Remember that these people will have very little actual knowledge of the terms and processes associated with aeration, so making it the most basic review is important. See **"Aeration 101"** as an example of the content that should be covered.

This may seem like a lot of information for, say, the bartender. But if you can get your bartender to at least make an effort to digest some of this information, you'll have a hidden ally at the course who can help make your life easier by communicating some part of that message to the golfers.

Consider this scenario: A group of golfers are sitting at the bar talking about the fact that the greens have been aerated. The bartender can chime in one of two ways. He can come off as an enemy of the maintenance team and damage the entire system by saying something like, "Yeah, can you believe they aerated the greens again?" Or he can do the exact opposite and help out your aeration plan by saying simply, "You know they've been aerating greens like that at the course for 20 years, and this system is the reason we get to enjoy perfect greens late into the season..."

I have also had a lot of success inviting any interested party to come out and watch a "demonstration aeration" where we would aerate the practice

Continued on page 32

Sure, it's a hassle today, but it's also the reason our greens are so perfect late into the season.



WINNING

The Andersons Complete TURF HEALTH SYSTEM





We guarantee iti

800-253-5296 www.AndersonsTurf.com

Plan & Protect

Continued from page 31

green and take the time to answer questions and show the processes step by step. This gives us a chance to check out equipment and engage a variety of stakeholders. We normally schedule this the afternoon prior

to the full aeration date. If you have a web page or a Facebook page you can take a few pictures of the process and post comments.

> Here are a few tips for education and communication of your aeration plan:

Tip # 1: Train your staff but educate the entire operation and all stakeholders (golfers, members, food and beverage staff, etc.) Tip # 2: Utilize all the modern communication devices that you can such as websites,

newsletters and social network pages and do not forget the smartphone with the highresolution camera. **Tip # 3:** Create cards and other training aides to promote a common language that will be consistent throughout your operation. When anyone answers a question about your scheduled aeration the consistency will be a huge advantage.

Tip # 4: Conduct an "aeration demonstration" to allow interested parties to see the entire process and learn the importance of each scheduled task.

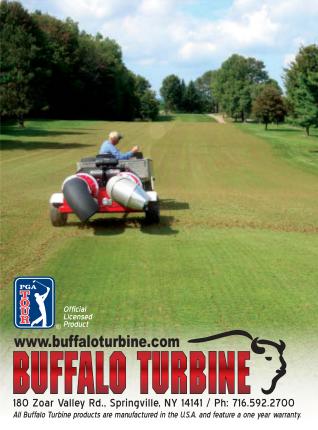
Tip #5: Attend local or regional trade shows to gather the latest information about products and Best Management Practices (BMPs) as they relate to aeration and the local golf business.

Executing the plan

Finally, let's talk about the execution of the aeration plan. This is where superintendents excel, getting the work done.

Many superintendents use other turfgrass cultivation activities such as verticutting, spik-





ing, spooning and slicing in conjunction with an appropriate aeration program. Sometimes superintendents might even substitute these less aggressive processes instead of aerating.

My advice is to remember that when choosing your aeration plan and its goals/ components, consider the amount of organic matter to be removed, other stresses on the turf, construction methods/soil types and as always ultimately the effect on financial needs of the operation. Here are the top things to consider when executing your aeration plan:

Small diameter solid-tine aeration tends to be effective for about three weeks while hollow-tine aeration with larger tines can be effective for about eight weeks. Plan accordingly and local knowledge trumps most other sources.

If you can no longer afford to buy aerators due to capital budget limitations, consider hiring an outside contractor to punch your holes. You save the money on equip-



ment costs and pick up a few extra crew members on aeration day.

• Share equipment. Core harvesters or other specialty equipment can be borrowed or bartered. Be sure that the equipment is properly cleaned before and after use.

Continued on page 34

When selecting tine size and type, local knowledge trumps most other sources.







It is more important than ever for a superintendent to plan the work and protect the plan. Continued from page 33 Take a close look at the cost of your tines

and the square footage you get out of each set. You may be able to increase your results and save a few dollars at the same time by changing the type of tines you use.

Flex schedule your staff on aeration day, bringing in each group in relation to their primary task to keep everyone busy and minimize the hurry up and wait factor.

Aeration is a complex and critical part of any successful superintendent's skill set. The ability to schedule, educate/communicate and execute a detailed aeration plan is one of many evolving skills that superintendents need to thrive in difficult economic times. It is more important than ever for a superintendent to plan the work and protect the plan.

Anthony Williams, CGCS, CGM, is the director of grounds at the 36-hole Stone Mountain (Ga.) Golf Club. He is the first two-time winner of the GCSAA/Golf Digest Environmental Leaders in Golf Awards, as well as one of Golf Inc.'s "20 most admired golf operators." This is his first article for Golfdom.



CHAMPION DWARF BERMUDAGRASS

No-Till Greens Renovation[™]

Over the last 14 years, over 300 courses have had their greens converted to CHAMPION by Champion Turf Farms

AFFORDABLE

Savings of hundreds of thousands of dollars compared to conventional reconstruction

MINIMAL DOWNTIME

We routinely get courses back in play in less than 2 months – minimizing the greatest cost of performing a renovation – loss of play

INCREASED ROUNDS

Most of our clients report significantly increased numbers of rounds/increased revenues after converting their greens to Champion

AGRONOMICALLY SOUND

We have identified the rootzone properties that work best with the growth habit of Champion and we test your existing greens to compare against these parameters

GUARANTEED RESULTS

We conduct the necessary evaluations and testing as well as performing every installation ourselves to ensure your successful outcome

LONG TERM SUCCESS

Greens we installed over 14 years ago have retained their purity and still perform well today

THE BEST PUTTING SURFACE

No other bermudagrass can create the same ball roll as Champion. The growth habit of Champion combined with the correct system of agronomic management allows you to have putting surfaces that are second to none.

Specializing in Bermudagrass Greens since 1966



1-800-463-TURF (8873) www.championturffarms.com info@championturffarms.com



ustainability" just might be the hottest term in the golf maintenance universe.

The precise definition of the word depends on whom you ask or to what sector of the industry you are referring.

According to the Environmental Institute for Golf, "Sustainable practices

consider the environment, the community and the financial requirements that contribute to the long-term success of the golf industry."

Greg Lyman, Director of Environmental Programs for GCSAA, says this definition is different from what a biologist might say. Lyman defines sustainability as, "more along in perpetuity with few inputs such as a wetlands system or a desert."

The goal, Lyman continued, is to "meet the needs of the present without compromising the ability of future generations to meet their own needs."

Fungicides that fit that definition of sustainability have a role in golf course maintenance.

"Fungicides provide another opportunity to be more effective with inputs," Lyman said.

Superintendents and chemical companies are working to make sure both are happy by being smart about fungicides.

Less dangerous, adequate control

When it comes to fungicides, sustainability is a topic on which superintendents and manufacturers focus. Utilizing fungicides that fit with sustainability is important to Sean Tully, the superintendent at the Meadow Club in Fairfax, Calif. Meadow Club has the distinction of being the first American design of English architect Alister MacKenzie, opening in 1927 some 25 miles north of San Francisco.

Having as little impact on the environment as possible is important to the Meadow Club members, Tully said. The topic of lessening the club's carbon footprint came up during a recent green committee meeting, including the possibility

"

of installing solar panels.

"We want to use stuff that's less dangerous," Tully said. "We do tend to lean towards fungicides that are a lower risk to us as users and still provide adequate control. We look at effectiveness of each product, potential risks, and cost, in that order."

The fungicides Tully wields include Affirm, Heritage and Medallion. Heritage is for the treatment of anthracnose and other summer diseases with Medallion used to combat brown ring patch and anthracnose in the summer.

He also sprays Agri-Fos in an effort to stave off sudden oak death that is wreaking havoc on the Meadow Club's oaks.

Another tool for helping with sustainability and fungicides for Tully is the TDR 300 Soil Moisture Probe. Tully said the tool gives him a much better understanding of the irrigation needs of his greens. This means he has been able to reduce his water usage and that led to a reduction in fungicides by either extending his application intervals or by eliminating an application altogether.

"We continue to look for other products that would benefit us and the environment," Tully said.

Jimmy Johnson is the fungicide product manager for Bayer. He said the company views sustainability as "a strategy that protects the envi-

ronment and manages our resources for the future."

For Bayer, the StressGard technology found in five of its 11 fungicides that have applications for golf course turf is the best example of the company's aim.

"The direction with fungicides is putting a lot of focus on plant health promotion," Johnson said.

He pointed out that while the active ingredients in the StressGard products, Chipco Signature, Chipco Triton FLO, Interface, Reserve and Tartan, work well against pathogens, the role played by the non-active ingredients are just as important.

Those components, according to Bayer's own research, have been shown to strengthen cell walls or boost enzymes that have fungicidal capabilities or help protect cell walls from harmful radiation.

"They can not only control the target disease but also improve plant quality under stress," Johnson said. "We're seeing a healthier root system, which means it's going to be more resilient.

One result of a healthy plant is that it may require fewer inputs such as water and fertilizer, and there is even the possibility of extended time between spray intervals.

Continued on page 38

ECO-NOMICAL!

Control Disease. Reduce Chemicals. Improve IPM.

RHAPSODY[®] Biofungicide.

RHAPSODY 🕿

For more information, or to find the distributor in your area, please contact:

Scott Houston, Business Manager 850-228-1819 • shouston@agraquest.com

> A G R A Q U E S T www.agraquest.com

RHAPSODY & AgraQuest are registered trademarks of AgraQuest, Inc ©2008 AgraQuest, Inc Audubon is a registered trademark of National Audubon Society, Inc. All rights reserved.

Sustainable Practices

Continued from page 37

Tom Hill is the commercial manager, turf and ornamentals, for BASF. He said like all companies, BASF is working on solutions that provide economic, social and environmental benefits to the golf industry. For them, that not only pertains to fungicides that are sustainable, but the packaging as well.

This means out with the traditional plastic buckets and in with corrugated cardboard. The packaging holds 33 pounds of Curlan and could potentially eliminate, in the next two years, up to 150,000 pounds of plastic that would take up 35,000 square feet of landfill space.

Eventually, Insignia will be sold in 36pound cardboard containers.

"For the turf professional, that means less impact. The cardboard will breakdown and it can be recycled," Hill said.

The idea of switching away from plastic is in line with the concept of "verbond," German for "no waste," according to Hill. He said it is a

company-wide concept, not just in the golf turf business.

Hill also said there is anecdotal evidence, "right now, no definitive data," that pyraclostrobin, the active ingredient in Honor



THE TURFCO CR-10 MAKES IT HAPPEN!

Whether you're topdressing your fairway, renovating bunkers or relocating material, the Turfco® CR-10, with a four cubic-yard hopper, is the workhorse you've been looking for. Its patented three-position switch, cross-conveyor flow control and self-cleaning hopper make

it the most effective material handler available. And now the CR-10 is available with WideSpin" technology—allowing you to deliver light or heavy topdressing applications at unprecedented widths and depths. All this—plus a three-year warranty. The CR-10. Don't start a project without it.

Call 1-800-679-8201 for a FREE on-site demonstration or video. WWW.TURFCO.COM



"We want to use the stuff that's less dangerous," says Sean Tulley, superintendent at the Meadow Club in Fairfax, Calif.

Corrugated cardboard is replacing the plastic container.



and Insignia fungicides, strengthens plants and leads to longer root systems, making them more resistant to drought.

GCSAA's Lyman applauds those companies working on behalf of the environment as well as the superintendent. He encourages superintendents to seek out and use the best available products.

"The way forward is with more technology, more knowledge, fewer inputs," Lyman said. "Another step towards improving the environment you manage."

Lyman recognizes it's a big investment for manufacturers to continue to fund the search for new chemistries that meet the tough EPA standards.

"We think it's important to support companies that can afford the research and development," Lyman said.

What your budget wants

For some superintendents like Adam Ikamas, sustainability in regards to fungicides translates to using as little as possible, which reduces the budget, and not so much worrying about the new chemistries.

"Losing money out of the front end, that's not sustainability," he said.

In 2009, Ikamas undertook an experiment to see how much he could reduce his fungicide usage on fairways. That year he applied 15 percent less fungicide to one fairway on the 36-hole Crystal Mountain Resort and Spa in Thompsonville, Mich. While there was increased disease on the trial site, it was not enough to make him turn back. Instead, in 2010 he reduced usage on a fairway by 25 percent. Ikamas is encouraged by the results, and next year four fairways will see fungicide application cut by 25 percent.

"We'll see what happens. If we like the results, all the golf courses will be reduced by 25 percent," he said.

The final number may not reach that level, but that is fine with Ikamas as long as there is a decrease.





"Maybe it will only be 10 or 15 percent," he said.

Ikamas said he would monitor the *Poa annua*, the dominant grass on his course, to see how much stress it can take. Ikamas' efforts are somewhat hindered by an old irrigation system that does not allow him to manage small areas.

"My goal is to see how far we can push it (*Poa*), and see what fills in," he said.

Ikamas pointed out not all superintendents could copy what he is doing since off-color or dead turf might cost them a job.

"Ninety percent of superintendents apply more than they need just to protect themselves," he said.

He added that he thinks it is a wise strategy for superintendents to try and reduce fungicide applications on their own. Ikamas said too many superintendents "lean on their budgets" to keep the course in great shape, while not looking for cheaper alternatives. That process, he said, can end up getting a superintendent fired when their budgets are cut significantly in a cost-saving move by the club for which they work.

As the experiment on the fairways continues, Ikamas said application on greens will stay at the current rate, for now, but may change eventually. On the other hand, he is targeting tees as an area that can receive fewer inputs as well.

"It's the only place on the golf course where you can improve your lie," he said. "Why are we spraying every two weeks?"

According to Ikamas, a key to sus-

tainability and fungicides, or any input, for that matter, is for a superintendent to know his own golf course and situation.

"You have to find what your members want. You have to find what your budget wants," he said.

It's a point to which the GCSAA's Lyman agrees. "Supers are the key managers of change," he said. ■



Reduce Costs, Not Expectations.

Economic times may be tough, but golfers still expect pristine conditions. Manage the budget and expectations by seeding the Penn bents — specified by architects and superintendents more than any other bentgrasses in the world.

Do the Math.



Why Use Anything Else? 800-547-0255 • www.tee-2-green.com • bentinfo@tee-2-green.com