

## Sometimes superintendents inherit challenges on day one and are forced to deal with them right off the bat.

his maintenance operation.

"They're the real heroes," he says. "You go to any well-groomed golf course or great-run golf course, and it's because of the staff."

### AGRONOMIC CONCERNS

Beyond staff concerns, Olinger's most pressing worry is the facility's aging irrigation system, which was installed in 1975 and last upgraded in the mid-1980s.

"We've gone actually weeks with it down completely," Olinger says. "The players and others at the club are good about the troubles, though. For the most part, they understand. If they see me out here, they know I'm doing everything I can."

Likewise, Olinger makes due with the irrigation system because he understands the significant investment the club would need to make to install a new one.

Drought conditions this year also haven't eased Olinger's mind any. While he has the benefit of an irrigation pond and two wells that he can refill with free ground water, he doesn't take water for granted because the rain clouds might not return for a long time.

"Everybody needs to keep that in the back of their mind," he says. "You never know when you're not going to have any more rain."

Good planning helps a maintenance operation run smoothly, but sometimes superintendents inherit challenges on day one and are forced deal with them right off the bat.

"A big issue that was here at the club before I started, and one that's becoming more common around the country, is earthworms," says Doug Brooks, golf course superintendent at Denver Country Club.

Brooks is trying to solve the issue through water management and strengthening the ryegrass turf's canopy, which is a top priority.

"I've learned where the bad areas are and when there's going to be more activity," he says. "I've really been on top of it this year."

Another concern for Brooks is a purely local one that took root – or failed to – after a renovation project. The club's driving range was changed from two levels to one. About 1,500 tons of material were brought in to level it out. But the

sod hasn't flourished because the soil struggles to supply enough oxygen and water.

"It's not recovering well, so that's a real focus to make some improvements," he says.

Ricky Craig, golf course superintendent at Shingle Creek Golf Club in Orlando, Fla., is concerned about the future without Nematicur because his Tifeagle greens are susceptible to nematodes.

Nematicur, a nematicide with the active ingredient fenamiphos, is in the process of a five-year phase out because of Environmental Protection Agency concerns.

"It's a concern with sand-based greens," Craig says. "But I haven't had to use a nematicide to date."

Craig's interest in staying ahead of nematodes shows in his topdressing program. He focuses on keeping the biomass healthy through aeration three times a year. He strives to keep the microbial population happy and moving so they decompose thatch. This should keep the turf healthy and the nematodes in check. If this doesn't work, however, the situation could deteriorate.

Users can apply Nematicur until supplies are depleted, but distributor sales will cease after May 31.

"Other than using Curfew, there's not a plan in place," he says.

### MONEY MATTERS

Skyrocketing fuel costs are a worry for superintendents, but some foresight keeps sleepless nights at bay. For example, Olinger readjusted his budget to accommodate for that.

"Fuel is a concern, but if you're prepared for it, it's not that bad," he says.

Other superintendents say they prepared for the higher costs this year by increasing their fuel budget considerably. Surprisingly, fuel costs didn't make the top 10 concerns in the GCI survey.

Unlike rising fuel costs, not all trouble can be seen in advance. Sometimes the issues keeping superintendents up at night seem like a rare disease. Other times they're like the common cold. Brooks has experienced both this year. Inflation is a common concern for him.



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### Top 10 concerns for superintendents

1. Staff
2. Weather
3. Family/home affairs
4. Irrigation
5. Budget
6. Turf
7. U.S. economy
8. Members' expectations
9. Pests/diseases
10. Job security

#### Other concerns for superintendents

- Gas prices
- Business plans
- Labor shortage
- Equipment
- Tournaments

Source: A Golf Course Industry survey of 200 subscribers

"Obviously, the cost of fuel and fertilizer has got everyone's attention, but we've been able to manage those," he says.

Brooks splits fuel purchases of unleaded and diesel over alternate months to help cash flow.

"We've paid attention to every part of our operation," he says. "We're careful with the money we're spending on labor and paying attention to our fertility, making sure we're not getting ahead of ourselves."

Tighter budgets have handcuffed many superintendents. Rounds played nationwide have been flat the past several years. For Staeger, a decline of members has hurt his nearly \$1-million budget, which was reduced 10 percent this year. Staeger, with a crew of 15, used ingenuity to trim back to the new funding level. For example, he cut \$45,000 out of his chemical budget by switching one chemical to a new product that lasts longer and requires fewer applications. He also has swapped several branded products for

generic ones. He hopes that strategy will save money and that no significant issues demanding costly reactive measures will crop up and burn through the savings.

Staeger also is concerned that the roughly \$85,000 in planned reductions he made won't be enough because of the higher-than-expected equipment and irrigation costs. He's keeping the financial team abreast of the situation.

"Hopefully, they don't get to the end of the year and their eyes pop out," Staeger says.

Because of these various operational concerns, superintendents have been working a lot of overtime, and that's not likely to change. Keeping a course in premium condition despite a barrage of personnel, budgetary and agronomic issues might require them to work even more hours than they already clock.

"It's going to be our cost to bear in upcoming years if this economy doesn't turn around," Staeger says. **GCI**



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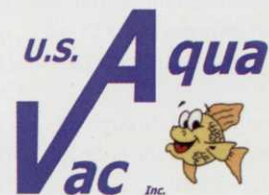


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# TIME to go

Although a touchy subject with golfers, tree trimming or removal improves turfgrass health

BY TOM LELAND

Though few careers are as intertwined with nature as that of a golf course superintendent, golf maintenance professionals tend not to be nature freaks. At least, not at first. But they spend their days monitoring and tending vegetation, surrounded by natural splendor at every turn. Superintendents – and golfers – can't help but build an appreciation for nature's beauty and relentless vitality, including an enhanced respect for the colossal strength and stoic elegance of trees.

So when a tree has a negative effect on a putting green and it's time to examine the possibility of cutting it down, a superintendent approaches a club's green chairman or general manager knowing it's a touchy subject.

Many golf courses in the United States have hundreds of trees, and many were planted with little thought to their placement beyond aesthetic appeal. Trees planted during the 1960s and 1970s weren't planted with the costs of pruning or removal in mind, says Bruce Williams, CGCS, director of golf courses and

At Pelican Hill Golf Club, tree roots can grow into the collar of the green and compete with the grass for moisture. Photo: Pelican Hill Golf Club

# Searching For A Cost-Effective Solution To Control Dollar Spot?



## Problem: Dollar Spot

Dollar Spot *n.* - The fungus *Sclerotinia homoeocarpa* ("Dollar Spot") commonly attacks low-cut creeping bentgrass. It thrives in damp clippings or moist, cool soil.

### Symptoms:

Fast-spreading Dollar Spot begins as small discolorations. Grass blades bleach, forming dead patches on turfgrass surfaces. Spreading infection causes ugly, tan-colored spots 2-3" wide (silver dollar size).

1. Many small, round dead patches
2. Hourglass-shaped lesions
3. Cobwebby white mold
4. Damaged putting greens



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The Science of Nature

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At Glendora Country Club, superintendent Juan Maldonado uses tree growth regulators to reduce the need for pruning. Photo: Glendora Country Club

but not both," he says.

Nowadays, with much greater awareness about the negative effects shade has on turf and the competition between trees and turf for air and water, a great deal of time, energy and money is spent managing trees around putting greens. However, opinions vary about best practices for tree management. At private clubs, tree management often causes friction between management and members.

**SEEING THROUGH THE FOREST**

The biggest tree issue on superintendents'

minds is the effect of shade on turf. When turf receives less than optimal light, it begins to change almost immediately at the biochemical and molecular levels, resulting in lower rates of respiration and photosynthesis and slower growth. Plants become taller, but their stems become thinner and weaker. The turf thins, root growth decreases and the leaves become more vulnerable to traffic and disease. To make matters worse, the depleted root system and lower energy reserves make it more difficult for the plant to recover from the effects of heat, cold, dry and wet conditions, or disease. Weeds proliferate because the turf plant can't compete with them for moisture, light and nutrients.

Pruning is only a temporary solution and can be harmful to trees. Tree growth regulators, such as trinexapac-ethyl or flurprimidol, can increase plant density and decrease shoot elongation, counteracting some of the negative effects of shade. Juan Maldonado, superinten-

grounds at the Los Angeles Country Club.

"Back then, most courses felt comfortable planting hundreds of trees every year, which has resulted in extreme levels of competition, where either the tree is healthy or the turf is healthy,

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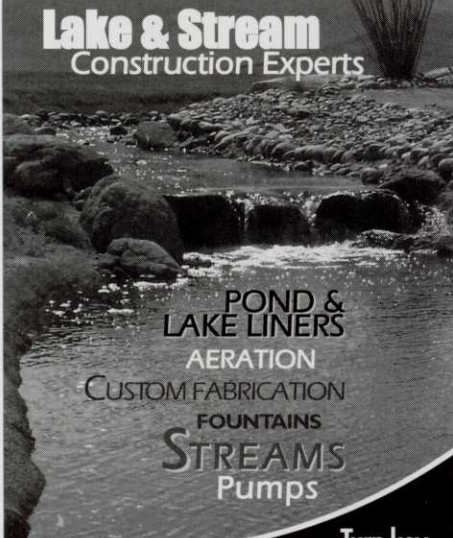
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dent at Glendora Country Club in Los Angeles County, has been using a flurprimidol product for about a year. The chemical is injected around the base of a tree and is effective for about three years, Maldonado says.

"We've reduced the need for having trees pruned," he says. "Canopy production and tissue growth are regulated, the trees don't produce as many leaves and foliage no longer grows into the netting. More light comes in, and now our greens are nice and dry."

Steve Thomas, director of golf course maintenance at Pelican Hill Golf Club in Newport Beach, Calif., combines a growth regulator with a physical barrier.

"Where our tree roots grow into the collar of the green and compete with the grass for moisture, we trench in a thick, plastic 18-inch barrier that also has a chemical to stunt root growth," Thomas says.

In 2003, Pelican Hill hired a company to create a global positioning system for the course.

"Every hole has its own map, and every one of our 5,000 trees has a GPS coordinate," Thomas says. "This really helps us make an overall tree management plan and helps us allocate our budget."

Generally, the approach superintendents take is to prune when it makes sense while educating themselves about the amount of light greens receive, then adjust their turf care accordingly. But there's a lot of information to consider. Morning light is the most important for turf, and sun angles vary throughout the course of the year. In the fall, shade can cause frost on greens. More bad things happen to wet grass than dry grass, and if trees are hampering air circulation, they might need to be cut down.

Safety also can be an issue. Sometimes cutting down a tree increases the chance someone will get hit by an errant ball. Or trees that drop a lot of debris onto a green or bunker take priority over those causing shade problems.

## EVERYONE'S AN EXPERT

Overall, tree removal is becoming more widely accepted as a necessary evil, and that's when emotions, and club politics, can heat up.

Too often, emotion plays a part in the process of deciding whether a tree needs to be removed. Golfers, particularly old-timers,

become attached to trees and the specific look of the landscape around greens. It's common for a green committee to thwart a tree removal that clearly would benefit a nearby green. But these incidents are rooted in ignorance as much as emotion. Golfers often don't understand the significant impact trees have on turf. They tend to assume solutions lie in pruning and better or different application of water or nutrients.

"It's difficult for them to understand you have to cut down a 30-year-old tree because it's competing with the turf," Williams says. "They say, 'Can't you just prune it?' At some clubs, they say, 'We won't let you take every tree out, but every other one'. But that might improve the situation by, say, only 20 percent."

It doesn't help that club members have their own trees and grass at home, so they think they have the answers. Many superintendents must bite their tongues regularly, tapping into unknown reserves of diplomacy as management or member committees resist cutting down trees. Sometimes a superintendent's superior sees things his way, sometimes he doesn't. Every private course has its own hierarchy and each superintendent has unique challenges in enlightening decision-makers. Superintendents at public courses have a much easier row to hoe because they're often empowered with all tree management decisions.

It's common for a course to hire a certified arborist as a consultant, or to enlist the help of one who's on the staff of a tree management company. Inevitably, an arborist's opinion can help a superintendent make his case about certain trees. Generally, arborists agree that if a tree needs pruning more than twice a year, it's so bad for the health of the tree it might as well be removed.

Most courses try to remove trees as quickly as possible, usually on a Monday when club's are closed. Many courses alert their members of the action with an e-mail or other communication, with hopes that this courtesy will soften the blow.

## FINANCIAL REGULATORS

The money golf course managers spend on tree management varies somewhat, usually falling within the \$40,000 to \$90,000 range annually. But often it's not enough.

"Tree management budgets are usually deficient to keep up with the number of trees on a property," Williams says. "It's a lot easier

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Every one of Pelican Hill's 5,000 trees has a GPS coordinate to help Steve Thomas make an overall tree management plan and allocate his budget properly. Photo: Pelican Hill Golf Club



to come up with money to plant a tree than to maintain it."

Occasionally, there's even some horse-trading involved.

"Sometimes I'll negotiate with our tree company," says Brian Archbold, golf course superintendent at El Niguel Country Club in Laguna Niguel, Calif. "I'll trade their usual trimming and pruning for the removal of a tree."

One tree management approach is probably out of the league of all but the biggest budgets. There are companies that document shade issues and quantify light levels with tools such as portable weather stations and aerial photography. When taken at a time of day and year when tree shadows are visible, they are a convincing and inarguable record of tree shading. If a course is lucky, aerial photographs from years past might exist in photo banks. However, such images are always taken vertically – directly above the area – and at mid-day, when shadows are less pronounced. If an archive of these photos is available, they can be especially useful in tracking the increasing size of trees and the shade they cast throughout time. When available, they can be obtained from aerial photography services, usually for less than \$100.

Superintendents can photograph areas where they believe trees are hurting turf quality. Keeping a photo record of a given location throughout the year could help them convince others of the need for action on trees. Williams uses this technique at L.A. Country Club.

"After a diseased or decaying tree comes down, no one remembers it was sick," he says. "We try to take pictures of trees before removal, so if we're questioned about it, we can show their prior condition."

Some superintendents observe light conditions on their own.

"I'll study where the sun comes up over a couple of days, just seeing which greens aren't getting enough morning light," Archbold says.

#### BUSINESS AND THE ENVIRONMENT

The line between running the business of a golf course and doing right by the environment and its living things is a fuzzy one. Thankfully, many superintendents instinctively try to preserve the nature around them. When a tree is cut down, some courses make a conscious effort to mimic nature as closely as possible.

"We try to leave the snag (stump) up so it can be a habitat for wildlife," says Charles Joachim, CGCS, at Champions Golf Club in Houston. "We get a better diversity of wildlife that way. For instance, as far as I know, our stumps are the only home around for the pileated woodpecker."

Ultimately, when push comes to shove, grass must win over trees. Stanley Zontek, Mid-Atlantic region director for the USGA's Green Section, breaks the issue down to its core.

"The game of golf is played on grass," he says. "Superintendents are judged on their ability to grow grass, and trees are bad for grass." **GCI**

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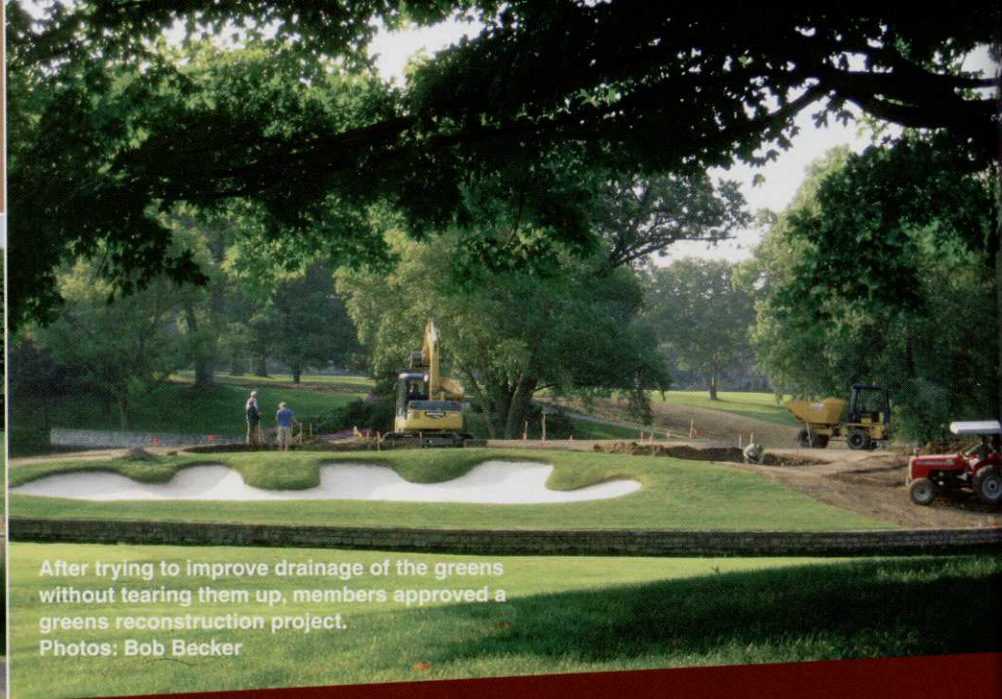
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After trying to improve drainage of the greens without tearing them up, members approved a greens reconstruction project.  
Photos: Bob Becker

# Better than great By John Walsh

## A unique team effort improves the classic layout at Scioto Country Club

**H**ow do you make a great course better? Well, at Scioto Country Club in Columbus, Ohio, the grounds crew dug up the greens to find out.

It turns out a renovation at Scioto in the 1960s contaminated the soil profile, preventing the greens from draining efficiently. But because talented superintendents Mark Yoder and Bob Becker babied the greens for years, club members tolerated the poorly draining greens. After a field experiment, Yoder, Becker and architect Mike Hurdzan convinced members their greens needed to be rebuilt.

But the renovation didn't stop there. The project team moved a few greens, added two sets of tees and regrassed the fairways.

### TRY THIS FIRST

In 1974, members of Scioto called Hurdzan to look at winter damage on the greens, and he commented how poorly the greens were built.

"They were very inconsistent," he says. "It was a first-class golf course, and it needed first-class greens."

Scioto has had a history of problems with greens – they didn't drain, says Bob Becker, CGCS.

"The greens were basically big bath tubs," he says. "We always had complaints about the greens being too soft and overwatered. I chased localized dry spots all day. To work water in, it was delivered by hose. We would use the overhead irrigation only three to four times a year. I was fed up with it."

From 1980 on, Yoder, now the director of golf course operations, built a USGA-conforming sand layer, but the layer was only 3 inches deep after about 30 years. So Yoder and Becker did what they called the "Scioto Experiment," in which they double drilled and filled three greens on a few holes using ¾-inch tines.

They then contracted XGD Drainage to install its system on two greens. Their crew cut 19 channels – 14 inches deep and 4 inches wide –

into the greens and installed drain tile on 6-foot centers. The process of cutting channels in the greens, including the addition of the Advanced Aer System on only one of the drained greens and the 6-2-2 (sand, soil, peat) profile mix that was added to the trenches, cost \$40,000.

There were four greens in the experiment. The first had drainage, an Advanced-Aer unit, and drill and fill. The second had drainage and drill and fill. The third just had drill and fill. The last was a control green. All greens contained RZ wireless sensors at different locations and depths.

"We had so many issues," Becker says. "We found chunks of concrete, asphalt and steel in the greens. Architect Dick Wilson rebuilt the greens in the 1960s, but we would have been better off with the original Donald Ross greens. The root-zone mix and methods used in the 1960s were horrible. There was no quality control, and the result was inconsistent depths of gravel and root zone. There also was no drain tile under many of the greens."

The crew used wireless sensors in the greens to measure how much water they were pulling out of the greens. Using information from the sensors, Yoder and Becker were able to plot graphs of the profiles so members could see moisture movement in the greens and the lack of drainage.

"We tried to fix the greens without tearing

### AT A GLANCE Scioto Country Club

LOCATION: Columbus, Ohio

TYPE OF PROJECT: Renovation (greens, tees and fairways)

COST: \$1 million

DIRECTOR OF GOLF COURSE OPERATIONS: Mark Yoder

GOLF COURSE SUPERINTENDENT: Bob Becker

GENERAL MANAGER: Greg Wolf

ARCHITECT AND DESIGNER: Mike Hurdzan and Jack Nicklaus

GOLF COURSE BUILDER: Topp Shape

COURSE CLOSED: July 9, 2007

COURSE REOPENED: April 28, 2008

TURFGRASS ON GREENS: A-1, A-4, T-2 bentgrass mix

TURFGRASS ON FAIRWAYS: L-93 bentgrass