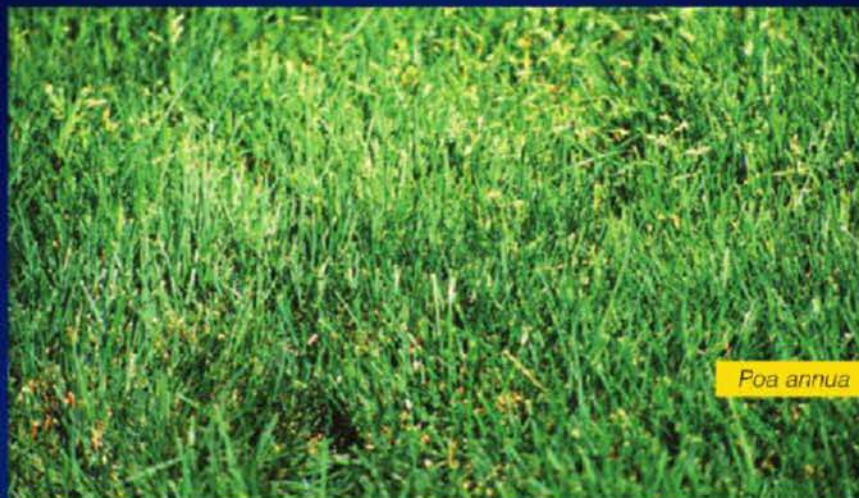
"Crabgrass and cupgrass look very similar, but cupgrass does not have any visible hairs on the stem or leaves. The seedheads are also distinctly different, but it is too late to control when they appear. Use a hand lens to observe the hairiness around the collar region of the leaf and stem," he says. For identification, Umeda recommends using 'Weeds of the West,' a publication from scientists at the Western Society of Weed Science.



Southwestern Cupgrass



Crabgrass



Poa annua

Mid-Atlantic

Poa annua and, to a lesser extent, clover continue to be challenging spring weeds in the Mid-Atlantic, says Elliott L. Dowling, agronomist with the region's Green Section.

"For most superintendents, these two weeds in particular are the easiest to identify. Poa can be challenging if seed heads are not present, which they typically are in the spring unless preventative applications were made. If in doubt, consult a colleague or ask any Green Section agronomist. They will be happy to help," he says.

"Additionally, weed identification apps are a valuable tool for any turf manager. I recommend downloading one on your phone. They are quick and easy to use. If you're still unsure, reach out for help."

Darin S. Bevard, director of the Mid-Atlantic Green Section, also stresses the importance of proper identification and diagnosis.

"The first thing to do is to ask another superintendent for help if you need immediate input," Bevard says. "With modern technology, it is very common for a superintendent or assistant superintendent to send me a picture via text or e-mail. Sometimes I will be on a visit and someone will show me a weed and ask me what it is. It is critical to properly identify weeds so that the best course of action can be selected for control."

Once identified, the best method to treat the weeds depends on the turf surface, says Bevard.

"The first thing that should be done is to make sure that whatever herbicide you select for control will not injure any desirable grasses or at least be certain that the extent of injury can be tolerated for a period of time."

Mid-Continent

Charles "Bud" White, director of the Mid-Continent Green Section, sees crabgrass, nutsedge, kyllinga, and goosegrass as the major weeds in his region.

Fortunately for superintendents, they are fairly easy to identify.

If you're looking for a little extra help, White suggests the University of Tennessee extension website, which is "especially good with identification info."



Kyllinga



Goosegrass

Southeast

Lambert McCarty, professor of agricultural, forest and environmental sciences at Clemson University, has a list of winter annuals that will rear their ugly heads in the spring. Included on the list are annual bluegrass, henbit, hairy bittercress, annual blueeyedgrass, wild onion/garlic, henbit/purple deadnettle and Carolina geranium. Summer annuals such as crabgrass and goosegrass also present problems for superintendents in the region.



Hairy Bittercress

For identification, McCarty recommends using the 'Color Atlas of Turfgrass Weeds.'

Florida

In Florida, USGA Green Section senior agronomist Todd Lowe sees goosegrass on his radar.

"It's a perennial problem on most Florida golf courses, but there are a variety of herbicides to manage it," he says. "Tropical signalgrass has emerged as one of the most difficult weeds to control, due to the loss of MSMA."



Signalgrass

Having dealt with goosegrass before, most superintendents have no trouble with identification. But, he adds, "tropical signalgrass is a little more difficult to identify because it looks similar to crabgrass. It forms thick mats, unlike most crabgrass, but the distinctive difference between tropical signalgrass and crabgrass is in their seedhead morphology."

Lowe suggests to look carefully for those seedheads: "Crabgrass seedheads somewhat resemble a hand, whereas signalgrass seedheads hang off the main stem at a 90-degree angle, like a signal flag."

Growing a healthy stand of turfgrass is one way to avoid weeds, but you may also want to stop overseeding in the winter.

"Overseeding with perennial ryegrass creates thin and bare areas in spring," Lowe says. "These bare areas are then colonized by other plants and weeds as the Bermudagrass recovers."

THE CLEAR CHOICE



KPHITE 7LP SYSTEMIC FUNGICIDE BACTERICIDE

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



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

Bull paspalum



Northeast

James Skorulski, senior agronomist in the Northeast Green Section, says annual grasses receive the most attention in the region and are usually targeted with preemergent products.

"Crabgrass populations seem to be spreading to northern parts of New England and Canada," Skorulski says. "Goosegrass is becoming more prevalent in recent years with the warm summers. It seems to be working its way further north and remains most common along cart path edges and other areas of compaction. It's also becoming evident in some practice tees and other areas.

"There are the regular broadleaf weeds such as dandelion, plantain, prostate knotweed, and clover," he adds. "The other weeds that are becoming more prevalent, especially in coastal and southern parts of New England, are green and false green kyllinga and bull paspalum."

Aside from paspalum, which can be confused with crabgrass, these weeds are fairly easy to identify, says Skorulski. Paspalum – usually found in dryer areas like roughs and bunker banks – is a perennial unaffected by preemergent herbicides. Kyllinga may be confused with nutsedge, but it's much more aggressive and tends to form mats.

Northwest

The Northwest Green Section, headed by director Larry Gilhuly, sharply contrasts with the abundance of weed varieties in the Northeast. In the Pacific Northwest, Gilhuly sees clover, dandelion, and other broadleaf weeds. In Hawaii, it's all goosegrass, smooth crabgrass, and torpedograss, which are problematic year-round. In all these cases, he says, the weeds are fairly easy to identify and diagnose.

North-Central

The worst weed offenders in this region are dandelion and clover, says Robert C. Vavrek, Jr., senior agronomist in North-Central Green Section. Luckily, both are easily identified.

"There are good weed identification keys on a number of university turf management websites," he says.

Treatment

Once dandelions are identified, Vavrek says, most superintendents will treat them curatively. Some treat crabgrass preventively,

Good Vs. Bad Turf

New turf seed varieties are being introduced to best suit different environments across the country. Have these led to new weed varieties as well? In a word, no.

"I have not seen, nor do I anticipate, any of the new varieties of turf being associated with new weeds," says Elliott L. Dowling, agronomist with the Mid-Atlantic Green Section. "In fact, I would go so far as to say that the new varieties of turf may help eliminate weed pressure.

"Newer varieties, such as Latitude 36 Bermudagrass, are suited for the Mid-Atlantic climate," he adds. "This is a good

alternative for those who are managing P. Rye. In summer, Latitude 36 will be actively growing, providing a uniform stand of turf which can reduce the risk of weeds germinating."

That's not to say that it will be business as usual for superintendents, says Kai Umeda, area turfgrass extension agent for the University of Arizona.

"New and improved Bermudagrasses lead to new management strategies, i.e. more verticutting or aerifying that can stir up weeds to germinate," he says. "But tighter and denser turfs can also

Listen in! Goosegrass is notorious on golf courses, and develops resistances quicker than many other weeds. Dr. Jason Fausey, regional field market development manager for Valent Professional Products, shows how to stop it now. Enter bit.ly/1qq6Plg into your browser to access this Superintendent Radio Network podcast.

prevent weeds from emerging.

"Longer surviving ryegrass can allow summer grass weeds to establish themselves if postemergence herbicides are less selective compared to the safety of Bermudagrasses," he says. "Longer surviving ryegrasses are becoming more difficult to eliminate through the summer and re-establish in the fall for the winter," he says. "Sulfonylurea herbicides work well to eliminate them in the winter in non-overseeded areas in dormant Bermudagrass.

Lambert McCarty, professor of agricultural, forest and environmental sciences at Clemson University, says several weeds are becoming more of an issue in the southeast (i.e. tropical signalgrass, doveweed.) But, he adds, this is not related to new and improved turfgrasses.

"This has been generally related to herbicide use pattern changes, specifically the use of MSMA," McCarty says. "As MSMA use has decreased, weeds which generally would be controlled have become more of an issue."

while others wait to control crabgrass with herbicide after it germinates.

Of course, an ounce of prevention is worth a pound of cure.

"Fall treatments for perennial weeds will lessen weed pressure during spring," says Vavrek, acknowledging the difficulty superintendents often face in getting on the course early in the season. "Many treat for dandelions too early. The weeds are not growing rapidly enough to absorb a lethal dose of herbicide. The weeds are stunted for a while, but they will recover."

Dowling also finds preventative measures to be the most effective, pointing out that it is difficult to maintain control if you try to apply products curatively.

"Eliminate and control as many weed species as possible before they become a problem on your golf course," he says. "The best method to control spring weeds is kill them in the fall. The more you can do in the fall, the less the spring outbreaks may be. Additionally, focus on the health of desirable plants. Providing complete coverage will reduce the likelihood of weed species germinating. Use desirable turf to out-compete weeds."

Preventative control boils down to knowing what your weed problems are in advance, says Bevard.

"Summer annual grasses (crabgrass, goosegrass, etc.) should be controlled with a preemergent herbicide with an early spring timing if pressure from these weeds is high," he says. "If there is low pressure from crabgrass and goosegrass, some superintendents opt for spot treatments with post emergence herbicides.

"If you have broadleaf weeds such as clover and dandelion, herbicide applications can be made in the fall to eliminate most of the problems," he adds. "Then you do not have to deal with the problem in the spring, or at least the problem is far better than it would be otherwise."

Still, according to McCarty, many curative options do exist.

"Winter annual weeds are easier to control with postemergence herbicides in our region because Bermudagrass is often not actively growing when these weeds are present," he says. "In contrast, crabgrass and goosegrass are more difficult to control because of the lack of selectivity of postemergence herbicides which control these weeds. Of course, if the facility is overseeded, this complicates the situation considerably."

Lowé balked at the idea of completely ridding a course of weeds. "Terms like 'elimination' and 'eradication' should not be considered. There's only 'weed management.' The soil seedbank on most golf courses is very high, and many weed seeds can lie dormant for decades. If given the right opportunity, seeds can germinate and establish quickly in a subtropical environment," he says.

"Weed management begins with strong, dense turf. The best defense is a good offense." **GCI**

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



Syngenta Business Institute™

ALUMNI UPDATE

One of the most important things that I learned was how to read and understand the way people choose to conduct meetings or negotiations. With the right approach to the situation, you get a win/win result all around.

My daily interaction with the club's supervisors and management team improved. My new skills enabled me to communicate more efficiently and have the other person understand my side of the equation, with both of us moving forward.

When I returned to work, I took a step back and reevaluated the personalities of my staff. I then tried to see how I could approach my directions and interactions with them for a greater benefit to both of us.

SBI gave me a fresh start again and increased my staff's productivity as well as overall morale.



Rob Williams
Stockton Golf &
Country Club
Stockton, CA



Exclusively Sponsored by

Learn more about the
Syngenta Business Institute at
www.greencastonline.com/SBI



© 2014 Syngenta. Syngenta Business Institute™ and the Syngenta logo are trademarks of a Syngenta Group Company.



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

NO “FUN” IN FUNDING

John Kaminski explores the rigors of securing research dollars for turf.

When I discuss research programs with most people outside of academia, it is clear that many don't really understand the full concept of research funding; both in terms of where the funds come from and how they're used. With funding streams to turfgrass programs around the country dwindling, it's time to shed some light on this process and address some potential implications to our industry.

WHERE DOES THE MONEY COME FROM?

That's the million-dollar question. Funding for turf programs – particularly those of an applied nature that can actually benefit those of you reading this article – is dramatically down across the country. It doesn't matter if we are referencing large granting organizations like the USDA and National Science Foundation, national associations like the GCSAA and USGA, companies that pay to evaluate their products, or your local golf associations and turf councils.

LARGE GRANTING OPPORTUNITIES.

From a university perspective, the importance of applying for (and hopefully landing) large-scale competitive grants is heavily stressed. Unfortunately, these grants are few and far between even for those doing the most fundamental science. Put the word “turfgrass” into the grant and it gets even harder to successfully get a grant funded. Make the proposal applied in nature and you can basically kiss your chances goodbye.

While the percentage of turfgrass academics receiving these large grants is minuscule, pressure is still placed on researchers – especially

young, tenure-track faculty – to spend countless hours writing and applying for them. Perhaps it's for the prestige it brings to the university and the program, the large sums of funding relative to traditional turfgrass funding opportunities, or the large portion of these grants that goes directly to the university in the form of the “in directs.”

NATIONAL ASSOCIATIONS. This is a tricky one to write about. You never want to bite the hand that feeds you, but the reality of the situation is that organizations like the GCSAA and USGA provide very little in the way of funding for turfgrass research.

these moves, the bottom line is the funding is simply not there.

LOCAL TURF ASSOCIATIONS. This is an interesting one. These groups are usually run by a handful of select and dedicated volunteers whose sole purpose is to make sure the turf programs in their regions are supported. I am thankful that during my career I have been fortunate to have my research supported by local groups like the Pennsylvania Turfgrass Council, Tri-State Turfgrass Association, the New England Regional Turfgrass Foundation and various local turfgrass chapters.

While their support helps offset the

“ If we look at a “successful” research program that has a technician, one Ph.D. student, two M.S. students, and all of the expenses that go along with that you will see that it adds up. A quick estimation for the above program could cost as much as \$200-250k annually.”

The GCSAA has come under fire from academics in recent years due to the drop off in funding to support research benefitting its members, as well as the loss of select personnel that helped connect academics with the association.

Although some of these issues have more than ruffled a few feathers, these organizations – like many – simply don't have the resources to put back into research and/or have decided to put those resources into other programs. I can't begin to fully understand the decisions being made and have to assume they are doing what's best for their organization.

Regardless of the reasoning behind

exorbitant cost of research, they obviously can't always fund large-scale projects involving multiple graduate students, technicians, and expensive equipment and research protocols. Having said that, they are a tremendous resource.

INDUSTRY SUPPORT. While not everyone involved in research is supported by R&D dollars from large companies, there is no doubt these funds play a large role in funding many programs. The funds made available for the evaluation of pest control products, discovery of novel technology, and the performance testing of new turfgrass species is critical to keep many

programs viable. These funds are often used to support additional basic research projects where competitive funding could not be secured.

HOW MUCH MONEY DO YOU REALLY NEED? I hear that asked a lot from superintendents. I love to answer this question because, in most cases, the superintendent on the other end of my soapbox speech sits there with eyes wide in amazement of what it takes to run a successful research program.

TECHNICIANS. Let's begin here. Technicians are the backbone of many research programs if you're fortunate enough to have one. In the past, "hard money" technicians (paid by the university) were fairly common and researchers could focus on spending their grant money in other areas. In recent years, however, the costs have been passed on to the researcher. This includes salaries and benefits, as well as other associated costs. In general you can expect to pay \$45-70k+ for a technician. Money well spent if you're lucky enough to have a good technician.

GRADUATE STUDENTS. Grad students are among the most important asset in any research program. Working under the direction of the PI (principle investigator), graduate students are the ones in the trenches conducting the day-to-day activities of an individual project, spending hours tediously collecting data, and pulling the entire project together into a coherent thesis or dissertation. A typical M.S. or Ph.D. student is likely to spend 2 to 3 or 4 to 5 years completing a research project, respectively. Each graduate student comes at an average cost of approximately \$35-40k per year. This doesn't include additional expenses associated with the individuals and their projects.

OTHER EXPENSES. In addition to labor, researchers must pay for a variety of other expenses to keep a program afloat. These can include charges for lab and field space, manuscript fees (yes, we actually have to pay to publish our research in most scientific journals), vehicles, equipment and supplies, travel costs, and other miscellaneous expenses. Another fun fact...did you know that most universities require 48 percent to as much as 60 percent of a total grant be allocated towards indirect costs paid directly to the university?

If we look at a "successful" research program that has a technician, one Ph.D. student, two M.S. students, and all of the expenses that go along with that you will see that it adds up. A quick estimation for the above program could cost as much as \$200-250k annually.

Feeding all of those mouths comes at a personal sacrifice, as well. Many universities hire new faculty on a "9-month" appointment with the expectation that the researcher will write grants in which they include their "summer salary" into the proposal. Unfortunately, most groups funding turf research have provisions that do not allow for this type of compensation to the PI and instead limit funding to technician or graduate student salaries. Many (dare I say most) faculty sacrifice their own summer salaries to make sure funding is in place to keep their program operating at full capacity.

WHAT'S THE SOLUTION? I have no clue. I continue to fight for every dollar that comes into my program in an effort to attract the best graduate students and provide real solutions to superintendents and the turfgrass industry. I also fully admit that if it wasn't for funding from some of the groups I mentioned

above that I wouldn't have been able to successfully complete my graduate studies and may have been less successful when submitting my tenure packet only a few years ago.

Superintendents must continue to push their national organizations to provide funding for research projects that benefit them. They must volunteer within their local associations to ensure funding is available to researchers in their region and give their time to serve on boards and research committees to direct the limited resources to projects that will yield the greatest impact.

Perhaps my biggest concern with limited research dollars is the impact it will have on turfgrass programs and young faculty. Resources at the university level are scarce. Vacant positions created by retiring faculty are being lost to disciplines where funding is on the rise and the turf industry isn't exactly in an economic peak at the moment. We are also seeing a trend in which many academics and recent doctoral graduates are seeking positions within the industry instead of academia. Finally, those young scientists who choose academia are finding it more difficult to obtain those competitive grants so desperately needed to successfully navigate the tenure process.

Research dollars aren't just about solving the latest problems superintendents face. The funding dilemma is much larger than that. Solutions to problems, training of graduate students, hiring new faculty and all of the things associated with or reliant upon research funding are at the very heart of this issue. While I can't expect every turf organization to direct all of its resources into research, those whose goal is to support the industry should look closely at the level of support they are providing academia relative to the level of support they are extracting from it. **GCI**



Get Out, Damn Spot!

Record lows this winter won't force superintendents to alter their standard dollar spot programs.

By Jason Stahl

It's been a brutally cold and snowy winter, with most areas of the country seeing temperature records shattered like falling icicles. Ohio, for example, had more sub-zero days in January than in any month in the past 20 years.

So, what does this mean for dollar spot pressure in the spring? Not much, says Jim Kerns, assistant professor and extension specialist for turfgrass pathology at North Carolina State University. Kerns experienced the pathogen's hardiness firsthand during his time at the University of Wisconsin, where he studied dollar spot's overwintering.

In his studies, Kerns found that "while it did seem to show that winter temperatures have an association with winter survival, it

INTRODUCING THE MOST
POWERFUL GASLESS
TOOLS EVER BUILT.



C(•)RE[™]
E L I T E

E 400

E 400 TRIMMER

CUTTING SWATH Up to 16"
TRIMMER LINE..... .095
TORQUE EQUIVALENT TO..... 45CC
RUNTIME..... UPTO 100MIN
WEIGHT 11 LBS WITH POWER CELL



C(•)RE[™]
E L I T E

36235 KERR DAM ROAD | POLSON, MT 59860
1-855-831-CORE | www.coreoutdoorpower.com

C(•)RE GasLess Power.
**MONTANA
T(•)UGH**
INVENTED, DESIGNED &
ASSEMBLED IN MONTANA



The Revolutionary Speed-Brush

- ◆ Angled
- ◆ Softer Brushes
- ◆ Better Built



Call 636-326-1009 or www.Redexim.com

DISEASE MANAGEMENT

Have a listen...



Want more information about dollar spot? Check out this podcast from Dr. Karl Danneberger, professor at The Ohio State University. In the podcast, Danneberger shares the warning signs for dollar spot and how superintendents can identify it on their courses. Just enter bit.ly/NCVdDd into your web browser.

does seem the organism can survive pretty well over winter, even with subzero temperatures.”

Kerns believes that winter isn't the best judge of how pathogens work in different seasons because these fungi are capable of surviving in different climates.

“Certainly, this winter will have some sort of effect, but I think that effect is going to be mild in the eyes of the practitioner,” he says

In other words, it won't save any superintendents from using fungicide applications or changing their management practices.

“[The winter] may not back some of the survival of the organism, but once it gets going, you see an initial lag, then it grows exponentially if the environment is correct,” says Kerns.

One of the reasons Kerns is leery of winter lessening the impact of dollar spot is that he has stored these fungi at -80 Celsius and still was able to pull them back out, plate them, and watch them grow just fine.

“They have a mechanism to withstand cold temperatures well,” he says. “They may not be actively growing, but they can withstand extremely cold temperatures for long periods of time.”

Based on work he has done in trying to forecast development of dollar spot, Kerns advises superintendents to consider their first dollar spot application when temperatures over 50 degrees Fahrenheit coincide with relative humidity above 70



Dollar spot is resilient to temperature extremes.

percent for at least five days.

"That could vary this spring, but not necessarily as a result of winter," says Kerns. "That's just whatever spring we're dealt this year. Looking at winter as a predictor for spring and summer – and I know a lot of people are thinking about this – I've never found it as a good prediction of what happens in spring."

According to Kerns, the disease is most severe when relative humidity reach 85 percent and above. Typically, the disease is not problematic when temperatures are 90 degrees Fahrenheit and above, but it still can cause disease at higher temperatures if relative humidity remains high.

Kerns' other piece of standard advice is to always plan for the norm.

"Don't assume based on fall conditions or winter conditions that your dollar spot application will be any different than last year," he says. "Typically, if you've had great control in years past, you'll most likely get great control in 2014 and years on. For courses that have struggled, it's time to re-evaluate what

Contact vs. Systemic

Fungicides can be broken down into two groups: contact fungicides and systemic fungicides.

According to Rob Golembiewski, Ph.D., member of Bayer Environmental Science's technical service team for turf and ornamentals, contact fungicides are applied to the plant surface and prevent fungus from developing on the leaf surface.

"It more or less inhibits the growth and development of the disease itself," says Golembiewski.

Systemic fungicides are generally taken up by the plant itself. Because of this, there is usually longer residual activity, around 14 to 28 days of control versus 7 to 14 with contact fungicides.

The biggest class of fungicides, says Golembiewski, is the DMIs. Within this class are six different products: Bayleton, Banner Maxx, Tourney, Torque, Trinity, Triton FLO and a new product from Bayer coming out in the spring called Mirage.

"The group most widely used in early season applications is DMIs," Golembiewski says. "When you get into the in-season, because of the higher temperatures guys look at contacts or non-DMI chemistry."

At the end of the day, Golembiewski says, it's a good thing that the market has such a wide variety of products.

"When you look at the amount of products and chemistries available, it's really nice as far as with dollar spot because you do have the opportunity to look at more of a solutions approach," he says. "It would be great if we were just dealing with dollar spot, but on a golf course, we all realize you're dealing with multiple diseases depending on what part of the country you're in. So you want to think about a different approach when it comes to dollar spot, anthracnose, brown patch or summer patch and start utilizing fungicides to target multiple diseases."



NUMBER ONE IN LAKE AND POND CLEANING.



866-980-6825
usaquavac.com



Expert advice

For more information on dollar spot and the issues related to managing and treating for this turf pathogen, check out the following articles. To access the content, just enter the following link into your browser.

A New Look at a Costly Problem

Research on fungicide resistance in dollar spot.

By Joseph Roberts

bit.ly/1bNama6

Dollar Spot Control

Treatment of this disease in creeping bentgrass fairway turf as influenced by fungicide spray volume and application timing.

By Steven J. McDonald, Peter H. Dernoeden, and Cale A. Bigelow

bit.ly/1aVytbx

fungicides they're using in combination with cultural management."

Kerns uses last summer as an example. It was a banner year for dollar spot because most of the country stayed pretty wet most of the year and didn't get too hot in most areas.

Likewise, North Carolina rarely has dollar spot in July and August, yet it had it all summer long.

"So if people did well last year with their dollar spot program, they'll likely do well this year," he concludes.

"What this year's pressure will be based on is what spring and summer holds. That's the main thing," Kerns adds. "Depending on spring, it certainly could be later or may not be as severe initially, but again it's difficult to predict based on winter temperatures."

Rob Golembiewski, Ph.D., member of

Bayer Environmental Science's technical service team for turf and ornamentals, predicts no significant change as well in dollar spot pressure this spring.

"If anything, a milder winter would probably be more conducive to seeing activity earlier in spring," he says. "But the turfgrass went dormant in fall and we have had ample snow cover for the most part that has acted as an insulation blanket. So even with these extreme cold temperatures, the turf really hasn't been impacted that much."

Research coming out of Ohio State University suggests applying a DMI fungicide after the second true mowing of the year can delay the onset of dollar spot anywhere from 8 to 12 weeks into early summer. Bayer has an additional recommendation, Golembiewski says, based on its "total solution" approach.





Applying a DMI fungicide after the second true mowing of the year can delay the onset of dollar spot anywhere from 8 to 12 weeks into early summer.

"A lot of superintendents treat for fairy ring and waitea patch in that 55- to 60-degree soil temperature range at a 2-inch depth. Generally we're recommending a

DMI for those diseases, so if you're treating for fairy ring or waitea patch with a DMI, you're likely to get dollar spot control as well. You're really targeting multiple dis-

eases with that early spring application."

Golembiewski advises that, instead of relying on calendar dates or time periods, superintendents should look at predictive models and evaluate environmental conditions.

"You really should be looking at soil temperatures and growing degree day models and environmental conditions as guides versus a calendar-based approach, and I think most superintendents are doing that," Golembiewski says.

"Using those predictive models, we see a lot of folks targeting that early season application to get that eight- to 12-week delay as far as the onset of dollar spot – but also targeting multiple diseases in that time period," he adds. **GCI**

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

TOHO

there's only one SOLUTION.

DIRECT SOLUTIONS™

Your partner in the fight for stronger, healthier turf.

Managing your turf is a monstrous job, with weeds, insects or worse threatening your greenscape. You need a partner to protect your turf – you need Direct Solutions. With industry best products like DEFENDOR® and RADIATE® as well as insecticides like ACELEPRYN®, Direct Solutions will help you defeat the monsters of the fairway.

GET RESULTS TODAY –
visit www.aatdirectsolutions.com
to learn more, or contact your
local Direct Solutions rep today.

DIRECT SOLUTIONS™
Committed to Growth™

© 2014 Agrium Advanced Technologies (U.S.) Inc.
DIRECT SOLUTIONS is a trademark owned by Agrium.

BY ADAM MOELLER

Dollar Spot – An appropriate name for a costly nuisance disease

Dollar spot is expensive to control on fairways, but a little tolerance for this nuisance disease can result in significant cost savings at your golf facility.

Dollar spot (caused by the fungus *Sclerotinia homoeocarpa* F. T. Bennett) is a very common disease on golf courses, especially those with creeping bentgrass or *Poa annua* (annual bluegrass). It was originally named more than 70 years ago because infected turf resembled silver dollars. At present, dollar spot is a perfect name because it is expensive to control on fairways. Budget constraints are an increasing concern for many golf facilities, and fewer fungicide inputs to control dollar spot present a great cost

fairways depends on many factors; however, the amount of disease occurrence that is acceptable at your golf facility is the driving force in most cases. Dollar spot control with cultural and chemical inputs is never perfect, and some amount of disease breakthrough on fairways is likely each year despite regular use of preventative inputs. How much dollar spot is acceptable at your golf facility? This is a question that should be asked.

Before this question can be answered, the impacts on playability must be understood. The dollar spot pathogen blights

be slightly sunken, but it is unlikely to be sitting on bare soil. The infected turf will be discolored, matted down, and sparse, but very playable. Remember, there are no guarantees for perfect lies, even in fairways. Is it ideal to play shots from turf with symptoms of dollar spot? Probably not, but an increased tolerance of dollar spot creates a significant cost saving opportunity for golf facilities looking to reduce maintenance costs.

Many golf facilities with low budgets simply cannot afford to treat fairways for dollar spot control, yet golfers still enjoy the course. Play the ball as it lies and play the course as you find it are fundamental principles of golf, and this includes turf affected by dollar spot. If golfers become more tolerant of dollar spot incidence, fungicide use can be reduced. This allows turf managers to make fewer fungicide applications each year and save money in the process. The cost of making a single preventative fungicide application can vary greatly, but a conservative estimate is \$2,000 to \$5,000 for an 18-hole golf course with 25 to 30 acres of fairways. Forgoing just one or two fungicide applications each year could help pay for many important golf course maintenance items, such as labor, materials like top-dressing sand, or even allow for a small budget reduction. Regardless, fewer pesticide applications for dollar spot control results in a more economically and environmentally sustainable golf facility. Spending large amounts of money on cos-

“A dollar spot outbreak can severely compromise ball roll on a putting green because it creates small depressions, often referred to as pitting, in the turf canopy.”

saving opportunity for golf courses without significantly impacting playability.

Dollar spot can develop on golf courses in the Midwestern and Northeastern U.S. for most of the growing season, while many other diseases are found under more specific environmental conditions as illustrated by Figure 1. The long duration of seasonal activity requires superintendents to budget dollar spot prevention programs accordingly, with many making 5 to 10 (or even more) applications per year on fairways. The number of applications made to prevent this disease on

turf leaves, creating 1- to 2-inch-diameter spots of tan, matted grass. Because the disease does not infect turfgrass roots or crowns, it is primarily a cosmetic problem and not usually lethal to the turf.

A dollar spot outbreak can severely compromise ball roll on a putting green because it creates small depressions, often referred to as pitting, in the turf canopy. On fairways, playability can be affected by the disease also, but it is almost always more of an aesthetics nuisance than a major problem with ball lie. For instance, a ball lying on infected turf may

VERDE-CAL[®]

PRODUCTS

With  Organic Complexing Technology

Soil's Secret Weapon!

Start your season
with the proper
amending to
your soils.

VERDE-CAL will
navigate you
toward **SUCCESS!**

VERDE-CAL[®]
Enhanced Calcitic Limestone

VERDE-CAL[®] G
Enhanced Gypsum

VERDE-CAL[®] K^{PLUS} 0-0-15
Sulfate of Potash *plus* VERDE-CAL G and L-Amino Acids



5484 S. Old Carriage Road
Rocky Mount, NC 27803
800-394-1551 • 252-937-4107
www.aquaaid.com
www.verde-cal.com

thCa[™] is a trademark of AQUA-AID, Inc.

Real Science

metic problems is not money well spent, and fewer fungicide inputs targeting a disease that is rarely lethal to the turf will serve to make the game of golf more affordable for everyone.

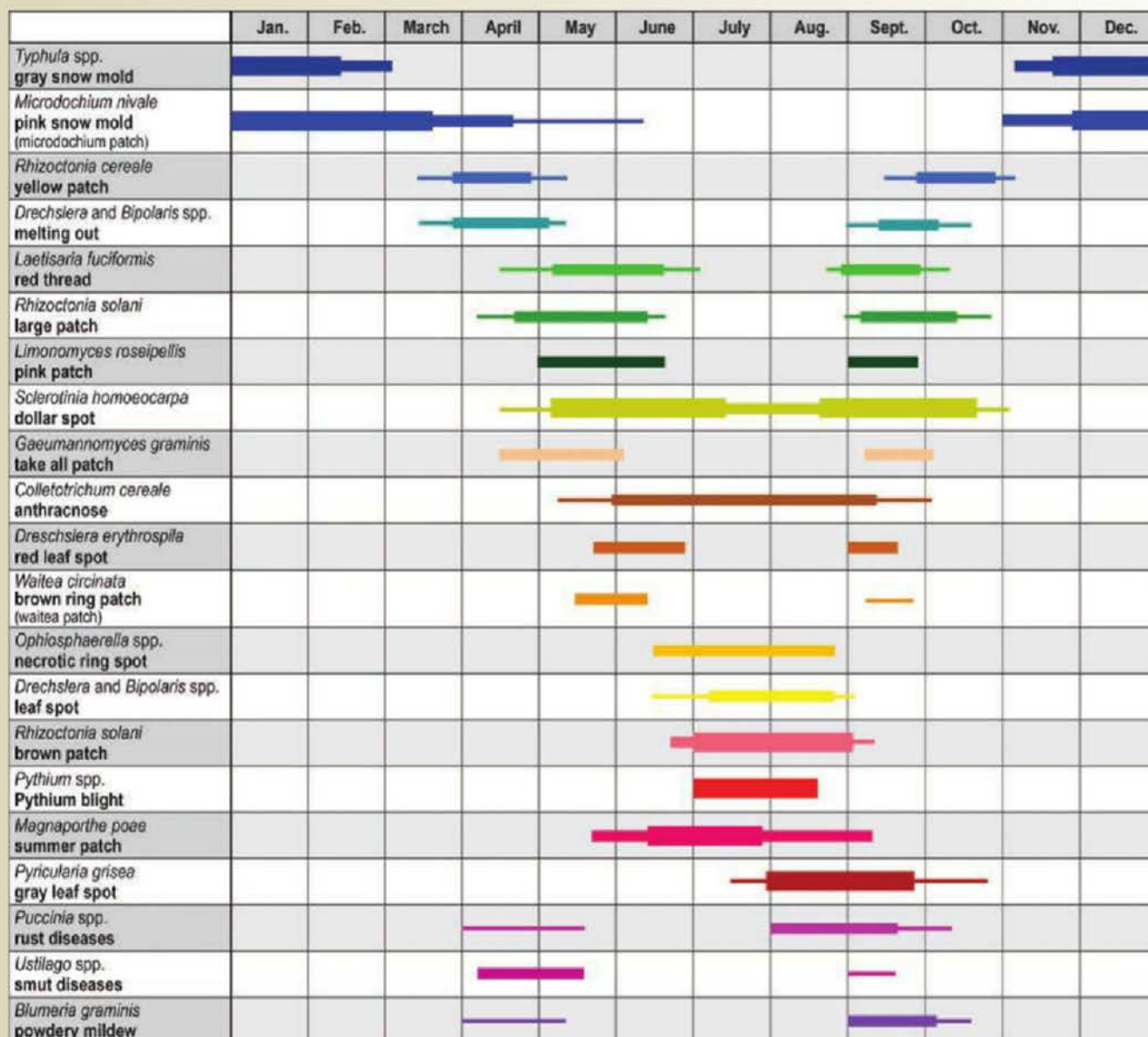
Reduced fungicide use for dollar spot does come with some challenges beyond golfer acceptance. Mainly, what happens if dollar spot outbreaks get really bad? The amount of disease breakthrough is not a linear relationship with fungicide use. Sometimes a curative program will result in very little disease, while at other

times moderate disease could occur. New fungicides with good curative efficacy against dollar spot and long residual activity will allow for this type of program to be utilized more successfully than ever before, even if severe outbreaks occur. With appropriate rotation of systemic active ingredients and tank-mix combinations with contact active ingredients, fungicide resistance concerns can be minimized as well.

Curative fungicide treatments require full application rates, while preventative

applications usually are half the curative rate. Thus, one could argue that two preventative applications will cost the same as one curative application and probably result in less disease. But if the disease does not occur or if the outbreak is small to moderate because of a favorable change in the weather, the money spent to prevent dollar spot could be wasted. Budgeting for preventative versus curative control strategies against dollar spot is difficult, but the costs of curative fungicide programs will not exceed the

Figure 1: Seasonal activity of turfgrass pathogens in the Midwestern and Northeastern U.S. Figure courtesy of Dr. Richard Latin, Purdue University. Originally published in Seasonal Activity of Turfgrass Pathogens (BP-125-W). bit.ly/1E1F8q



This article is reprinted from the Sept. 6, 2013, Vol. 51 (18) of the USGA Green Section Record. Copyright United States Golf Association. All rights reserved.

costs of preventative programs if golfers are more tolerant of the disease

Researchers from Oklahoma State University, Pennsylvania State University, Mississippi State University, the University of Wisconsin, and the University of Tennessee have developed an accurate model for predicting dollar spot activity and outbreaks. This model, which uses site-specific weather data as the driving force, is a great tool that will allow superintendents to make more informed decisions on when to apply fungicides for dollar spot, and it will aid in reducing costs associated with controlling this disease. Accurate predictions of dollar spot activity will allow fungicide appli-

cation intervals to be stretched and may even eliminate preventative applications altogether. If all goes well, turf managers will have access to this model by 2014.

The USGA Turfgrass and Environmental Research Program has funded plant breeders for many years to develop turfgrasses that are more resistant to dollar spot. To date, dozens of varieties of creeping bentgrass have been released with superior resistance to dollar spot. Unfortunately, many of these varieties have been underutilized because new golf courses are not being built frequently and fairway regrassing has remained limited because of the associated disruption. The combination of a superior grass

and the soon-to-be-available dollar spot prediction model should make adopting a curative-only fungicide program easier for golf facilities trying to reduce expenses.

Every golf facility is encouraged to examine its dollar spot program and identify the potential to save budget dollars. Consider the financial reward of tolerating more dollar spot, and remember that this approach, while aesthetically noticeable, will have minimal impact on playability. With increased golfer tolerance of dollar spot and a committed golf facility, reduced fungicide applications and costs savings are possible. This is a great way to make golf more affordable. I hope you agree. GCI

Adam Moeller is an agronomist in the USGA Green Section's Northeast Region.

www.spyker.com

SPYKER
SINCE 1868
SPREADERS

OUTPERFORM. OUTLAST.

Facebook, Twitter, YouTube icons and QR code.

LOWERING THE CHEMICAL BOOM

How aquatic dyes are helping superintendents to better manage and manicure their water.



By William Olmstead

Dan Cremins knows what's wrong with his water. A few years ago, during the middle of the playing season, the superintendent at Sterling Mountain in Woodland Creek, Colo. watched helplessly as three of his water hazards began to stagnate and overgrow with weeds and algae.

"There was really no way to solve the problem. We got such a late jump on the season that even herbicides and algacides weren't doing the trick," he says.

Since then, Cremins has taken the time to properly plan for his hazards, using some chemical assistance to save hard work and money throughout the year.

© MULEGAN | THINKSTOCK.COM



A Green Links™ World

Perfectly green turf. Year-round. In any climate.

SENSIPRO'S GREEN LINKS™ turf colorant makes it possible. Green Links new long-lasting pigment technology enhances your turf perfectly to any shade of green you need and protects it from harsh conditions:

- Extensive coverage rates keep you in the green
- Reduce or eliminate costly over seeding, fertilizers and irrigation
- Superior UV protection and weather-fast performance
- Highly effective on tees, greens and fairways for more playable rounds

Don't settle for less. Go with the pro. **SENSIPRO™**

Sensient Industrial has been a global leader in color innovation for over 100 years. If we don't already have a solution for your turf, water or divot sand challenge, we will develop one.

SENSIENTINDUSTRIAL.COM | 800.325.8110

SENSIENT®
INDUSTRIAL COLORS

WATER DUTY. Properly caring for lakes, ponds, and streams adds to both a course's beauty and its playing difficulty. A well placed lateral hazard can create a stunning fairway view for players while simultaneously demanding meticulous approach shots. As a result, understanding these hazards is important to establishing and enhancing course value. Without proper planning and execution they can become a nightmare for superintendents.

THE PROBLEM. From the Barry Burn at Carnoustie to Ike's Pond at Augusta, hazards have always been a huge part of courses and course management. Not surprisingly, superintendents are constantly seeking unique and cost-effective ways to understand and manage them.

"It can be intimidating for many managers who are, naturally, mostly focused on turf," says Shaun Hyde, water quality and technology leader at SePro Corp. "Sometimes, they fail to establish a proper water treatment program, or they get behind and the problem worsens. The solutions don't immediately present themselves."

Submerged aquatic weeds and algae, like all plants, require nutrients to grow and flourish. In untreated water, ultraviolet light reaches the pond floor, allowing these plants to photosynthesize, growing larger and taller as a result. The area in which this occurs is called the photic zone. If unmitigated, this plant growth can overrun the surface and become unsightly, detracting from course beauty and giving off unpleasant odors as the natural result of biochemical breakdown. Understandably, no golfer wants to play on a course dotted with stagnant ponds and silt-laden lateral hazards. Simultaneously, beautifully managed ponds are an indicator of a well-kept course and a capable staff.

THE SOLUTION. Aquatic dyes allow superintendents to control plant growth and establish consistent water coloration through the year. These dark dyes, properly diluted throughout the water, filter out ultraviolet light and prevent plants and weeds from accessing the energy they need to grow. The dye also allows

start on the season."

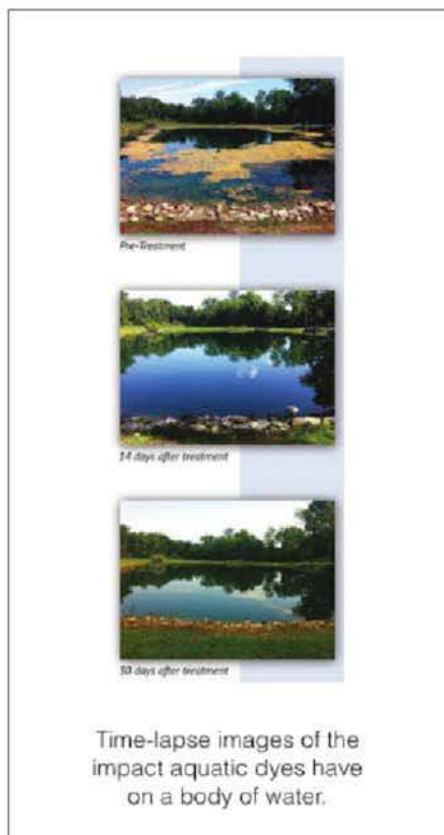
But, he notes, when the plants break through, you need to bring in other tools, like an algaecide or an herbicide.

The dyes are easy to use but require some advanced planning. A recent study at the Ohio State University found them to be most effective when applied in March or early April, depending on regional climate. If the dye is applied late in the season, plants will have already grown to the surface, making the dye ineffective.

"Dyes can be proactive or reactive, depending on the time of year when they are applied" says Troy Bettner, turf and ornamental director at SePro.

Once applied, the dye will naturally dilute in just a few hours. No spray application is needed. The Ohio State study recommends measuring the dye dilution within 48 hours of the initial application. To do so, take a white, weighted object (such as a painted 5-pound free weight) on a length of twine or string and carefully lower it into the water, measuring the exact depth at which the object is no longer visible. Use the initial depth measurement as your baseline level to maintain throughout the season. Every two or three weeks, continue to measure the visibility depth. The study recommends that once the measurement increases by 25 percent (i.e. the baseline measurement was 24 inches, the visibility depth is now 30 inches,) more dye should be applied. To eliminate variables, it's best to conduct the visibility test in the same area of the pond at the same time of day throughout the season. Maintain dye levels through the end of August, or until temperatures drop and growth slows. **GCI**

William Olmstead is GCI's assistant editor.



superintendents to color their ponds to their specific preference. Dark black dyes are the most popular, giving ponds a shiny, mirror-like surface.

"It gives a sense that the water is naturally colored, and that's the key," says Joe Lara, chief product manager at BASF. "It's also a great foundational product to start a management program at the beginning of the year, a nice soft tool to get a jump

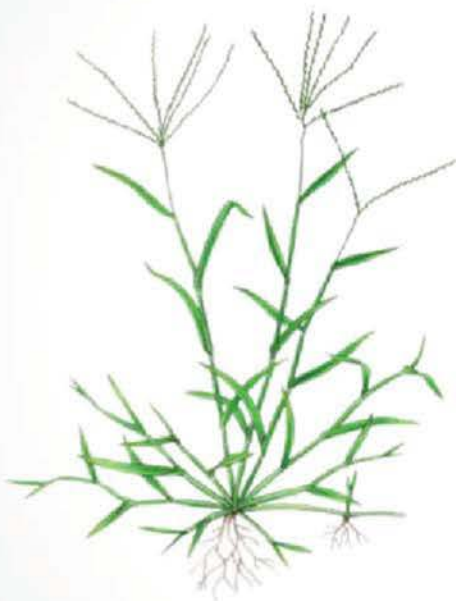
More online

For more information on aquatic dyes, check out an Ohio State University Extension Factsheet by entering bit.ly/1fWwpMR into your browser.

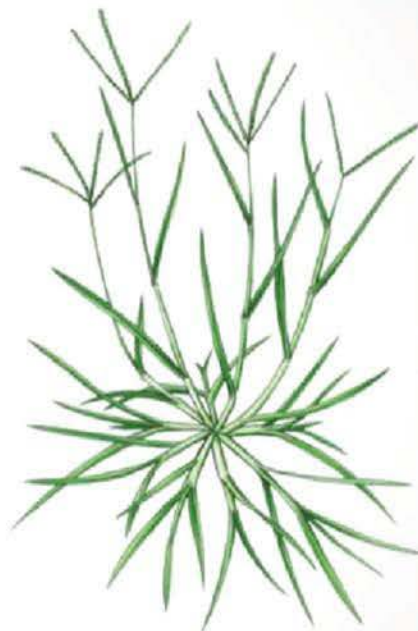




*Take a good look.
You may never see them again.*



[fig. w-42]
Digitaria sanguinalis



[fig. w-76]
Eleusine indica



Spect(i)cle®

Apply less. Achieve more.

Specticle® from Bayer provides effective, long-lasting pre-emergent weed control. Specticle gives you superior control of crabgrass, goosegrass and *Poa annua* as well as 75 other troublesome grasses and broadleaf weeds. Get ready to achieve more with Specticle. For more information, visit www.BackedbyBayer.com/Specticle.

Follow us on Twitter @BayerGolf

Specticle G is now available as a spreadable granule.



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

GIS RECAP

Some of the industry's irrigation innovations from this year's big show.

Over the last decade, irrigation equipment manufacturers with new products to debut wait for the Golf Industry Show (GIS) show to unveil them. This year was no different in Orlando.

Toro had the biggest irrigation product/enhancement announcement with its **Infiniti Series** of sprinklers. This new series takes the internal parts of the 835S and 855S models and encloses them in a new case that is 100 percent top serviceable – no digging necessary. The cool thing is you can work on almost all of the sprinklers without turning off the water. It's not the first top-serviceable golf sprinkler – Hunter has had one for several years – but it is the first where the water can stay on.

Viewed from the side, the sprinkler looks big and ugly, but in the ground the case has the exact same surface area as the 850 series. The 835 has a slightly larger surface area than its older sibling. I like that the actuator switch is no longer on the side where it gets clogged with grass clippings and dirt, or has grass growing in the hole and getting in the way. The wire connections are located in the sprinkler case, although they may be smaller than you're used to, they are easy to get to and not in the soil. The pilot valve is readily accessible from the top of the case. And if you select a decoder control system, there is also room for the decoder... although things get a little tight.

Lastly, the Infiniti Series has a large blank area to engrave yardages, and it

has room for your golf course logo. Of course, you pay a premium for these sprinklers compared to Toro's existing product line, so you need to decide whether you can justify the added expense.

New pump station technologies were on display, as well. Flowtronex unveiled an upgrade to its Oasis con-

trol system, which is mostly used for control panel retrofits. The new Oasis EX has additional features, such as remote and web monitoring that are more consistent with the technology you see in Flowtronex's new pump station control panels.

“Given the experience of their staff, the pump station included all of the necessary features that you want to see on a golf pump station. It will be interesting to see how quickly they make an impact, if at all.”

Watertronics displayed a new larger, touch screen interface that is really a computer on the front of its panel. Watertronic's Watervision 6 monitoring software, which came out two years ago, is very good graphical monitoring software. On the new panel it is included right on the touch screen with the operator interface. Similar to the monitoring screen on your computer or smart device, when you go down to the pump station you can use the monitoring screen as your user interface or use the standard pump station touch pad/screen that is running at all times.

There was also a new golf course pump station manufacturer unveiled at the golf show. Motor Controls Inc. (MCI) debuted a large, full-blown golf irrigation pump station on the show floor. MCI has been in the control-panel business for a number of years. Staffed with several past pump station manufacturer employees they have jumped heavily into the

golf market. Given the experience of their staff, the pump station included all of the necessary features that you want to see on a golf pump station. It will be interesting to see how quickly they make an impact, if at all. Yet to be seen is whether the MCI station will be able to communicate with any irrigation central control system software on the market.

Harco introduced an enhancement to their epoxy-coated, angle globe isolation valves by adding a stainless-steel seat. Regardless of the manufacturer, all of these valve types on the market have a stainless-steel seat.

Lastly, and to no surprise, a number of new or enhanced apps were unveiled, mostly to do with remote control or monitoring of the irrigation system. While some are completely new, others are primarily enhancements to existing apps or software. **GCI**



Bringing soil and water together for over 50 years.
We fix relationships.

 **Aquatrols**

We fix relationships.



Are water repellency issues driving a waxy wedge into your soil/water relationships? Probably. Statistically speaking, there comes a time in every soil's life when water just doesn't find it as attractive anymore...

Aquatrols soil surfactants help re-establish the bond between soil and water, making water-repellent areas attractive and receptive to water once again. And with a full line of formulations, we can help you solve a wide range of relationship issues.

Aquatrols. We bring back the .



scan the QR code with your smartphone
or visit [YouTube.com/Aquatrols](https://www.youtube.com/Aquatrols)



FLUSH with FEATURES By William Olmstead

How an environmentally friendly restroom helped solve some toilet trouble at The Flying Horse Club.

Last season, Dan Hawkins ran into a problem that was particularly pertinent to his members.

"We needed an additional bathroom unit located in an area that did not have power or potable water," says the director of agronomy and facility operations at The Flying Horse Club, an 18-hole Tom Weiskopf design located on the north side of Colorado Springs, Colo.

This dilemma is all too common for superintendents looking for simple and affordable ways to improve their courses. To solve the problem, Hawkins turned to Clivus Multrum, a supplier of composting toilet systems.

In addition to the course and club athletic facilities, Flying Horse is part of a large planned community containing residential and commercial properties. It's also a certified member of the Audubon Cooperative Sanctuary, an organization that provides education and certification programs to help courses protect the environment and preserve the heritage of the game.

At Clivus, Hawkins found the perfect solution: The composting M54 Trailhead.

"The composting component was attractive to us, and it fit well with our environmentally friendly approach to maintenance on the golf course and grounds" says Hawkins.

The M54 is specifically designed for locations that receive low-volume use, such as parks and golf courses, where it provides a superior alternative to portable toilets. The unit, which is typically installed in less than two days, uses foam-core panels for the floor and walls. The buried composting bin serves as the base of the structure, and solar panels are used to power the fans that keep the unit odorless and self-sustaining.

"We've had comments from members about how great it looks," says Hawkins. "Some say it's nicer than our other fully functioning flush bathrooms on the course."

The unit functions like a normal compost system, using microbes to break down the waste that collects in the basin belowground. The flushing kit uses compostable foam soap that carries the waste from the bowl to the basin using only a small amount of water.

"We hooked a small line from our ir-

rigation system to provide minimal water for the flushing process," says Hawkins. "Otherwise, it is very self-contained."

The M54 Trailhead is available in both single and double-stall models in a variety of finishes to suit superintendent and course preferences. It's also completely customizable.

"We did all of the work in-house. We were able to dress up the structure to match the existing style of the buildings on the property, so it blends well," says Hawkins. "We put in windows and a skylight to provide interior lighting since we have no power connecting to the unit."

The M54 also has the distinction of being the only composting restroom certified by the National Sanitation Foundation. The NSF takes into account the design and integrity of the unit and its components and evaluates the efficiency of the composting process under controlled testing in their laboratories.

"This unit allowed us to provide an attractive alternative for our membership that was cost effective," says Hawkins. **GCI**

William Olmstead is GCI's assistant editor.



GRIGG BROS.

INTRODUCES
the next generation of
soil specialty product

RHIZONIFY™

6-4-4

- A new product from Grigg Brothers designed to improve plant and soil nutrients, carbohydrate and moisture status.
- Contains a specifically designed wetting agent formulated to improve nutrient placement and uniformity of the wetting front in challenging soil conditions.
- Readily available plant nutrient (N, P, K + minors) plus reactive non-plant food ingredients including fulvic & humic acid, plant sugars, amino & organic acids to enhance and stimulate the rhizosphere
- Useful to manage and promote recovery from localized dry spot (LDS)
- Promotes root growth and recovery from environmental stress, disease or insect damage



For more information
scan or link.
<http://gri.gg/info1314>

For a Distributor Near You Call:
1-888-246-8873
or find us on the web at: www.griggbros.com



VISIT

<http://griggbros.com>



JOIN

<http://gri.gg/join>



LIKE

<http://gri.gg/fb>



SUBSCRIBE

<http://gri.gg/tv>



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

Travels With Terry

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

ADAPTED ACCELERATOR LINKAGE

This 2013 John Deere Gator TX 4x2 utility vehicle's accelerator pedal linkage can be bent upwards that allows it to operate at a faster speed. This was obviously a safety concern and operating the engine at higher RPM's could potentially cause damage to the engine. The accelerator linkage was removed and a ¼-inch diameter steel rod was welded from the top of the linkage to the bottom and then painted with glossy black enamel. This prevents anyone from bending the linkage whatsoever. The materials cost about \$2 per vehicle and it took about 30 minutes total labor time. Bill Brousseau is the director of golf course maintenance; Steve Judd, superintendent, of the Golf Village; Blair Kirby, superintendent, of the East Course; and John Lombardi is the equipment manager at The Club at Admirals Cove in Jupiter, Fla., a 45-hole venue.



PENN STATE | ONLINE

The Industry is changing. Education is more important than ever.

Whatever your career goals, the World Campus has a turfgrass program to set you apart from the rest:

- Master of Professional Studies in Turfgrass Science
- Bachelor of Science in Turfgrass Science
- Associate in Science in Turfgrass Science and Management
- Advanced Certificate in Turfgrass Management
- Basic Certificate in Turfgrass Management

For more information, visit www.worldcampus.psu.edu/GCI



14-0142/14-WC-0214ajw/smb



Developed in cooperation with 

Musketeer®
Triple PGR technology that encapsulates the benefits of paclobutrazol alone, yet is gentle to both your budget and your turf



Legacy®
The all-around PGR excelling in extending the duration of growth regulation and reducing the "rebound effect" and *Poa annua* encroachment in cool- and warm-season turfgrasses

Cutless® 50W/MEC
The premier PGR providing unsurpassed turf quality and color in both cool- and warm-season turfgrasses while efficiently suppressing out *Poa annua*

SePRO. Leader in Turf PGR Technology

From the reintroduction of Cutless 50W in 2002 to the patented breakthrough of the dual synergy of Legacy, and now the latest PGR innovation of the combination of three PGR technologies with Musketeer... SePRO has been at the forefront of turf PGR leadership. For more information about the innovative solutions from SePRO, contact your SePRO Technical Specialist or call 1-800-419-7779. Visit sepro.com



SePRO Corporation Carmel, IN 46032

Always read and follow label directions. Cutless, Legacy and Musketeer are trademarks of SePRO Corporation. © Copyright 2014 SePRO Corporation

MOISTURE METER STAND

This Field Scout TDR-100 (about \$735) hand-held moisture meter “stand” was built in-house and saved the club about \$300 versus buying one welded together as one unit. The “stand” was built so the staff did not have to bend-over to take the moisture readings. The handle (and neck) was made using ½-inch square tubing and it was extended 2 inches on one side to account for the electrical plug coming out of the display unit. The display unit is mounted to the 2 inch x ½ inch metal flat stock with 2-inch wide industrial Velcro and the cord is attached with 4-inch black zip-ties on the neck. The probe unit slips into 1¼ inch x ½ inch thick flat metal stock block that is held in place with one ¼ inch x 1¼ inch bolt with locking nut. The metal pieces were all welded in place and then painted with Rust-Oleum black hammered paint. It took about two hours to design and built the first “stand” and another two hours to paint/drying time. The materials cost about \$20 for each one. Matt Wilson, superintendent, designed and built the first one and Steve Bell, mechanic, from the Hillcrest CC in Bartlesville, Okla., will build the rest. “Aluminum tubing and flat stock could also be used with bigger tubing so it would not increase the weight and it would not have to be painted is another option,” Wilson added. “The display and probe units can be easily removed from the ‘stand’ as-needed.” **GC**



New Bird Phazer
“Daylight” Laser
for Canada geese

The new pocket-sized Bird Phazer Laser 200 emits a powerful bright green beam. When the beam hits the feathers of geese, it makes a bright splash of light. Their eyes are very sensitive to uv light, and the bright green laser light is very traumatic for them. A flock of more than 50 Canada geese will immediately take flight from more than 300 yards away.

\$249 Compare to the
LaserGlow Aries 175 sold for \$539

geesedamage.com
(800) 555-9634

JWB Marketing Columbia, SC



THE TURFCO CR-10 MAKES IT HAPPEN!



Whether you're topdressing your fairway, renovating bunkers or relocating material, the Turfco® CR-10, with a four cubic-yard hopper, is the workhorse you've been looking for. Its patented three-position switch, cross-conveyor flow control and self-cleaning hopper make it the most effective material handler available. And now the CR-10 is available with WideSpin™ technology—allowing you to deliver light or heavy topdressing applications at unprecedented widths and depths. All this—plus a three-year warranty. The CR-10. Don't start a project without it.

Call 1-800-679-8201 for a **FREE**
on-site demonstration or video.

WWW.TURFCO.COM

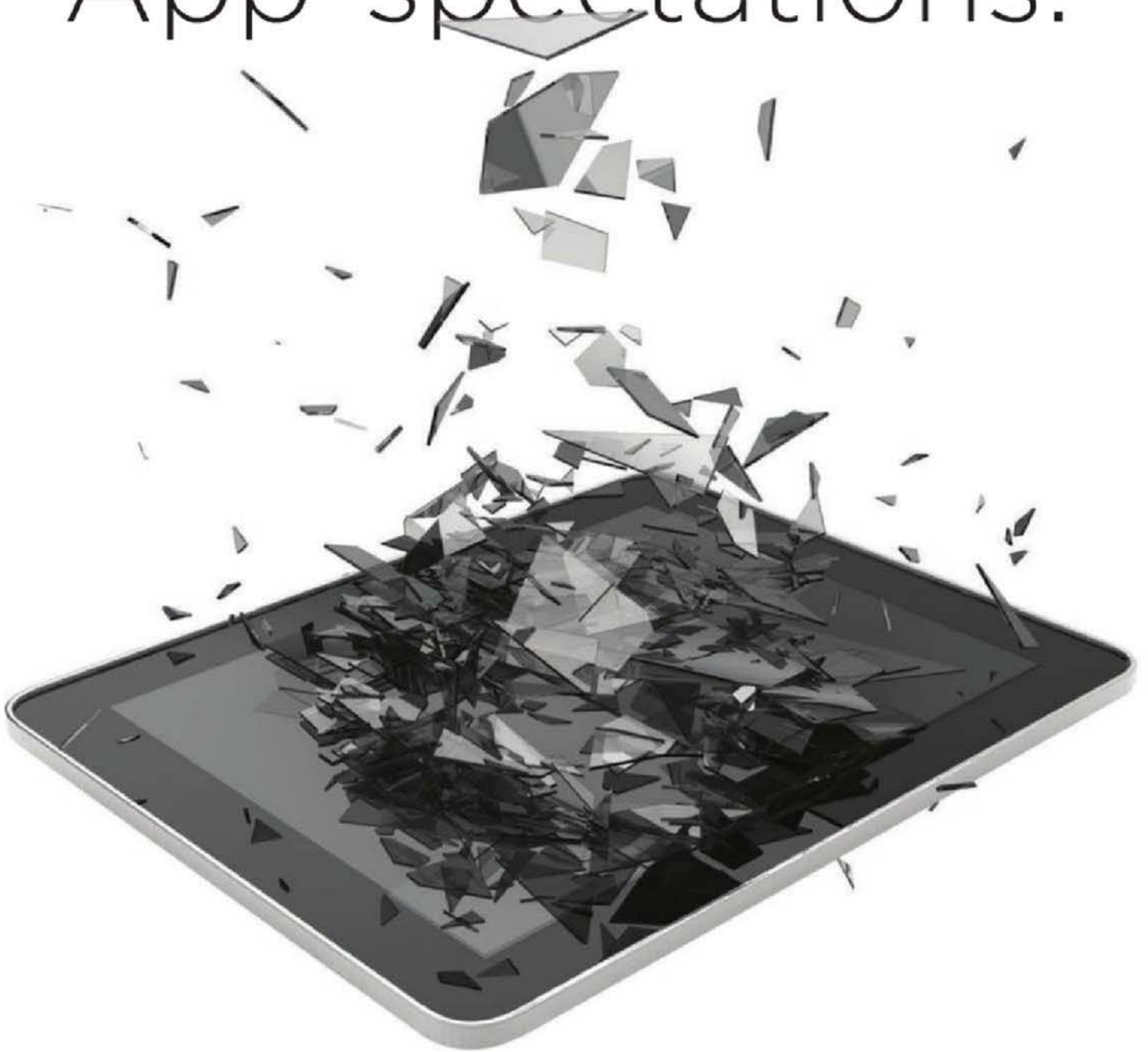


THE LEADER, SINCE 1961.

GOLF COURSE
INDUSTRY

SHATTERING

App-spectations.



Available FREE on the App Store.

Same with multiple tees. It's a no-brainer that golfers should play from the starting point that best suits their ability. "Tee it forward" is a great idea. Too bad more people don't do it. Why are we building – and maintaining – five, six, or more sets of tees? Is a 10- or 15-yard difference really affecting the likelihood that someone will find the ideal yardage for his handicap index?

Here's a simple idea. Three teeing grounds, that's it. Rate and slope them, then let golfers play from where they want. Can't most people figure out that with three it's roughly beginner, intermediate, and advanced? And while we're at it, other than for competition, do we really need tee markers?

Next: the Rules. I know the Rules of Golf and have studied them, taken the tests, and acted as a Rules official at numerous tournaments. Keep that in mind

when I ask, "Who plays by the Rules of Golf every day?" Answer: About the same as the number of golfers who really know the Rules: Almost no one. I'm sorry, but strict adherence to the Rules doesn't matter unless someone is playing competitive golf.

Tee it up in front of the markers, ground a club in a hazard, putt with the flagstick in the hole. You say against the rules. I say, who cares? Not the guys I play with. As well as I know the rules, I don't want my friends, or yours, to adhere to them if it's going to slow us down, cause more problems than they solve, and keep us from having fun.

If we want to grow the game, we should stop being sticklers for the Rules. Or consider bifurcation.

Yes, the "B word." It's time to consider two sets of Rules, one for competitive golf and one for what the rest of us play to

have fun. The new president of the USGA, Tom O'Toole, said it can't be called golf if it uses alternative rules or equipment standards. That's fine, call it what you want, I'll keep playing.

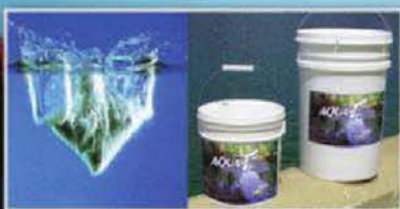
Other sports vary their rules based on ability level: Think about T-ball for little kids or junior swimmers who swim 25 meters before advancing to 100 meters. Enact a set of rules for beginners, and as people grow with the game, they can grow into the rules.

Two sets of rules – one for the best amateurs and professionals in tournament play, the other for everyone else in almost every other situation – won't ruin the game. Can you tell me we all try to play by the same rules now? Do Phil Mickelson and I play the same game? No. But we play the concept of the same game. And once we all accept that concept, we can help golf grow. GCI

Manage the health of all your water features naturally and effectively!

• DIGESTS • CLARIFIES • DENTRIFIES

AQUA-T™ Pond Bacteria



- Controls odors
- Eliminates sludge
- Removes nutrients

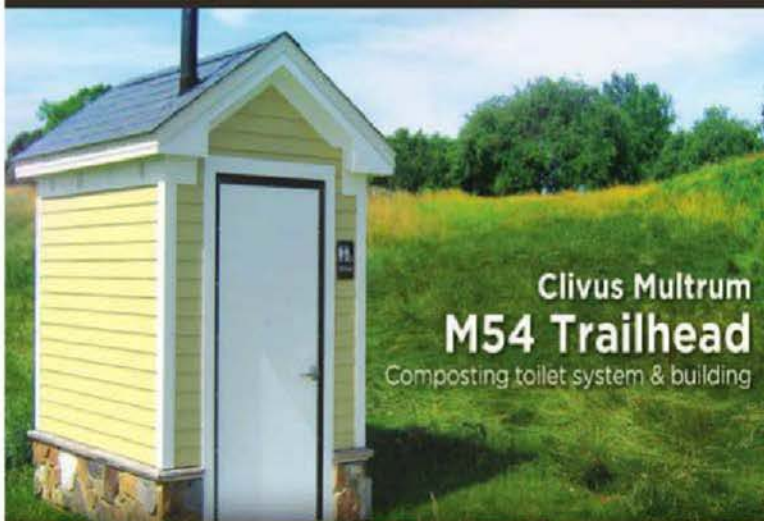
Easy-to-Use water soluble bags in 25 and 50 unit pails

TREATED **UNTREATED**



800-988-8257 • bioprotechnologiesllc.com

No Water. No Sewer. No Problem.



Clivus Multrum
M54 Trailhead
Composting toilet system & building

M54 Trailhead

clivusmultrum
Incorporated

- Odor free
- Pollution Free
- ADA compliant
- Kit or pre-fabricated
- Single or double stall
- Custom finishes
- 6 oz Foam-flush toilet or completely waterless fixtures

Contact us to learn more **800.425.4887**

www.clivusmultrum.com

FOR SALE

**Discount
Small Engines & Parts**

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

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

MERGERS & ACQUISITIONS

**ATTENTION
OWNERS/BUYERS**

Thinking of buying or selling
your **Golf Course Business/
Commercial Real Estate?**

Specializing In:

- GOLF COURSES
- GOLF COURSE COMMUNITY'S
- ACQUISITIONS

CALL: Eddy A. Dingman, CNS
Coldwell Banker Commercial NRT

**National Golf & Marina
Properties Group**

847-313-4633

Eddy@nationalgolfandmarina.com
www.nationalgolfandmarina.com

SEEDS

NATIVE SEEDS

Largest distributor of native
seed east of the Mississippi, from
Canada to Florida! We specialize in
upland to wetland sites, including
bioengineering for riparian sites.

Your native seed source.

Contact **ERNST SEEDS** today.
www.ernstseed.com - 800/873-3321

HELP WANTED

**TERRITORY SALES MANAGER**

LebanonTurf is seeking a Territory Sales
Manager to cover the Mid-Atlantic/
Southeast US. The successful candidate
must have experience selling to
distributors and distributor sales forces.
An understanding of both the Golf
and Landscape business is essential
to success in this role.

Please submit resumes to Emily Huie at
ehuie@lebsea.com or 1600 E. Cumberland
St., Lebanon, PA 17042.

SERVICES

Providing Bulk Transportation
of golf course sand, landscape gravel,
& other bulk materials

www.edgewaterbulk.com

info@edgewaterbulk.com
610-837-3867

Let us help you
get the **word** out.

The Lawn & Landscape
Media Group's Reprint Service.

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

**MAXIMIZE
YOUR ADVERTISING DOLLARS**

Place a **GCI Classified Ad**

Contact **Bonnie Velikonya**
at 800-456-0707 or
bvelikonya@gie.net.

AD INDEX

COMPANY	WEBSITE	PAGE	COMPANY	WEBSITE	PAGE
AAT Direct Solutions	www.aatdirectsolutions.com	40-41*	Plant Food Systems	www.plantfoodsystems.com	31
Aqua Aid	www.aquaaid.com	43	Qualipro	www.quali-pro.com	24
Aquatrols	www.aquatrols.com	51	Redexim	www.Redexim.com	38
Arysta LifeScience	www.arystalifescience.com	17	Charterhouse		
Azek	www.azek.com	21	Sensient	www.sensientindustrial.com	47
Bayer	www.BackedbyBayer.com	49*	SePRO	www.sepro.com	7, 55
Central Life Sciences	www.centallifesciences.com	19*	SipcamAdvan	www.sipcamadvan.com	61
Clivus Multrum	www.clivusmultrum.com	58	Spyker Spreaders	www.spyker.com	45
Core Outdoor Power	www.coreoutdoorpower.com	37	STEC Equipment	www.steceequipment.com	23
Cushman	www.cushman.com	29	Syngenta	www.syngenta.com	cover, 33
Ecologel	www.bioprotechnologiesllc.com	58	Target Specialty	www.target-specialty.com	18
Grigg Bros.	www.griggbros.com	53	Toro	www.toro.com	11
Jacobsen	www.jacobsen.com	62	Trojan Battery	www.trojanbattery.com	5
John Deere	www.JohnDeere.com/Golf	2-3	Turf Diagnostic	www.turfdiag.com	20
JWB Marketing	www.geesedamage.com	56	Turfco	www.turfco.com	27, 56
Neptune's Harvest	www.neptunesharvest.com	20	US Aquavac	www.usaquavac.com	39
Otterbine	www.otterbine.com	14	Winfield	www.winfield.com	15
Penn State	www.worldcampus.psu.edu	54			
Performance Nutrition	www.PNfertilizers.com	22			

*denotes regional advertising



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

THE TROUBLE WITH FOMOs

Please allow me to introduce you to Greg Nathan of the National Golf Foundation and his “Mayor of Crazytown” blog.

His blog name tells you a bit about Greg. He’s NGF’s guy in the market. Speaks a lot at events, gets out in the field and meets a lot of golf business leaders. Typical schmoozer... and good at it. But, he’s also a bit of a rarity among association folks because he seems hell-bent on speaking his mind. I’m not saying association people aren’t honest... I’m just saying most are practiced diplomats who are masters at suggesting things without taking a position. Greg apparently has no such qualms. I like it.

Greg recently wrote a blog post that nails a serious problem: the sharp drop in players in the 18-34 demographics. You know... the people who are supposed to be keeping your place going a decade from now.

“You may have heard or read that the next generation of golfers... has been ‘voting’ definitively against the traditional game with their feet, as they say. They’re just not showing up at golf courses the way they used to. Golf participation among this age group has declined 30% during the past twenty years. Since the 18-34 age segment historically has the highest participation rate and is also the age range when most people take up the game for the first time, this decline has profound implications for golf’s future.”

Are your alarm bells ringing? Why are we losing this core customer group?

“The referendum on recreational golf (not to be confused with interest in pro golf) among younger people is so negative because we continue, as an industry, to expect/force them to put aside their regular lifestyle for 4-5 hours. Aren’t businesses and industries supposed to

evolve and innovate to better serve their customers’ needs/wants? If we do not change (and fast!), the game and business of golf will absolutely guarantee its own ‘right-sizing’ in the not-so-distant future.”

Yikes! And then he poses a critical question that forces us to consider our slavish devotion to “tradition” versus the compelling need to evolve:

“What makes golf so special that we can maintain the arrogant position that it’s the customers who need to alter their behavior in order for us to allow them to consume our product!?”

Ouch. The truth hurts, doesn’t it? Here, Nathan says, is the problem:

“Golf is simply not relevant for the perpetually engaged, never-out-of-touch ‘Millennials’ of whom I write. The concept called ‘FOMO’ (Fear Of Missing Out) is a huge driver of their behavior. After all, they sleep with their phones! Hey, wait a second... I sleep with my phone and I’m 44! Think of the golf course as FOMO-central – the place where they are virtually guaranteed to be missing out on everything in their life! Doesn’t that sound awesome? I can hear the echoes of a generation of 28-year-olds now: ‘Golf? Are you kidding me? No chance.’ We might as well be fertilizing the fairways with kryptonite, folks!”

And here’s where Greg gets really crazy; he actually suggests a solution:

“My crystal ball says that the most critical way that golf must innovate is by encouraging and facilitating, not simply allowing (yes, there’s a BIG difference), entertainment in the golf car. The new line item in the capital improvement budget at most golf courses (should) be video monitors and connectivity in all of their (golf cars). If you need to make your course a 150-acre Wi-Fi zone, then so be it. If every car in your fleet needs to be a mobile Internet hot spot, then get on it. Full broadcast media in every

buggy... absolutely. Bluetooth-enabled speakers in the back of every car... check!”

Okay, I’m not sure I agree 100 percent with the Mayor of Crazytown on that, but he makes an excellent point. We accommodate people with disabilities. We accommodate kids and ladies. Why not accommodate the wired customer? I’m 51 years old and I must confess that I’ve live-streamed the Masters broadcast onto my iPad in my cart during the middle of a round at a nice club. It seemed wrong to do it. Why should I feel guilty for doing something normal while I’m playing golf?

“If the next generation of players were going to be attracted to the golf product that course owners and operators have been serving up... they’d already be playing. They’re not. Even if it was free, I’m not sure they’d be teeing it up. I think traditional golf is the most perfect game ever created... but our customer prospects under 35 absolutely do not agree. Unless you run one of those 25% of facilities (and I think that’s generous) that can do good business offering only the traditional game... it’s wake up time!”

The Mayor is absolutely right. Instead of bemoaning the problem, offer a solution. Success in today’s crowded, weird market is often dependent on finding the right niche and exploiting it ruthlessly. Why not cater to the iGeneration?

I’ll let Mr. Nathan have the final word:

“Make your course a FOMO-free zone and help start the golf revolution that might just be the secret to keeping our game and business strong.”

(Greg Nathan’s blog can be found at <http://ngfdashboard.clubnewsmaker.org/Newsletter/1rf655upc2m118g6mneb41>.) GCI



“ETQ fungicides are pretty much all I use on greens, tees and fairways.”

“Echo® Dyad ETQ™ is great because I don't have to worry about resistance with chlorothalonil. I also use Eclipse and Sipcam Clearscape® ETQ for season-long protection and to meet the required restrictions. We've seen great color, quality and a dramatic reduction in hand watering. Pre-mix convenience and affordability are other benefits and the money saved allows me to do more in other areas.”

Scott Goniwiecha
Golf Course Superintendent
The Glen Club
Glenview, Illinois



Discover what Scott Goniwiecha already knows. ETQ fungicides from SipcamAdvan deliver all the advantages you expect. And plenty more you never thought you'd see. Trust in ETQ technology. Because accomplishing more with less is the new normal.



SipcamAdvan
The Natural Choice™

www.sipcamadvan.com
800-295-0733



WILL THE MOWER WITH THE MOST POWER IN ITS CLASS PLEASE RAISE YOUR ARM

NEW AR722T™

Nothing is more powerful than the all-new seven-gang AR722T™ contour rotary mower from Jacobsen. With a massive 65.2 horsepower Kubota® turbo-charged diesel engine, the AR722T powers its ultra-productive 124-inch width-of-cut without slowing down. The AR722T glides over ground contours and climbs hills with ease – thanks to the exclusive SureTrac™ four-wheel drive traction and weight transfer control. See for yourself why the powerful and productive Jacobsen AR722T contour mower is at the head of its class – call your local Jacobsen dealer today.

JACOBSEN