MARCH 2009 golfcourseindustry.com Builder Excellence Awards

SERVING THE BUSINESS OF GOLF COURSE MANAGEMENT

Don King (left), executive director of golf operations, and Sandy Clark, CGCS

SCALING BACK

Barona Creek implements a turf reduction project to reduce water, inputs and energy use **P. 30**

A Sure Bet

A winner! That's what you get with the Penn bentgrasses from Tee-2-Green. From Penncross, to the A's & G's, to Penneagle II and PennLinks II, superintendents around the world know and trust the Penn bents. They're tried, proven, and easy to manage; a sure bet to provide legendary turf quality on your putting greens, fairways, and tees.



Why Use Anything Else?

PO BOX 250 Hubbard, OR 97032 USA • 800-547-0255 • FAX: 503-651-2351 www.tee-2-green.com • bentinfo@tee-2-green.com



FEATURES

Club manager profile

22 IT'S THE CLUB, FIRST!

Barbara Jodoin is redefining the general manager role by maintaining a fierce focus on bottom-up management and top-flight communication.





IN THIS ISSUE

COVER STORY: Course management SCALING BACK



Turfgrass maintenance THE BEST-LAID PLANS Superintendents rely on experience, peers and experts to craft effective agronomic programs.

Personnel management HIGHER PAY VS. BETTER BENEFITS Knowing employees'

66

72

preferences boosts retention and satisfaction.

Pesticide management PREVENTING HERBICIDE MIX-UPS

Put a system in place to ensure misapplication doesn't happen.

Product focus:

Organic fertilizer 84 ENVIRONMENTAL CONSIDERATIONS

A public course on Long Island uses organic fertilizers where it can.



76 RESEARCH

Fertilizer meta-catalysts can maximize nutrient management.

GOLF COURSE INDUSTRY (ISN 1054-0644) is published monthly. Copyright 2009 GIE Media Inc., 4020 Kinross Lakes Parkway, #201, Richfield, OH 44286. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One-year subscription rate; \$33 in the United States, \$42 in Canada and Mexico, and \$88 in other foreign countries. One year foreign airmail rate: \$102. Two year subscription rate: \$65. Single issue rate, \$10. Subscriptions and classified advertising should be addressed to the Richfield office. Periodicals postage paid at Richfield, Ohio, and additional mailing offices. Postmaster: Send address changes to *GOLF COURSE INDUSTRY* 4020 Kinross Lakes Parkway, #201, Richfield, OH 44286. Canada Post: Publications Mail Agreement #40612608 Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2



golfcourseindustry.com

Did You Know?

The No. 1 cause of on-the-job deaths for golf course workers is being struck by a piece of equipment – almost always due to a rollover, according to Howie Eberts, OSHA compliance assistance specialist.

DEPARTMENTS

- 6 **Teeing off** John Walsh: Perception vs. reality
- 8 Feedback
- 20 Consumer research
- 87 Travels with Terry Equipment ideas
- 88 Classifieds
- 89 Ad index

COLUMNS

- 10 Assistant's view Tavis Horton: Preparing a portfolio
- 12 Design concepts Jeffrey Brauer: Pay now or pay later
- 14 Irrigation issues Erik Christiansen: Face regulation proactively
- 16 The Monroe doctrine Monroe Miller: Moving out ... and on
- 18 Equipment management Stephen Tucker: A European perspective
- 86 Outside the ropesTim Moraghan:One year, three majors
- 90 Parting shots Pat Jones: Fear and scribbles

ON THE WEB – GOLFCOURSEINDUSTRY.COM

Look for these articles on our home page and in our weekly e-newsletter.

SAFETY IN NUMBERS

OSHA figures from 2004 to 2008 shed some light on how workers most commonly get hurt on the golf course and what violations facilities are most frequently cited for.

SET AN EXAMPLE

A Florida golf course superintendent shares an environmentally responsible grow-in method.

PREDICTING FERTILIZER PRICES

Experts help make some sense of fluctuating fertilizer prices and predict what might happen next.

MANAGING A MORE PROFITABLE ORGANIZATION

To stay afloat during the recession, golf course operators look to reduce costs and increase revenue wherever they can.

PREVENT GOLF CART GAFFES

Take note of how golf cart injuries occur and ways to reduce the incidents.



EDITORIAL MISSION STATEMENT:

Golf Course Industry reports on and analyzes the business of maintaining golf courses, as well as the broader business of golf course management. This includes three main areas: agronomy, business management and career development as it relates to golf course superintendents and those professionals responsible for maintaining a golf course as an important asset.



Introducing total disease protection in one container. DISARM[®] C is the first and only strobilurin and chlorothalonil premix with a unique systemic and contact formulation that provides the broadest spectrum control of thirty diseases, including dollar spot, brown patch and all major patch, spot, and snow mold diseases. There is simply no easier, more cost efficient or worry-free way to protect your entire golf course. To learn more about the best weapon against turfgrass diseases, contact Arysta LifeScience North America Support Services at 1-866-761-9397 or visit www.arystalifescience.us/disarmc.







L+ CHI

WHION ON

Always read and follow label directions. DISARM and the DISARM logo are registered trademarks of Arysta LifeScience North America, LLC, Arysta LifeScience and the Arysta LifeScience logo are registered trademarks of Arysta LifeScience Corporation. ©2009 Arysta LifeScience North America, LLC, DCL-026 www.golfcourseindustry.com/readerservice #11

BIT WAY

PERCEPTION VS. REALITY

few weeks ago, I was talking to a few superintendents about the official postshow numbers released by the organizers of the Golf Industry Show. Before, during and after the show, there was incessant talk about show numbers, specifically the number of attendees, suppliers, booth space and qualified buyers. That last one struck a chord with one superintendent because he didn't believe there were 7,012 qualified buyers at the show. He suggested the host associations were trying to paint a prettier picture than what really happened in New Orleans. (An aside: No matter what picture of Bourbon Street you paint, it's not going to be pretty.)

Whether there were 7,000 qualified buyers or not, too many people get hung up on the GIS-related numbers. The big show's numbers shouldn't be used to define the industry's performance because:

• The GIS, as well as all regional and local trade shows and conferences throughout the country, should be looked at as a whole for a more wellrounded perspective.

• There always will be people who don't go to the show each year for one reason or another. It's unrealistic to think show attendance is going to increase significantly year after year.

• Few qualified buyers actually purchase products at the show.

• Total revenue from all the golf-industry-related business' (manufacturers, distributors, service providers, architects, consultants, builders, etc.) is a more accurate gauge.

• The Internet, where one can access plenty of product information and research, has reduced the need to attend trade shows.

That said, I'm not suggesting the industry isn't in the doldrums right now. It's just that much more than the GIS needs to be considered when gauging the state of the industry.

Another superintendent said the GCSAA has perpetuated the perception the GIS is a significant industry metric, and perception is reality in the marketplace. Well, if perception is reality, the industry is in deep trouble because people should be making decisions based on reality, not perception. There's a difference between the two, and the difference can be considerable depending on the situation. To start, perception is defined as a result of attaining awareness or understanding, or to become aware of through the senses. Reality is defined as the quality or state of being real, or the totality of real things and events.

There's an important distinction between the two. Here's an example: I might perceive someone in the office as one who doesn't work hard based on what I see of that person. That's my perception. However, reality could be different. That person might be an exceptionally hard worker; but, because I don't work closely enough with that person or see him as often as other coworkers, I don't see the whole picture, or the reality of his job.

> Smoke and mirrors can be part of perception. They're not a part of reality, unless you're not healthy mentally.

> > What are your perceptions compared to realities? How many of them are one in the same? How many are different, and to what degree? I'm sure you've had perceptions of coworkers, companies, golf courses, etc., that turned out to be incorrect after learning more about that person, business or facility. There's nothing wrong with having perceptions just as long as you understand those perceptions

> > > might not be reality based on your

John Walsh Editor

knowledge of the subject, which might be incomplete or lacking. In other words, you don't know the whole story.

Now, think about the perceptions of your coworkers, management, maintenance operation and golf facility. Have you heard perceptions about yourself or others in the organization that aren't accurate? Have you done anything to change that? Did you find out what the perceptions were based on?

If you're operating in a business environment where perception is reality, work to change that as quickly as possible. Because decisions made based on perception are foolish ones sometimes, and decisions made based on reality are intelligent ones all the time, make sure the people in your organization know the difference. It's in reality, not perception, where you'll find the truth, which, in turn, is a solid basis for decision-making. **GCI**

John Welsh

GOLF COURSE

Serving the Business of Golf Course Management

Vol. 21 No. 3

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

Fax: 330-659-0824 John Walsh Editor jwalsh@gie.net

Marisa Palmieri Senior editor mpalmieri@gie.net

ONLINE Cindy Code Director, interactive content ccode@gie.net

Heather Wood Taylor Interactive content editor htaylor@gie.net

Katie Alberti Interactive content editor kalberti@gie.net

EDITORIAL ADVISORY BOARD Terry Buchen, CGCS, MG Golf Agronomy International

Raymond Davies, CGCS CourseCo

Tim Hiers, CGCS The Old Collier Golf Club

Laurence Hirsh Golf Property Analysts

Ted Horton, CGCS Ted Horton Consulting

Michael Hurdzan, Ph.D. Hurdzan/Fry Golf Course Design

> Pat Jones Flagstick LLC

Mike Kriel The Brick Cos.

Joe Livingston, CGCS River Crest Country Club

Matt Rostal Interlachen Country Club

AGRONOMIC RESEARCH COUNCIL Rob Golembiewski, Ph.D. Department of Horticulture Oregon State University

David Kopec, Ph.D. Department of Plant Science University of Arizona

Dara Park, Ph.D. Pee Dee Research and Education Center Clemson University

John Stier, Ph.D. Department of Horticulture University of Wisconsin-Madison

Nathan Walker, Ph.D. Department of Entomology and Plant Pathology Oklahoma State University

> Fred Yelverton, Ph.D. Department of Crop Science North Carolina State University

Deer Rabbits Moles Snakes Geese

Liquid Fence[®] animal repellents.

From the nation's number-one selling Deer & Rabbit Repellent to guaranteed effective Mole and Goose Repellents – Liquid Fence products will do for you what they've done for millions of satisfied customers... <u>really work</u>!



www.golfcourseindustry.com/readerservice #12

The Liquid Fence Company



Call (800) 923-3623 www.liquidfence.com pro@liquidfence.com

Always read and follow label direction

FEEDBACK

We'd like to hear from you. E-mail us at jwalsh@gie.net with your thoughts and opinions.

Lean thanks

"Lessons in Lean" (page 30 in the January issue) is an outstanding article. I was so impressed with the way Marisa Palmieri presented the concepts. It was simply fair and unbiased journalism. I've had several great emails and comments, and the team at Lexington was thrilled with how well the program was presented. Thanks again for Marisa's tremendous work and putting the Working Smarter Training Challenge out there as an option and a resource to help golf courses learn more about the potential of lean.

Jim Paluch President JP Horizons Cleveland

Real world vs. ivory tower

John Stier's comments about research funding cutbacks vis-a-vis grant preparation time, energy and cost are what the real world often views as typical ivory-tower thinking (golfcourse industry.com/news/news.asp?ID=4854).

First of all, a different economic world existed in September when calls for proposals went out. If you don't think that's true, check your retirement and investment portfolio values then and now.

Second, I'm sure Stier has applied for competitive grants in the past and been unsuccessful. Chalk it up to the cost of doing business. As a business person, I'd love to be in a position in which my downside potential was limited to my due diligence incurred costs.

Finally, recognizing the reality of the current funding climate, offering ideas to enhance it in troubled times and encouraging existing partnerships will probably go much further in the future than "poor me" complaining.

Dane Gamble Head greenkeeper Bridger Creek Golf Course Bozeman, Mont.

Editor's note: We agree – offering ideas to improve the current funding climate is a step in the right direction. We encourage readers with thoughts about how individuals or associations can aid research funding efforts during these difficult economic times to comment on our message board (golfcourse industry.com/messageboard) or contact mpalmieri@gie.net.

On target

Pat Jones' column, "Plan C for the GCSAA" (page 90 in the January issue) was most enjoyable and hit the nail on the head. The GCSAA board is made up of superintendents with college degrees, and this is the best they could do? Also, the famous celebrities are overpaid. Good work.

John Wantz, CGCS Retired San Antonio

GIS success

I've attended every Golf Industry Show since Atlanta and have a much different take on the success of the show than just passing my superintendent in the airport as mentioned in the article "Team time" (golfcourseindustry. com/news/news.asp?ID=4888). Building a relationship with your fellow managers doesn't start at the GIS; it's just an extension of a successful partnership. Being at the Kansas City Country Club for just seven months has provided me another perspective into the superintendent/general manager relationship. Our superintendent, Loren Breedlove, has been at the club 30 years and has been a great support for me. The club is investing a lot of money in the two of us attending the GIS. As such, we scheduled how we were going to work together, spending time with certain vendors well before the show.

Mark A. Bado, CCM CCE General manager Kansas City Country Club Mission Hills, Kan.

Correction

Since 1983, the USGA has funded more than 400 research projects at land grant universities, at a cost of about \$30 million, to improve playing conditions and enjoyment of the game. As the result of budget cuts implemented this year, the information appeared incorrectly in "Follow the money" (on page 56 of the January issue).

GOLF COURSE

Serving the Business of Golf Course Management

SALES

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

> Kevin Gilbride Group publisher 330-523-5368

Amee Robbins Account manager, West Coast 310-546-6060

Dave Szy Account manager, Northeast 330-523-5338

Russell Warner Account manager, Southeast 330-523-5385

> Bonnie Velikonya Classified sales 330-523-5322

Debbie Kean Manager, books 330-523-5341

Maria Miller Conferences manager 330-523-5373

GRAPHICS / PRODUCTION

Mark Rook, Creative director Andrea Vagas, Managing art director Helen Duerr, Production director Samantha Gilbride, Production coordinator

CORPORATE STAFF

Richard Foster, Chairman and CEO Chris Foster, President and COO Dan Moreland, Executive vice president Jami Childs, Director, business resources and IT Kelly Roop, Manager, accounting department Melody Berendt, Circulation director

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









JOHN DEERE

By the time you read this, your height-of-cut could have been adjusted.

New Quick Adjust Reels. Yes it's now this easy to adjust the height-ofcut. Just click in a power drill on either side of the cutting unit, hit the trigger, watch the gauge, and you're done. No wrenches, and no need to double-check both sides. (Thanks to SpeedLink technology, they match perfectly every time.) But don't just read about these reels. See them for yourself by calling your John Deere Golf distributor for a demo. **Consider us part of your crew.**



Contribucter



PREPARING A PORTFOLIO

or many people, interviewing for a job doesn't come naturally. Many assistant superintendents, including me, haven't had the experience selling themselves and drawing attention to their strengths and qualifications. Whether you have the experience or not, having a well-prepared portfolio can be a confidence-builder, distinguish you from other applicants and help you earn a job.

As I prepared for my first interview, I reached out to my friends in the industry who began interviewing for their first superintendent positions. I asked for their advice about many aspects of the process and what they did to stand out. Most of them had prepared a portfolio that was tailored to each specific job interview. There's no single correct way to prepare one -a different presentation is appropriate for each person, situation and interview.

A portfolio is a show-and-tell resume, a sophisticated scrapbook. It's the first opportunity you have to market yourself. It'll indicate your value, portray your experience, serve as a creative asset to intrigue prospective employers and leave a lasting impression. A portfolio can become a large collection of items, but remember to take your cues about what to include from the job advertisement. This is important because your portfolio will demonstrate you have done your homework and understand the characteristics and skills an employer seeks.

There are many advantages to investing in a portfolio. A well-prepared portfolio will distinguish you from candidates who don't bring one. It shows initiative on your part, suggesting you're prepared and organized.

A thorough and well-organized portfolio does more than just add appeal and information. It gives you some control over which topics will be discussed during the interview. I've found it shifts the meeting from the interviewer to the interviewee. It makes me feel more relaxed and confident, easing me into the more difficult or technical questions. It helps set you apart from the people who simply respond to interviewers' questions.

Developing a portfolio helps you prepare for interviews by allowing you to think critically about your career experiences and accomplishments. While compiling your portfolio, you'll rediscover the many accomplishments you might otherwise forget during an interview.

Don't skimp. A nice binder or professionally bound package may set you back a few dollars, but consider the impression your portfolio will make.

page filled with black text is boring.

Make sure the items you include add to your credibility and celebrate your ability to work on different types of projects. Include recent documents and those that show you in a position of leadership and strength. Your documents and/or pictures should illustrate traits such as taking initiative, resolving a wide range of problems and managing projects. Before and after pictures can show off your skills effectively.



The first step to building a portfolio is to understand the skills a position requires. Focus on including relevant support for the skills outlined in the job posting. To enhance the uniqueness of the portfolio, request a visit or tour of the facility so you can tailor what you include in your presentation to what you saw on the course and at the maintenance facility.

Draft a table of contents to guide you to narrow the scope of the documents. Most portfolios include a table of contents, resume and cover letter. Some include letters of recommendation. They also may include agronomic plans, project experiences or work samples, articles demonstrating communication skills and organizational documents, such as job sheets, pesticide records and labor-tracking forms.

Consider using pictures. Remember, the right picture is worth a thousand words. If you're trying to document an agronomic plan, using pictures to demonstrate an aeration or topdressing program will help put your description into context. No matter how well written or comprehensive your agronomic program may be, a white Other documents may include work samples that show your ability to handle various tasks. If a prospective employer advertises it's seeking someone with strong communication and organizational skills, include a section with samples of articles you've written and reporting templates you've developed or assisted with developing, such as a template for monitoring monthly finances or the daily job schedule. You also can focus on a few of your accomplishments and projects from around your golf course that may be relevant to the job you're interviewing for.

Finally, organize your portfolio into a professional presentation. Don't skimp. A nice binder or a professionally bound package may set you back a few dollars, but consider the impression your portfolio will make. Try to keep your presentation package to about 25 items.

The process of assembling a portfolio doesn't just give you a great marketing tool for that interview, it also serves as an effective technique for managing your career. If kept current, it will assist you in working toward your education and career goals. **GCI**



Products That Work, From People Who Care#| www.valentpro.com | 800-89-VALENT (898-2536) Read and follow the label instructions before using.

"I've seen everything. But I've never seen a fungicide like this."

> —**Ben Frolich**— Tourney Believer

See it. Believe it. Tourney-Fungicide controls a broad spectrum of diseases including brown patch, anthracnose, dollar spot and many more. All with exceptional turf quality and low use rates. See the proof at TourneyBelievers.com.



Seeing is Believing.

TourneyBelievers.com



Jeffrey D. Brauer is a licensed golf course architect and president of GolfScapes, a golf course design firm in Arlington, Texas. Brauer, a past president of the American Society of Golf Course Architects, can be reached at jeff@jeffreydbrauer.com.

PAY NOW OR PAY LATER

There's no doubt these are trying times for golf courses. But, despite your balance sheet, there's still a need for ongoing capital improvements. Given the next up year for the golf economy might arrive with Halley's Comet, it's as good a time as any to assess your strategy for meeting ongoing renovation needs in a down economy.

Many courses have quit spending completely. A few have, perhaps, taken on huge projects overconfidently. Some continue – conservatively and wisely – with their capital improvement programs, albeit on a smaller scale, but not so much that they're in danger of falling too far behind.

The challenge for facilities is to pursue renovations and upgrades in an economically feasible manner but not allow budget pressures to cause unwise quality reductions. Despite the economy, if it's worth doing a renovation, it's worth doing right. The adage, "You can pay now, or you can pay later," also comes to mind.

I understand the need to lower budgets during a recession, but I still see too many mistakes in the name of budgeting. The short view inevitably starts a treadmill. Underbudgeted renovation programs create more problems than they solve, leaving everyone involved unsatisfied. That leads to fewer attempts and/or even lower budgets for necessary renovations because no one wants to get blamed for spending all that money for undesired results.

Low budgets are like the flu, and the projects tied to them often show the symptoms. Poor quality is almost always the result. Most budget problems stem from:

• An originally adequate budget that inflation erodes when the project is delayed three, five or even 20 years. For some reason, few people account for inflation in these cases.

• Club members who are simply hopeful bids will come in lower and aren't prepared for when they don't.

· Superintendents who prepare budgets

based on using their crew for labor, figuring materials only, and then decide to use contractors, who need to cover labor, overhead and profit.

• Attempting six projects with a fiveproject budget by adding "just one more thing that won't cost much" without adding to the budget.

Underbudgeted renovation programs create more problems than they solve, leaving everyone involved unsatisfied.



• Simply forgetting or not realizing the need for items related to the renovation.

If the finished product is poor, you usually can blame budget-related problems. Is the design poor from "saving" money on a golf course architect? Did you use cheap but inexperienced contractors to save 5 or 10 percent? Did you implement other "moneysaving ideas" such as:

• Using asphalt rather than concrete paths without considering which will need to be rebuilt sooner.

• Undersizing irrigation system pipe that will blow out of the ground.

• Skimping on greens construction, bunker liners and sand and not improving playability. Skimping on sod and erosion netting, risking higher and unanticipated grow-in costs.

So, what's the chicken soup for the under-budget flu? For many courses, this tastes more like medicine than soup, but you need to:

• Take the long view. Are you are confident your course will prosper again based on weathering past economic storms and your current situation? The 10- to 15-percent cost difference between bad and great results only adds nominally to monthly assessments or per-round surcharges. Realize immediate savings typically cause greater long-term costs.

• Prevent falling in the classic budget traps outlined above. Are parts of the current project caused by the need to rebuild some budget-saving measures taken in the last one? Omitted features are usually added sooner rather than later, and poor construction is rebuilt typically sooner than otherwise necessary – both at more of a cost than if included in the original construction.

• Do fewer projects well rather than many poorly when your budget is firm. Whatever projects you undertake, be sure to fix the problems you set out to fix. Nothing is worse than having similar problems after a renovation.

• Consider value over price. Contractors are hungry right now. Material prices have fallen. Bids will be good. If you can borrow, interest rates are at historic lows. In some ways, it's a historic opportunity to max out your renovation dollar.

• Invest in planning, design and value engineering. As old tailors say, "Measure twice, and cut once" for the best value. It's less expensive to plan the project on paper than in the dirt. Using an architect and contractor to value engineer the project is a critical expenditure rather than unnecessary expense. If the devil is in the detail, your professional team must work to spend only what needs to be spent to do the job right.

In rising economies, most managers and superintendents look good. Performing well in down times will separate the best from the rest. **GCI**

Greetings from Hustler Turf Equipment

For nearly 50 years Hustler has been an innovative leader in the turf equipment industry. Our people have dedicated time and tremendous effort to perfecting the products they make and providing exceptional customer service after the sale. We are proud of our peoples' uncommon commitment and humbled by the many great distributor, dealer and customer relationships that have formed as a result. This uncommon commitment has been the key to our past success and we hope it will give us the opportunity to meet and serve you as we enter the Golf marketplace.



HUSTLERTURF.COM

UNCOMMON COMMITMENT



Erik Christiansen is a licensed irrigator and president of EC Design Group, an irrigation consulting and water management firm based in West Des Moines, Iowa. A board member for the American Society of Irrigation Consultants, Christiansen can be contacted at erik@ecdesigngroup.com.

FACE REGULATION PROACTIVELY

'm still surprised by how many new codes, standards, procedures and requirements are being imposed on golf by everyone from regulatory bodies to community organizations.

Water, power and trade are the most obvious parts of an irrigation system being analyzed by people who want to regulate our industry. At one level, the scrutiny highlights just how much science and precision is involved when designing and managing a large-scale irrigation system efficiently. But on another level, the mountain of research and paperwork related to that scrutiny can be suffocating. And this falls on a golf industry that doesn't need the challenge of additional operating costs imposed to meet new laws, restrictions or even taxes from regulatory bodies.

I learned early in my life it's better to be the delivering hammer than the receiving nail. Therefore, I broached this topic with two golf course superintendents who've learned to hammer out the challenges the industry faces instead of waiting for the hammer to fall. I wanted to know how they found a way to cope with legislative bodies, and others, for a successful outcome.

Various environmental and community groups have embraced the idea that our industry isn't an efficient user of our resources. There are instances where that's true, but unfortunately, these groups fear what they don't understand. Water use doesn't automatically equal water waste. Green space, habitat and recreation are important to cities and communities. Carbon scrubbing by turf and other plant material is real and beneficial. Unfortunately, in many cases, environmental groups have been successful dictating how we use our resources, which is problematic and can be costly to any golf operation, especially when it comes to water.

So, how do we build a level of communication that will help educate the public?

"You have to take a proactive approach,

and don't go it alone," says Ted Horton, CGCS, with the Foundation of the California Alliance for Golf. "Consider creating alliances with other organizations that have similar goals to help your organization build strength with numbers."

Ted always has been in front of aggressive restrictions with water and other resources. Recently, he's had to face the proposition of additional taxes on golf clubs in California. We can benefit from Ted's years of experience dealing with these threats to our livelihood. He developed a sader who took the bull by the horns and created the Georgia Allied Golf Counsel to develop databases and best management practices to be used as tools to negotiate agreements with state officials.

Remember the Georgia drought of 2007? Anthony's hard work helped golf courses throughout the state go from watering greens only to retrieving water rights for the entire club. Anthony asserts he was successful because clubs throughout the region participated in a state best-management-practices memorandum, which required 75 percent of golf courses to have best management practices in place by May 2007.

When our industry becomes proactive, we can get the message out and realize positive results. Perhaps our first step should be to organize our practices and gather data individually.

game plan and hired lobbyists to implement the following goals:

- Influence political action;
- Develop a water position by using proactive best management practices;
- Update the industry economic analysis that proves golf is a valuable business;
- Improve proactive environmental stewardship; and
- Enhance public relations for the game of golf.

These are a few of the goals the Foundation of the California Alliance for Golf put forward to educate the public about the facts of golf and refute rumors. Through targeted communication, the public is learning golf has economic, communal and environmental benefits. It provides jobs and generates health and fitness programs for all ages. Golf needs to be presented as an asset to the community, not singled out as the bad guy.

Anthony Williams, CGCS, at Stone Mountain (Ga.) Golf Club, is another cru"We even surpassed our goal," he says. "Clubs are at 97-percent participation."

With Anthony's best-managementpractices database organized and in place, state officials had factual information about golf course water-use practices at their fingertips. State officials felt comfortable with the prescribed best management practices and no longer feared irrigation because they were presented data in a logical format.

These are telling tales. When our industry becomes proactive, we can get the message out and realize positive results. Perhaps our first step should be to organize our practices and gather data individually. Preparing yourself with information and a game plan will enable you to make a positive impact, not for only your livelihood, but the livelihoods of others who depend on our industry.

For more information, visit the following Web sites: cagolf.org, ggcsa.com and eifg. org. GCI

For more information, contact your Rain Bird sales representative or visit www.rainbird.com/neweagle



Greater playability and a lower water bill.

That's intelligent.

Enjoy superior coverage and reduced water use with the longest-lasting, most water-efficient rotor.

Now more than ever, performance matters. That's why Rain Bird[®] Eagle[®] Series rotors are engineered to last up to 10 times longer and use up to 23 percent less water than the competition. They also offer superior distribution uniformity over the widest range of conditions. Now that's The Intelligent Use of Water.[®]

The Intelligent Use of Water™



www.golfcourseindustry.com/readerservice - #16



Monroe Miller is a retired golf course superintendent. He spent 36 years as superintendent at Blackhawk Country Club in Madison, Wis. Miller can be reached at groots@charter.net.

MOVING OUT ... AND ON

Despite warnings to the contrary from some, retirement has been nothing short of wonderful so far. I now have the time to devote to my hobbies, visit kids and grandkids and plan a few trips to those places I've dreamed about for decades. I've started reading several of the thousands of books I own, and I'm chomping at the bit for spring so I can shape up my average home landscape.

The economic climate and its impact have caused some consternation, but not so much that I'm going to pull a Brett Favre and unretire. I'll just spend less.

The most difficult part of formally ending my career, surprisingly, was cleaning out my office. I wish I could've done what a friend of mine did – tossed the keys to his successor and told him to pitch whatever he didn't want. That would've been easy.

I'm one of those pack rats who saves everything that might have some historical value sometime in the future. I always assumed that when I reached this stage of my life there would be a Wisconsin Golf Museum and Library to receive my considerable collection of golf course books, memorabilia and correspondence.

Of course, the museum never happened. So I spent weeks going through a mountain of material, saving the irreplaceable and invaluable and discarding the rest. Much to my wife's distress, much of the valuable stuff is being organized, sorted and filed in our basement. When that's done, I'm not sure what I'll do with it.

I went through four closets, 11 file cabinets and scores of storage tubs piece by piece. I should've been an archivist or historian. It would've made this job much easier for me. Our golf course staff helped me, although I heard my assistant tell them, "Don't talk to him because it will just take that much longer." Slowly, almost painfully, I slogged my way through it.

What a trip down memory lane. My career was spent as a superintendent at the same golf club, which made acquiring so much material easy. I never moved. The GCSAA Conference and Show was important to me, so I never missed a single one, going back to Boston in 1973. I have old burlap Penncross bags full of key chains, buttons, ball-mark repair tools, pens and pencils, tees, golf balls and every other trinket exhibitors have handed out. I have a Jacobsen hat from each of the 37 shows



The most difficult part of formally ending my career, surprisingly, was cleaning out my office. What a trip down memory lane.

I attended, along with a collection of 700 different trade caps of every description and color.

My textbooks offered contrast from the 1960s and 1970s to more contemporary writing. I have Monteith and Dahl's publication about turf diseases, the first about the subject. Contrast Dr. H.B. Couch's first edition book about turf diseases and then his magnum opus about turf pathogens of a few years ago, and you get a feel for the changes I've seen. The same holds for Musser's excellent book of the 1960s and Dr. Jim Beard's USGA book of just a few years ago.

One of the most interesting things I came across was a four-page, four-color ad piece distributed by Wisconsin Turf Equipment Corp., our Jacobsen dealer for 50 years. The entire Jake line was neatly parked on a golf course, and the owner was standing in the middle, smiling proudly. Does anyone remember the Rogers truckster, a threewheeled vehicle with a loud engine and a lot of metal-on-metal contact? You could hear it coming 500 yards away.

The first triplex greensmower was part of their line, a tremendous development that saved a lot of labor. Every superintendent wanted one or two. The F-10 fairway mower, the G-10 tractor and airfield blitzer pull-frame rough mowers are all equipment from a time long ago.

My USGA files were full – Green Section reports from all those years. They consistently were well written and offered advice that was always on the mark. The first Green Section specs about putting green construction – I have a copy – demonstrate how experience modified them somewhat, but that the principles are firm. I enjoyed the writing of the national directors I've known – Radko, Bengeyfield and Snow.

I ran across photos of our crew from many of those years, as well as pictures from the first Jacobsen college student seminar back in the summer of 1968. I attended the first Toro turf professionals meeting and found the pen set given to each of us, along with a class photo. I made several life-long friends at that meeting.

It's been an exhausting job, moving out and moving on, but a rewarding one. As I look back, I'm inclined to say I worked during golf's zenith, but it's probably because my career was so rewarding and enjoyable. The trip from the morning side of the mountain to the twilight side of the hill seemed to go so quickly, and moving out of my office in this deliberate way gave me a chance to see it in a different light. I laughed about the good times, remembered so many people I had the chance to know, and felt melancholy and joy that it's over. I also realized I'd do it all over again. **GCI**



Pegasus[™] HPX fungicide helps you RAISE THE BAR on healthy turf.

New university testing proves that NexGen products outperform traditional formulations—and make your pesticide dollars go farther.

The grades are in, and NexGen products are at the top of their class. With only the best active ingredients and improved manufacturing, NexGen reformulations provide unbeatable performance—and results prove it. Pegasus[™] HPX chlorothalonil gives better control of dollar spot, brown patch and other fungal diseases, with less resistance.

To make the grade for your course, call 888.240.8856 or visit www.PhoenixEnvCare.com.

PREVENTATIVE DOLLAR SPOT CONTROL





©2009 Phoenix Environmental Care, LLC. The Phoenix logo is a registered trademark of Phoenix Environmental Care, LLC. Pegasus¹⁴ HPX is a trademark of Phoenix Environmental Care, LLC. Always read and follow label directions.

EQUIPMENT MANAGEMENT



A EUROPEAN PERSPECTIVE

In England, only about 20 percent of golf courses employ a full-time technician. Most of the golf courses use equipment distributors to service and repair their equipment. U uring the past 10 years in this business, I've looked at managing a fleet of equipment pretty much the same way. I learned the proper way to manage a facility and the equipment within it while attending Lake City Community College in Florida.

Recently, I traveled to England with the IGCEMA. I toured golf courses, football fields and the Ransomes/Jacobsen factory, and attended the BTME conference in Harrogate. This wasn't my first time to England; however, it was the first time I was able to really grasp how things are done on the other side of the pond.

We learned that, while the equipment may be the same, the way we take care of it is extremely different. In England, only about 20 percent of golf courses employ a full-time technician. Most of the golf courses use equipment distributors to service and repair their equipment. While that seems crazy to us here in the States, there are many more distributors throughout England compared to the U.S. Most courses are within 10 to 15 miles from a distributor. My first thought was "What happens if a piece of equipment you need to use goes down?" The response was, "We wait." I wouldn't want to be the first to try that concept here in the States.

Our mentality is a bit different. We want courses kept nice and trimmed. The British want courses to be overgrown and look natural. We need things done now; they don't mind waiting, knowing it'll take days or even weeks to get something done. We also learned their care for the environment is held in high regard. We visited Ipswich Golf Club, which employs a fulltime person to handle the club's environmental aspects. One guy on a staff of eight spends all his time looking out for the environment on the golf course. This is an example of how much they value environmental stewardship.

Our standard of maintaining equipment is much higher than in England, but it doesn't mean they don't want to change that. The biggest issue for them is the cost of having a full-time employee in the workshop. By having a technician on staff, they may have to drop a maintenance crew member, which could lower the staff to an ineffective level. This fact is another reason they rely on the equipment suppliers for servicing and repairs.

Looking at the overall picture, I'm not sure how cost effective it is not to employ a full-time equipment technician. The English fleets of equipment are much smaller than ours, and there's less to maintain, so this may be the factor they take into consideration when deciding whether to have a technician. Also, there are some courses that will employ a technician part time or borrow equipment from each other to accomplish tasks. So while they continue to produce outstanding golf courses, it's done differently.

We also visited a football (soccer) club in Ipswich and met with Alan Ferguson, the head grounds man. Ferguson – who has experience working on golf courses, including St. Andrews – is one of the top grounds men in Europe. He explained to us how Europeans maintain their football fields, which made me feel more at home. When we visited him, it was dark, and he was drying the field to get it ready for the next night. The long hours and high expectations seemed to match well with how we look at golf in the U.S.

We spent the final three days of the trip at the BTME conference where the IGCEMA had a booth at the trade show. We talked to greenkeepers and technicians from throughout Europe who seemed excited about the possibilities of what an international technicians' association could help accomplish in Europe. This is a much different attitude than we experienced one year before at the GIS. The folks we talked to were excited and driven to spread the word to get more people involved. I was impressed to see such interest in a country where technicians are a luxury.

It's great to be able to look at alternatives to maintaining golf courses. While some methods are different than others, we still manage to produce outstanding golf courses. **GCI**

WORLD'S FASTEST GRINDERS

The **EXPRESS DUAL** spin grinder is much faster than back-lapping with no messy cleanup. Fifteen minutes floor-tofloor for a reel grind makes lapping a thing of the past.

And everyone knows a freshly ground mower delivers a better cut to grass than lapped mowers. Instead of grass blades that are torn; you get a smooth, surgical cut resulting in greener, healthier turf.

Find out for yourself Test Drive a Dual - 888 GRIND-IT



-888 GRIND IT

www.expressdual.com



AMERICA'S FAVORITE GRINDER www.golfcourseindustry.com/readerservice - #18

CONSUMER

A glimpse of how golfers' behavior affects the business of facility maintenance and management.

POTENTIAL GROWTH IN THE CENTER OF THE WORLD

N orth Africa has a historic relationship with golf dating to the late 19th century when the British introduced the game to Egypt. They built the first private club in North Africa, the Gezira Sporting Club, but it wasn't until this past decade the sport started to develop. Several golf courses appeared throughout the region, attempting to capitalize on golf as a potential source of tourism income. With supply growth, the number of golfers has increased, too.

Currently, there are only 43 golf courses operating in North Africa – Morocco (18 courses, 42 percent), Egypt (14 courses, 33 percent) and Tunisia (10 courses, 23 percent) are the three largest markets, according to KPMG's 2008 Golf Benchmark Survey. Additionally, there are 40 to 45 golf projects in different phases of planning and construction.

Participation rates among the local population still are very low compared to European levels. The primary source of demand is tourism. The estimated number of golfers in the region is about 9,000. This figure equates to a golf participation rate of about one player in every 10,000 inhabitants. As the most developed golf region, Morocco accounts for more than half of these golfers. Egypt follows with about 3,000 players. Tunisia has less than 1,000 golfers. Given the low participation rate, there's likely demand growth potential in North Africa.

All courses in North Africa have reported year-round playability. The average number of rounds played on a North African golf course is 26,500, considering courses of all sizes. This figure equates to 73 rounds per playable day. Eighteen-hole golf courses host about 20,000 rounds. The average number of rounds played is slightly higher than the registered number at golf courses in the south and east Mediterranean.

The majority (89 percent) of the total rounds consist of greenfee rounds, and only about one-tenth are played by members. The share of member rounds versus green-fee rounds is significantly higher in Morocco than in other countries.

To allow courses to benchmark themselves against the average of their performance group, KPMG calculated the average number of rounds for the top and bottom performers. (See chart at bottom right.) While some courses with 27 or more holes recorded more than 40,000 rounds, the lowest performers recorded only 10,000 to 15,000 rounds. Considering the size of the courses and focus on 18-hole courses only, it's apparent the best performers recorded about 25,000 rounds.

Source for text and charts: KPMG's 2008 Benchmark Survey

SUPPLY AND DEMAND OF NORTH AFRICAN COUNTRIES (2008)

Country	Courses	Players	Golfers per course
Morocco	18	5,000+	278
Egypt	14	3,000	214
Tunisia	10	900	98
Algeria	1	n/a	n/a
Total	43	8,900+	212

Source: National golf federations and golf courses with KPMG elaboration.

AVERAGE NUMBER OF ROUNDS PLAYED IN NORTH AFRICA





AVERAGE NUMBER OF ROUNDS PLAYED – TOP PERFORMERS VS. LOWER PERFORMERS (ALL COURSES)



CHUB MANAGER PROFILE



Trinity.

You've got enough to worry about, so use **Trinity® fungicide** to control anthracnose, brown patch, take-all patch, summer patch and dollar spot, even during summer stress periods. Use it to suppress algae, too, which can lead to higher turf quality. Like the entire family of BASF fungicides, **Trinity** works. So don't worry. Everything will be a-ok.

betterturf.com | 800-545-9525

D BASF The Chemical Company

CLUB MANAGER PROFILE

Barbara Jodoin tries to create a culture that members participate in, appreciate and sometimes even sacrifice to be a part of.

It's the club, first!

Barbara Jodoin is redefining the general manager role by maintaining a fierce focus on bottom-up management and topflight communication

କ କ କ ନ

BY PAT JONES

ou can sum up Barbara Jodoin's philosophy in four simple words: It's the club, first! For Jodoin, it's about providing impeccable service to members. But, it's also about creating a club culture that members participate in, appreciate and sometimes even sacrifice to be a part of.

Pinetree Country Club in Kennesaw, Ga., isn't a name that's top of mind when thinking about elite clubs. Yet, thanks to a forward-thinking board and a dynamic manager, it's one to watch.

Jodoin has 30 years of experience in the hospitality business, the first half with hotels and resorts and the second with private clubs. She started in the hotel business because she loved the chaos of serving different customers with different needs, but the commoditization of hotels eventually drove her away.

"I wasn't happy just looking at the bottom line, and it bothered me that great service didn't seem to matter as much," she says.

So in 1992, when her husband was transferred to Florida for his job, she jumped over to the club market. Her learning ground was a good one – Martin Downs Country Club in Palm City, Fla. – before moving over to Piper's Landing Country Club, one of the more exclusive clubs in the state. Another transfer for her family landed her at Pinetree in 2004. The club, led by board president Stan Hodges, recently completed its first five-year improvement plan that included significant renovations to the course, range and the Olympic-size swimming pool. The next phase is just getting underway.

As if managing the club wasn't enough, Jodoin is serving her first elected term on the USGA Green Section Committee and is managing partner of Merrows Management, a consulting and property management company that helps clubs fix operating problems.

What was Pinetree's state when you started?

The club had the critical components of success but hadn't invested – the physical plant needed attention. But we had 600 members who wanted a great club and were willing to support the member-owned business. We wrote a five-year plan, and the president said if we could achieve half of it, he'd be happy. We did it all. We have the largest private pool in the state. It's been redone, and it's now an integral part of the club's social life. We also rebuilt the driving range and practice area. In 2008, a tee-to-green renovation of the golf course completed our first round of upgrades.

How has the culture changed?

Our organizational structure looks like it's upsidedown to some. The board is at the bottom of the chart. They're the club's foundation, and they establish philosophies and policies. I'm next. They support me, and I support the managers, and they support the staff. That strategy highlights the fact that if you have a great staff you have a great club. Hiring the right people at the line level is critical. The top tiers of our organization are the members, and most important, the club is the highest priority. No one member is more important than the success of the club as an institution.

We also talk a lot about members' obligations. They'll be asked to sacrifice for success. One example was the vote to renovate the course. That vote meant they'd have to give up their course for seven months. In the end, 96 percent voted yes. That speaks volumes about the culture here. You hear horror stories about losing members during a renovation, but we didn't lose one member.

The members bought into the plan?

Absolutely. Duty to the organization is a focal point. What does it mean to be a member/owner? Sure, membership has privileges, but privileges come with responsibility. Yes, you get to play when you want with whomever you want, create your own programs, govern yourselves, etc., but the flip side is to remember constantly what's best for the organization and support its success.

What's the smartest thing the club has done to be more competitive?

I can't narrow it down to one thing because we've done so much. First, we upgraded the facilities, particularly the driving range, golf course and aquatic facilities. We also expanded our familybased programs and developed a junior social committee. We've implemented the U.S. Kid's Golf tees program. These tees allow children to play the course. This year, we'll add an assistant pro whose key role is to work with children and novices. We do everything we can to foster the game within the club.

Clubs keep talking about being the center

of family life, but we've actually implemented creative programs such a concierge system that offers discounts on services outside the club for things such as hotels, rental cars, dry cleaning, etc. Our members receive those services for less. It's a great way for members to know we care about them off campus. We want them to have a positive experience with anything associated with the club, and these value-added services cost the club's budget nothing.

So you encourage thinking outside the box?

I detest the phrase "think outside the box!" It implies there is a box. Each club faces certain realities and resource issues, but you need to use your imagination and intelligence to create great aspects of the club. We're all a part of the ongoing process of reinventing the club. There's no box. That expression is forbidden within my team.

What did you try that didn't work out?

It's less about what didn't work than a lesson I've learned. I call it the 99-and-1 rule. You can spend far too much time trying to satisfy that 1 percent of members who are always critical. I've learned, finally, to ignore the 1 percent and focus all my attention on the 99 percent who really value the club. That's why so many club managers burn out. They spend all their time on that 1 percent.

What's the biggest mistake most clubs are making right now?

When you have an economic downturn, clubs devalue themselves by dropping joining fees. Clubs who were asking \$30,000 now are lowering or waiving initiation fees drastically. How does that make existing members feel? How do you bring the value back to the original level once you've discounted it? It jeopardizes the long-term success for some short-term security. New members feel like it's cheap to get in and out. Managers and boards throughout the country are making that same mistake every day.

What's the alternative in tough times?

Add value instead. Keep the value in the membership. There's a simple equation – services equal the dollars available. We have little attrition – less than 5 percent. But, if we had been impacted more by the downturn, we'd go to the members and let them suggest what they want curtailed or kept for services. If you can satisfy your membership and not have a dollar left over, you're managing perfectly in a private club setting.



Today, superintendents need both quality and value. And that's exactly what Quali-Pro has been delivering since day one. Proven plant protection products featuring the newest formulation technologies at an unprecedented value. **Unsurpassed Quality. Outstanding Value. Get to know Quali-Pro.**

For more information on our comprehensive portfolio of products call 800-979-8994 or visit quali-pro.com.

©2009 FarmSaver.com, LLC, Quali-Pro is a registered trademark of FarmSaver.com. Know The Sign is a trademark of FarmSaver.com. Always read and follow label directions.

"After three seasons of using Quali-Pro products, there's no sacrifice of quality and the economy is very evident."

> Tom Leahy, Superintendent Sleepy Hollow Country Club Scarborough, New York

Sknow The Sign." Greater Than Or Equal To.



Professional Turf & Ornamental Products

What do you learn from others?

I always know what others are doing, but I don't use that as a benchmark. They have different realities than I do. We have our own business model with our own forward motion. We stay committed to our business plan. If other clubs offer services or experiences that we're not offering, I'll look. I'll always steal a great idea. But, if they're simply cutting costs, devaluing their club, I'm not getting in that line.



THE NEXT WAVE IN SEEDING IS HERE.

- Patent-pending floating heads follow the ground contour you won't miss the low spots and you won't destroy the high spots or sprinkler heads.
- Patent-pending WaveBlade[™] technology creates a clean, optimal square slit while minimizing turf disruption.
- Patent-pending seed delivery system puts seed directly into the slit, reducing seed waste and increasing germination.
- Patent-pending depth adjustment allows for infinite, in-field adjustment to suit your specific needs. (No tools required.)
- Close 1-1/2" spacing increases germination with fewer passes.

If you need to seed, you need to see the TriWave[™] difference. Call 800-679-8201 to arrange a FREE DEMO from your Turfco Distributor today!



www.golfcourseindustry.com/readerservice - #21

Many managers are afraid of risk, and something different can be risky. Too many managers tend to spend more time detailing problems to boards rather than focusing on presenting creative solutions. Most boards see assessments or fee increases as the only remedy. These shouldn't be the only tools in your bag. Board members are the consumers of our club services; they aren't the industry professionals. It goes back to the operations philosophy described earlier. Owners hire us to manage for their benefit. We have completed almost \$5 million of improvements without assessment or dues increases, and Pinetree has a small debt to equity ratio.

My board is a great support structure, but you can't just dump problems on them and expect them to create solutions. I'd fail as a manager if I did that. They're not running the business; I am. It's my responsibility to provide sound business leadership.

I grew up in Boston, and I'm a Red Sox fan, so I'll use a baseball analogy. The members of the club are like the owners of the team. They hire a manager who manages all aspects of the team. The owner enjoys the game from the box, gives the manager money to work with and expects results. The manager's job is to create a winning team for the owner. But, when the Sox finally won the World Series, the trophy was presented to the owner. That's the way it should be. The club members are the winners; we're just the players on the field.

Many times when I talk with other general managers, their presidents are telling them how to play the game. That's not their role. Also, in sports, no owner expects their team to win every game. Members should understand that. Win or lose, we're here for you, and we should expect your support.

What's your definition of teamwork?

Everyone says, "Empower your team," but it scares managers to death because if they fail, will I lose my job? That's the fear in the true team concept. If the team has a losing season, the manager usually takes the fall. This also is why general managers would rather have the board make the tough decisions. I give my team the tools they need to succeed. What I expect back is success.

In our organization, the closer you are to the top of the organizational chart, the more impor-

If You Are Looking at a Fairway Mower... Start from the Ground Up.

"Same high quality but lasts longer." Albert Sizemore, Bay Hill Club and Lodge

"We haven't had to grind our reels yet." Steve McFeron, Hillcrest Country Club "I like the new angles, the reels perform beautifully." Bill Berst, Charles T. Myers Golf Course

Apes Hill Club-St. James, Barbados

The Jacobsen® Difference.

For almost 90 years, Jacobsen has manufactured the most advanced, precisionengineered reels in the world. Reels that hold their adjustment and provide a superior quality of cut day in and day out.

Now the legendary Jacobsen Classic XP[™] Reels feature **Advanced Relief Technology[™] (ART)**. ART provides increased **durability**, **reduced wear** and **extended life**. Users get up to three times more spin grinds with this aggressive new reel design. They feature the ultimate standard in precision with tighter tolerances, making them the next evolution in performance. Experience the Jacobsen difference today.

For more information about our full line of lightweight fairway mowers call 1.888.922.turf or **visit www.jacobsen.com**



The Official Turf Equipment Supplier to The PGA of America and The Exclusive Turf Equipment Supplier to PGA Golf Properties. © January 2009, Jacobsen, A Textron Company.



When Performance Matters.™

tant you are to our overall success. Everybody must buy in. Everyone on the staff and within the membership understands the culture and mindset. We're all on the same page. Contrary to the old saw, there is an "I" in team – as in, "I am accountable" and "I am responsible to the team." Too few people like to be held responsible for the overall success of the company. Here, we all are. That's the difference. I strongly believe that, and so far, I haven't been fired, so I'm doing OK.



Who was your mentor, and what did he or she teach you?

The person who comes to mind is my former boss Roy Dunfey, the owner of the old Parker House in Boston and a few other hotels. He epitomized the philosophy of service and taught all of his employees that providing an exceptional experience ensures a positive bottom line.

Roy also taught me you can never manage from your office. Walk the property, talk to people and inspect every inch of the property every day. I do most of my paperwork at home on Monday when the club is closed. I spend the rest of the week highly visible and available to members and staff. Also, know your staff. If you don't know them, how can you inspire them to succeed? Roy always remembered my name and my children's names and knew what was important to me. That blew me away because he could do that with 400 or 500 employees. He practiced what he preached.

I also have a hero. My mom had muscular dystrophy and raised six children from a wheelchair. She never felt sorry for herself. When we had a little problem, she'd remind us that there were worse things in life.

Defend the future of the private club.

There will always be a market for quality. I like to think of private clubs like Ivy League universities. I think about the University of Notre Dame – it's different than it was in the 1940s – it has computer labs, and it has changed the way it operates, but it still gives students something different, something special. It's a great institution, and great institutions evolve and remain.

In the future, you'll no longer have the option to be a moderately successful private club. They won't exist. You must be excellent. You'll have to foster the idea that it's a privilege to belong. Not everyone gets into an Ivy League school. Not everyone will be part of a private club. We are now only 25 percent of the industry.

Our aim is for Pinetree to be in that elite group that will offer a high-quality experience, evolve to meet the needs of our members and always remain a private club. There will be fewer private clubs, but they'll all provide a unique experience, and getting in will say something about your success and expectations as a member. True private clubs will be a rare commodity that will be highly sought after. That line is being drawn right now. **GCI**

www.golfcourseindustry.com/readerservice - #23



There's a Better Way to Cut Costs!

The fertilizer catalyst that improves efficiency and lowers application rates providing high quality turf at a reduced cost.

- Vastly improves fertilizer efficiency
- Increases root growth resulting in better nutrient uptake
- Enhances overall turf establishment

NutriLife is available in these and other LebanonTurf products:

- LebanonPro 8-16-8 starter fertilizer
- LebanonPro 19-0-5 with 50% LSN
- ProScape 24-0-6 with 30% MESA

For more information on NutriLife and for your FREE Agronomy Manual, visit our website at LebanonTurf.com, click on promotions and enter coupon code GC4039.

"Our trials over three years have shown that we can reduce the nitrogen required to grow quality turfgrass by 25% or more."

> - Dr. Frank Rossi Cornell University

LebanonTurf

Improving the Way Professionals Care for Turf

www.LebanonTurf.com • 1-800-233-0628

BY JOHN WALSH

They're coming, and Sandy Clark and Don King want to be prepared, as well as proactive.

Much like their neighbors in Arizona and Nevada, golf facilities in Southern California are staring at water-use restrictions coming down the pike that could be implemented as soon as July.

"It's inevitable," says King, executive director of golf operations at Barona Creek Golf Club, which is located in Lakeside, Calif.

"San Diego is ground zero for water cuts," says Clark, certified golf course superintendent at Barona Creek. "Water reductions could be substantial. Considering the levels of Lakes Mead and Powell, Colorado River allotments and the snow pack in the Sierra Mountains, this could be a 20-year thing. And the high-end private clubs won't be able to buy themselves out of the restrictions. Everyone will be told to cut back X percent."

So, in a voluntary approach to water conservation and environmental stewardship, Barona Creek is in the midst of the second phase of a three-phase turf reduction project that will lower course irrigation and maintenance needs while enhancing its conservation of natural resources. The first phase started in September 2008, and the third phase is scheduled to be completed in October 2010. The exact cost of the project, a capital expenditure, is confidential.

"Our commitment to protecting and preserving the environment always has been at the forefront of the golf industry," King says. "Our goal is to further reduce our carbon footprint by moving forward with this turf-reduction initiative."

In the face of continued drought conditions in the Southwest, governments in California, Arizona and Nevada are requesting voluntary water use restrictions and limited acreage requirements on new construction and new golf course developments. The Barona Band of Mission Indians, owners of the Barona Valley Ranch Resort & Casino, is addressing the issue with a proactive approach that could result in a trend for the golf industry.

"The Barona Tribe has made a legacy commitment to preserving the natural resources on our reservation," says Edwin "Thorpe" Romero, chairman of the Barona Band of Mission Indians. "It's our hope the innovative environmental practices we've implemented will serve as a model for the golf industry. And, as we watch the global climate changes, we also feel a responsibility to our tribal mem-

SCALING BACK

Barona Creek implements a turf reduction project to reduce water, inputs and energy use "We want to be an example of what you can do to help reduce water use. Barona has made a tremendous commitment to the environment. We're showing the respect of living in harmony with nature." – SANDY CLARK



How can a product that's so tough on grubs be so gentle at the same time?



Nearly 500 independent university trials prove it: DuPont[™] Acelepryn[™] insecticide delivers excellent control of the 10 toughest grubs, plus other key pests, in as little as one application—and at the lowest application rate ever utilized for white grub control. No other grub product can match the outstanding environmental and toxicological profile of Acelepryn.[™] Or its reduced-risk classification from the EPA. Tough on grubs, yet gentle at the same time. DuPont[™] Acelepryn.[™] Learn more by visiting us at proproducts.dupont.com. **Kill them. With kindness.**

DuPont Professional Products



DuPont" Acelepryn" may not be available in all states. See your local DuPont representative for details and availability in your state. The DuPont Oval Logo, DuPont," The miracles of science" and Acelepryn" are trademarks or registered trademarks of DuPont or its affiliates. Copyright © 2009 E.1. du Pont de Nemours and Company. All rights reserved.

QUPOND.

DuPont[®] Acelepryn[®] bers, the guests of our resort and our neighbors to do everything we can to conserve all natural resources."

PHASING IT IN

Phase one of the turf-reduction project, which was completed in September 2008, entailed removing about two acres of turf from the course and replacing them with 14 waste bunkers. The sand in the bunkers on the course is 75 percent Augusta white and 25 percent desert tan. To match the waste bunkers with the existing bunkers (the original mix has faded), Clark used a 50/50 mix of the two sands.

Most of phase one, which was contracted to Temecula, Calif.-based Weitz Golf International, was done while the 7,448-yard, par-72 course was closed to allow the maintenance crew to implement its winter maintenance program, which includes overseeding tees and rough. The course typically closes for three to four weeks in September, depending on what's involved. In 2008, it was closed from Sept. 8 until Sept. 29.

The course features 419 bermudagrass on the fairways; Bull's-Eye (that's thinning because they didn't overseed this year) and Tifway II bermudagrass in the rough, which is usually overseeded with perennial ryegrass; 419 on the tees and A-4 bentgrass on the greens. It also features more than 170 mature native oak trees transplanted from other regions of the Barona Indian Reservation.

Phase two, which will be done in-house by Clark's staff, will eliminate alternate tee boxes – there are between five and eight on every hole – and remove about two acres of sod surrounding tees and about eight acres in out-of-play areas, converting them to more natural areas. The teal-colored tees, which are right behind the burgundy-colored ladies' tees, are being eliminated. The goal is to have four sets of tees on every hole.



www.golfcourseindustry.com/readerservice - #26



Less than 1 percent of the number of rounds played were from the teal tees, which were designed for lower handicap

women golfers. In addition to the burgundy and teal tees, the course features silver, gold and black tees, which are the championship set.

Phase three will consist of completing what doesn't get finished during phase two and analyzing what was done overall.

"Anything we can reduce will be a benefit," King says, adding the staff is always thinking about technology to help the club use less water to maintain the golf course.

BLENDING IN THE CHANGES

Most golfers didn't notice the turf reduction because architect Todd Eckenrode, of Irvine, Calif.-based Origins Golf Design, blended it in so nicely, King says. No holes have been closed since the turf-reduction project started.

"And that's the way we wanted it," King says. "We wanted to make sure the turf-reduction project didn't take away from the look or playability of the course. And we accomplished that with the help of Todd."

When first working with the Barona Band of Indians to build the course about 10 years ago, Eckenrode learned the tribe has a great affinity for its land and wants it to be cherished and showed off.

"We moved very little dirt when we built the course," he says. "The whole design and feel of the course was supposed to be about nature. The original turf allocation was typical of a desert course; they just wanted to take it a little further this time."

The club was receptive to Eckenrode's idea of replacing the turf with waste bunkers instead of native grass to help keep the course's playability the same. Golfers can hit out of waste bunkers instead of tall native grass. To help reduce the maintenance required of the waste bunkers, Eckenrode's design included native grass surrounding them.

"We wanted to take out all the frills without the course looking too drought stricken," says Clark, who has been at Barona nine and a half years, since the grow-in.

A few regular golfers noticed finish work taking place after Barona reopened after winter maintenance. The Barona staff told golfers what the project entailed and why the resort was doing it. The upside for golfers is that the golf course will remain open during the turf reduction and



THE NEXT GENERATION OF TURF NUTRITION TRANSFORM THE WAY YOU FEED YOUR GREENS!

Contec DG 100% DISPERSION (28 particles per sq. in.)



ContecDG[®] is a dispersing granule technology that "melts" into the turf within minutes of irrigation. About 10 minutes after contact with water, the granules have fully dissolved into thousands of particles, ensuring 100% of the DG nutrients are delivered into the turf.

That means...

- No nutrient loss from mower pick up
- · No shoe or ball pick up
- No particle run-off from heavy rain
- Virtual elimination of player downtime

Order today! Call your local Andersons distributor.

For more information visit www.contecdg.com



75 SGN for Greens:

0-0-25 AGCK25MDG4 9-0-18 AGC95WMDG4 12-3-12 AGC12MDG4 13-0-26 AGC131WDG4 17-0-17 AGC178WMDG4 18-9-18 AGC8348.3 19-0-15 AGC1919WMDG4

150 SGN for Fairways: 18-24-5 AGC186WDG5 20-0-20 AGC202WDG4 24-0-10 AGC2424WDG5

10 MINUTES AFTER WATERING

TNT Programming Tool

Do you need a tool to

help plan your seasonal nutrition needs? The Andersons has created "TNT"

(Turf Nutrition Tool) that operates with Microsoft Excel and is informative and simple to use. With this tool, you and your distributor sales representative can now plan your nutrition needs for a balanced, consistent feed of nitrogen for your turf for an entire year. Download the program at www.contecdg.com.



"Awesome"

Dave Riffle, Superintendent, Seven Springs, Champion, PA

®&™ Contec DG, DG Man and Andersons Golf Available o

© 2009, The Andersons, Inc. Worldwide rights reserved Andersons Golf Products are registered trademarks of The Andersons, Inc. Available outside the United States as NutriDG

COURSE MANAGEMENT

reseeding process, which, when completed in late spring, will result in better course playing quality with enhanced natural surroundings, Clark says.

LESS CONSUMPTION

Clark, whose crew consists of 31 full-timers year round, has been looking at turf reduction for some time and discussed the idea with superintendents at courses in Arizona that have reduced turf.

"This plan will further reduce our water usage," says Clark, who was awarded the 2004 Environmental Leader of the Year by the GCSAA and Golf Digest Magazine. "Being more environmentally friendly and aesthetically appealing aren't mutually exclusive terms. We will still be green and gorgeous."

The multiphased project also includes limiting overseed-

Sandy Clark (left) and Don King are preparing Barona Creek for impending water-use restrictions in Southern California.



Consultant/Specifier, Pumping Station Producer, Owner/Superintendent Finally a water filter they all agree on



www.golfcourseindustry.com/readerservice - #28


Mean, Green & Clean.

ORIGINAL INVERT

MR TECHNOLOG

Trimmers

- Brushcutters
- Blowers
- Edgers
- Chainsaws
- Sprayers
- Hedge Clippers

NEW MaxPro Chainsaws for 2009

GZ3500T Commercial duty, high-torque arborist saw.

The Reciprocator is 4 Units in 1: Trimmer, Edger, Hedge Clipper & Pruner

SGCZ2401S

MaxPro is available at a dealer near you.

Visit www.redmax.com

To find a dealer or learn more about,

MaxPerformance - MaxPower - MaxTorque MaxAcceleration - MaxTechnology - MaxSpeed

COURSE MANAGEMENT



Barona Creek removed about two acres of turf from its golf course during the first phase of its turf reduction program.

ing to tees and roughs, lowering maintenance requirements by an additional 10 to 15 percent. These measures will address several important environmental issues, ranging from reduced fuel and energy consumption to the use of fewer fertilizers and chemicals used for maintenance.

"What makes this program even more important, especially in a dry, drought-prone region such as San Diego, is the water savings that could run as high as 100 percent in those turf areas that will be eliminated or returned to native plantings," King says.

Clark, whose maintenance budget is about \$1 million, says it's too soon to determine what percentage of fuel, energy, fertilizer and chemical use will be saved by the program, but he's hoping it's at least 15 percent. Time will tell. He also doesn't know exactly how much money the project will save. But any savings will be put into detail work on the course, which features 130 bunkers, and improving the property.

WATER CONSERVATION EFFORTS

Before the turf-reduction program started, Barona Creek implemented water conservation efforts through its advanced water reclamation plant, computerized irrigation system, sophisticated weather-monitoring program and sustainable landscape plan. The water reclamation and wastewater treatment facilities allow the tribe to save and reuse almost every drop of water runoff at the resort.

"These water-saving innovations at Barona Creek are about more than self-preservation," Clark says. "They're also helping the environment and hopefully influencing the golf community at large."

Barona Creek's water supply comes from three sources: effluent water, which comes from the hotel; rain water, which is captured in a 22million-gallon-capacity reservoir; and on-site emergency wells that contain nonpotable water, which is the last source Clark taps into. Some



Learn from a leader in turfgrass education



Bachelor's Degree in Turfgrass Science Certificates in Turfgrass Management

- Employer-recognized and accredited
- Flexible, convenient, and entirely online
- Financial aid options available

PENNSTATE World Campus

www.worldcampus.psu.edu/GCI

U.Ed.OUT 08-0859bkh/yjw

www.golfcourseindustry.com/readerservice - #30

Throughout the history of the turf management industry, professionals who develop innovations in equipment, products and methods have eagerly handed down their wisdom and experience to the next generation. That's why SePRO Corporation is proud to establish its legacy in the form of the latest advancement in turf growth regulation.

The Legacy has been passed on

New Legacy Turf Growth Regulator incorporates patented synergistic growth regulation technology resulting from its dual sites of action and absorption. No other product can match Legacy's combination of enhanced growth suppression, extended spray intervals, improved turfgrass color and quality, suppression of *Poa annua* and more uniform growth regulation on mixed turfgrass stands. The next generation of turf growth regulators is here in the form of an innovation that will be passed down for years to come.

Make it a part of your golf course's tradition by visiting www.sepro.com or calling 1-800-419-7779 to learn more about Legacy or any of SePRO's products, services and technologies.

ACY



The Next Generation of Turf Growth/Regulation Technology

nark of SePRO Corporation. Always read and follow label directions Legacy is pending registration in some states. The synergy derived fro bination of Type IIA and Type IIB PGRs is covered under U.S. Patent No. 7.135.435. @Copyright 2008 SePRO Corporation

Speaking of bailouts, we have one for the turf industry.



Tournament Ready[®] Soil Surfactant performs as well or better than our competitors' top selling brands, including Revolution[®] for up to 35% less. Now you can get the most from water, without being dragged under by the cost.



800.255.5196

kalo.com

© 2008 KALO, Inc. All rights reserved. Tournament-Ready[®] is a registered trademark of KALO, Inc. Revolution[®] is a registered trademark of Aquatrols Corporation of America. www.golfcourseindustry.com/readerservice - #32

Unmatched Performance



Put the Gandy Dethatcher Overseeder to work on your course, and you'll be amazed at its performance. Here is unmatched quality, precision and economy in one machine.

The Category 1, 3-pt self-leveling hitch model

is PTO-driven for tractors above 18 hp. The unit is 48 inches wide with 24 blades of 8-inch diameters to create slits on 2-inch centers. The overseeder has a stainless steel hopper bottom and slides and holds 100-125 lbs of seed. Material flows through a separate opening disc or shoe assembly for excellent seed-to-soil contact.

The Gandy Slice 'n Seed[™] walk-behind Overseeder allows the operator to evenly and accurately place seed in smaller areas.

Talk to your Gandy dealer about how these Gandy Detatcher Overseeders can work for you. Or call us. This year, look to Gandy turf equipment to bring more performance to the job. Gandy has been a name you can trust for over 72 years.



800-443-2476 www.gandy.net custsrv@gandy.net

www.golfcourseindustry.com/readerservice - #33



www.golfcourseindustry.com/readerservice - #34

COURSE MANAGEMENT

water from the wells was used in 2008.

"The goal is to be 100 percent on reclaimed and captured water, using nothing from our wells," King says. "This past year we were very close. We manage every drop of water as best we can."

Barona also is involved in a pilot program with Toro in which mower-mounted sensors allow operators to see how much water different areas of the course are receiving. Additionally, Clark's use of wetting agents helps maximize water use.

The championship-caliber course, which features more than 100 multifingered bunkers and a series of lakes and ponds connected to the area's naturally fed streams, has been recognized for its environmental efforts by the U.S. Environmental Protection Agency and San Diego Earthworks. It also has won the Bronze Signature Sanctuary Certification from Audubon International in March 2002 for its conservation, environmental quality and land management efforts.

The PGA Tour also has acknowledged Barona Creek for its conservation efforts.

"Barona Creek Golf Club should be applauded for taking a proactive approach in their turf reduction plans," says Cal Roth, senior vice president agronomy for the PGA Tour. "Golf courses throughout the world need to look at their environmental issues and plan accordingly to ensure their courses meet their maintenance and conditioning goals. It's admirable how Barona Creek has become a leader improving their sustainable landscape and carbon dioxide footprint."

Barona Creek hosted the PGA Nationwide Championship in November 2007, but, at this point, isn't scheduled to host any other PGA Tour events.

"We want to be an example of what you can do to help reduce water use," Clark says. "Barona has made a tremendous commitment to the environment. We're showing the respect of living in harmony with nature."

The turf-reduction project at Barona was the first of its kind Eckenrode was involved with, but he thinks he'll be doing much more work like this in the near future.

"The water situation out West is dire," he says. "We're talking to a lot of clubs about turf reduction. It's going to be a trend in the industry, particularly out West. If clubs aren't paying attention, they could be in for a rude awakening. They need to form a plan and be ready to go." **GCI**



builder *Excellence Awards*

AND THE WINNERS ARE . . .

The GCI staff presented the 2009 Golf Course Industry Builder Excellence Awards at the Golf Course Builders Association of America's awards dinner, which occurred in conjunction with the Golf Industry Show in New Orleans in February.

Three awards were presented. Wadsworth Golf Construction Co. won the Heritage Award for best reconstruction project with its work at Naperville Country Club in Illinois (page B4). For the first time since the inception of the awards program in 2004, a company won two awards the same year. Aspen Corp. took home the Legacy Award for best renovation project with its work at The Water's Edge Country Club in Penhook, Va. (page B8). Aspen also won the Affinity Award for best environmental project with its work at the Wisp Golf Course in McHenry, Md. (page B12).

The following three articles depict these award-winning construction projects.

Conserve Water....Save Money!



A WORD FROM THE GCBAA

The Golf Course Builders Association of America is honored to participate in the annual Golf Course Industry Builder Excellence Awards program. The GCBAA is dedicated to advancing and continuously improving the profession of golf course construction, while serving the interests of its members. Our members build the



highest quality golf courses in the world, and it's rewarding to see a recognition program address this. Our award winners are proud of this recognition of their dedication and hard work.

We hope that by reading about these award-winning projects you agree GCBAA builders are professional and strive to construct the best golf facilities, keeping in mind the environmental concerns required. On behalf of the GCBAA, we congratulate our winning builders for 2009 and look forward to next year's program.

- Paul Foley, executive director

CONTENTS

4 SIMPLE BUT ELEGANT

Blind shots are no more thanks to a challenging yet rewarding reconstruction at Naperville Country Club.

8 LOVING CARE

Attention to detail during a renovation preserves the original character of The Water's Edge Country Club, a Buddy Loving Jr. design.

12 LEAVE NOTHING TO CHANCE

A well-prepared Aspen Corp. overcomes environmental restrictions and withstands bad weather to complete a renovation project at Wisp Resort.

 Geosynthetic Material and Installation Services Including Material Only, Materials and Supervision, and Full Installation Services.

CLI-CLEARWATER 0 N S T R U C T I O N

• Turn-Key Construction Services For Feature Jobs Including Design/Build , Waterfalls, Streams, Rock Walls & Pump Systems.

800.524.8672

EMERALD DWARF BERMUDAGRASS FOR GREENS

"I can water my Emerald greens less than twice per week - even in the heat of summer" - Shawn Myles, GCS Traditions Golf Club, College Station, TX

Cup-Cutter Profile from 4-1/2 Year Old Emerald Dwarf Green at Traditions Golf Club

The growth habit of Emerald, with its deep roots and lack of thatch production, allows Shawn to manage his greens with less water, even with a high-bicarbonate, high-sodium water source.

Some of Our Newest Emerald Dwarf Bermudagrass Installations:

MA

TPC at Scottsdale - Scottsdale, AZ - The Founders Club - Pawley's Island, SC Twin Rivers Golf Club - Waco, TX - Sweetwater CC - Sugar Land, TX

For more details on these courses and Emerald Dwarf Bermudagrass go to:



www.championturffarms.com

Specializing In Bermudagrass Greens BY MARISA PALMIERI

SIMPLE BUT ELEGANT

Blind shots are no more thanks to a challenging yet rewarding reconstruction at Naperville Country Club

Perhaps the greatest compliment for any builder is when long-time members of clubs that have been rebuilt can't place the course's old holes within the new layout.

That's the case at Naperville (Ill.) Country Club, which reopened in May 2008 after a reconstruction that included rerouting 14 holes on a 124-acre landlocked site.

"Everyone raves about how natural and mature it looks and plays," says David Tierney, a 30-plus-year Naperville member, who served as project coordinator for the reconstruction. "Most don't believe we're just in the first year of postconstruction grow-in."

Wadsworth Golf Construction Co. is the builder on the receiving end of the compliments, along with golf course architect Steve Forrest of Arthur Hills/Steve Forrest & Associates in Toledo, Ohio.

"Wadsworth implemented the vision of Arthur Hills/Steve Forrest and the Naperville membership – simple but elegant," Tierney says.

Naperville's original Tom Bendelow design, circa 1921, featured rectangular tees, greens and bunker styles characteristic of its time. Unfortunately, because of several factors – poor earthmoving, funding and/or vision – the original design and an unsuccessful renovation in the 1960s left many holes playing directly across steep contours. About 65 percent of shots were blind or uphill, which caused problems and posed safety hazards for golfers.

"It just wasn't up to today's standards and what's needed to attract members and families to the club," Tierney says.

In 2006, members approved a reconstruction, including rerouting the course; installing a new drainage system; constructing all new greens, tees and bunkers; expanding the water supply and water storage facilities; constructing a new practice facility; and relocating the maintenance facility.

Though scheduling challenges, regulatory bodies and Mother Nature stood in the way, the reconstruction team transformed a tired, blind-shot-ridden golf course into an updated design with the classic style of rectangular tees, grass-faced bunkers and rolling greens compatible with today's faster green speeds.

The project has paid off for the club, a golfonly, member-owned facility in the Chicago area. It's added 43 new full members and has seen guest fees almost double. "The golf course embraces the land and accentuates the beauty of our property," Tierney says. "The new course looks like it's been here since 1921."

SCHEDULING AND PERMITTING

Typical of many renovations, the project was on a tight schedule. The original plan called for a July 2006 start date and November 2007 completion; however, permitting problems caused unexpected delays.

"It was exceptionally challenging," says Tom Shapland, Midwest president of Wadsworth.

Because a floodway bisected the property, four regulatory agencies – the Army Corps of Engineers, the Federal Emergency Management Agency, DuPage County and the city of Naperville – claimed jurisdiction over the project. It wasn't until after construction began the project team knew the extent of the permitting issues and realized the agencies weren't going to allow work on the primary drainage corridor until the following spring. One permit needed for completion of the back nine took more than 400 days. This delay and others caused Wadsworth to revamp its strategy and schedule.

It's a pretty big gamble when renovating your golf course and you aren't able to work on the last four holes because you don't have a permit, says Tom Shapland of Wadsworth Golf. Wadsworth was restricted from even crossing the floodway with its equipment before the permit release date, but it devised a staging plan that accommodated the restrictions and found a way to crisscross the course and complete as much work as possible without disturbing the floodway.

"It's a pretty big gamble when renovating your golf course and you can work on the first 14 holes, but not be able to work on the last four because you don't have a permit," Shapland says. "It was a big leap of faith by the club. It took some resolve on the committee's part to have the confidence the subsequent permits would be in place so they could finish the work.

"There was a worry the last four holes would be delayed, which would delay the proper usage of the golf course," he adds. "I was more concerned we'd miss a grassing window again, but the permits came in time for us to finish the last four holes."

Naperville's golf course superintendent Tim Anderson, whose crew was involved in the construction, was impressed with Wadsworth's flexibility and commitment to the schedule. For example, even though the original construction permits arrived late, Wadsworth crews mobilized the site, using the time to their advantage to stage the project, and began working on items not specifically covered by the construction permit.

"Wadsworth could have easily said they weren't willing to commit resources to the site until they were sure the construction permit was released," Anderson says.

Creative solutions and a commitment to the

schedule paid off. Despite the extensive permitting issues, the 18 holes opened just several months later than the original schedule.

WEATHER WOES

Once construction began, the main challenge was trying to control the uncontrollable – weather. On October 2, 2006, the course was hit with 5 inches of rain in two hours on six recently seeded golf holes. The setback would have been serious if it weren't for Wadsworth's quick response.

"Under the contract terms, this damage was on the club's ticket," Tierney says. "Nevertheless, [construction supervisor] John Cotter and [site superintendent] Mario Salis of Wadsworth were on site the next morning to assess damage and help us formulate a plan to restore the affected areas. There's great comfort in listening to Cotter's more than 50 years of experience and wisdom telling you, 'Dave, I've seen worse. We'll get this fixed.""

Wadsworth fixed the problem just in time. The storm-related damage was reseeded by Oct. 7, just days before the fall seeding window closed Oct. 12.

"Had they not responded so quickly to our request for a change order, the repairs wouldn't have been completed before the end of the fall seeding window," Anderson says. "This would have resulted in six of the front nine holes needing work the following spring. If that occurred, we wouldn't have been able to open the front nine by June."

OTHER KEYS

Wadsworth's experience also shined through

WHAT THE JUDGES SAID

"Wadsworth had five months in the fall for the project. They were delayed and had to complete four holes the following spring. They did it in 10 weeks. They controlled costs well. They worked with 12 holes that were already carved out and had to recreate six holes in the practice facility and did a good job of blending those in with the existing 12 carved-out holes. They made good use of the wetlands and the existing rock, which was performed in a timely manner. They had a timely change order in the fall that proved valuable for opening up the following spring after 22 inches of rain during October."

> - Craig Felton, golf course superintendent, Oak Hills Country Club, San Antonio

"Wadsworth worked through permitting, which caused delays, and then they made accommodations to get the practice area and at least nine holes complete for opening the next spring. They accommodated the membership and kept them happy. They kept the course going, enabling the club to increase membership after the project was finished. They responded timely to a washout in October to allow those nine holes to open.

 Mike Benkusky, golf course architect and president of Michael J. Benkusky Golf Course Architecture, Lake in the Hills, III.

"I was most impressed with Wadsworth for rebuilding the entire golf course on a difficult site. They responded timely to bad weather and submitted the best report presentation in this category, which included great statistics of all the details. They had no contractor-generated change orders, donated equipment for buildozing the old golf course and raised a significant amount of money."

 Terry Buchen, CGCS, MG, president and consulting agronomist, Golf Agronomy International, Williamsburg, Va. in several areas that paid off for the project. "We were amazed at how well the project was priced out in advance," Anderson says.

Change orders were minimal, and not one was initiated by Wadsworth. The difference between the initial contract value and the final contract was \$73,669 (on a \$2.75 million final project) – less than a 3-percent difference. The slight difference was caused primarily by the devastating rain event and measures imposed by regulatory agencies after the design was submitted.

Tierney was impressed with Wadsworth's expertise and partnership mentality that made his job easier and even saved the club money. For example, Wadsworth reviewed the park-

MILLIKEN

The Professional's Choice for Bunker Lining

SandMat[®] Geosynthetic Bunker Liner

Engineered for performance UV stable Superior drainage capabilities Increased design flexibility for improved bunker aesthetics Two colors (white and tan) The "green" bunker liner composed of recycled fiber Faster installation with reduced waste Reduced labor costs associated with installation and maintenance

> www.sandmat.com toll-free 877-sandmat

709 Heritage Award Winner

Naperville Country Club

Location: Naperville, III. Web site: napervillecc.org Type of project: Reconstruction Cost: \$2.75 million Construction started: July 2006 Course opened: May 2008 (September 2007 soft opening) Architectural firm: Arthur Hills/ Steve Forrest & Associates Builder: Wadsworth Golf Construction Co. Golf course superintendent: Tim Anderson Project manager (club green committee member): David Tierney

ing lot stormwater engineering design and made suggestions, which the county accepted. It saved the club more than \$40,000.

The way the project team worked together was the reason for success.

"From Brent Wadsworth, John Cotter, Tom Shapland, Greg Korneta to Mario Salis and his crew, communication and coordination were exemplary," Tierney says.

Anderson's team-player mentality also helped move the project along.

"He's what I refer to as a true working superintendent," Shapland says. "He's not only a good manager, but one who dug in and did whatever he could whenever he could to help the project proceed."

Anderson takes pride in the fact that his 22 maintenance crew members were able to change gears well and take on construction work. As a cost-saving measure and time management tool, the crew did a lot of work in-house, including erosion control, grassing and tree removal.

A unique aspect of the project was the years of experience and collaboration between the builder and architect.

"On occasion, we had 150 years worth of golf course construction experience on hand in Art Hills, John Cotter and Brent Wadsworth," Shapland says. "We've been building golf courses for Art for more than 40 years."

The project's success was based on mutual respect and experience.

"If they knew that I really wanted to achieve something with the design, they would take the steps necessary to make it happen," Steve Forrest says. "If we could make a revision to help them and not adversely affect the golf course architecture, we did it. How can you do anything but succeed when you have a builder with such extensive experience?" GCI

www.golfcourseindustry.com/readerservice - #37

B6



> WATER MORE EFFECTIVELY WITH PREDICTABLE RE-WETTING LONGEVITY

150 Day Re-wetting



3150

Soil and Peat Industries 800-942-0448 www.eandssoil.com



Gently Penetrates Hardest Soils
Increases Root Depth
Drills 1" to 15" Depths

• Backfills to a 12" Depth



Congratulations to Aspen Corporation, a proven provider of quality construction, on receiving the Legacy Award!



Provider of rootzone mix for over 35 years.

120 Day Re-wetting

'09 Golf Course Industry Builder Excellence Awards





Each hole on The Water's Edge offers a view of the water.

Loving care

Attention to detail during a renovation preserves the original character of The Water's Edge Country Club, a Buddy Loving Jr. design

BY MARGARET HEPP



The Water's Edge Country Club

Location: Penhook, Va. Web site: thewatersedgecc.com Type of project: Renovation Cost: More than \$5 million Construction started: July 2006 Course opened: May 2008 Architectural firm: Richard Mandell Golf Architecture Builder: Aspen Corp. Manager, golf course maintenance: Jeff Snyder Owner representatives: Ronald Willard, Ronald Willard II Some builders might find Ronald Willard Sr. a difficult owner to work with. First, there's the perfectionist mantra of The Willard Cos.: "Good enough is not OK. It must be right."

Then there's Willard's hands-on approach to ownership, which, at best, borders on micromanagement, and, at worst, has been mistaken for vandalism.

But Donnie Adkins, co-owner of Aspen Corp., understands Willard's style. Adkins understands what it's like to build a family business from the ground up. And he understands, that for a particular breed of owner, a golf course holds much more than monetary value.

A native of greater Roanoke, Va., Willard started local operation of his construction company in 1973. Expanding his business, he chose and purchased the land for Smith Mountain Lake's first golf course and largest residential community, The Waterfront, in 1976. He began development on The Water's Edge Country Club, another lakefront property, in 1985. Willard chose architect Raymond "Buddy" Loving Jr. to design the second 18hole course in Penhook, Va. Together, Willard and Loving walked the grounds and staked out spots for every tee, tree and green – and not just any spots, the right spots.

So, when Aspen was hired for an 18-hole renovation of The Water's Edge in 2006, Adkins had an idea of what he was getting himself into. The job included a thorough upgrade based on significant maintenance challenges:

- Reshape and drain all bunkers;
- · Update irrigation on all holes;

 Replace all greens, surrounds and tees; and

Improve landing areas in the fairways as required.

Adkins was inspired by Willard's desire to improve what he started more than 20 years earlier.

"Ron has blood, sweat and tears equity in this course," Adkins says. "I've never seen an owner develop such a vision."

That vision ultimately doubled in scope – and price – under Willard's direction. But during the renovation, improvements gradually became less about looking back than looking forward.

EYES ON THE PRIZE

Each hole on The Water's Edge offers a view of the water. Nine holes provide unobstructed vistas of Smith Mountain Lake. During the original course construction, Willard sacrificed close to 2.5 miles of lakefront positioning to build that amenity into the golf course and the community.

Views are of utmost importance to Willard, and he and Loving ensured there were windows to the water, as well as opportunities to enjoy the natural beauty of the course and land. When Willard's son and partner, Ron Willard II, hired architect Richard Mandell of Richard Mandell Golf Architecture, Willard was pleased with Mandell's reverence for the lay of the land and respect for nature. But Willard was vehemently opposed to the removal of trees on the property – even for the sake of a clearer view.

Mandell is perhaps the only architect in the industry who also shares the title of certified arborist. Still, it took a lot of effort to convince Willard they were on the same team.

"One tree can limit the survival of five other trees right behind it," Mandell says. "It can also create erosion and difficulty for growing grass. A true environmental advocate understands all elements of the golf course."

Willard became that environmental advocate as the project progressed, Mandell says, but only after he relinquished his tendencies toward tree-hugging. Adkins recalls the early process of tagging trees for removal at each hole.

"We would go out and tag a bunch of trees according to Richard's plan, and by the next morning, almost all of the tags would be gone," Adkins says. "We thought it was vandalism, local kids playing a prank. Then we found out Willard was walking the course at night and pulling marking tape from trees."

Though he remains somewhat proud of his rebellious antics, Willard explains he and Mandell eventually saw eye-to-eye when he realized their mutual desire to preserve the property.

"We chose Mandell because he was the one guy who didn't want to destroy the design or change Loving's architecture," Willard says. "He refined it."

REDESIGNED AND REFINED

Mandell recognized the unique responsibility of his role in such a sensitive renovation.

"With a new project, you have a virgin piece of property," he says. "With a renovation, you have a piece of property with 18 existing holes. There are roads and homes. You can't just build or rebuild wherever you want. You have to take into account where things are and how things work."

Mandell's goal from a practical standpoint was to make the rest of the course less maintenance intensive and create less handwork. The biggest challenge came with the sand bunkers, Mandell says. Loving's course design is typical of the 1970s, complete with large, serpentine bunkers. Mandell stayed close to Loving's style, softening bunker faces but maintaining the original flashed-sand appearance.

"The flashed bunkers are so much more maintenance intensive than flat bunkers," he says. "I haven't worked with this style of bunker before. It was a fun challenge."

Aspen used Luck Stone white sand to fill several new bunkers, created on the course as needed.

Another issue was tee-box drainage.

"We enlarged all the tees to spread out wear and tear," Mandell says. "We softened slopes here and there. The square tee got a little bit away from the kidney shape of the '60s and '70s, but we maximized the usable tee shape."

Tees were seeded with L-93 bentgrass once the crucial earthmoving process was complete.

"We enhanced the ability to move water with proper shaping and earthwork and modern interior drainage systems," Adkins says.

One detail of Loving's original design that wasn't honored is part of hole eight. A tiny old chapel – just 30 feet by 20 feet – that had been frequented by black workers in the area stood here on the grounds. During the original course construction in 1986 the dozer operator was ordered to level it.

"They called me in on the two-way radio," Willard recalls. "I knew we'd bought a church, but I'd never really thought about it. When I got there, the African-American operator insisted he wouldn't move God's house."

Loving amended his original blueprint to preserve the chapel. It was renovated and used as storage space – but the second time around, Willard recognized the strength and potential within the four walls.

"During this renovation, we gutted the church and restored it to its original condition," he says. "We added a copper steeple and made sure it was lit at night. It became a focal point of the project."

Four weddings were held at the renovated chapel during the summer of 2008.

GETTING TO THE GREEN

Jeff Snyder, manager of golf course maintenance and son of The Water's Edge's original golf professional, made the initial contact with Aspen in 2005.

WHAT THE JUDGES SAID

"Aspen delivered the project on time within two weeks of the scheduled date, with substantial changes that were added by the owner. There was an excellent relationship between the owner and Aspen, which contributed to the finished product. It sounds like Aspen was able to help the owners see opportunities for expanded vistas and tree removal that the owner was unable to see originally. It was a good coordination between all parties, and it shows in the end product.

Mike Bylen, owner, Shepherd's Hollow Golf
 Club, Clarkston, Mich., and Pine Trace Golf Club,
 Rochester Hills, Mich.

"Aspen was able to open up more views on the golf course and create a better and more enhanced golf course compared to what was there originally. The ability of the contractor to find a sod supplier on short notice to put more sod down on the golf course was noteworthy, as well as the contractor's willingness to supply and install plastic liner around the greens at its own cost to help those areas. The club is generating more revenue than it's seen during past years."

> Mike Benkusky, golf course architect and president of Michael J. Benkusky Golf Course Architecture, Lake in the Hills, Ill.

"Aspen worked daily with an owner who was heavily involved financially and emotionally in the project. Aspen was able to take and modernize an old facility. It looks like it belongs where it is today. The architect was happy and recommends working with Aspen again. The quality of the work presented is outstanding."

- Tommy Sasser, vice president of development, Linger Longer Communities, Greensboro, Ga.

"We had *Poa annua* issues on our greens, and we were thinking of renovating them in the future," Snyder says.

Snyder had to put his dream of faster greens on hold until the following year, when Aspen's schedule opened up and renovation got underway. The goal was to make the greens as fast as possible without struggling to manage two different types of grasses on the greens during the summer. To accomplish this goal, the team focused on new grass and irrigation.

In addition to considerable drainage problems, irrigation at the Water's Edge was hindered by an old pump station.

"It was a clay-valve system with a very high-demand electrical system," Snyder says. "The pump station was always trying to give us hundreds of gallons of water, even if we only needed 50."

Course irrigation is now fueled by a VFD pump station, which supplies only as much water as required.

"We save electricity and wear and tear on our piping system," Snyder says. "Our irrigation breaks were cut dramatically, our electrical use was cut dramatically, and we have more water flow. We were able to go from 1,000 gallons per minute to 1,300."

Using a double-row system, more than 1,000 Toro 854S and 855S sprinkler heads are in use now – about a 30-percent increase in head quantity from the previous system, Snyder says. The team also added an OSMAC control system.

But the irrigation installation process turned out to be much more complicated than originally planned. The irrigation had to be addressed as the project unfolded, Adkins explains, because about a month into the project, Willard decided to change from seeding to sodding the A1/A4 greens. Unfortunately for Aspen, winter was fast approaching, bringing with it a nightmare for sod installation.

"The only company that could cut the sod during the wintertime was a vendor in Delaware," Adkins says. "In freezing, windy temperatures, we had to take every precaution not to let the sod freeze in transport. We've had a lot of experience in grow-in projects in the wintertime. We made sure to keep the sod fresh the evening before. On the tractor-trailers, it had to be netted, covered and brought in."

Installing as many as two to three acres of sod per day, Aspen had to move quickly.

"It had to arrive fresh and be laid immediately to avoid freezing," Adkins says. "Sodding in the wintertime was the only way to get it green fast enough."

This labor-intensive work required high levels of quality control for hours and weeks.

"There were many seven-day weeks to get it all done," Snyder says. "Aspen didn't miss a beat."

In hindsight, Willard wishes he would've elected to sod the golf course completely.

"It's more money, but it balances out," he says.

COMMUNICATION

The biggest success of the whole project was

the communication and the ability of the team to work together, Snyder says. What he appreciated most was the transparency of Aspen.

"There weren't any secrets or hidden costs," Snyder says. "Whether we wanted to add a little drainage or sod, it was easy for us to do the math with the contractor."

Mandell had high praise for Aspen's project superintendent Joe Kubin.

"Kubin is one of the finest project managers I've had the pleasure of working with," he says. "For the most part, I describe this project as a nonevent. To me, the term 'nonevent' is the highest mark I could give to a contractor because it means there were few issues and dramas."

But perhaps most indicative of Aspen's success is the fact the team was just two weeks past the original deadline, despite receiving almost twice the original workload. Getting it all done in time required daily input from every single member of The Water's Edge renovation team, from Kubin, Mandell, Snyder and Willard.

"If you wanted to do a case study of teamwork, you could do it on this project," Adkins says. **GCI**

Margaret Hepp is a freelance writer based in Cleveland.

The owner of The Water's Edge was vehemently opposed to removing trees on property.



ROSION CONTROL BLANKETS FOR SAND BUNKERS

The easiest to install and most effective of all bunker blankets.

Now available in three great options

Hi Performance Sand daM[™] for slopes as steep as 60°

2 Sand daM[™] MR is ideal for projects where high performance and low costs are required

Install Sand daM[™] Lite in greenside bunkers with low angle slopes, or flat bottomed fairway bunkers to eliminate contamination

Professional Turf Products LLC

TOLL FREE 866-726-3326 PHONE 724-929-2111 FAX 724-929-0282 EMAIL info@proturfproducts.com WEB WWW.proturfproducts.com

'09 Golf Course Industry Builder Excellence Awards

Workers had so much confidence in their erosion and sediment controls, they used the existing Spring House for drinking water.

Leave nothing to chance

A well-prepared Aspen Corp. overcomes environmental restrictions and withstands bad weather to complete a renovation project at Wisp Resort

BY JOHN WALSH



Wisp Resort Course

Location: McHenry, Md. Web site: wispgolf.com Type of project: Renovation Cost: \$1.5 million Construction start: July 17, 2006 Course opened: June 2008 Architectural firm: Design Workshop Builder: Aspen Corp. Grow-in superintendent: Scott McMillion Owner: DC Development Performing the service of the servic

One project (named Fantasy Valley), the renovation of the daily-fee, 18-hole Wisp Resort Course, turned out to be challenging from an environmental perspective. A daunting task for DC Development, which previously hadn't been involved in a golf course construction project.

No problem, though. Aspen Corp., a certified builder member of the Golf Course Builders Association of America, used its experience and resources to overcome inclement weather and numerous environmental hurdles to renovate a portion of the course on schedule without disturbing the environmentally sensitive and protected trout stream that runs adjacent to the course, which generates, on average 18,000 to 20,000 rounds a year.

The renovation included moving four of the most difficult, steep-sloped holes, which backed up to the base of Marsh Mountain, while not disturbing Hoyes Run Creek, which is one of the state's few Class Tier II trout streams. "The original Wisp Resort Course was difficult to play for the average golfer," Richards says. "There were four difficult holes, so we closed them and moved them. We will put skiin/ski-out condos in their place. The renovation was done to make the golf course easier for golfers, speed up play and maximize real estate opportunities."

The project went so well, the same builder (Aspen), architect (Todd Schoeder) and management company (OB Sports Golf Management) are building a private course, called Lodestone, at the top of the mountain for DC Development. Nine holes will open in July, followed by another nine the following summer.

"We bring the same intensity to all projects," says Donnie Adkins, president of Aspen. "We take the best way to protect the environment."

EROSION CONTROL

The Fantasy Valley project was the first golf course work applied for and permitted in Garrett County, Md., with the Department of Environmental Protection. The whole process was new to Garrett County, which resulted in delays and abundant erosion and sediment measures. More than 22 sediment basins were built on four holes. Many were placed in landing areas and feature locations. Extensive supersilt fences were installed, too.

"The amount of erosion control and protect-

[THE STAMP OF APPROVAL]

For three decades, the Golf Course Builders Association of America has been providing golf development with the best-built courses in America. When you choose a GCBAA builder, you choose unmatched experience, expertise and a proven track record of industry satisfaction and approval.

Whether new construction or renovation, start your next project on the right track by selecting a member of the GCBAA. For builder members and additional information, visit www.gcbaa.org.



727 "O" Street, Lincoln, NE 68508 • (402) 476-4444 • www.gcbaa.org

ing the trout stream below was challenging," says Scott McMillion, director of golf maintenance for Wisp Resort. "The state of Maryland has the most stringent erosion control regulations that need to be in place before building a golf course."

Many of the sediment basins and diversion ditches were expected to function at finished subgrade by the Maryland Department of the Environment. This expectation created situations in which the erosion and sediment controls wouldn't function until the earthwork was finished. So, Aspen worked with the MDE and DC Development to come up with a workable solution that would satisfy compliance and function using the most commonsense or practical approach. This strategy often required installing and adjusting grades on sediment basins multiple times.

"The workers had so much confidence in the results of their erosion and sediment controls they regularly used the existing Spring House, which was located in the middle of the project, for their drinking water," Adkins says.

Aspen worked well with all the environmental agencies. "Donnie developed a good relationship with the MDE," Richards says. "He showed them the things we could do that are less impactful to the environment than the design itself."

Architect Todd Schoeder, principal of Denver-based Design Workshop, views the environmental groups as necessary partners in the construction process.

"We needed to involve them from day one," he says. "They're essential to make the project work. The same agencies are reviewing the golf course on the top of the mountain because of the job we did on the base of the mountain. The environmental groups trust us and aren't on site as often for the course on the top.

"Aspen helped enhance the environment, not just protect it," adds Schoeder, who hadn't worked with Aspen before.

TROUT STREAM AND WETLANDS

Several permits were delayed, which extended the project. Multiple regulatory agencies – the MDE, the DEP and Trout Unlimited – were involved in the permit process. For example, it took one year to receive a permit



to remove a pond from the property.

"Trout Unlimited was the watchdog down there," Richards says. "Hoyes Run Creek is a highly protected stream. The toughest thing was keeping the tree canopies, which covered the stream. We needed to remove the trees but had to leave some. Removing too many trees would warm the stream. So this limited our design in some areas. We took a minimalistic approach."

The site's wetlands required protection, so those areas received special care during the project. Bridges had to be installed to avoid negative impact to the area by using free-span bridges and having them at an elevation that wouldn't harm the wetland. Clearing required a lot of hand work and special equipment that couldn't remove the woody materials without the equipment encroaching on the actual wetland.

"We had zero wetland impact," Richards says. "Once we got into the project, it became difficult, especially the pond removal, but it worked out better than expected."

INCLEMENT WEATHER

During construction and throughout grassing, the area experienced record rainfall. Aspen reworked several features extensively, added erosion and sediment controls, and added sod to counter the rain's effects.

"Heavy and frequent rains hammered the project site, making it even more difficult for Aspen," Schoeder says. "However, they never complained or asked for schedule extensions and cheerfully completed the project on time."

"The thunderstorms up here in the mountains will kick our butt," McMillion says. "We can get 4 inches of rain in one hour. It's a difficult site as far as weather conditions. For example, Aspen teamed up with us to repair a hole after a heavy rain even though it wasn't their job. We couldn't have done it without them."

CAREFUL WITH THE UTILITIES

Underground septic tanks were discovered during construction, which required properly pumping and disposing the contents before removal. Aspen worked closely with DC Development and subcontractors, which was critical because utilities crossed almost every hole. Neighboring properties needed to retain utilities, so Aspen coordinated removing some, but not all, of the overhead utilities until new services could be extended to the affected properties.

"I liked their team approach," Schoeder says about Aspen. "They weren't afraid to offer opinions and disagree at times. They listened, provided ideas, ran a clean job site, shaped innovatively and had a professional attitude."

AN UPDATED LOOK

Schoeder started working on the project about six years ago when he was asked to look at a parcel of land, called Fantasy Valley, adjacent to the Wisp Resort Course with the intent of expanding it. There was a lot of analysis, planning, financing, funding and waiting for approval. Schoeder ranks the project as one of the three most challenging he's ever worked on.

Originally, the owners planned to add nine holes, but because of the environmental concerns and restrictions, the project was scaled back. There were about 12 different routing plans, everything from three holes and a practice facility to nine holes, Schoeder says.

Even though DC Development had never been involved in a golf course construction project before, the lack of experience didn't hinder the project in any way.

"We took Steve to other projects we did in the past and explained the process to him," Schoeder says. "We educated him. It's common for us to work with first-time developers."

Dominic Palombo was the original architect of the Wisp Resort Course, and because he wasn't a famous architect, there was less pressure on Schoeder when redesigning the course. Schoeder was matching a style, which was a mix of old and new school, not a strategic design.

"The bottom line is that I had to compliment and match the character of the existing course, which was outdated," he says. "DC let us do our job, yet they offered us opinions from a golfer's perspective. They let us do what was best for the project and the environment. DC didn't balk at the environmental costs, either, which added about a half million dollars to the cost of the project."

LET IT GROW

McMillion, who has been at Wisp since July of last year, was brought in to work on the project about two months before the seed hit the ground. When he arrived, two greens were complete, but two holes hadn't been started yet.

"Everyone got together to make decisions about where the water went and the steepness of greens," he says. "No reasonable request was denied."

Before McMillion's arrival on the scene, superintendent Mark Halsig was – and still is – maintaining the Wisp Resort Course. But because he had never managed a grow-in, DC hired OB Sports Management – which brought in McMillion – to manage the property and the one under construction on the top of the mountain. Now that the Fantasy Valley project is complete, Halsig focuses on maintaining the course, and McMillion is focused on growing in Lodestone.

The four new holes were built on soil, which forces a greater dependency on erosion control, making it more difficult than sand, which was used on the USGA-speced greens and tees. During the project, the native top soil was removed, the golf course was shaped and then the soil was replaced.

"Aspen had superintendents on site who bend over backward to make sure things were done right the first time," McMillion says. "There were many sets of eyes. They were proactive in the process. They made some good changes, such as softening the swales on the greens and adding drainage in some areas. They did the right thing. If any reseeding needed to be done, you didn't have to look for them."

AFTER CONSTRUCTION

After the project was finished, a few drainage tweaks needed to be made, McMillion says. But overall, the project was successful.

"We opened in the summer to rave reviews," he says. "Golfers were happy. The course looked great. We didn't have to redo anything. It was just a matter of seeding, growing in and turning it into turf. The contractors were the big difference between this project and others I've worked on, which were smaller in scope. They had all the resources."

Aspen attacked the project with a full

WHAT THE JUDGES SAID

"Aspen endured tremendous rain events and renovated four holes successfully. It worked with multiple state and environmental regulatory agencies in the presence of a Tier II trout steam."

> - Craig Felton, golf course superintendent, Oak Hills Country Club, San Antonio

"Aspen had a challenging project, even though it was only four holes. It paved the way with some regulatory agencies. This was a sensitive site. It has a Class Tier II trout stream adjacent to it, making it difficult to permit. The project was monitored closely, even to the point of having a project engineer from the regulatory agencies on site regularly. Aspen was innovative in finding solutions to satisfy the agencies. It dealt with record rainfall and still was able to deliver the project on time, albeit some delays with permitting were beyond their control."

 Mike Bylen, owner, Shepherd's Hollow Golf Club, Clarkston, Mich., and Pine Trace Golf Club, Rochester Hills, Mich.

"This golf course is the first one in Garrett County, Md., to have a project like this, and Aspen had to deal with two environmental agencies. It installed 22 sediment basins and used buffer strips of vegetation to protect a Class Tier II trout stream. It took one year to get a permit to remove a pond. It did this all during a record rainfall. It set up many silt fences and cleaned up a lot of silt. It had excellent erosion and sediment control, and responded to design changes and met all deadlines."

- Terry Buchen, CGCS, MG, president and consulting agronomist, Golf Agronomy International, Williamsburg, Va.

contingent of personnel, including a job superintendent, assistant superintendent, irrigation superintendent, two shapers, a finishing superintendent and all support labor, plus all of the iron (on site) necessary, Schoeder says.

"I appreciate Aspen's attention to detail, from the immaculate job yard to the red polo shirt uniform each employee wore while on the job," he says. "They left nothing to chance." GCI



Have a big project? We'll bring a big toolbox.

With financing, heavy equipment, irrigation systems, agronomic supplies and an army of experts, we have all the tools you need to complete projects faster. So give us a call. When it comes to helping you, we think big.

866-769-4859





www.JohnDeere.com/golf

SCALE 12"= 1 FT. DRAWN By:. TRACED BY :-CHECKED BY:

THE BEST-LAID PLANS

Superintendents rely on experience, peers and experts to craft effective agronomic programs

BY KURT LAWTON

2

REVISION

3

There's no right or wrong way to write an agronomic plan. That is, unless you're over budget or dealing with unresolved agronomic issues.

Superintendents, PGA Tour agronomists and multicourse agronomic consultants all may view the details of growing and managing turf a little differently, but their goals are primarily the same: keep golfers happy with a consistent playing surface and, in all likelihood given the economy, spend less money achieving that.

Because golfers are playing fewer rounds and stiff competition exists to attract daily-fee golfers or club members, there's a heightened business pressure to do more with less. That's where good maintenance and agronomic plans, complete with past history, are invaluable.

PLAN BEYOND THE BASICS

Most superintendents have a plan for maintaining greens, tees, fairways, roughs and bunkers on a spreadsheet or written down in some form. Where plans differ is with the attention to detail, along with a happy and hard-working staff to carry out the plan. These details often separate pristine courses from mid-level courses.

Surrounding himself with experts, sound advice from peers and experience helps Mike Caranci thrive as golf course superintendent at Candlewood Country Club in Whittier, Calif.

"I'm very organized," Caranci says. "I have a

daily, weekly, monthly and three-month list of plans. I'm particular about applying and tracking exactly how much product goes where, when and under what conditions."

SKETCH SHEET.

DATE

Caranci is passionate about his job. One of his most valuable tools, aside from his maintenance and agronomic plans, is his daily diary.

"I've been tracking my daily plans since I started here 21 years ago because we had a lot of problems when I arrived," he says. "This history of issues/treatments/results has served me well throughout the years because I'm presented with different weather and turf challenges, along with product changes every year."

COMBO PLAN

Caranci combines his maintenance and agronomic programs together, breaking them down by area – greens, tees, fairways, roughs and trees. He also has categories for machinery and irrigation system maintenance.

"Maintenance and agronomy plans go handin-hand in my detailed and organized mind," he says. "I think and plan in terms of everything that goes into keeping a golf course in tournament shape all year round."

Caranci's greens plan is detailed by season and other parameters. It includes:

- Mowing heights by season;
- Fertilizer application rates and timing;
- How and when preventive fungicides are used;
- Growth regulator amounts and timing;
- Proper leaching of greens for salinity management;
- Exact aeration types and timing; and
- The hows and whys of syringing at various temperatures.



Cal Roth (right) works with Jeff Potts at TPC Scottsdale in preparation for the 2009 FBR Open. Mike Caranci (far right) is particular about applying and tracking how much product goes where, when and under what conditions at Candlewood Country Club in California.

BRING IN THE EXPERTS

One piece of valuable history Caranci garnered – and lived through 19 years ago – helps many superintendents in California combat high salt in irrigation water successfully.

"For me, the date I'll never forget is August 1, 1990 – the day I had to cut a new green in front of the first green I lost – a day that was forever humbling," he says. "It led me to consult with Larry Stowell, Ph.D., at PACE Turf in San Diego. We began applying IPM strategies on what we thought at the time was brown patch, then pythium."

Caranci and Stowell realized the problem wasn't fungus based – it was salt in the irrigation water that was weakening the turf, allowing diseases to move in. This issue wasn't well understood at that time, Caranci says. So Stowell invited Caranci to join his first advisory board and gave him a project to find a way to leach salts away from the root structure of Candlewood's *Poa annua* greens.

From 1993 to 1996, Caranci began a vigorous deep-tine aeration and heavy topdressing program while monitoring salt levels. The program helped rebuild the greens from the bottom up.

"Despite humbly losing four greens, it was rewarding to develop the program with Larry that saved greens everywhere and is still being applied today," he says.

Being a mentor to younger superintendents brings joy to Caranci. He strongly urges organization, planning and communication skills in place of attempting to be a plant pathologist. "Too many young superintendents want to be pathologists, which means they're in the wrong job," he says. "I tell them to focus on doing their job right and leave the diagnostic work to highly trained pathologists."

KNOW THE COURSE

Cal Roth, senior vice president of agronomy for the PGA Tour, has helped PGA Tour and TPC club superintendents compile knowledge and plans during the past 25 years. Roth recommends a thorough evaluation process of a property.

But before a superintendent can develop optimum fertilizer and chemical plans for various areas of a course, he must have in-depth knowledge of it, such as:

- The type of property (resort, public, private);
- Property condition expectations;
- The number of rounds played per month;
- Results of on-going soil and water quality tests;
- Typical weather patterns;
- Typical insect/weed/disease pressure patterns; and
- Hosted tournaments and related issues during that time frame.

"Once you have this information and compile it into a system, you can develop a specific fertilizer and chemical plan for each area," Roth says. "Be prepared to make constant adjustments because you can never follow your plans exactly."

The agronomic plan spreadsheet, used by all 18 PGA Tour-owned TPC clubs and many PGA

Tour event locations, lists every product used, location on course, rates, timing, acres applied, total product applied, product cost per unit and total cost. Each line item is listed by actual day of application, as well as where it was applied (greens/collars, spectator hubs, fairways, roughs, tees, general, etc.). The fertilizer section includes the same breakouts by amounts of nitrogen, phosphorus and potassium applied.

Once this information is plugged into the spreadsheet, it calculates exact product amounts and budgets by day, month and year for chemicals and fertilizers, Roth says. This provides a clear blueprint plan to follow, including the approximate costs.

Roth's staff of 11 agronomists handles about 110 to 120 tournaments for the PGA Tour, Nationwide Tour and Champions Tour. They also contribute to the agronomic plans for 18 TPC courses. Many man-hours are spent at each course to help the superintendent and staff, beginning with a one-day visit eight to 10 weeks before the tournament. The second visit begins one week before the tournament starts, and the staff usually will stay until Wednesday of tournament week, and sometimes through the final round on Sunday.

Roth's staff also will make a follow-up visit six to 10 weeks after the tournament to begin plans for next year. Roth's staff reviews each course's agronomic plan throughout the year to iron out any needed changes.

"My staff constantly talks with each other, sharing issues and solutions that contain good general knowledge for any course," Roth says. "Fortunately, we work with experienced and talented superintendents and staffs, so it makes the process easier when tournaments are repeated year after year – except when dealing with new sites, which takes much more work."

FOLLOW THE MODEL

Like Roth, Nick Dunn, vice president of agronomy for Dallas-based Eagle Golf, overseas multiple courses – 79 to be exact.

"Because our business model comprises managing properties we own and properties for others (private and city owned), we view the budget and business model to be just as important as the maintenance/agronomic plan," Dunn says. "We expect our superintendents and assistants to be good agronomists and good business people. Because the maintenance budget of these properties may be 30 to 50 percent of

Geese have a sixth sense that tells them when a golf course is perfect.

The course is beautifully manicured. The play is true. The turf quality is ideal thanks to Primo MAXX,[®] the leading plant growth regulator. Fewer mowings this season reduce the stress on your turf and provide a labor and fuel savings. Like you, we understand the frustration when unavoidable wildlife makes their presence known on your turf. But take it as a compliment. It simply means that everyone wants to be on your course. **We take conditions personally.**

1-866-SYNGENTA • GreenCastOnline.com/PrimoMAXX

©2008 Syngenta. Syngenta Professional Products, Greensboro, NC 27419. Important: Always read and follow label instructions before buying or using this product. GreenCast,® Primo MAXX,® and the Syngenta logo are trademarks of a Syngenta Group Company.



enre

An agronomic plan spreadsheet (part of which is shown below) used by all PGA Tour-owned TPC clubs calculates exact product amounts and budgets by day, month and year for chemicals and fertilizers.

Month	Chemicals	Fertilizers
January	\$7,609	\$1,341
February	\$3,619	\$13,425
March	\$1,289	\$781
April	\$24,350	\$11,443
May	\$8,755	\$843
June	\$12,736	\$6,091
July	\$3,858	\$11,000
August	\$3,001	\$668
September	\$7,771	\$1,108
October	\$8,392	\$443
November	\$5,704	\$6,476
December	\$2,009	\$12,974
Total	\$89,094	\$66,592

the total expense line for the property, we rely on them to be team players to make the whole property successful."

Dallas-based Eagle Golf espouses the philosophy of superintendents knowing the property they maintain.

"We work with superintendents to help write their maintenance plans, which they really can't do until they know who they are," Dunn says. "Are you a \$40 golf course or a \$90 course, a mid-range private or high-end private club. And how do you stack up to the area competition?"

In most cases, when superintendents write plans with exact knowledge of what they manage, they can create a budget that's supported by the revenue of that property and make the golf course profitable, Dunn says.

"It's extremely important for the superintendent to take proverbial ownership of the property, staff and membership," he says. "It's important the budget be understood by all parties and that the plan specifics are designed to help control your market share."

IN THE ZONE

One key to making sure a sound agronomic plan will work is to have a happy and healthy staff that looks forward to come to work, says Tim Barrier, CGCS, at Rancho Santa Fe (Calif.) Golf Club.

"I treat them like they're family," Barrier says. "I have two great assistant superintendants and a great crew who've been with me a long time. Their average tenure is 15 years."

Barrier, now in his 17th year at Rancho Santa Fe, says about 75 percent of his agronomic plan is driven by instinct and experience, mostly because of the varied weather.

"It honestly took me about 10 years to really understand the soils and the microclimate weather patterns," he says.

Rancho Santa Fe is in the transition zone. It's



INTRODUCING THE WIDESPIN[®] 1540 EC TOPDRESSER.

Combining the industry's best spread with 30% greater spinner angle and an easy-to-use electronic controller, it delivers unmatched performance and productivity. Just dial in and set three custom application rates, from ultra-light to super-heavy, and get the right application rate—every time you topdress.

See all the innovative features of the new WideSpin 1540 EC. Call 800-679-8201 for a FREE DVD or to schedule a DEMO.



www.golfcourseindustry.com/readerservice - #43



You Trusted Us Then... You Still Do Today.

If you're a golf course superintendent, chances are you grew up using Ryan products – sod cutters, dethatchers, aerators and overseeders – trusted since the 1940s to provide long-lasting, dependable service. And whether your Ryan is one year old or older than you, it's there when you need it, ready to tackle any job. That's why superintendents have counted on Ryan products for more than 60 years.

To find your Ryan dealer, visit www.RyanTurf.com or call 866-469-1242.

The First Name in Turf Renovation™

SO CUTTER





TIRED OF LEAKING FILTERS?



....Wherever Water Flows



- Lifetime Body Warranty to Never Leak
- 316L Stainless Steel Construction
- Simplicity
- No Pistons
- No Motors
- No Limit Switches
- No Seals
- Competitively Priced

Simplicity with Efficiency all combined to provide the most cost effective filtration systems available.

303-425-4242 • www.valveandfilter.com

TURFGRASS MAINTENANCE

not quite coastal or inland because it's six miles from the ocean. Barrier must be prepared to deal with fog, frost, rain, clear skies, and Santa Ana winds and fires.

"One big challenge during what we call 'May gray' or 'June gloom' clouds in the morning and sunshine in the afternoon - is planning to keep greens dry in the mornings while delivering enough water to handle 90 degree sunny afternoons."

Barrier's agronomic and maintenance plan spreadsheet is a customized template derived from one created by a consultant. It's divided into sections: greens, tees, fairways, collars/approaches, rough and driving range. Within those categories, he plots when to apply which plant protection products, plant nutrition products, soil amendments, cultural practices (large and needle tine aeration, hydroject, verticutting, grooming, leaching, etc.) and irrigation scheduling.

FOLLOW THE STANDARDS

The details that drive Barrier's agronomic plan are spelled out in an annual standard operating procedures document that summarizes course set-up and maintenance. Barrier and his staff develop the details with the green committee, which then takes it to the club's 592 members for ratification.

The three-page standards document starts with an objective, then addresses each area of the course:

- Greens
- Bunkers · Lakes
- Collars/approaches
- Green aprons
- Tees
- Tee surrounds
- Fairways
- Primary rough
- Secondary rough
- Streambeds
- Within each section, the document details:
- Stimpmeter speed
- Irrigation timing
- Aeration and topdress timing
- · Nutrition and plant protection guidelines

- · Lake surrounds · Cart paths
- · Driving range
- · Watering practices
- Tree management
- Type of grass
- · Mowing height and frequency/ schedule
- - Resodding plans
 - · Overseeding plans
 - · Type of sand
 - · Rake placement and timing
 - Tree trimming.

"My plan is not super scientific or clinical like some superintendants who map out every minute detail," Barrier says. "But what we have is a flexible plan that works for us, and it works well. It allows the general membership to come out and enjoy the course every day in conditions as close as possible to the last time they played." GCI

Kurt Lawton is a freelance writer based in Eden Prairie, Minn.

For a template of a baseline standard operating procedure document supplied by the USGA, visit golfcourseindustry.com/ files/pdf/maintenance_sop.pdf.





HONOR THE GAME

WE HONOR THE GAME THROUGH OUR DEDICATION. At Club Car, our devotion to the game — and our customers — is reflected in everything we do. Build a relationship with us and discover how our creative business solutions can help you succeed. Please visit us at www.clubcar.com. Or call 1.800.CLUBCAR.



www.golfcourseindustry.com/readerservice - #46

PERSONNEL MANAGEMENT



HIGHER PAY VS. BETTER BENEFITS

Knowing employees' preferences boosts retention and satisfaction

You've seen the great match ups: Ali vs. Frazier, the Red Sox vs. Yankees, and at your course, pay vs. benefits.

Retaining the highest caliber staff takes significant time and insight into what energizes quality employees. Throw in the turmoil brought on by a floundering economy and tightening budgets, and situations can get pretty dicey from a staffing perspective.

Superintendents should ensure they have the best staff possible by examining what kind of employees they want to attract and what they value most in terms of compensation and work environment.

Some full-time employees emphasize excellent benefits, such as health care coverage and vacation time. Seasonal employees may prefer to be paid more instead of taking health insurance they might not use or having access to a 401(k) plan they don't need. Retirees might be looking at the opportunity to work outdoors more and stay productive during their later years compared to a big paycheck or receiving additional insurance coverage.

"There's a lot of give and take regarding salary or benefits," says Lyne Tumlinson, director of career services for the GCSAA.

Much of what a superintendent can offer is dictated by the type of facility. Consider a highend private club vs. a municipal golf course. A private facility likely pays a higher salary, but the benefits usually aren't as good as a municipality, where the crew receives the same benefits as all municipal employees, Tumlinson says.

BY MICHAEL COLEMAN

RETENTION AND COMPETITION

Optimizing the value of the pay and benefits a facility offers is more important now because of the economic recession. Superintendent Ricky Craig at Shingle Creek Golf Club in Orlando, Fla., says the sour economy has hurt the region, and his staff feels it.

"The cost of living has increased exponentially, and the pay increases haven't," he says. "In any business that's in a down economy, you have work, but you're struggling to get by because you're not making the wages that would be adequate to survive."

Some of those challenges are inherent to the golf industry.

"The salary range for equipment operators isn't very competitive compared to other markets, such as construction, or any other market for that matter," Craig says.

What's normally positive for employees, a good benefits package, seems to be valued less by the Shingle Creek crew.

"We have a decent benefit package, but most of our guys are more interested in their checks, not necessarily benefits," Craig says.

Because benefits have to be offered to the employees, even though they don't appreciate them, means some compensation goes unnoticed and underused. Some Single Creek employees don't understand the importance of being able to go to the doctor and be taken care of for just a small co-pay, Craig says.

Al Bathum, CGCS, at Cascade Hills Country Club in Grand Rapids, Mich., sees a variety of perspectives from employees. Bathum's fulltime crew receives health insurance coverage, but seasonal staff must pay the entire premium if they want coverage. While he's had a pretty high return rate among the seasonal crew, the lack of insurance makes it difficult to retain experienced crew members.

"That's one thing that doesn't help bring anybody back," he says.

On the other end of the spectrum, Bathum has a number of retirees with other insurance, so coverage isn't a factor for them. Bathum tries to keep pay and benefits competitive with other industries in his area. He knows what the local landscaping companies pay – his employees make almost as much. Bathum pays his

YOU WORRY ABOUT BUDGETS, GRUBS AND GREENS. WE'LL WORRY ABOUT RAKES.

Today, you have to present your budget to the board. We're guessin' the last thing you'll talk about is the finer points of a bunker rake's business end. Luckily, we've put a lot of thought into those finer points, creating a complete line of golf course accessories and tools designed to be relied on, day after day.

Hey, somebody's gotta think about this stuff.



Like talking to real people? So do we. Call us direct for anything you need at 1-866 SG EXPRESS.

Also visit us at standardgolf.com



year-round employees \$12 to \$16 an hour and seasonal staff about \$10 an hour.

"There aren't as many manufacturing jobs in our area anymore, which helps our retention," he says.

Bathum also improves retention by focusing on that from the beginning, during hiring.

"First off, we'd like to hire people who would like to return more than one season," he says. "If we can get three, four, five seasons out of them, we're not going to have to retrain."

Seeing the potential of several seasons of work can be a benefit for the employee as well, but often, the biggest draw for an employee depends on his personal situation. For example, some of Craig's laborers prefer slightly higher pay rather than benefits because – being a large Hispanic population – they're looking out for families and want to be able to cover expenses at home.

"You can't eat benefits," Craig says.

John Cunningham, CGCS, director of golf and landscape operations at the Four Seasons Resort and Club, Dallas at Las Colinas, agrees. Having the right employees is the key factor for the success of the 36-hole facility near Fort Worth, Texas, home of the EDS Byron Nelson Championship.

"There are some employees just looking for that extra dollar an hour," Cunningham says. "But ultimately, we're looking for the employee who realizes and understands the value of



If the Four Seasons attracts that type of employee, the club is better off, Cunningham says. On the other hand, employees who don't use benefits, such as insurance, are often sick and miss more work.

A GOOD MIX

Recruiting people who see the value in employee benefits, such as health care, taps into a traditional human-resources approach to benefits, which encourages companies to offer health insurance because it promotes good health, as well as higher productivity with less work missed. Variety among a staff can increase productivity, too.

Depending on the type of employee, health insurance coverage might not be an important benefit of the job. "It's nice to have a broad spectrum of employees because the young people learn from the retirees' work ethic and Hispanic employees, because their work ethic is second to none," Bathum says.

Bathum estimates his crew is about one-third retirees, one-third Hispanic and one-third college age.

"It can be a challenge if superintendents mix certain retirees, with say, college students, because of generational differences," Tumlinson says. "That's something superintendents are learning a lot about: how to deal with Generation Y, and what makes them tick, and how to make it a win-win situation."

Bathum found ways to keep his crew engaged, using fun outings to try to encourage a light atmosphere. The crew takes a long canoe trip together every year.

"Just being together, having a little bit of fun, especially the young kids, they like that," he says.

Sometimes it's the little things, the soft benefits, that add up to a more positive experience for employees. The extras count when it comes to keeping employees satisfied.

"They go above and beyond here at the Four Seasons to make sure the employees know they're appreciated," Cunningham says, citing several ways employees are recognized. "That goes a long way. Everyone has a choice where they want to work."

ILLEGAL CRACKDOWN, MORE TRAINING

Laws can have a significant impact on staffing. Trevor Monreal, the superintendent at Lone Tree Golf Club in Chandler, Ariz., had to make staffing-level adjustments since taking over in September of 2007. Lone Tree is the first public course at which Monreal has been superintendent. What started as a staff of 15 has been reduced to 10 people, including a mechanic and irrigation technician. Monreal gladly pays more overtime for his high-quality crew.

Monreal has had to be more selective when hiring and retaining staff, primarily because of the Legal Arizona Workers Act, which has been enforced since March 1, 2008. It requires employers to verify, through a federal Web site, that new employees are authorized to work in the U.S. legally. There are stiff penalties for knowingly hiring someone without legal documents.

"The illegal labor has allowed us to be lazy,"



NON-STABILIZED NITROGEN.

STABILIZED NITROGEN.

WAIT NO LONGER FOR A BETTER NITROGEN SOURCE.

Slow release nitrogen fertilizers can starve your turf while waiting for soil temperatures high enough for soil microbes to release the nitrogen. Not UMAXX® Stabilized Nitrogen. In any season UMAXX provides a steady, dependable supply of nitrogen to your fairways and greens. Apply as a granule or melt and spray. Either way, it is the most efficient source of nitrogen you can find. Why wait? And ask your distributor for UMAXX in all seasons.



AGROTAIN International, LLC. • 888-547-4140 • www.stabilizednitrogen.com • UMAXX is a trademark of AGROTAIN International, LLC.

The lack of health insurance makes it difficult to keep experienced seasonal crew members on board at Cascade Hills Country Club in Grand Rapids, Mich., according to superintendent Al Bathum. Monreal says.

Now, with an emphasis on hiring people who have all the legal paperwork in place, there are fewer people to consider for employment. One way Monreal dealt with that was by hiring people who worked for him at other courses in the area.

"The face of entry-level labor has changed in Arizona," Monreal says.

It used to be a superintendent could ask one of his best employees to bring a friend or relative, who is a good worker, to work with him. Now, employers aren't willing to take the risk in a climate of increased enforcement. Additionally, some workers applying with the right paperwork don't have the experience they need, Monreal says.

"At first, it was discouraging; then I realized it's my job to train them," he says. "We shouldn't be looking for guys who know a lot about golf course maintenance."

Monreal has been focusing more on teaching and coaching less-experienced employees.

"It's not just this industry, but many industries," he says. "We're not taking the time to train them."

CONSISTENCY, LEADERSHIP

To find and retain the best people for an operation, superintendents need to examine their needs. Monreal has focused more on consistency because his staffing levels have declined as a result of budget constraints. He's able to offer limited benefits to his crew, which is provided with uniforms, boots and jackets. Health insurance isn't offered.

To meet budget work, Monreal is choosing to staff his crew with fewer workers who perform at a higher level. He spreads the same budget across a smaller staff, meaning those who work harder and earn overtime are able to make more than if the crew still numbered 15.

All said, a crew's success depends on the superintendent's leadership.

"If a superintendent does a good job of training, mentoring and helping the crew feel like a team and understanding how they're working together, they won't have a problem with having to hire less-experienced staff because people will stay from year to year," Tumlinson says. **GCI**

Michael Coleman is a freelance writer based in Kansas City.

The Power Of One.



Shift your business to the independent distributor members of PrimeraTurf* and tap into the power of a wide range of high-quality PrimeraOne⁻⁻ products.

You'll find the products and the name of the distributor in your area at **primeraone.com**.



©2009 PrimeraTurf. PrimeraOne is a trademark and PrimeraTurf a registered trademark of PrimeraTurf, Inc. Always read and follow label directions.

TORO

BY WENDY GELERNTER, PH.D., AND LARRY STOWELL, PH.D.

Preventing herbicide mix-ups

Put a system in place to ensure misapplication doesn't happen

Every year, we hear of at least one serious incident of herbicide misapplication on turf. Glyphosate accidentally applied to greens is one example, as are preemergent herbicides that are unknowingly applied (usually via herbicide-impregnated fertilizer granules) on fairways that are about to be overseeded. These accidents usually happen when people don't realize they're applying an herbicide because:

• The commercial name resembles a nonherbicide product. For example, there are many pesticides, surfactants and watertreatment products that begin with the word aqua. Unfortunately, there are several glyphosate-based products that also have the word aqua in their names, making it easy to mix up products.

Accidental applications of glyphosate is an alltoo-common occurrence that can be avoided.
Get a Spring Tune-up With ROOTS

No matter what's on your spring check list, ROOTS has the right products, right now:

Bring course out of dormancy	ROOTS Turf Food
Overall turf health	TurfVigor®
Intensify turf color without rapid growth	1>2>3 Premix Plus
Aerification	endoROOTS®

To keep your course running at top performance all season long, ask for ROOTS today.

800-284-7435 • www.rootsinc.com

Always read and follow label directions. The Novozymes logo, endoROOTS and TurfVigor are trademarks of Novozymes A/S. ©2009 Novozymes Biologicals, Inc.

andoROOTS

Name Savs it



PESTICIDE MANAGEMENT



Table 1. Commercial names of commonly encountered glyphosate-based (pure glyphosate, as well as mixtures and salts) herbicides. Because glyphosate will kill almost any plant it comes in contact with, and it's ubiquitous and sold under a large variety of commercial names, take special care with proper identification, storage and use. This list is not all inclusive, and there

storage and use. This list is not all-inclusive, and there might be glyphosate-based products available for use in turf that don't appear at the right.

Accord Eag Aqua Neat Gly Aquamaster Gly Aquapro Gly Aquastar Gly Avocet Hor Buccaneer Kle Campaign Mir Credit Duo Pro

Eagre Gly-4 Gly Star Glyfos Glyphosate Honcho Kleen Up Mirage

Ranger Sh Rattler Sh Razor Sill Rodeo Str Roughneck Tou Roundup Tra Sequence Tra

Shootout Showdown Silhouette Strikeout Touchdown Trailblazer Traxion



• The commercial name isn't recognized. While most people recognize RoundUp is a broad-spectrum herbicide, many other products based on glyphosate aren't so easily recognized. (See Table 1 above.)

 Label art is similar. Many herbicide product labels have similar colors and designs compared to other turf management products.

• Fertilizers that are impregnated with herbicides are applied as if they were just fertilizers. If labels aren't carefully reviewed at the time of each application, workers might mistake herbicide products for plain fertilizer products.

 Herbicide products are stored next to other turf management products. Workers might mean to pick up one product but take the one next to it instead.

• Dealers or distributors mistakenly deliver the wrong product.

PATENTS AND THEIR ROLE IN THE PROBLEM

Recently, there were only a few glyphosate-based products on the market, and it was easy to train

Figure 1. A glyphosate product label, highlighting the information that's most useful when determining the nature and damage potential for pesticide products.



crew members about the proper and improper uses of RoundUp. But since Monsanto's patent for glyphosate expired, workers must now deal with close to 100 different glyphosate-based products with names ranging from Accord all the way through the alphabet to Traxion.

AVOIDING THE NIGHTMARE: THE LABEL

The brand name of the product alone is a poor indicator of the nature of the material that workers are about to spray. The product label contains all the information one needs to know to avoid the heartache of herbicide errors. The following elements of the front panel of the label are your guides to what is contained within (See Figure 1 below.):

1. Commercial name. This is the name the manufacturer selected for marketing the product. As Table 1 indicates, there can be several commercial names for each active ingredient.

2. Product type. Most labels indicate whether the product is an herbicide, insecticide, fungicide or other pest control product.

3. Active ingredient common and chemical names. This section of the label identifies each pesticide chemical and its percentage by weight in the product. The active ingredient can be listed in two different ways. The common name is the shorthand term chemists use to refer to this molecule. The chemical name is usually much longer and more descriptive. The federal EPA requires, at a minimum, the common name be used. For example, glyphosate is the common name for the active ingredient in RoundUp and other related products, while N (phosphonomethyl) glycine, in the form of its isopropylamine salt, is the chemical name. Note: The words other ingredients or inert ingredients refer to nonpesticide formulation components, such as water, spreaders, stabilizers, etc.

EDUCATING THE STAFF

Key staff members should understand these label components. The product type always should be double-checked before application, and if the word herbicide appears on the label, staff should be encouraged to ask questions if they have any doubts about the suitability of applying a product. If possible, they should be familiar with the commercial and common names, as well as use patterns of all pesticide products that are used on the golf course.

Workers need to be familiar with the herbicide-impregnated fertilizer products used on the golf course and understand these products have plant-killing capabilities.

Finally, workers need to avoid using design and/or colors on the label as a means of identifying products.

STORAGE

If possible, herbicides should be stored in a separate cabinet or room from all other products. At a minimum, specific shelves should be set aside and labeled for herbicides only.

CHECK AND DOUBLE-CHECK

Many superintendents have systems that require the approval of a second person – usually the superintendent or a designated manager – before daily product selections are applied. This type of arrangement is a good safety net for catching product mix-ups and probably is most successful when the manager assumes final responsibility for the product selections. **GCI**

Wendy Gelernter and Larry Stowell are the owners of PACE Turf. For more information about avoiding mishaps and other production practices, visit www.PaceTurf.org.

Some Heads You Want...

Some Heads You Don't.

The golfers on your course don't want *Poa* seedheads. Embark[®] is proven to be the best – and the most economical – *Poa annua* seedhead suppression available. Get Embark and prevent unsightly *Poa* seedheads on your course!

800.821.7925 • pbigordon.com/embark

<image>

An Employee-Owned Company

s a registered trademark of PBI/Gordon Corporation. ALWAYS READ AND FOLLOW LABEL DIRECTIONS

www.golfcourseindustry.com/readerservice - #51

BY CATHIE CUSH

A new approach

Fertilizer meta-catalysts can maximize nutrient management

R ising natural gas prices, an increased focus on biofuel crops and growing offshore demand have driven fertilizer costs to record highs. In many markets, fertilizer costs have almost doubled since 2007. Additionally, the growing environmental movement is raising concerns about nitrate and phosphate leaching and runoff.

The industry has tried many approaches to address these concerns, with only partial satisfaction. Some organic products may be costly or offer lackluster performance. However, some research indicates a new category of fertilizer catalysts offers relief for turf managers.

THE NEED FOR NUTRIENTS

Like all living things, plants require various types of nutrients. Nonmineral nutrients – carbon, oxygen and hydrogen – are readily available from water, sunlight, soil and the atmosphere. Plants also require more than a dozen primary mineral nutrients – macronutrients and micronutrients, most of which are obtained from the soil and decaying plant matter.

The three most important macronutrients are nitrogen, phosphorus and potassium, which provide raw materials that the plant needs at a molecular level to grow and thrive. Plants use these nutrients in large amounts to grow and resist disease. Nitrogen is necessary for all metabolic processes, including protein and energy synthesis. It's a component of chlorophyll and associated with rapid plant growth and vigor. Phosphorus plays a key role in photosynthesis and is necessary to support plant maturation, rapid growth and stress resistance. Potassium is necessary for protein synthesis, photosynthesis and disease resistance.

Soil analysis results on extremely salt-contaminated soil by Texas A&M University:

	Calcium	Magnesium	Potassium	Sodium	Total Salinity	Soluble Salts
Meta- catalyst	154 ppm	83 ppm	44 ppm	178 ppm	815 ppm	2.06 mmhos/cm
Alternate Treatment	493 ppm	284 ppm	94 ppm	494 ppm	2138 ppm	5.37 mmhos/cm





Figure 2: The technology in the meta-catalyst increases nutrient uptake.

WE'RE CHANGING THE GAME. FOR THE BETTER.



Introducing $CIVITAS_{m}$ - a breakthrough in fungus control technology.

CIVITAS is unlike any other fungicide you've ever used. That's because – unlike conventional chemistry – CIVITAS does not kill anything. Its unique mode of action activates the natural defenses of your turf enabling it to effectively defend itself against dollar spot, brown patch, anthracnose, snow mold and other fungi. Without the resistance headaches. Embrace CIVITAS and change your game for the better.

Turn on the natural defenses of your turf and drive away fungus.





THE ROLE OF MICROBES

The oldest form of life on earth, microorganisms (or microbes), are tiny single-cell organisms such as micro arthropods, nematodes, protozoa, fungi, algae and bacteria. All plants and animals depend on microbes to digest food.

Microbes are everywhere, with especially high concentrations in the soil. A single teaspoon of healthy soil may contain 25,000 algae, more than 120,000 fungi and more than 1 billion bacteria. Using genetic analysis, researchers estimate a biologically rich soil sample may contain as many as 10,000 distinct species of bacteria. Of these many species, only about 1 percent or fewer can be cultured (isolated and grown synthetically). Even less are known to have specific soil functions.

Microorganisms play active roles in many aspects of the soil environment in which they live. Their activity has measurable impact on organic matter and nutrient availability, nutrient cycling and uptake (by the plants), and soil structure and function. Living in the soil, this community of microbes will metabolize various organic and inorganic materials. All microbes don't process the same nutrients. Different species metabolize different food sources. Some species may do a less effective job in the absence of a microbial community structure that aids efficient metabolic functioning. The microbes absorb nutrients, process them and release unique biochemicals – a rich variety of enzymes, proteins, carbohydrates, organic acids and many others. The soil solution holds these exuded biochemicals, which play critical roles in the complex array of plant/microbial interactions.

Current research points to biochemical communication as a mechanism for many of the observed interactions in growing plants. For example, bacteria will multiply in the presence of nutrients, but they also seem to be receptive to biochemical signals indicating the food reserves are limited or that conditions are not otherwise optimal, which may slow down or stabilize population growth.

Other signaling agents – for example, the release of root exudates that nourish the indigenous microbial community – may be required to elicit certain functions from a plant. Adding microbes to fertilizer blends (along with concentrated solutions of their biochemical byproducts), appears to help increase the plant's efficient use of essential nutrients.

However, recent research points to the likelihood that the product's metabolic capacity, rather than organism counts, may be the critical variable in enhancing fertilizer efficiency. In other words, products with a broad metabolic profile may metabolize a wider range of food sources, making them more available to the plant. Improved nutrient uptake by the plant will, in turn, build greater biomass (roots and shoots) and allow the plant to reach its full genetic potential better.

A NEW CATEGORY: META-CATALYSTS

The concept of adding microbes or other enhancements to fertilizer is not new. However, much of the focus has been placed on growing and harvesting individual strains that have been cultured in high concentrations in the laboratory.

A fertilizer meta-catalyst, on the other hand, starts with a base stock of naturally occurring microbes that's highly diverse – both microbiologically, as shown in plate counts, and in metabolic capacity – that is, the ability to metabolize a broad range of food sources. Rather than just containing a few isolated species, this meta-catalyst base stock might include scores or hundreds of different strains of organisms living in an interactive community that reflects the soil's extraordinarily rich microbial environment.

To commercialize a meta-catalyst, the diverse base stock is fermented in community, and the microbes are harvested along with a fermentation medium, which contains the rich deposits of naturally exuded biochemicals. The better products are taken through a stabilization process to make them easier to use and to extend their shelf life. They're tested to assure they're free of known plant and animal pathogens, and then profiled for production batch management and traceability to ensure consistency. In many cases, the base solution may be blended with other beneficial materials such as humic acid, nutrients or other biostimulants to bundle together benefits for the plant and soil.

The end result is a fertilizer meta-catalyst that contains viable, beneficial bacteria, a complex of fermentation byproducts (biochemicals) and other materials that increase the efficient processing, conversion and uptake of soil-applied nutrients. The meta-catalyst may be added to

Superintendent at Leading Saucon Valley Country Club Course Reports Exceptional Control of Annual Bluegrass Weevil and White Grubs with ALOFT[®] Insecticide



Saucon Valley Country Club, host of the 1992 and 2000 Senior Opens and 2009 U.S. Women's Open

In an attempt to control the Annual Bluegrass Weevil, Jim Roney, course superintendent at the 850 acre, 60-hole Saucon Valley Country Club in Bethlehem, Penn. has tried multiple products and received lackluster results. Saucon Valley was the site for the 1992 and 2000 U.S. Senior Opens, as well as the host of the 2009 U.S. Women's Open.





Jim Roney



Annual Bluegrass Weevil

Roney's main concern lately has been the Annual Bluegrass Weevil. A tough bug to control, Roney anticipated that a treatment that controlled the weevil would take care of the other insects as well.

Previous Annual Bluegrass Weevil products results mediocre

Roney reports that he had tried everything on the market in the past to control the weevils with other products, but determined that the results were mediocre at best. "My goal has been to take advantage of the early application, to prevent the adults from laying eggs, since the larvae are what cause the most damage," says Roney. "But when I used those products that claimed adult control, I just wasn't seeing that happen."

With the 2009 U.S. Women's Open looming, Roney contacted Dr. Harry Niemczyk, turfgrass entomologist, to determine his options. Dr. Niemczyk engaged Roney in a comprehensive field trial of seven different products at varied rates.

Outstanding performance on Annual Bluegrass Weevils achieved with ALOFT

"In my experience, courses either have a really bad problem or a minor weevil problem. But on courses where you have a really bad problem, like at Saucon Valley, you need to find something that provides the best control for the greatest length of time," states Roney. "Keeping this in mind, I was completely blown away by the control I saw on the ALOFT holes. I'd say we experienced close to 95% control."

Season-long white grub control reported

Roney experienced season-long control of white grubs in addition to the Bluegrass Weevil with the full application of ALOFT. "The full application of ALOFT provided season-long control of all white grubs. We actually experienced some white grub damage in areas where we used other products, but zero

damage in the ALOFT plots," according to Roney. "I was so impressed with the results that I've decided to put all my eggs in one basket, and will be using ALOFT on the entire 60 holes."

Extensive university field trials verify similar results

Dr. Doug Houseworth, technical service manager at Arysta LifeScience, has worked with university researchers in extensive field trials over the last two years, confirming the results Jim Roney found – that ALOFT, applied preventively, offers season-long systemic and contact control of multiple



White Grub

insect pests. Houseworth reported, "The more experience we have with ALOFT on early season insects, surface-feeding insect pests, and all white grubs, the more evidence we see that the unique activity of ALOFT increasingly delivers exceptional insect control throughout the season."

More information

To watch a video interview with Jim Roney about his successful experience with ALOFT at Saucon Valley Country Club, view the latest ALOFT field trial data, and learn where to buy ALOFT, please go to www.arystalifescience.us/alofttestimony.

Aloft Insecticide

The One-Two Punch™



Always read and follow label directions. ALOFT and the ALOFT logo are registered trademarks of Arysta LifeScience North America, LLC. Arysta LifeScience and the Arysta LifeScience logo are registered trademarks of Arysta LifeScience Corporation. ©2009 Arysta LifeScience North America, LLC. ALO-086

ADVERTISEMENT www.golfcourseindustry.com/readerservice - #53

Figure 4: Potential cost savings.

FERTILIZERS	Cost per ton	Application rate- lb/1000 sq ft	Amount Nitrogen	Cost per 1000 sq ft	Savings per sq ft
30-0-10 50% Slow N	\$920	3.5	1.05	\$1.61	1221
30-0-10 50% Slow N with Meta-catalyst	\$980	2.75	0.825	\$1.35	16.3%
46-0-0	\$1,000	2.5	1.15	\$1.25	
46-0-0 with Meta-catalyst	\$1,060	2	0.92	\$1.06	15.2%
15-25-10 33% SCU	\$1,085	4	0.6	\$2.17	
15-25-10 33% SCU with Meta-catalyst	\$1,150	3	0.45	\$1.73	20.51%

granular and liquid fertilizer products to enhance performance.

PROVEN RESULTS

Research about fertilizer meta-catalysts shows promising results. More than 400 field, university and third-party studies have been conducted on such blends, and the products have been proven effective in improving nutrient uptake into plants. The potential implications are enormous – opening the door to reduced fertilizer application rates, improved fertilizer performance and the possibility of reduced leaching and runoff of soil nutrients.

Some of the studies suggest this microbial technology can increase nutrient uptake in grass and other plants by 25 percent or more. A University of Florida study about perennial ryegrass and hybrid bermudagrasses showed a soil application of the meta-catalyst increased nitrogen uptake over the control by between 50 percent and 75 percent at application rates of 3 ounces and 6 ounces per thousand square feet, respectively. (See figure 1.)

Meta-catalyzed fertilizer appears to have a significant impact on the plant itself – as measured at roots and shoots. Auburn University conducted a controlled study in bentgrass. Plots were treated with a conventional 19-5-9 fertilizer or a meta-catalyzed 19-5-9 fertilizer, each applied at a rate of four pounds per 1,000 square feet. Bentgrass in the treated plots had 91percent higher fresh root weight, 105-percent higher fresh shoot weight and 37-percent higher average diameter.

In a similar Auburn study of root growth in tall fescue, samples treated with the microbial technology showed increased biomass, especially root mass, in less than four weeks. Deeper roots provide more surface area for nutrient uptake and can draw on soil deposits of nutrients that haven't been depleted yet. A healthier root structure also can help plants survive stress better, even in dry soils. Enhanced nutrient uptake is important particularly for new plant establishment.

IMPLICATIONS

When plants use nutrients more efficiently, it's possible to use less fertilizer - or to use fertilizer with a lower ratio - to get the same results. When nutrient uptake is increased by 25 percent or more, one can reduce fertilizer application rates by as much as 25 percent without sacrificing performance. For example, a turfgrass that's normally fertilized at a rate of 4 pounds per 1,000 square feet could be treated at just more than 3 pounds per 1,000 square feet with a meta-catalyzed blend. Similarly, if a ton of fertilizer treats 11.5 acres at the 4-pound rate, a ton of meta-catalyzed fertilizer treats 14.4 acres because it's applied at a lower rate. In either case, the use of the enriched blend could reduce costs by 15 to 20 percent or more.

As an alternative to applying the lower rate, it's possible to use a meta-catalyzed fertilizer with a reduced nutrient content. For example, instead of applying conventional 30-0-10 fertilizer at 4 pounds per 1,000 square feet, an Auburn study says it's possible to apply a metacatalyzed 22-0-8 fertilizer at the same rate to achieve the same results.

In 2004, an Auburn team fertilized transplanted broccoli plants. Plants were broken into four groups. Two groups were treated with conventional fertilizer with 80 percent and 100 percent nitrogen, respectively. Two other groups were treated with meta-catalyzed 80-percent or 100-percent fertilizer. After 32 days, plants in the meta-catalyzed fertilizer groups were more than 30 percent larger than the other plants, and the 80-percent meta-catalyzed fertil-

Some studies suggest this microbial technology can increase nutrient uptake in grass and other plants by 25 percent or more.

To get healthier turf, get healthier soil.

Healthier Soils with SoilLife[™] The Key to Consistent High Quality Turf

Everybody judges your turf from the top down. Color? Consistency? Fast and Firm? The real truth is that the soil plays a big part in how your turf starts and ends up season after season. That's where SoilLife comes in as the soil amendment that delivers healthier soils for healthier turf. And healthier turf makes your job easier.

Quality Turf from Healthier Soil

Bound up nutrients in the soil do not benefit your turf. As time goes on your turf's roots are looking for the nutrients they need to grow strong and healthy. When these nutrients are locked up the turf only gets a portion of what it needs, so it does without, and even though it looks healthy it could be much healthier.

Health Benefits of SoilLife:

- Increased Nutrient Uptake in Turfgrass
- Increased Root Growth
- Effective Compaction Reduction
- Improved Soil Water Efficiency
- Healthier Turf Makes Your Job Easier



To learn more about Health Care for the Soil and find the distributor nearest you go to www.nutrienttechnologypartners.com or call us at 610-594-9950.



izer significantly outperformed the untreated 100-percent fertilizer. (See figure 3.)

There are some advantages to focusing or improving the efficiency of fertilizer use, as the examples above illustrate. That said, the use of meta-catalyzed blends or any other enriched fertilizers isn't a panacea for undisciplined turfgrass or horticultural management. Sound agronomic practices – including the measurement and management of soil nutrient levels – remain essential to any turf professional's long-term success.

The use of meta-catalyzed fertilizer can

provide several environmental benefits. First, such products can reduce the amounts of fertilizer that must be added to meet plant nutrient requirements. Second, increases in plant and root mass will enable plants to absorb more nutrients from the soil. As a result of reduced application rates and improved uptake, there is less residual material to leach or run off into the water table. A study conducted by Illinoisbased Arise Research & Discovery found the use of such meta-catalysts reduced nitrate concentrations at 12-inch depths by 48 percent, and 57 percent at a depth of 30 inches.

SUMMARY

A difficult economy forces many to tighten budgets, and for turf managers, the rising cost of fertilizer is a challenge. Until now, solutions have forced users to trade off – on cost, performance or environmental impact. Microbialbased fertilizer meta-catalysts represent a new product category that may enable users to hold or reduce costs without sacrificing performance or environmental health. GCI

Cathie Cush is a freelance writer based in Newtown, Pa.

AGRONOMIST'S VIEW

Food for thought

BY JEFF HIGGINS

Soli microbes serve many functions when growing turfgrass. One of those functions is to make fertilizers and nutrients available in forms turfgrass plants can uptake. For example, nitrogen can be taken up by plants only in the inorganic forms of ammonium and nitrate. Therefore, all nitrogen fertilizers have to be converted or applied in one of those two inorganic forms for the plant to use them. The process of mineralization converts organic nitrogen- and urea-reacted fertilizers to ammonium. Nitrification converts ammonium to nitrate. All of these require aerobic soil microbes for the reactions to occur.

There is such a thing as good and bad microbes. Aerobic microbes are required for many of the reactions mentioned above; however, when anaerobic conditions exist, anaerobic microbes survive and cause unfavorable reactions, such as the formation of black layer.

Microbes needed to grow healthy turfgrass already exist in the soil, or else grass wouldn't grow. If and when microbes are added, the diverse population of soil microbes are at a balanced state already. When new microbes are added, if they're of the same genus and species, there's a great chance they'll survive. If they're foreign, there's a great chance they won't.

However, it's important to review some basics about soil microbes. The beneficial soil microbes are primarily aerobic, which means they require oxygen. I've yet to have any of the soil microbe product manufacturers answer this question for me. If these microbes require oxygen, then what happens to them when they're vacuum sealed in a jug or package? What is their shelf life? Is this shelf life for alive or dead microbes? What would happen to you if you were submersed in an environment with limited supply to no oxygen? Let's assume these are superman microbes and can survive without oxygen and are alive when applied to the soil. The soil and soil microbes are a competitive environment, and the ones present are there because of competitive exclusion and survival. What's going to happen to the newly introduced microbes? More than likely, they'll get outcompeted or eaten alive by the ones that have been there for many years and become well established under the environmental conditions for a given geography.

What happens with the bugs-in-a-jug type of products is they're simply food for the existing soil microbial population. More than likely, they're dead when applied, and they behave as a simple organic fertilizer. Any type of organic material, whether it's chicken litter, Milwaukee's finest sewage sludge (Milorganite), or a bunch of dead microbes, they'll behave as organic fertilizer (material) existing soil microbes will feed on (mineralize), and you'll see a turf response.

For example, catalyst microbes that are being added are more than likely dead when they reach the turfgrass. If they're not, they only serve as a food source for the existing soil microbial population, which makes the soil microbial community more active, and thus, the microenvironment activity is escalated. One may see a positive result from this increased activity. One can get the same catalyst type of activity by applying molasses or sugar water, which many of the old school superintendents did and some still do. Any food source applied to the environment will stimulate microbial activity, whether it's molasses, sugar water or meta-catalyst microbes. GCl

Jeff Higgins, Ph.D., is director of agronomy for ValleyCrest Golf Course Maintenance.

Use Less

A catalyzed fertilizer increases nutrient uptake so you can use 25%+ less.



IIII

The Fertilizer Meta-Catalyst that increases nutrient uptake in turf and ornamentals.

Leave Less

NutriLife Fertilizer Meta-Catalyst puts more nutrients in the plant leaving less to run-off or leach into surrounding sensitive areas.



Spend Less

Fertilizer costs going way up? Control your expense by catalyzing your fertilizer with NutriLife. NutriLife Fertilizer Meta-Catalyst allows you to lower your nutrient blend by 25% or more.

	Fertilizer Savings	s in this
Old Way	0=0/01	New Way with NutriLife
30-0-10 18-24-12	25%+ Reduction	22-0-8
		14-18-9

Catalyzed fertilizers promote better uptake into the plant. Call your fertilizer blender for a quote on a catalyzed fertilizer with NutriLife.

Nutri

he Fertilizer Meta-Catalyst that helps control costs in turf and ornamentals.

Get More

More Control Over the Cost of Your Fertilizers

More Environmentally Friendly by Leaving Less Nutrients to Leach or Run-off

More Quality Turf & Ornamentals by Delivering More Nutrients

More Satisfied Customers - Existing and New



Get more control of your fertilizer cost, more nutrient uptake and a more environmentally friendly fertilizer with NutriLife.

To get more out of your fertilizer and find the fertilizer blender nearest you go to www.nutrienttechnologypartners.com or call us at 610-594-9950.



BY MARISA PALMIERI

Environmental considerations

A public course on Long Island uses organic fertilizers where it can

s golf course superintendent at Bergen Point Golf Course, Deron Snyder cites a number of reasons he's exploring organic fertilizers. Restrictions, environmental considerations and cost influence his decision to incorporate organics into his nutrient program.

Bergen Point, a links-style layout on Long Island that generated 45,000 rounds last year, features ryegrass tees and fairways and 60/40 *Poa*/bengrass greens. Snyder manages the course with a \$400,000 budget.

MOVING TOWARD MANDATES?

The environmental oversight of Suffolk County, which owns the 18-hole public facility in West Babylon, N.Y., is the No. 1 reason Snyder's using organic fertilizers.

"I've incorporated more organics into my program because of where I'm located," says Snyder, who became acclimated with organic fertilizer before joining Bergen Point a year ago when he was an assistant superintendent at Middle Bay Country Club in Oceanside, N.Y. "They're definitely pushing alternatives to pesticides and synthetics. We're right on the bay, so I'm very conscious. I don't spray or fertilize my roughs. I just fertilize the greens, fairways and tees."

The county already limits the time of year municipal properties can be fertilized (April 1 through November 1). It doesn't mandate the

Duke poses on a green at Bergen Point Golf Course, where superintendent Deron Snyder spends about a quarter of his \$20,000 fertilizer budget on organic products. use of organic fertilizers yet, but considering the county restricts what pesticides Snyder can use, he believes more fertilizer regulation is possible. So, he's incorporating organic products to stay ahead of the curve.

"I wouldn't doubt it if there were more restrictions countywide or statewide," Snyder says. "It's definitely a concern, especially on Long Island. That's why I'm trying to go more organic."

Though some facilities are touting the use of organic materials as "going green" initiatives,

(Product focus continued on page 89)

ONLINE EXTRA

Evaluating the need to feed: Read about how superintendent Joe Lucas takes a lean, mostly organic approach to fertilizing the golf course at Saratoga National Golf Club in Saratoga Springs, N.Y.





Fend Off Turf Diseases with Companion[®] Liquid Biological Fungicide

Companion® received a new EPA label for all turfgrass and landscape use. Manufactured by Growth Products, Ltd., Companion® effectively prevents, controls and suppresses a broad range of root diseases. Several years of trials at Rutgers and the University of Massachusetts have shown that Companion® can be used in combination with lower rates of chemical fungicides for improved efficacy and/or in rotation with chemical fungicides, thereby reducing chemical applications and total Prevents chemical costs.

Companion®'s GB03 strain of Bacillus subtilis has multiple modes of action



Or Visit Us At www.GrowthProducts.com

in preventing and controlling plant diseases. It produces a broad-spectrum antibiotic (Iturin) that disrupts pathogen cell-wall formation. It is Call Today: (800) 648-7626 a competitive and fast colonizing rhizobacterium that crowds out pathogens preventing their growth and antagonistic effects.

- Anthracnose
- Brown Patch
- **Dollar Spot**
- Summer Patch Fusarium Patch Pythium
 - Phytophthora

T C T

Tim Moraghan is principal of Aspire Golf Consulting in Long Valley, N.J. He can be reached at tmoraghan11@comcast.net or 908-635-7978.

ONE YEAR, THREE MAJORS

on Maddern, golf operations manager and deputy director of the city of San Diego Parks and Recreation Department, hosted two PGA Tour events and a U.S. Open Championship between February 2008 and February 2009. I asked him about the similarities and differences preparing golf courses for the PGA Tour and USGA.

What allowed you and your staff to navigate three events within a year?

A We needed to separate the two organizations' philosophies about set-up and preparation. Once we understood what each tournament required, we established a team concept for our staff to undertake the enormity of the upcoming year. Teamwork is essential.

We increased our meeting schedule and interaction with the associations' reps, exchanged set-up outlines and held frequent course walk-abouts with each organization so we didn't overlook any details. We reviewed video of past U.S. Opens we attended at Pinehurst, Winged Foot and Oakmont for golf course preparation, staffing and efficient use of volunteers. Each operational area had its own team of volunteers. We began this during the 2008 PGA Tour event as a practice round, then transitioned the same crew leaders and their staffs to the U.S. Open. It saved training time for the U.S. Open.

What were the conditioning differences between the two?

A The PGA Tour event includes a Pro-Am; the USGA doesn't. Because amateur players couldn't handle U.S. Open conditioning, we geared it down in February and increased the difficulty for June. Green speeds weren't extremely quick for the amateur player. There was a one-foot difference in green speed requirements between the organizations. Each requested smooth, consistent and true surfaces regardless of speed.

The USGA focused on spot tweaking firmness and green speed, so our irrigation became more precise. Our rolling procedures for the two events varied because of attempts to maintain a higher and more consistent green speed for the U.S. Open.

Kikuyugrass can be mown between 3/8 inch and 4 inches. We monitored nitrogen amounts with slow-release fertilizers to avoid disease and puffiness on fairways. Irrigation was tricky, but converting to the turf was a home run.

The PGA Tour had two levels within the primary rough: an intermediate cut 6-feet wide and a primary rough at 3 inches. The USGA had three levels of rough: an intermediate, a second cut and the primary rough at 3 inches and higher.

Bunkers were more penal for the U.S. Open, and the PGA Tour had shot options included in its preparation instructions.

The fairways were kikuyugrass for both events, although there was more perennial ryegrass overseeding for the PGA Tour event than the U.S. Open. As the temperatures climbed, the rye transitioned out. We've kept the U.S. Open fairway widths for the PGA Tour in 2009. The only difference is the height of cut, which was lower for the U.S. Open.

The PGA Tour has a long history with Torrey Pines and had an established set-up in mind. Being the first U.S. Open at Torrey, the USGA had more input, opinions, questions and suggestions for us to reach its set-up goals. **Q** Do you have any tips to ease superintendents' set-up issues during a busy tournament season?

A Grass can tolerate less water than we believed. This was established by using moisture-sensing devices and checking for water deficiencies during the day. We determined a watering range and wilting potential with the devices. To accomplish watering effectively, we employed two staffs – one to check moisture and one to irrigate where needed.

There should be transportation and support vehicles for yourself, management staff, mechanics, irrigation staff, golf course set-up folks, association staff, vendors, first-aid staff, food-and-beverage staff and volunteers.

Have a daily meeting with your staff and the staffs of those who will be working, checking and moving throughout the property. We met with our staff, the PGA Tour/USGA staff, security, city staff, vendor representatives and media.

Involve local and state industry vendors to provide a daily uniform and meal for the staff and volunteers. We had a vendor day during the seven days of the U.S. Open to support the staff and volunteers, as well as provide business opportunities for vendors. Most importantly, this daily meeting provided each person an opportunity to exchange ideas, look for solutions for their own golf course concerns and make new friends.

Have an accurate and locally knowledgeable weather service. We prepared for two distinctly different seasons with opposite weather conditions, so daily and weekly weather updates from professionals was key to our course work.

The media attention provided an opportunity to promote the message of our game and its values as it relates to the environment, community, family and economy. **GCI**

Terry Buchen, CGCS, MG, is president of Golf Agronomy International. He's a 38-year, life member of the GCSAA. He can be reached at terrybuchen@earthlink.net.



EQUIPMENT IDEAS

Engine protection

t The Silverleaf Club in Scottsdale, Ariz., Bruce Leonard, equipment manager, and Alejandro Garcia, assistant mechanic, designed and built a protective plywood cover over the engine/mechanicals of the Toro Workman 3300, which has a Toro 1800 topdresser permanently mounted on its rear.

Because there are cross braces underneath the plywood for added support, the cover is strong enough for an employee to stand on when scattering topdressing material in the hopper. The cover also protects the engine from stray topdressing materials. A piece of rubber joins the plywood and topdresser, yet it allows required movement. The mechanics also plan to modify the platform by adding a box for the operator to store tools.

Platform dimensions are 34 inches by 18 inches by 6 inches. Materials used include:

- 11 feet of 1-inch-by-1-inch-by-0.120-inch-thick square tubing
- 34-inch-by-20-inch-by ½-inch-thick plywood
- 1-inch-by-1-inch-by-1/8-inch flat tabs
- 34-inch-by-8-inch-by-1/4-inch-thick, flat flexible piece of rubber

The square tubing cost about \$12, the flexible rubber mounting cost about \$10, and the remaining materials were in stock. Labor took about an hour and a half.



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.

Spill prevention

B (Old Ashburn) in Nova Scotia, Canada, built holders for 1-gallon mixed gas (2-cycle oil/gasoline) cans. The holders keep the cans from falling over and spilling mixed gas when transported in the dump body of John Deere Gators. Moving them to the outside of the dump body also provided more room to transport other supplies. The material used to build the holders is:

- One $^1\!/_{16}$ -inch-thick piece of flat steel, 5 inches by 24 $^1\!/_4$ inches. Bend each end up 90 degrees six inches from the end

+ One $^1\!/_{16}$ -inch-thick piece of flat steel, 5 inches by 11 $^3\!/_4$ inches. Weld on one side at the top of the U shape.

• Two $^{3}/_{8}$ -inch rods 22 inches long. Bend them five inches from the end at 90 degree angles to form a U shape.

- Three $\frac{5}{16}$ -inch stove bolts, $1\frac{1}{2}$ inches long
- Three ⁵/₁₆-inch lock washers
- Three ⁵/₁₆-inch washers
- Three ⁵/₁₆-inch nuts

Assembly tip: Keep the gas can holder bracket closer to the operator seat when drilling for the three mounting holes so the mud flap won't hit the opposite side. The operator raises the dump body slightly, places the gas can in the holder, then lowers the dump body back down. The dump body holds the gas can firmly in place.

After building a prototype, the holders each took about one hour to build. The materials cost about \$15, including materials already in inventory. **GCI**





CLASSIFIEDS

BUSINESS FOR SALE

9-HOLE COURSE

For sale, owner will finance 9-hole par 3 course w/1100 sq ft club house. Course lays nicely on 26 acres, greens are awesome. Popular and just 7 mi. from Lebanon, Mo. 417-533-7273.

Your course struggling in this economy? Call us for an operational review and save thousands.

Golf Agronomic Service Business For Sale - Email for Info.

Miller Management Associates Inc. Visit us at www.mmagolf.com

Golf Course Brokerage/Consulting Licensed in NC SC TN 828-775-7765

200 ACRE FARM/DEVELOPMENT PROPERTY

90 Miles East of Chicago 50x170 Bldg with Offices 2-40x80 Bldgs w/shops — 2 Homes 269-695-5505

BUSINESS OPPORTUNITY

SERIOUS ENTREPRENEURS ONLY! After four years, \$400,000 of market testing, and Millions of dollars in earnings, we have perfected the most powerful, automated, turn-key, sales and marketing system on the planet. That's How Normal People Like You Are Earning

\$5,000 to \$10,000 a week Without Picking Up The Phone. visit: www.wealthmaster4u.com 229/848-5288

HELP WANTED

Golf Course Company seeking experienced Shapers, Irrigation Supervisor, Drainage, Management and Finish Personnel and Drafts Person with Auto Cad experience for International Projects. Resumes to be e-mailed to resumes@intergolfinc.com

FOR SALE

TECH SALES Golf Course Division

REPLACEMENT: Bearings, Oil Seals, V-Belts

> Nation's Leading Supplier
 > Most Competitive Pricing In The Industry
 > Same Day Shipping On Most Parts

1-800-373-6002 www.techsales-golfcoursedivision.com

other Nature...

ow to Outsn

EVERGREEN The Turf Blanket the World Relies On

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

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

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



To Advertise in Golf Course Industry, Call Bonnie Velikonya at 800/456-0707 x5322.

Digital Edition

E-mail to anyone View on a PDA Print multiple copies



GOLF COURSE INDUSTRY'S NEWS AND RESOURCE CENTER www.golfcourseindustry.com

AD INDEX

COMPANY	PAGE	RS
Agrotain International	69	48
www.agrotain.com		
Andersons Golf Products	35	27
www.andersonsgolfproducts.c	om	
Arysta LifeScience		.11, 53
www.arystalifescience.com		
BASF	21	19
www.betterturf.com		
Bernhard and Co	19	18
www.bernhard.co.uk		
Champion Turf	B3	40
www.championturffarms.com		
Civitas Fungicide	77*	52
www.civitasturf.com		
Club Car	65	46
www.clubcar.com		
Colorado Lining International	B2	35
www.coloradolining.com		
DuPont Professional Products		25
www.proproducts.dupont.com		26
E & S Soil	B7	36
www.eandssoil.com	10	
Gandy	42	39
www.gandy.net	00	50
Gravely Turf, an Ariens brand www.gravely.com	92	58
Growth Products	85	56
www.growthproducts.com	0.5	
Hustler Turf Equipment	13	15
www.hustlerturf.com		13
Jacobsen	27	22
www.jacobsengolf.com		

COMPANY	PAGE	RS
John Deere Golf	9, B16	13, 41
www.deere.com		
JRM		23
www.jrmonline.com	10.11	
Kalo	40-41	
Lebanon Turf	20	24
www.lebanonturf.com		
Liquid Fence Co.		
www.liquidfence.com		
Milliken Chemical	Вб	
www.sandmat.com		
Nutrient Technology Partners		
www.nutrienttechnologypa		
Orival		88
www.orival.com	(all representation	
PBI Gordon	42, 75	34, 51
www.pbigordon.com	20	20
Penn State World Campus		
www.worldcampus.psu.edu Phoenix Environmental Care	1/gCl	17
www.phoenivenycare.com	1/	1/
www.phoenixenvcare.com Precision Laboratories	91	57
www.precisionlab.com		
Primera Turf		
www.primeraturf.com		
Professional Turf Products	B11	
www.proturfproducts.com		
Quali-Pro	24, 25	20
www.quali-pro.com		
Rain Bird	15	
www.rainbird.com		

PAGE	RS
	29
73	50
63	44
39	31
67	
s61	42
2	
38	27
	21, 43
	14
64	45
34	26
; B denotes H	Builder

For more information about the products or services advertised in this issue, visit golfcourseindustry.com/ readerservice and search for the product with the Reader Service (RS) number listed above.

(Product focus continued from page 84)

Snyder says marketing isn't motivating his approach.

"To be honest with you, I'm not sure the golfers know," he says. "I don't promote it. It's more to benefit the course and environment.

In addition to pressure from the county and an internal desire to move toward organic products, Snyder also uses organic fertilizer because he likes the way it works.

A significant benefit of organic fertilizer is it adds to the amount of organic matter in the soil, and increased organic matter helps soil retain nutrients, Snyder says.

THE PROGRAM

Of Snyder's \$20,000 fertilizer budget, about a quarter is spent on organics.

For Snyder's greens program, the first fertilizer application is a water-soluble synthetic fertilizer, which gets nutrients into the turf quickly, he says. Snyder waits until right before the summer when the temperature increases and there's microbial activity in the soil to make an organic fertilizer application. At that time, he uses the Sustane 10-2-10 product.

About 12 weeks later, Snyder spoon feeds the greens with Growth Products' Essential Plus and Companion soil amendment.

Snyder's fall applications include 1) a synthetic fertilizer with a high phosphorous rate when he seeds, and 2) a final application of an 8-2-4 organic fertilizer.

On fairways and tees, Snyder uses synthetics, mainly because of cost, at a rate of 3 pounds per 1,000 square feet for the year.

"I'd like to look into going organic on the fairways, but synthetics last a bit longer – between 12 and 16 weeks," he says.

RIGHT THING TO DO

Aside from preparing for potential restrictions,

Snyder believes scrutinizing all inputs is the right thing to do for the environment.

"I wish I could be more like the Vineyard," Snyder says of the Edgartown, Mass., golf club that's known for its efforts in developing an organic maintenance program.

At the GCSAA Conference and Golf Industry Show in February, Snyder attended a half-day seminar called "Organic Approach to Golf Course Management" led by the Vineyard's superintendent Jeffrey Carlson, CGCS, and Frank Rossi, Ph.D., associate professor of turfgrass science at Cornell University.

Snyder learned he could do more to move to an organic approach, but he can't match the Vineyard's efforts without a big budget increase.

"They definitely have more money there," he says. "I only spend about \$60,000 on pesticides and fertilizer a year, so it's tight, but if I can use organics, I will." GCI



Pat Jones is president of Flagstick LLC, a consulting firm that provides sales and marketing intelligence to green industry businesses. He can be reached at psjhawk@cox.net or 440-478-4763.

FEAR AND SCRIBBLES

or 15 years, I've returned from the Golf Industry Show and penned a column about how my recollections of the event may have been slightly blurred by the copious amounts of beer constantly being handed out and how, usually, I had to spend weeks reconstructing the notes I'd jotted on the back of cocktail napkins, business cards or whatever happened to be at hand. I've always called the piece, "Beer and scribbles."

This year, though the beer was just as plentiful as ever on Bourbon Street and elsewhere around New Orleans, I decided the more appropriate theme was "Fear and scribbles."

For the record, I still scribbled plenty. I came home with hundreds of notes and quotes jotted illegibly on my shirt cuffs, forearms and even the soles of my shoes. Thankfully, my nephew works for the CIA, and he used one of the agency's cryptology supercomputers to decipher my ridiculous scrawls. Here's what I found once my notes and hazy recollections had been translated back to English:

Almost everyone I talked to, from newbie assistants to seemingly well-established superintendents at top 100 courses, expressed some sort of concern about their economic well-being. In short, if I fed anyone a couple of beers, they admitted that they're scared right now. Why?

They're scared because of the general perception golf is in the tank. Everyone says the economic health of the golf industry is lousy, so that must be true, right? They often said they thought even if their facility is OK, golf as an industry is crashing around them.

They're scared because they believe their facility – like so many – is so hopelessly mismanaged they can't possibly survive a downturn. "My GM is an idiot," was one common refrain. "Our owner is close to bankruptcy, and he couldn't care less about what happens to the course," was another.

They're scared because their facility is

tied closely to a particular industry that's really sucking wind (e.g., banking, automotive, etc.) so badly they feel like they're standing on the beach watching, transfixed, as the massive tidal wave of destruction inexorably roars in.

They're scared because the housing development their course anchors is struggling, and the developer is trying to sell lots and spec homes when there are no buyers.

Welcome to Darwinian golf ... survival of the fittest courses and the fittest superintendents. Don't fear the challenge, embrace it.

They're scared because they work for a government entity (city, county, etc.) that's cutting budgets or even trying to dump their money-losing courses. Municipalities have no pity and no particular fondness for red-ink recreation right now.

They're scared because they've grown roots in their current job and have no idea how, or where, to find a new one if things head south.

They're scared because everyone's scared, and no one knows how this thing will come out.

Fear was the predominant theme for the meager 2,900 or so superintendents who came to the Big Easy. I won't even get started about how the suppliers and distributors felt while staring blankly at an empty show floor in the New Orleans Convention Center Friday afternoon and Saturday. Their fear was palpable as they looked around and realized there was no one to sell to.

(One aside: The lack of attendance on Saturday was a fitting funeral for the terminally ill, three-day trade show schedule. The half-day on Saturday has been on its deathbed for years. Attendees simply couldn't justify wandering around the show that long. Most meandered and saw a few key suppliers for a few hours. Frankly, the last day in New Orleans was the worst I've seen in the 23 shows I've attended. But, hallelujah! Beginning next year, GIS will go to a new schedule that will feature education on Monday and Tuesday, exhibits on Wednesday and Thursday, and education on Friday. The theory is that buyers will stay over and walk the show floor if tempted by good educational offerings on Friday. I'll leave it to you to be the judge of whether or not the new schedule will work.)

This is an appropriate time to quote Franklin Delano Roosevelt: "We have nothing to fear but fear itself." Facilities are failing, but many needed to fail. Most were badly conceived, overfinanced daily-fee facilities or private courses that never came to terms with new competition and the new reality clubs need to operate differently in the 21st century. Don't fear failure, recognize it's an opportunity to position yourself for the future.

Budgets will be cut, but welcome to 2009. Don't fear reality, deal with it.

Jobs will be scarcer, and raises will be few and far in between. The truth is we have oversupplied a finite number of good jobs with far too many good candidates. The fact is we have more people than jobs and more courses than golfers. Welcome to Darwinian golf ... survival of the fittest courses and the fittest superintendents. Don't fear the challenge, embrace it.

Whether or not the GIS was a success isn't the issue. The real point is you can't let fear dictate your career and life. Now's the time to take action to ensure you're not a victim. If you allow yourself to be crippled by the idea something bad may happen to your facility or career, it surely will.

One of the last things I scribbled on a cocktail napkin during a "research" trip down Bourbon Street on the last night of the show was, "Who wins? Who loses?" All I can do is ask those questions. It's up to you to answer them ... fearlessly. **GCI**



ESS Contraction of the second se



GET MORE WITH LESS.

Precision Products save resources. Precision Soil Surfactants save water. Precision Adjuvants save time. Precision Aquatics save money. Precision Nutrients, Spray Indicators & Paints save labor.

SAVE WATER, TIME, MONEY, AND LABOR WITH PRECISION PRODUCTS.



www.precisionlab.com/more • 1-800-323-6280

Precision Laboratories is a leading provider of specialized chemistries applied to plants, seeds, soil and water to maximize resource and biological performance potential while stewarding the environment.

© Copyright 2009 Precision Laboratories. All rights reserved.

www.golfcourseindustry.com/readerservice - #57

Results. Expect it ...

When you are

MANNHANNE HHE

FOR THE CHAMPIONSHIP

IT'S MORE IMPORTANT THAN THAT



GRAVELY.COM

FOR LOVE OF THE FIELD.



VISIT GRAVELY TURF, AN ARIENS BRAND, AT THE GOLF INDUSTRY SHOW IN NEW ORLEANS, BOOTH #3939

urseindustry.com/re

Ariens An Ari