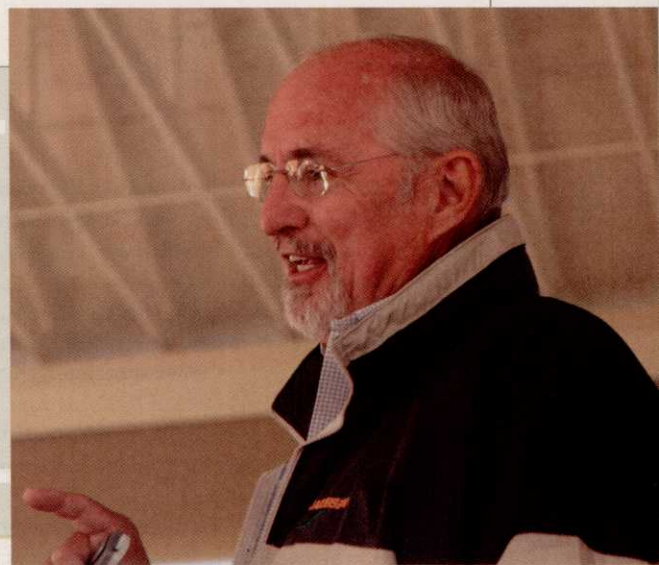


“It’s important to distinguish grooming from vertical mowing. Both processes use vertical blades, but from a biological standpoint, this is where the similarities end.”

-MILT ENGELKE, Ph.D.



“If we don’t stay on top of kikuyugrass, it can get out of hand real quickly,” he says. “When I came here, I was afraid to fertilize.”

Gradoville cuts fairways three to four times a week and uses turf groomers every other mowing.

“The groomers eat into the thatch and take out some of the puffiness,” he says. “We’ve actually increased the percentage of kikuyugrass in the fairways by feeding it more and using a growth regulator. The growth regulator reduces clippings and makes the plant more compact.

We have the benefit of adding nutrients without getting a flush of growth.”

However, grooming isn’t a substitute for verticutting for Gradoville. Grooming can be aggressive and will thin turf if the blades are set too deep, or if groomers are used too much. Healthy turf producing thatch will tolerate much more grooming than hungry turf with no thatch.

“We use it more like a hard tickle,” he says. “With this practice, we’ve reduced the need to verticut as frequently. The kikuyugrass seems to thrive with turf grooming, but you need to

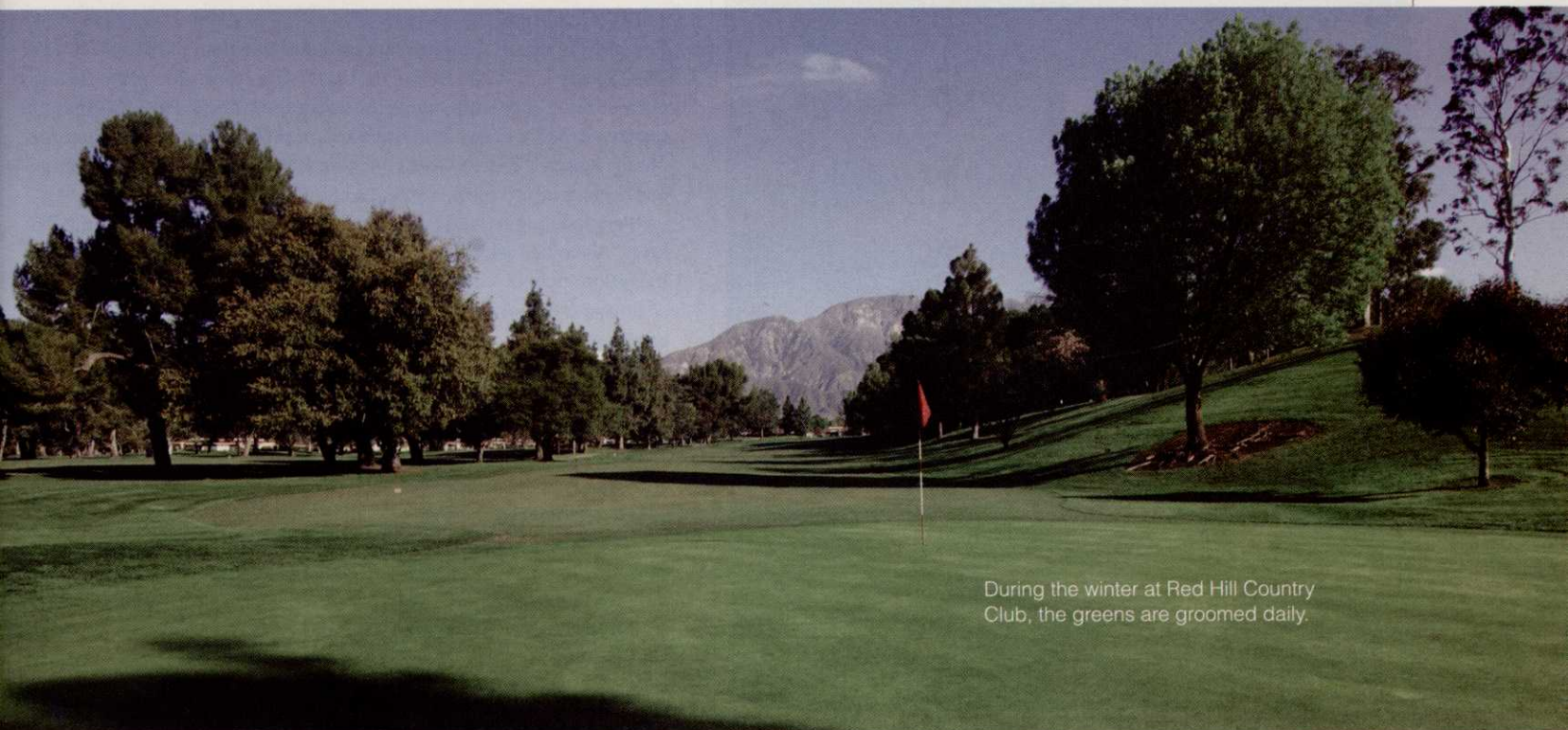
watch you don’t overdo it.”

The *Poa annua* greens at Palos Verdes are groomed twice a week, while the bentgrass tees are groomed every other week.

“The golf course continues to improve, as the members tell me how much better playing conditions are today,” Gradoville says. “I attribute part of that to technology.”

#### FAIRWAY RENOVATION

Red Hill Country Club in Rancho Cucamonga, Calif., has a reputation for being one of the hid-



During the winter at Red Hill Country Club, the greens are groomed daily.

den gems of the Inland Empire. Built in 1921 and measuring 6,611 yards from the championship tees, the course sits on a bed of heavy, clay soil, and has small, push-up greens.

However, in today's golfing environment, players and members expect current standards of course conditioning. So, when superintendent Craig Kimmel arrived in March of 2000, his direction was simple: bring the course up to date. His first challenge was the fairways, which had been overseeded for many years.

"This created a lot of problems in summer with the *Poa annua* and ryegrass," Kimmel says. "They just died out in the heat. In 2002, we renovated two fairways as a test plot with hybrid bermudagrass, and it has stood the test of time. Now we've changed all the fairways to Tifway II, and they perform excellent in the summer. We aerify a couple times a year and sand topdress; we don't overseed. We want a drier, more consistent golf course with better ball roll during the



Superintendent Craig Kimmel and his staff try to stand up the grass for a better quality cut and more consistent surfaces.

summer and winter. When the turf is semidormant, we don't have to water. Then during the summer, we don't have to put as much water on hybrid bermudagrass as we would with a cool-season grass. The quality of the fairways has risen exponentially."

The maintenance staff verticutts a lot from the spring to the beginning of summer to knock down *Poa annua* seed heads and take care of thatch. Then they light topdress for a smooth ball roll.

Kimmel uses turf groomers on his walk mowers for greens and collars and on the club's three fairway mowers.

"During the winter, greens are groomed every day," Kimmel says. "From March through November, fairways are groomed whenever they're cut, five to six days a week.

Turf grooming isn't verticutting. We're trying to stand up the grass for a better quality of cut and more consistent surfaces. Groomers were something I asked for in our last equipment package. From demonstrations, I liked what I saw and am pleased with the results. We're reaping the benefits of turf grooming."

#### A SPECIAL SETTING

Few golfing experiences are more memorable than playing a round at The Quarry Golf Club in San Antonio. The front nine plays through native rolling grasslands, while the back nine is nestled in a 100-year-old quarry pit. More than 1.5 million yards of topsoil were brought in to create the course's 8-inch base. Golf course superintendent Bruce Burger has been involved in the project from nearly the beginning in 1993.

"People living around the quarry's rim used to look into a dump," he says. "Now they see a beautiful golf course. When we first fired up the irrigation, people were on their patios clapping."

Burger cuts putting greens with triplex mowers equipped with turf groomers.

"When we started using groomers, we cut the greens at one-eighth of an inch (0.125) with the triplexes and groomers, and I got rave reviews," he says. "Everyone remarks about their consistency."

With the Tifdwarf bermudagrass, Burger is able to maintain the greens at that height without any undue stress on the turf.

"The groomers help reduce the number of times we need to verticut," he says. "The leaf blades stand straight up, and the bedknife and reel come behind and clip them vertically instead of just rolling over the top. We don't have much thatch buildup because the groomers stand up the leaf blades to give us a better cut." **GCI**

David Wolff is a freelance writer based in Watertown, Wis. He can be reached at [dgwolff@charter.net](mailto:dgwolff@charter.net).

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BY BOB SELIGMAN

# getting started

THE ENVIRONMENT, SOIL, FERTILITY AND PRODUCTS IMPACT THE ESTABLISHMENT OF TURFGRASS MANAGEMENT PROGRAMS



Setting up a comprehensive turfgrass management program at a new golf course might seem simple at first glance, at least to the uninitiated eye.

Put down soil, toss grass seed on top, let a good sprinkler system do its thing, and voila! Instant fairways, rough and putting greens.

If only it were that easy. Putting together a turfgrass management program requires a list full of requirements. It's comprehensive.

One deals with the desires of golf course owners and architects; issues involving soil, fertilizer, water, mowing and aeration; not to mention budgets. Superintendents must prepare for environmental conditions and variations, as well as determining what kinds of grasses are best suited for the course during play and the off-season.

And that's just the beginning. Once a program is in place, superintendents have to be able to plan for and make short-term and long-term adjustments.

"You cannot grow grass on cement like many people think they can," says Joe Voss, owner and president of Marco Island, Fla.-based Joe Voss Consulting and Design. "You need to get your soils up to meet the specifications and to grow the grass you're trying to grow."



### FERTILIZATION'S IMPORTANCE

But before the first blade ever rises out of the soil, one has to consider the important issue of initiating a turfgrass management program during the design phase of building a new course or during grow-in – but there doesn't seem to be a clear consensus about when to start.

"You usually do it during the design period because you want input from the architect and the owner about what they want for grass," says Voss, the former golf course manager for Liberty National Golf Club in Jersey City, N.J. "There's so many different varieties of bentgrass. First, you have to find out what they want and what their budget is going to be, which is key. How much will they spend on construction? How much drainage you have? What's your water quality? That determines

your turf program from the actual construction and the preplant through the grow-in and the maintenance."

Fertilization is key for a grow-in to start well, Voss says.

"You might have limited water or limited quality water, but you need to be up to speed on what you're going to use for your preplan and your grow-in," he says.

### ENVIRONMENTAL CONSIDERATIONS

Mike Etchemendy, director of facilities operations at 3 Creek Ranch in Jackson Hole, Wyo., also started his program during the design phase. The emphasis was on the environment, which includes the nearby Teton Range and a private fly-fishing area within the adjacent private housing community. Etchemendy started out with an

At 3 Creek Ranch (above), the turfgrass management program is influenced by the Teton Range, a nearby fly-fishing area and a housing community. Photo: Dan Tolson

At The Club at Flying Horse (opposite page), superintendent Dan Hawkins found out what products were and weren't needed during the grow-in. Photo: The Club at Flying Horse



When establishing the turfgrass management program at 3 Creek Ranch, director of facilities operations Mike Etchemendy used an environmental consultant who developed a natural resource management plan, which models fertilizer and pesticide use after weather conditions. Photo: Dan Tolson

environmental consultant who developed a natural resource management plan.

"It basically models fertilizer use, chemical use and pesticide use with weather conditions in this area," he says. "We have three spring creeks where the runoff water could enter during a storm. We modeled all chemicals that could be used here against thunderstorms and rain events that have happened here during the past 30 years. This model told us what kind of potential pollutants we could have entering our spring creeks from the golf course and the residential community. We eliminated anything that could potentially harm or pollute the spring creeks. That told us what kind of fertilizers we could use, what nitrogen sources could pollute the spring creeks and any fungicides that could enter the spring creeks. We worked backwards from there."

#### TESTING THE SOIL

But not everyone favors putting the pieces of the puzzle of a comprehensive turfgrass management program together during the design phase.

At The Club at Flying Horse in Colorado Springs, Colo., golf course superintendent Dan Hawkins says by testing the soil during the grow-in, he knew what additional amendments were needed such as gypsum and potassium. As a result, management was able to move the money set aside for preplant fertilization and use a portion of it for additional amendments such as gypsum and potassium. This was done before the grow-in, during the construction time frame.

"Those products would have been amended by the construction company on the golf course prior to seeding," Hawkins says. "Once we take over the hole from the construction company, then we begin growing in whatever hole it is."

During grow-in, Hawkins found what products were and weren't needed, which also saved money.

"At the time, we were doing this particular job, and I hadn't decided what we were going to use for our greens program," Hawkins says. "The fertigation system allowed us to get some nitrogen out during the watering of the greens, as well as the rest of the golf course, so we were



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~Mark

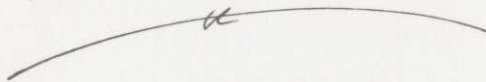
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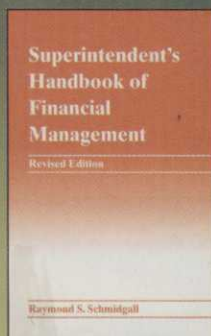
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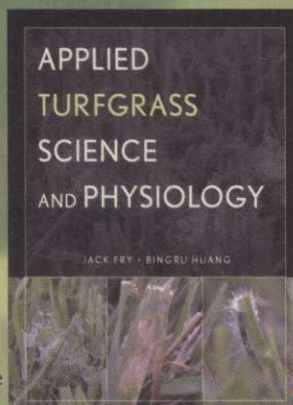
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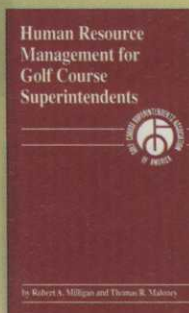
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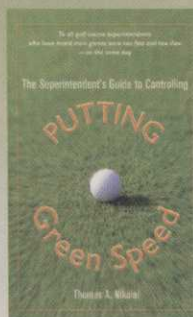
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getting a nitrogen component that allowed us to see what kind of growth we were getting. We could dial back on our foliar program rather than saying ahead of time that we knew exactly how the bentgrass was going to grow. We could see what the grass was looking like on the greens, and instead of using one product, we were going ahead with a different product because we were getting better growth than we thought.”

**MAKING ADJUSTMENTS**

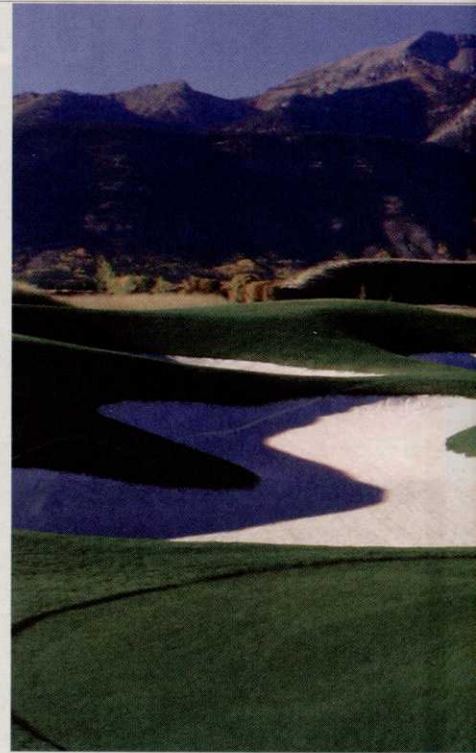
Being flexible is part of developing a successful turfgrass management program. As Hawkins admits, there’s much adjusting on the fly depending on what’s happening. At Liberty National, for example, capping material had an extremely high salt index, so an intensive program was needed to regulate the pH level and add nutrients while eliminating the salts. The importing

of high salt soil was halted eventually.

Even with making adjustments, not every aspect of a successful program is initiated at the beginning. Some take place several years later. One potential change is with products. New ones are made better and cheaper than their predecessors. As a result, Hawkins says he’ll probably use his fertigation system more extensively because there are more better-blended products available.

“The golf industry – the turf side of it – is a changing science,” Voss says. “Things get bigger, better, faster, stronger. That’s inevitable. We’ve gotten into all this new gene research. You might change what you’re doing halfway through the construction.” **GCI**

*Bob Seligman is a freelance writer based in Suffren, N.Y. He can be reached at bhseligman@aol.com.*



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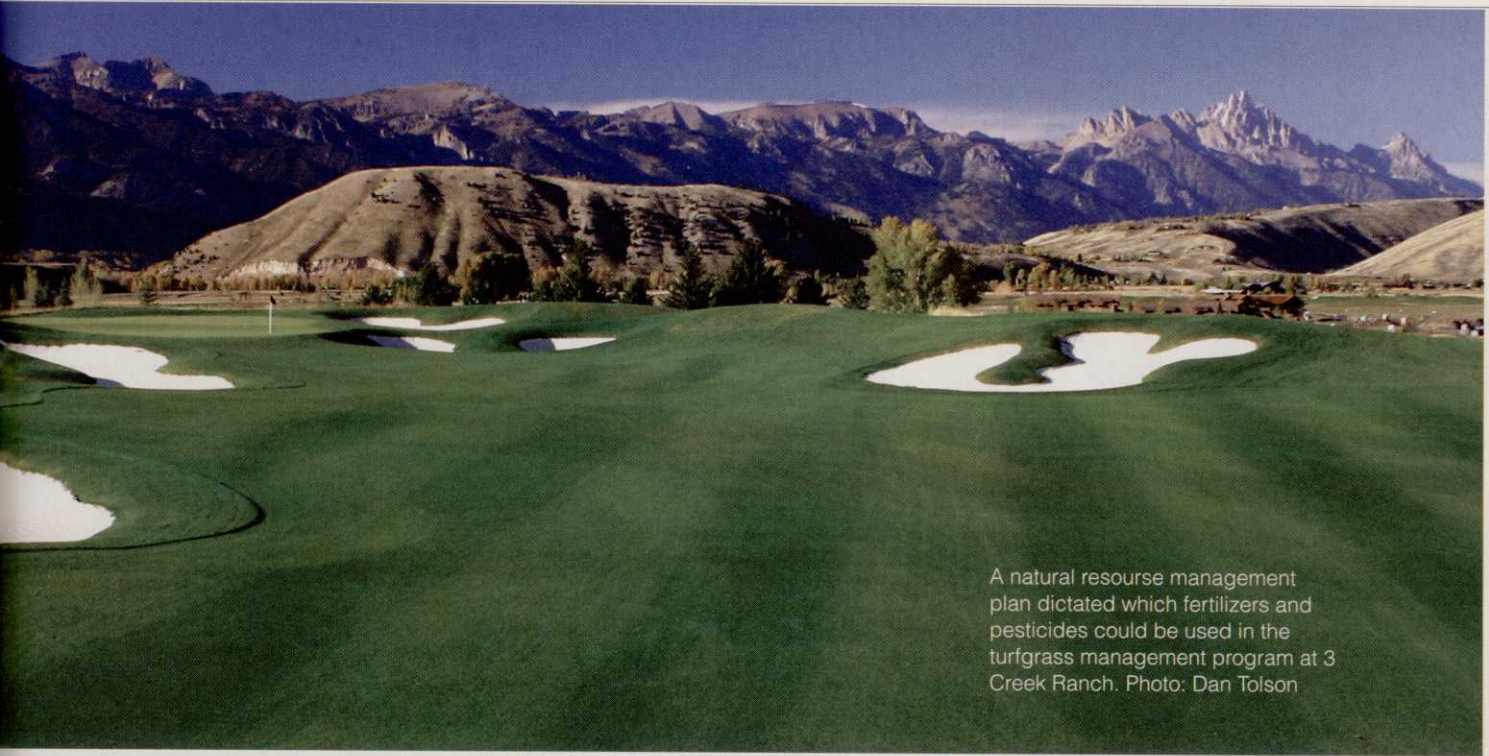
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A natural resource management plan dictated which fertilizers and pesticides could be used in the turfgrass management program at 3 Creek Ranch. Photo: Dan Tolson



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# shorter loops

By T.R. Massey

**G**olf course development is in a holding pattern. The need for new, 18-hole championship courses isn't as great as it was a decade ago, and new-builds have slowed during the last few years. The cyclical pattern happens as the sport's popularity waxes and wanes.

But it's not as if there's nothing going on. Many golf course architects say they're working on renovating older courses. There are still active areas of new development in the South and West. But in urban areas of the country reaching

a saturation point for traditional golf courses, some see a new niche developing that includes nontraditional, inexpensive projects.

"I think it's a trend," says Michael Hurdzan, a principle of Columbus, Ohio-based Hurdzan/Fry Golf Course Design and author of the book, "Building a Practical Golf Facility." "If we don't recognize that people are living a faster pace of life, then we're making a huge mistake," he says.

That's why when local developer Bill McCorkle called Hurdzan last year to ask for advice

about what to do with 17 acres of green space, Hurdzan had plenty of ideas.

"Our gut feeling was that there was a market for a nontraditional facility," Hurdzan says. "He only had so much acreage, so there was a leap of faith on his part that we were right."

McCorkle had purchased 85 acres of land adjacent to Polaris, one of the biggest retail areas in Columbus, and intended to build 93 single-family homes and 54 condos there.

"The township designated 20 percent had to be open space and recreational-use applied,"

Developer Bill McCorkle believed there was a need for a public golf course instead of soccer fields and baseball diamonds on the 17 acres of land he owns that was set aside for green space.

Photo: Little Bear Golf Course

