

It's all teed up and ready to go.



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

Pre-mixed CIVITAS ONE* makes it even easier to benefit from the many strengths of CIVITAS. Research-proven to strengthen plant health, user-proven to deliver top quality turf – CIVITAS ONE empowers turf to reach its full potential. Through its research-proven multiple modes of action, it boosts the plant's immunity, and overall development, making turf healthier, stronger and better able to defend itself against disease, insects and the elements. Plus it improves drought resistance by enhancing turf's root structures so it requires less inputs, such as water. Achieve picture perfect turf with CIVITAS ONE – The Total Turf Health Solution. **To get started visit civitasturf.com/one**

IN THIS ISSUE



COLUMNS

- | | |
|---|---|
| <p>8 The Monroe Doctrine
<i>Monroe Miller: What we need is a junkyard</i></p> <p>14 Design concepts
<i>Jeffrey D. Brauer: Cost benefits in renovations</i></p> <p>20 Outside the ropes
<i>Tim Moraghan: The "Grainy" Awards</i></p> <p>26 Johnny Turf Nerd
<i>John Kaminski: It's not the gadget, it's the user</i></p> <p>32 Irrigation issues
<i>Brian Vinchesi: Water costs</i></p> | <p>38 Game plan
<i>Henry DeLozier: Golf and the next generation</i></p> <p>42 From Dodson, With Love
<i>Ron Dodson, Bill Love: Sustainable soils</i></p> <p>38 Sage advice
<i>Dennis Lyon: Bouncing back</i></p> <p>50 Parting shots
<i>Pat Jones: Running scared</i></p> |
|---|---|

DEPARTMENTS

- 4 Teeing off**
App happy
- 6 The Whiteboard**
- 45 Travels with Terry**
Equipment ideas
- 48 Classifieds**
- 48 Ad index**

COVER STORY

- 10 RETIRE RIGHT**
GCI's guide to leaving the world of turf and living out your golden years in comfort.

FEATURES

- Construction*
- 16 BEST LAID PLANS**
Avoid the common traps and added costs superintendents and courses fall into during a renovation project.

- Trees*
- 22 A LITTLE OFF THE TOP**
Scheduling tree pruning for winter months can cut expenses and enhance tree health. GCI walks you through the process to establish a pruning program.

- Irrigation*
- 28 PIPE DOWN**
With no shortage on opinions, superintendents should beware misinformation plaguing the market about PVC vs. HDPE irrigation pipe.

Turf maintenance

- 34 COMB OVER**
Brushing greens prior to mowing provides multiple benefits without the surface disruption.

Pests

- 39 ENEMIES AT THE GATES**
The hodgepodge of weather extremes makes it difficult to predict pest pressures in 2013. GCI's experts offer their best predictions.



16

22



28

APP HAPPY

Chances are still excellent that you're reading these words right now on lignocellulosic fibrous material made by chemically or mechanically separating cellulose fibers from wood, fiber crops or waste product that's been processed, pressed and dried into a flexible sheet. (Thanks Wikipedia!)

In short, you're holding the cold, dead corpse of what was a nondescript tree at some point. It was probably planted and grown specifically for the purpose of making paper somewhere in Georgia or maybe Washington State. No treasured California Giant Redwoods or thousand-year-old Baobabs were harmed in the writing of this column.

Many super-genius experts predicted a few years ago that you would not be reading a dead-tree magazine in 2013. If video killed the radio star, digital would certainly kill print, they proclaimed. People would reject this clunky, outdated format for the sexier (and cheaper) version they could get on the Internet.

Well, to quote another super-genius, Mr. Lee Corso: "Not so fast, my friend."

Our research shows that nearly 90 percent of you still highly value getting a print magazine. Only about 10 percent of you don't want us to send you one. Most of those folks aren't environmental nuts or anything...they just prefer reading the magazine on their computer or tablet.

On the other end of the spectrum, 10 percent of you are the "luddites" who say you never visit our website or open an email from us. You want to kick back (usually in the comfort of the maintenance facility crapper) and read us in old skool style. That's cool too.

(Side note: I consider finding copies of my magazine in a stall at a golf course maintenance facility a major sign of success. How weird is that?)

The other 80 percent of y'all want everything we can give you to one extent or another. That's why we've invested so much time, effort and money to give you cool, non-dead-tree options like our digital edition, website, e-newsletters and our mobile app.

Many folks who've always loved the printed edition cite the ability to carry it around and read it whenever as a major benefit. That's a big advantage, too, for the GCI mobile app. You can read it on your iPad or even your phone, access past issues, email a story to a friend or even post something directly to Facebook or Twitter from the app. It's pretty awesome.

Well, awesome isn't good enough for us.

Next month, we're launching Version 2 of the GCI mobile app. We really need a fancier name than "Version 2" because it's not just a little upgrade with a few new bells and whistles. It's a whole new dimension in publishing. I kid you not.

The new app will, essentially, bring the "flat" pages of the magazine to life. We'll be able to animate stories. We can incorporate video or sound seamlessly to a story. We can make a mole cricket march across the page or give you 15 pictures of a course renovation project where only one would fit before. The content can link to anything, including live social-media feeds or blogs about the topic.

Even the ads will come to life. We're working right now with our industry partners to

recreate their ads with movement, sound and even geolocation. That's a fancy way of saying that if you see an ad for a product you're interested in, you can touch one hotspot on the page and instantly see a map pinpointing local distributors who carry that product.

I think it will, as Timothy Leary famously said, blow your mind.

What blows my mind is that we did it ourselves. Our little company – which also produces incredible publications in the lawn care, nursery, greenhouse and garden center markets – created this new app by ourselves. And we're building apps and other digital goodies for some leading companies, too. More on that soon. I love my team.

Here's the bottom line: If you have an iPhone, a Droid or an iPad and you haven't already downloaded our app, go do it right now. We'll be sending you a little post-Christmas present that I think you'll really like. Happy Holidays to all... GCI



Pat Jones

Editorial director and publisher

GOLF COURSE INDUSTRY

Serving the Business of Golf Course Management

Vol. 24 No. 12

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

Mike Zawacki

Editor

mzawacki@gie.net

Kyle Brown

Associate Editor

kbrown@gie.net

Bruce Williams

Senior contributing editor

SALES

Russell Warner

National account manager

330-523-5385

Martha Corfman

Manager, books

330-523-5366

Ted Schuld

Account manager

216-236-5937

Maria Miller

Conferences manager

330-523-5373

Bonnie Velikonya

Classified sales

330-523-5322

Jodi Shipley

Marketing coordinator

330-523-5368

GRAPHICS / PRODUCTION

Andrea Vagas, Creative director

Helen Duerr, Production director

Heidi Clevinger, Production coordinator

CORPORATE STAFF

Richard Foster Chairman

Chris Foster President and CEO

Dan Moreland Executive Vice President

James R. Keefe Executive Vice President

Marco Urbanic Director, Integrated Data Systems

Andrea Vagas Director, Creative

Helen Duerr Director, Production

Melody Berendt Director, Circulation

Maria Miller Manager, Conferences

Kelly Orzech Director, Accounting

Irene Sweeney Manager, Corporate Communications

Kevin Gilbride Business manager, GIE Ventures

Golf Course Industry is a member of:

Golf Course Superintendents

Association of America

National Golf Foundation

Golf Course Builders Association of America

The Irrigation Association

Responsible Industry for a Sound Environment



SAVE UP TO \$600
A YEAR ON FUEL.
CELEBRATE
AT WILL



Meet the **KOHLER COMMAND PRO® EFI ENGINE**. A penny-pinching fuel sipper that uses less gas than comparable KOHLER carbureted engines — saving you up to \$600 a year on fuel and fewer trips to the pump.* Every time gas prices spike, you save even more. See your savings at **KOHLERENGINES.COM/EFI**.

*Compared to a comparable KOHLER carbureted engine under comparable loads and duty cycles. Based on 600 hours of annual operation at \$3.50/gallon.

KOHLER ENGINES

KOHLERENGINES.COM/EFI

RISE, CL address industry issues at annual meeting

RISE AND CROPLIFE AMERICA have never been afraid to take on the big issues, whether it's working with government officials to find solutions to complex regulatory issues relating to protecting public health and the environment or grappling with how to feed an exploding global population that is expected to top 9 billion people by 2050.

That's why a well-attended general session titled "The Seven Revolutions" featuring Johanna Nesseth Tuttle of the Center for Strategic & International Studies proved so timely, as 500 industry executives traveled to Amelia Island, Fla., just a month before the U.S. Presidential election to chart the future of the chemical industry.

"What's the world going to look like in the year 2030?" Tuttle asked those attending the bi-annual meeting of RISE (Responsible Industry for a Sound Environment) and CropLife America. How policy makers respond to seven key issues with global implications in the years ahead — population, resources, technology,

economics, information, security and governance — will likely provide the answer to that question.



There will be opportunities for government and industry "to find new paths forward" and address the challenges of population growth, security, and other issues of importance to people around the globe, and chemical suppliers are going to play an important role in shaping that new world, although "the role that your industry plays is going to continue to be challenging" given the complex nature of the issues facing policy makers.

Still, there is reason for optimism if industry representatives stay actively engaged on issues of importance to them. "Our theme for this week — political campaigns of the past — also reminds us how important our individual and collective participation in the political process is — and how powerful it can be," observed Dave Morris, outgoing RISE Governing Board Chairman and Commercial Leader, Pest Management and Turf and Ornamentals Business, Dow AgroSciences.

In other RISE/CLA highlights, keynote

speaker Charlie Cook, editor and publisher of The Cook Political Report, shared his thoughts on the presidential race and the state of American politics. Regardless of the outcome of the election, he said, there is much work to be done in Washington, particularly as it relates to the economy.

"After this election...I'm very worried about what's going to happen at the end of this year and the beginning of next year," he said. "When they (Congress) get back, if they don't get a deficit package in place... you're going to see some bad things happen. Can these folks get their act together?" Cook asked. "We're now getting sort of close to judgment day."

In closing the conference, RISE President Aaron Hobbs said the association's longtime partnership with CropLife America "is a great thing for our industry," allowing the two advocacy organizations to speak with one voice. "We have a lot of opportunity out there to change policy and change minds," he said, but it requires active involvement by RISE members, a theme echoed by MGK President Steve Gullickson, incoming RISE Governing Board Chairman.



Industry pros have a lot of opportunities to change minds, but active involvement is required, says Aaron Hobbs, RISE president.

From THE FEED

With a summer of drought behind us, water use and irrigation is an even higher priority for golf courses throughout the U.S. Pat Jones attended the "Golf's Use of Water" summit put on by the USGA in November, and tweeted some of the key points made by the speakers and experts. We invited superintendents to join in the conversation on Twitter.

Ron Whitten @RonWhittenGD

At this point, I like to think that defining the problem is appropriate. Assume remainder of program will offer solutions...



GCI Magazine @GCI Magazine

Weak turf means weeds and pests, more inputs, etc. Greener usually equals healthier and healthier is better.



Sean R. @spartangrass

Golf isn't played from an agronomics standpoint. It's measured from playability.



based on that definition, must determine which costs more: Green lush turf: water and fungicides, Brown turn: herb & pesticides.

Sean Wilson @mseanw67

Most courses will never be able to afford all this technology being talked about as the answer.



Robert Waller @robertwaller70

There will be a financial tipping point that creates an ROI. 1st in high water and energy cost locations.



Robert Waller @robertwaller70

Biggest takeaway. "Technology doesn't save water, people's decisions save water." More training needed.

Join the conversation
on Twitter @GCI Magazine!



Veterans go the distance

So a couple guys clocked seven full rounds in a single day in Minnesota. Big deal. On Veterans Day this year, military veteran students at the Golf Academy of America played from dawn to dusk at River Oaks Golf Plantation in Myrtle Beach, and raised money for the Wounded Warrior Project and Salute Military Golf Association.

About a dozen total veterans played throughout the day, switching in for each other to keep a foursome going no matter what came up. Golfers received sponsorships or pledges to play, and each of the branches of the Golf Academy co-sponsored the marathon. Such strong support is no surprise for an institution where a full 15 percent of the student population is made up of veterans, according to Jim Hart, Myrtle Beach campus director.

The event was one of three Wounded Warrior Project fundraisers at River Oaks, which included a green target drive on a par 3 or a practice green putt, both for a donation. The marathon, however, comes on the heels of last year's effort: Air Force veteran and Golf Academy student Mark Chapman golfed 11 rounds in 11 hours to raise money.

MEAN GREEN DANCING MACHINE

Perfectly managing a height of cut while tracing graceful lines across a fairway takes skill, talent

and focus, but turf management branched into an entirely new art form at the end of October - a Mean Green CXR-60 shimmied its way to the dancefloor in the most recent season of Dancing With the Stars.

Mean Green owner Joe Conrad got the call from CBS studios just three days before the taping of the episode, meaning the Ohio-based team hauled a 36-hour journey to Los Angeles to make it. After arriving in the City of Angels, Conrad helped Derek Hough and Shawn Johnson prep with their new dance partner. Unfortunately, the mower didn't really get to cut up the dance floor, although the dancers rode out on it to Kenny Chesney's "She Thinks My Tractor's Sexy," scoring a 28 total for their country cha cha.

Maybe next season the machine will actually make it onto the dancefloor? We hear it does a mean mow-rengue.





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

WHAT WE NEED IS A JUNKYARD

The famous Iowa artist Grant Wood really had something when, many years ago, he said, "All the really good ideas I ever had came to me while I was milking a cow." This former farm kid can relate to Mr. Wood's observation. But my long career in golf inspires me to amend his observation to time spent mowing fairways.

I have done a lot of planning and reflection on fairway mowers and more than a few ideas came to me over the drone of their small diesel engines.

The thought came to me this spring that golf courses could really make use of a junkyard dedicated to golf course maintenance machinery. I was operating a Toro fairway mower at the time, and before I had headed across the tracks to the golf course I was watching the club's equipment manager pulling a starter from an engine he'd salvaged years ago. He removed a few bolts and, just like that, he had saved the club hundreds of dollars and had the machine back in use in minutes.

It wasn't the first time he had removed a part from that old engine and it likely wasn't likely the last. We have shelves with parts salvaged from equipment that had no value as a trade-in. They are pieces that experience had shown we would need somewhere down the line. Tires and rims were included. Often, there wasn't much left when we were done stripping an old machine.

We would have salesmen keep their eyes open for a cheap machine we could purchase that had great value after we cannibalized it for parts. Those salesmen sometimes even knew where a machine was abandoned in a fence row or behind a shop. A phone call to the superintendent and the machine was ours, solving a parts problem for the near future.

Jacobsen's earliest models of their

Turfcut, when fitted with a flail deck, pulverized fairway cores after aerification like nothing we ever had seen or demonstrated. They were terrific for mulching leaves, also. We like to keep three of them in good operating condition, but new OEM parts haven't been available for years. The way out has been to look for some junkers to salvage. So far, so good.

But someday, we will have to cast a wider net to find old machines. This is where turf equipment junkyard would come in handy.

I have liked junkyards since the day, back in 1962, when I got my driver's license and my first car. I kept that

Often the best way to make a repair is with a new part, but not always. How many times do you simply need a small component of a part, but have to buy the entire piece to get it. Instead of a few bucks, it could be \$500.



1951 Chevy two-door hardtop running by getting parts from an area junkyard. A glass-packed muffler, a condenser, a battery, a distributor cap and even a tire and rim were unaffordable new, but often for less than a buck, my car was running smoothly again. When I upgraded to a 1954 Chevy, I made a quick trip to the junkyard to find a radio and an antenna that would fit in the dash of my "new" car.

The biggest junkyard I ever saw was on the edge of an enormous Army post about 25 miles north of Saigon. Battle damaged equipment was hauled to this junkyard, which had to be a couple hundred acres. One day our MP jeep had a flat tire. To avoid the hassle and wasted time at the motor pool, my partner and I pulled into the junkyard to get a replacement tire. The yard was packed with disabled jeeps; nearly everyone had a couple of good tires on it. However, the ornery old E-6 threw us out, saying, "The Army doesn't put used parts on its equipment." A prime example of military efficiency.

Here in the Midwest businesses have been created that are essentially sophisticated junkyards for ag equipment. You can call an 800 number, give them the part number, and the staff strips it out of an old machine and overnights it to the farmer. Your back in business for a fraction of the cost of a new part.

Often the best way to make a repair is with a new part, but not always. How many times do you simply need a small component of a part, but have to buy the entire piece to get it. Instead of a few bucks, it could be \$500. It drives superintendents crazy and makes the idea of a turf equipment junkyard an appealing one.

There is no question this would take an ambitious team to get it going. After all, who likes to save a buck more than a superintendent? **GCI**

The Best is Back



The Most Effective Snow Mold Control Available

The fungicide you've trusted is back controlling Snow Mold and other labeled winter diseases on golf courses. Pound for pound – ounce for ounce this proven performer offers an exceptional value for your golf course management program.

Contact your AMVAC/AEP distributor today or AMVAC at 1-888-GO AMVAC (1-888-462-6822) and visit www.amvac-chemical.com.

Turfcide® 400 Turfcide® 10G

Retire **RIGHT**

GCI's guide to leaving the world of turf and living out your golden years in comfort.

