

"G-2 made my job easier."

Mike McBride
Golf Course Superintendent
Muirfield Village Golf Club

LESCO PENN G-2 wins at Muirfield.

Outstanding putting surfaces. That's what had everybody talking at The Memorial this year. And no wonder. With speeds averaging 12 in the morning and 13 in the afternoon and a trueness of roll that was beyond compare, the LESCO PENN G-2 greens performed like champions.

And Superintendent Mike McBride accomplished it all with the same cultural practices he utilized prior to the recent conversion to PENN G-2.

"Our program has not changed. The G-2 does not require any more maintenance than the bentgrass we had here previously."

In fact, McBride said the PENN G-2 actually made his job easier because it showed no signs of stress due to low cutting height, traffic or weather.

"We were double cutting morning and night at .086 and the greens maintained their color and upright growth habit. It was amazing."

And when the tournament ended? No problem.

"With these greens we were ready to resume member play the following day."

For more information about PENN G-2, contact your LESCO sales professional or call 800.321.5325.

LESCO[®]
G R O W W I T H U S .[™]

LESCO is a registered trademark and Grow With Us is a trademark of LESCO, Inc.

Circle No. 140

To Infinity and Beyond

Continued from page 70

turnover, Ullrich says. "We want to create a mower where the operator can diagnose problems and fix them, possibly without a mechanic," Ullrich says.

Corey Eastwood, CGCS of Stockton Golf & CC in Stockton, Calif., says he's not as convinced as other superintendents that mowers powered by GPS — a government network of 24 satellites orbiting the earth that tracks the location of moving objects on the ground — will work. "I can't believe you can take the human element out of this job," he says.

Still, integrating mowers into GPS is something all companies are exploring. Chuck Greif, manager of worldwide golf and turf market development for John Deere Co., says such robotic mowers are about 10 years away, but it's not for a lack of trying. Computer technology will have a great impact on how mowers of the future will operate.

Not only will mowers cut grass without operators, but they will also have a feature called parallel tracking which will guarantee straight lines on the greens, Greif says. It would allow superintendents to mow greens by remote late at night, know-

ing that they won't be destroyed in the process.

Mowers will also include sensors to track fungal development and nutrient levels on greens. Combined with the latest computer technology, these mowers will transmit such data to superintendents,



allowing them to adjust pesticide and fertilization plans accordingly, Greif says.

Greif adds that the speed of the roll-outs depends on how many industries can work together to develop new technologies. For example, alternative power sources that can also be applied to the auto industry will reach the market faster than optical disease sensors. "A lot of the technology to do these things exists now," Greif says.

"You have to balance the costs of how

much it will take to bring a feature to market with how much the market will be willing to pay," Greif says. "Otherwise, your investment won't pay off."

Electric greens mowers with the same capabilities of current hydraulic mowers will become available soon, says Peter Whurr, vice president of product management for Textron Turf Care And Specialty Products. These new engines will address pollution issues and reduce noise.

"Alterations to the machine will allow for less noise and meet the ever-demanding emission standards put forward by legislative bodies across the land," Whurr says. "A gradual process of evolution is to be expected, but we're getting there."

Robert Maibusch, CGCS at Hindsdale GC in Clarendon Hills, Ill., says he's excited about everything he has heard about the new fuel cells for greens mowers.

"That would help superintendents located in environmentally sensitive areas," Maibusch says. "It would eliminate the noise and pollution problems, which are big issues in a lot of areas."

Whurr says future mowers will help superintendents save money on fuel costs, as well as being lower maintenance. Greg O'Heron, superintendent at Peterborough Golf & CC in Peterborough, Ontario, hopes it will happen soon.

"My ideal mower will provide maintenance-free onboard diagnostics and repair," O'Heron says. "Any repairs that are made will be transmitted to a central database so we can keep track of all the repairs done to the mowers."

John Deere's Greif and Toro's Ullrich believe that, with the exception of the electric power sources, it may be five to 10 years before superintendents see all the high-tech gadgets they want. And despite these advances, however, they shouldn't expect greens mowers to look like spaceships anytime soon, Textron's Whurr says.

"The machine's appearance will not change significantly," Whurr says. "Any changes to greens mowers should enhance the machinery to meet the ever-changing needs of the superintendents." ■

Boundless Possibilities

Golfdom asked some superintendents to build the greens mower of the future. Here's a sampling of their responses:

In the near future, greens mower technology will find all mowers (both triplex and walkers) will be electric without a significant weight increase. They will design frames and bed knives to be thin enough to cut at below one-tenth of an inch without dragging on the green or forcing the mechanic to grind off the faces. Mowers will be able to calculate green speeds and adjust the cut

as necessary to create uniformity throughout. Mowers will contain moisture and disease sensing or monitoring detection systems that will send alerts (and pinpoint the area) to superintendents' hand-held computers. In spite of all this oncoming technology it still won't replace us because golfers don't want to complain to a machine.

Walter Montross
CGCS, Westwood CC
Vienna, Va.

I'd love to see battery-powered, self-propelled walk-behind mowers that would be quieter than

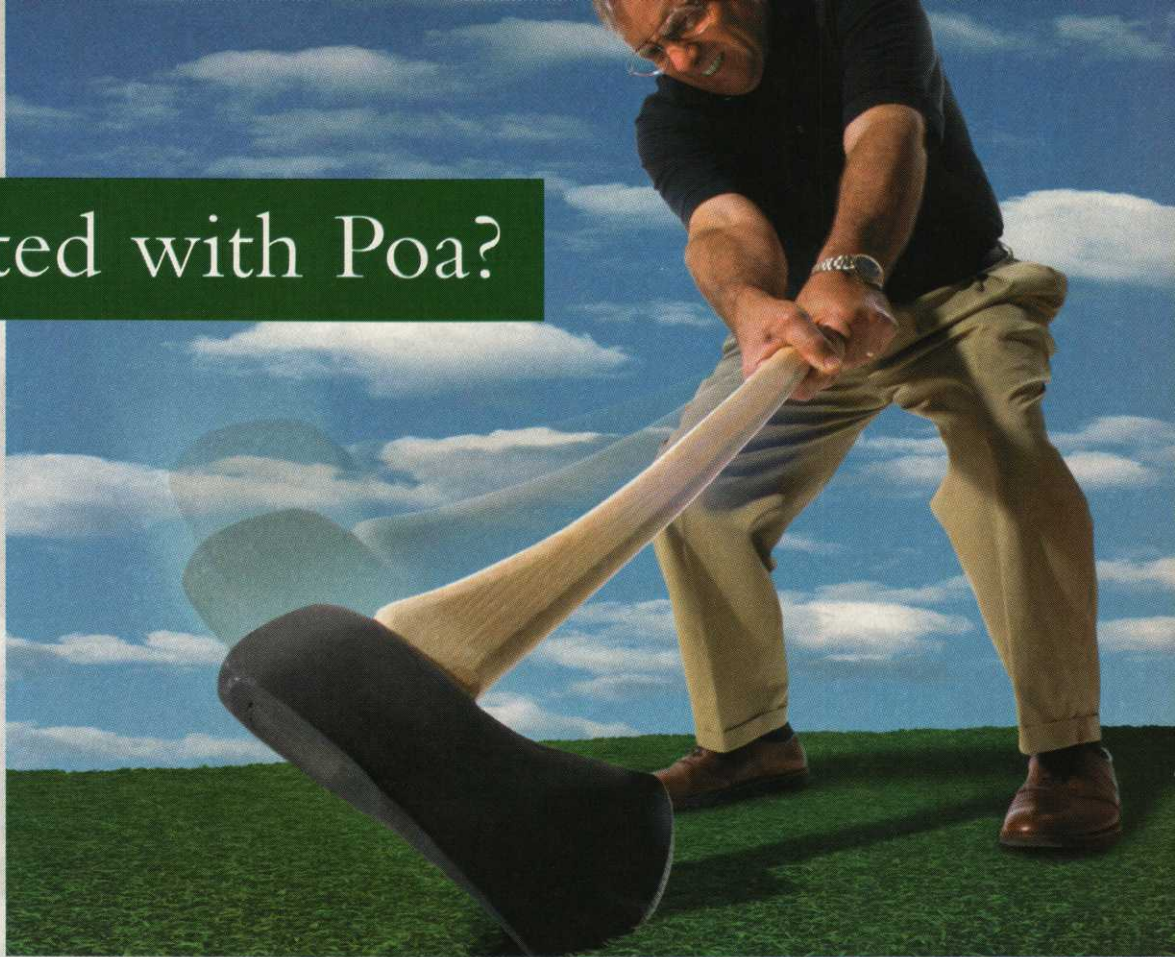
today's combustion engine mowers. I'd also love to have a computerized mower that you could program the night before to mow all 18 greens before the start of play the next day.

Mike Yenny
Superintendent, Mayfield CC
South Euclid, Ohio

The ideal mower would be electric so there would be no oil leaks. The reels would sharpen themselves while mowing. There would be sensors so the lines would always be straight.

Jim Nicol
CGCS, Hazeltine National GC
Chaska, Minn.

Frustrated with Poa?



Strike Back with TRIMMIT® 2SC Plant Growth Regulator.

When you have an ax to grind with *Poa annua* in your greens, tees and fairways, strike back with TRIMMIT® plant growth regulator. TRIMMIT in a turf management program will effectively reduce *Poa annua*.

As the best *Poa* management tool available to golf course superintendents, TRIMMIT:

- Slows grass growth for up to two months after application
- Reduces mowing up to 50 percent
- Minimizes clippings
- Enhances turf color and quality
- Reduces the potential for scalping

The next time you're frustrated with *Poa*, come down hard with TRIMMIT—and strike it rich in your management program.

For more information, contact your authorized Zeneca Agent, or call Zeneca Professional Products Toll Free at 1-888-617-7690. Labels and MSDSs available 24 hours a day, seven days a week via Fax on Demand. Please call 1-800-640-2362.

www.zenecaprofprod.com



Trimmit® 2SC
plant growth regulator for turf

ZENECA Professional Products

Circle No 141

Always read and follow label directions carefully.
TRIMMIT® is a registered trademark of a Zeneca company.
© 2000 Zeneca Ag Products Inc. Zeneca Professional Products is a business of Zeneca Ag Products Inc.

ZPP-TRI-002

TifEagle Flies at Florida Course



Blooming trees and flowers frame one of the new TifEagle green at Banyan GC. Closeup of TifEagle shows micro-sized ceramics to help soil hold nutrients and water (inset).

Club's greens now possess 'tournament-like conditions' thanks to new bermudagrass variety

Problem

The Tifdwarf greens at Banyan GC were in bad shape and unacceptable for play.

Solution

Rebuild the greens, but not with Tifdwarf. Superintendent Clint Smallridge chose TifEagle, a new ultradwarf bermudagrass.

Like other greens, Tifdwarf greens shrink over the years and lose their size, shape and playability. John Foy, director of the USGA Green Section in the Florida region, says Tifdwarf greens also begin developing spots, or "off-types," five to seven years after planting. Greens with off-types have major differences in textural characteristics, growth habits and tolerances to routine maintenance when compared to healthy greens.

Over time, the off-types progress to where management programs, no matter how intense, can't keep greens up to acceptable standards for play.

"In south and central Florida and throughout the Southeast, it's not uncommon to see the regrassing of Tifdwarf putting greens every 10 to 15 years," Foy says.

At the Banyan GC in West Palm Beach, Fla., the Tifdwarf greens had reached that stage. Something had to be done, but was regrassing with Tifdwarf the answer?

The problem

Banyan GC's original greens were 25 years old and a management nightmare. The club hired CGCS Clint Smallridge in 1997, who came to Banyan with the intent to rebuild the greens, along with the entire course.

"We put in new irrigation, new drainage, new bunkers, new soil and new grass," Smallridge says. "Our goal was simple: Our members wanted a course with fast greens, good fairways and perfect bunkers."

But Smallridge ruled out replanting with Tifdwarf.

"Why open yourself up to a repeat of the purity and quality problems you're trying to fix?" he asks. "Besides, faster greens speed

was one of the membership's main priorities. For a Florida course, that left bentgrass or one of the new ultradwarfs as the only viable options."

The ultradwarfs include Floradwarf, Champion, TifEagle, MiniVerde and MS-Supreme. Many experts believe these new bermudagrass varieties can rival bentgrass and transform the play and look of putting greens throughout the southeastern United States.

The solution

Smallridge selected TifEagle and says it was an easy decision. The previous superintendent at Banyan, Dan Jones, had a test plot of TifEagle on a practice green. Over a three-year period it performed well, appeared healthy and didn't get contaminated, Smallridge says.

"It held its color well in cold weather," he adds. "It could also handle close mowings. Our only question was whether it would overseed well because it grows so tight, but that turned out not to be an issue for us. We're far enough south that we don't need to overseed."

Smallridge said the greens were sprigged in the spring of 1998, and there was 100 percent coverage in two to three weeks.

"The grass is 2 years old, and there's virtually no

Continued on page 76

HERE. THERE. EVERYWHERE.



On greens. On tees. On fairways, roughs, flower beds, transplants — even in your divot mix. Milorganite delivers outstanding results for a uniform playing surface. No other fertilizer is easier on plants or simpler to use. Milorganite's slow release, organic nutrients won't burn or cause a flush of growth. Plus, it's high in micronutrients such as iron to promote dense, vigorous turf. And Milorganite resists leaching, for a sound environmental profile. So call your distributor today, or call Milorganite's turf professionals direct at **1-800-304-6204**. It's easy.



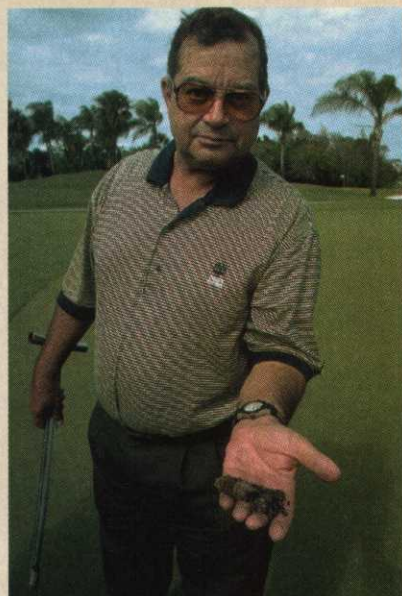
Real-Life Solutions

Continued from page 74
matty thatch," he says. "But the agronomics of growing TiffEagle is different. It's so tight and fine [that it can almost be] impenetrable."

Outlook

If you don't keep the turf open, even

water and fertilizer have a hard time penetrating TiffEagle. Smallridge and his crew don't spike, verticut or topdress their greens often, but they do apply a micro-sized ceramic product to keep the TiffEagle open. "It has little pockets which hold nutrients, oxygen, water and bacteria — the things grass needs if



Superintendent Clint Smallridge says the TiffEagle has no matty thatch.

PACIFIC EARTH



RESOURCES
Pacific Sod Pacific Arbor Nurseries

Growers of Pacific Sod

GN-1™ 

Excellent Dark Green Bermudagrass for
Golf Courses and Sports Fields

Tifway 419

Fine-textured Sod for Tees and Fairways

Bentgrass

Penncross and Dominance

Big Roll Harvest • Sand-Based Sod
Professional Installation Services

800-942-5296

www.PacificEarth.com

it's going to grow well," Smallridge says.

The new ultradwarf varieties have a reputation for being difficult to manage, but Smallridge says most issues can be linked to improper mowing.

"Most TiffEagle problems come from someone trying to set a regular mower at one-tenth inch or lower, something [the mower] isn't designed to do," he says. "When you have a mower with a front roller and a back roller and a bed knife in between, and that front roller and back roller are anywhere from 10 to 14 inches apart, what's going to happen when you go up and over a contour? The bedknife is going to dig in and scalp. So you have to narrow the distance between your rollers so they flow with the contours."

Ultradwarfs like TiffEagle cost more to maintain, but most superintendents who use it like the tradeoff. Smallridge explains that their greens mowers are equipped with extra-thin bed knives, which must be replaced more often to maintain TiffEagle properly. The bottom line, he says, is that all equipment must be in top condition to maintain the greens.

"It's critical to be right on — every day," Smallridge says. "That's demanding. But we went from a club that was in trouble to a club that has a waiting list. Our members call the course the best-kept secret in Florida" ■

Before June 1.



www.scottscompany.com • 14111 Scottslawn Road • Marysville, OH 43041

Circle No. 143

Shakespeare, in his tragedy *Orbello*, once wrote: "Who steals my purse steals trash. ... But he that filches from me my good name robs me of that which not enriches him — and makes me poor indeed."

It's obvious that Shakespeare never dealt with the Internet.

I hate to argue with The Bard, but thieving names on the Web has indeed enriched some name-pilfering pirates, popularly known as cybersquatters. For a mere \$70, people have registered domain names for which companies have paid fees ranging from \$1,000 to \$3.3 million for the rights to use.

These thieves forced Congress to provide some relief last year. Companies now have the right to seek civil damages in cybersquatting cases. But in the golf business, where profit margins hardly match that of companies like IBM and Microsoft, most clubs can't fight protracted legal battles to recover names from these dot-com desperados. So what's the answer?

Deb Wilcox, an intellectual property lawyer in the Cleveland office of Baker & Hostetler, says register all names that could be of use to your club — and register them early.

"You have a right to use your own name — and any club trademarks — as parts of your domain name," Wilcox says. "But you have to be smart about what you choose because there are certain names that are hard to protect."

Wilcox says you can't forget that there are other suffixes on the Web now beyond the standard dot-com. In recent years, dot-org and dot-net names have spread like wildfire and dot-cc is now adding its variation to the mix. You have to make sure to protect your name with all these suffixes, or you could lose your opportunity to create a clear identity for yourself.

There are currently about a dozen sites where you can go to register your domain names, but two of the most prominent *net-solutions.com* or *register.com*. For around \$35, you can register your domain name for one year. Your favorite search engine should get a fairly full listing of other sites.

Wilcox has the following tips about how to

Shakespeare Never Dealt With the Web

BY FRANK H. ANDORKA JR.



I HATE TO ARGUE
WITH THE BARD,
BUT THIEVING
NAMES HAS
PRODUCED
LUCRATIVE RESULTS
FOR SOME
CYBERSQUATTERS

protect yourself against online name thieves:

- Be creative when choosing your name. Surnames and generic names are difficult to protect under current law. If you devise an innovative irrigation control and hope to use a Web site using your name to sell it, Wilcox warns it will be hard to protect your site name because surnames are considered up for grabs under current Internet law.

- Register logical misspellings of the name and hyphenations. If you don't, someone might siphon off customers with a bogus name close enough to confuse the unsuspecting Web surfer without violating the law. Wilcox says that will make recovering any damages extremely difficult to do.

- Protect yourself against legal action by running a trademark search beforehand. It will alert you to possible conflicts with other companies that might have similar names.

- If there's a conflict, you can turn to the Internet Corporation for Assigned Names and Numbers (www.icann.com) for dispute resolution. The site is updated on a regular basis as new laws governing the cyberworld are passed — and they are changing even as you read this. Fortunately, Wilcox says more protections are coming every day.

"You've got good trademark laws that protect you in most circumstances, but there are some gaps," Wilcox says. "Congress is working hard to close those up."

In today's Internet world, a Web presence is more than just a passing fad — it will eventually become a necessity. You must protect your good name on the Internet before a thief can steal it. Otherwise, you could end up paying dearly for it later.

Frank H. Andorka Jr., associate editor of *Golfdom*, can be reached at 440-891-2708 or fandorka@advanstar.com.

After June 1.



On June 1, Scotts® ProTurf® Professional Products became part of The Andersons®. But Scotts® legendary professional product quality and technology are still the same. The outside of the bags may look different soon, but you can count on the same premium, high-performance products inside.

Order as usual. Order now. Order often!



www.andersonsinc.com • 480 W. Dussel Drive • Maumee, OH 43537

Circle No. 145

Tips:

Sampling Procedures

The most important role a superintendent plays in the testing process is insuring proper sample collection. Since all analyses and recommendations are based on the samples received in the laboratory, it's imperative that those submitted to a laboratory are representative. If they aren't, the lab results may be meaningless. Sample collection procedures vary based on the location of the material.

Greens

This sample procedure is for evaluation of existing greens to document the profile and/or diagnose physical problems. A 3-inch diameter PVC pipe should be cut about 24 inches to 30 inches long to extend down through the profile into the subgrade.

Bevel the outside of one edge to provide a sharper end to cut into the green. Drill two opposing holes into the other end into which a metal rod or rope can be inserted to help pull out the core. Drive the beveled end of the PVC pipe into the green far enough to reach subgrade, which is needed at the base of the core to hold in the gravel and/or choker layers. Pull the core out, and pack the ends with newspaper to prevent shifting and tape shut. Label the sample.

Fairways or native soils

The sample procedure is primarily for evaluation and documentation of the properties of native materials. Recommended tools for sample

collection are a clean, stainless-steel or chrome plated soil probe or shovel, a tarp or piece of canvas, and a plastic bucket.

Large areas should be divided into separate sampling units based on topography, vegetative cover, previous use, soil color and other visual differences. Small, non-uniform areas such as wet, rocky or eroded spots should always be a separate sampling unit. One sample can be submitted from each unit and should consist of a composite of numerous, randomly collected sub-samples.

The sub-samples can be collected with a soil probe or a shovel and combined in a plastic bucket, which can be sent as a sample. However, to reduce shipping costs, it can be portioned out as follows: Dump the bucket on a tarp or canvas and mix thoroughly. Split the material into quarters and discard opposing quarters. Mix thoroughly, split and discard again. Continue to do this until 1 gallon remains and bag it.

The average sample depth is 12 inches, but in some cases it may be necessary to sample deeper. Anytime there's a difference observed in the soil layers, it should be noted and the layers divided into separate samples. Record the depth of sampling and label each sample appropriately with a permanent marker, maintaining a record or map of sample locations.

Bottom line

The importance of good sampling techniques can't be overemphasized. While it's imperative that a quality laboratory is used for testing, keep in mind that the results obtained from a lab can only be as good as the sample you provide them.

This article was written by Sam Ferro and Mike Mealman of Olathe, Kan.-based Turf Diagnostics and Design, a laboratory and consulting firm serving the golf course and sports turf industries.

Want a new source for pest information?



www.pestfacts.org

Termites, cockroaches, rodents, even poison ivy and other nasty weeds. They're all pests, which means they can cause real problems that pose health and safety risks to children and adults. The good news is now you've got the Pest Facts Information Center at www.pestfacts.org. It's a handy resource discussing the problems caused by pests, as well as the safe and responsible use of urban pesticides and related issues. So don't just sit there...log on.