

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



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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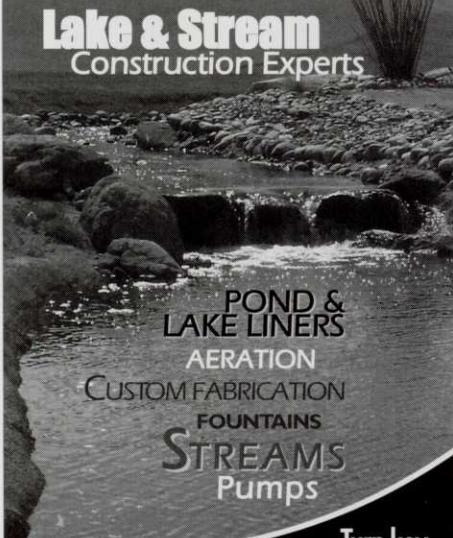


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dent at Glendora Country Club in Los Angeles County, has been using a flurprimidol product for about a year. The chemical is injected around the base of a tree and is effective for about three years, Maldonado says.

"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



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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