



Photo: Phelps-Atkinson Golf Design

important part of the Golf Club at Devils Tower.

Goodwill generated within the community by using local labor and resources was another positive. An example of the goodwill that continued throughout the project was The Golf Course Co.'s decision to donate the construction of a running path along the main road for local high school and community use.

Future growth

The grand opening of the course was sched-

uled for July 15, which is when a conversion from a public to a private course with limited public play will begin. Additional plans call for a nine-hole, daily-fee course designed by Phelps-Atkinson Golf Design. The start of construction on the third nine depends on future market conditions and sales of private memberships. Initiation fees will start at about \$25,000.

Potential members and homebuyers generally are in awe of the new back nine and the renovations to the old nine, according to club general manager Mike Saye.

"We explain what we have done in terms of design and construction, and they really like the way things turned out," he says.

So, too, do those who were directly involved with the project.

"This design and construction philosophy might not work perfectly on all projects, but it will work more often than most people think," Atkinson says. GCN

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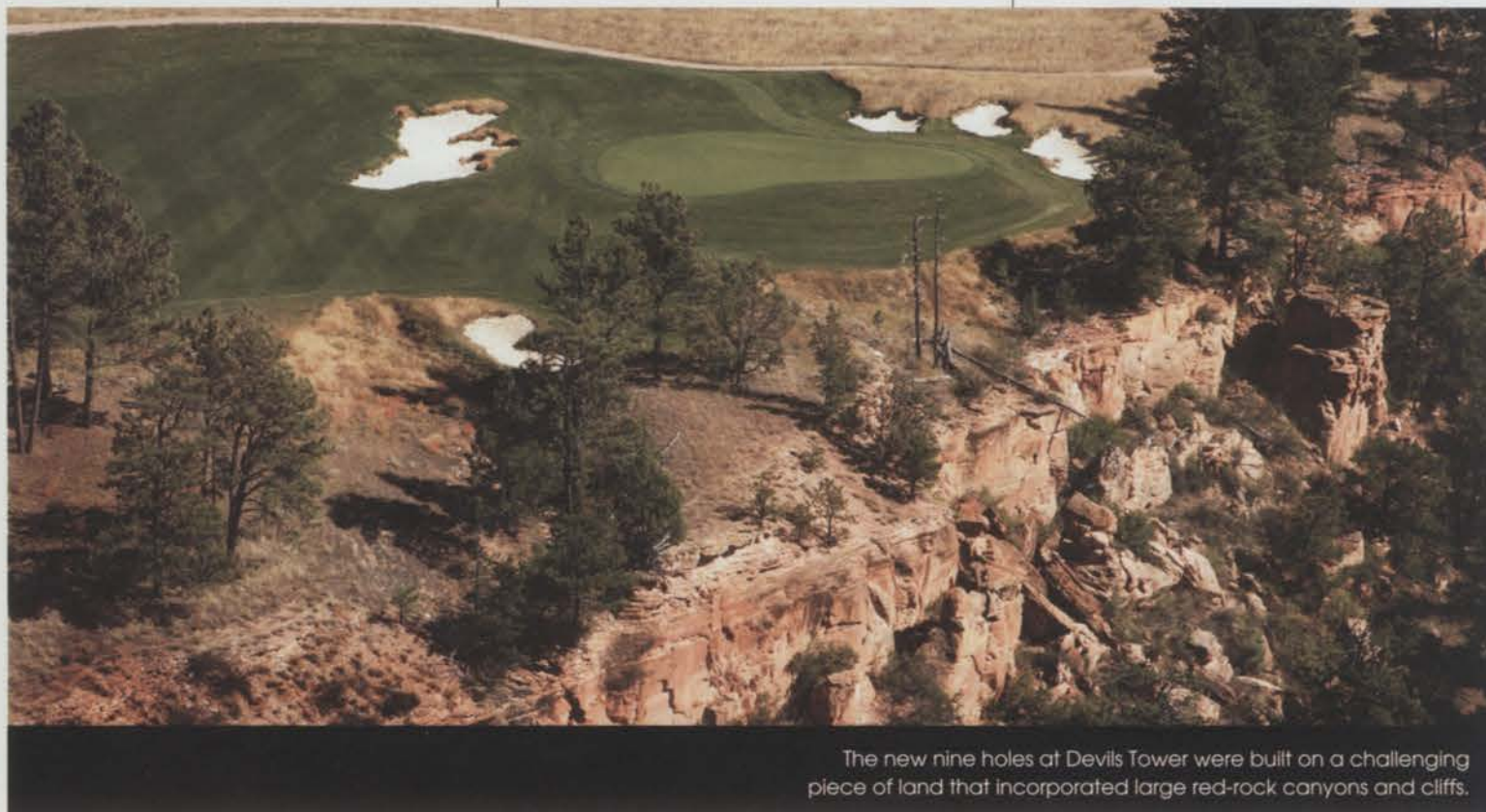


Photo: Phelps-Atkinson Golf Design

The new nine holes at Devils Tower were built on a challenging piece of land that incorporated large red-rock canyons and cliffs.



Not much to work with

SUPERINTENDENTS WITH SMALL BUDGETS DO WHAT
THEY CAN TO PRODUCE THE BEST PRODUCT POSSIBLE

by
JOHN
WALSH

"Doing more with less" is a mantra heard a lot these days. Not every golf course superintendent has the luxury of a \$750,000 budget or more to keep the track he maintains in the best condition possible. The average golf course maintenance budget is \$427,500, according to the 2005 GCN subscriber survey; but 40 percent have budgets less than \$250,000, so there are plenty of superintendents throughout the country who face significant challenges producing a desirable product with what they have.

When working with a small budget, everybody at a facility needs to be on the same page, according to Teron Bay, CGCS, at The Willows at Kenton County in Independence, Ky.

"The whole staff, from the general manager to part-time employees, needs to understand what the reality of a small budget is," says Bay, who has budget of \$275,000 for the 18-hole course. "We all want the best possible product to give to the public/membership, but the reality is that we're going to have to compromise on most all facets of the operation. This means all management team members have to be on the same page when it comes to expectations of the facility."

The Willows is part of the 54-hole Kenton Golf Course, which has a maintenance budget of \$800,000. A superintendent manages each 18-hole course, and one of them oversees the entire facility.

Of the \$275,000 Bay works with, \$190,000 is spent on labor (\$130,000 of which is tied up among three guys), \$40,000 is spent on chemicals, \$30,000 is spent on city water and \$15,000 is spent on miscellaneous items such as flags and cups.

Because of the size of the budget, Bay, who's in his fourth year at The Willows, says he and his staff run a strong integrated

pest management program and carry out more curative applications than preventive ones.

"Sometimes it works well, but sometimes we lose grass," he says. "Being a public facility, we have acceptable levels of grass loss before losing customers. The acceptable level on the bentgrass greens is zero, but on the bentgrass fairways and tees, it's about 10 percent. We're blessed with large tees."

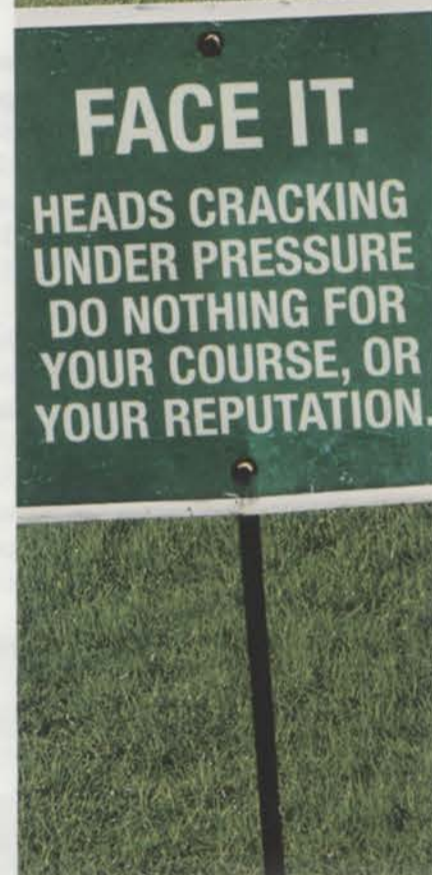
Operating with a small budget makes it difficult for superintendents to be on target at the end of the fiscal year. Last year, Bay says he met budget; but this year, he says he'll be a little over because of the dry fall the area experienced last year. Bay lost a lot of grass, so he spent money to grow it back.

Budget pressures

With a budget of \$100,000, \$57,000 of which is spent on labor, staffing is the biggest challenge that faces Cameron Tuss, golf course superintendent at the nine-hole Signal Point Golf Course in Fort Benton, Mont. During the winter, Tuss is the only one working at the course. However, he has three part-time employees who work from April through November. Because of the small staff, it's a challenge to get everything cleaned up and in shape in the spring, he says.

"I usually do daily maintenance work that, on other courses, a general laborer would do," he says. "I spend a lot of time on the mower, and because of that, I get behind on paperwork; and projects fall behind sometimes, too. Right now, I'm working on expanding a tee box. I work on it for a couple of hours whenever I can."

"Things might not get done as often as on other courses, but we get compliments about the course because the golfers know how small our budget is," he adds.



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Photo: Ontario Golf Course

With a small budget, Mark Copley, superintendent at Ontario Golf Course in Oregon, can't make all the improvements to the course he wants.

Aside from staffing, rounds have put pressure on Signal Point's operation. During the past five years, Tuss' budget has decreased \$10,000, mainly because of the decline of the number of rounds played and annual memberships. The city-owned facility has 105 members. A single membership is \$350, and a family membership is \$550.

"We average about 10,000 rounds a year, but the average age of the people in the community keeps increasing, and we're losing memberships," Tuss says.

Competition also is putting pressure on Signal Point. It's coming from Great Falls, which is 36 miles away and has two city courses, one private course and one executive course. There also are many nine-hole

courses in a 200-mile radius.

Additional pressures are caused by the local economy, which isn't thriving because it's a farming town, according to Tuss.

Despite a gloomy outlook, Tuss says the golf course won't close because the members won't let it happen. The board of directors is trying to increase play through advertising, promotions and group play.

Just the basics

At the 18-hole Ontario (Ore.) Golf Course, golf course superintendent Mark Copley says the \$230,000 maintenance budget, 60 percent of which is for labor, allows him to accomplish basic maintenance needs but few course improvements.

When Copley came to Ontario five years ago, the budget was \$280,000, and the revenue fell way short of that, he says. For the past three years, the budget has been \$230,000. Three years ago Copley was under budget considerably, but last year he was about \$8,000 over budget, partly because of a green renovation project, sewer project and new heating and cooling in the clubhouse. So far this year, he's a little above budget.

Even though Copley doesn't have much to work with, golfers are supportive of Ontario, he says. When he arrived at the course, it was in bad shape. Since then, he has been making improvements, but the course is only half-way to where he would like to see it. Copley says he and his staff put a lot of pressure on themselves and set their own expectations, which are greater than the public's.

"I'm fortunate to have an extremely dedicated staff – they live and breathe this course," he says.

If he had a budget to finance improvements, the two biggest ones he would make would be on the bunkers and irrigation system. However, he does little things, such as bunker edging and refilling during the off-season to improve the course. He completed two minor irrigation improvements to get better coverage in some areas. He's also in the process of redigging eight bunkers that have been grassed in. He has finished three so far.

Even though Copley's budget is too small to finance a renovation or considerable improvement projects, he was able to rebuild half of a green that was damaged from black layer last spring. The project cost was about \$10,000 including labor. Copley held a fund-raiser to generate money to help pay for the rebuilding of the green. Most of the cost was covered by the funds raised, but not all. Some funds came from the budget, but it didn't take that big of a hit, he says.

Ontario features bentgrass and *Poa annua* on the greens, which are push up and sand-based; tees are bluegrass, bentgrass and *Poa*; and the fairways are a mix of Kentucky bluegrass, ryegrass and *Poa*. Courses with larger budgets most likely would spend the time and money to eradicate the *Poa*, especially on the greens, but at Ontario, it's too costly to remove.

Despite not being able to make the improvements he wants, Copley says the conditions of the course won't slip too far.

"If we need it, we'll get it," he says. "The bottom line is the golf course, and we don't willingly take from that." GCN



Photo: The Willows at Kenton County

Because of the size of the budget at The Willows at Kenton County, superintendent Teron Bay says there are more curative pesticide applications than preventive ones.



Limited flexibility

SMALL BUDGETS FORCE SUPERINTENDENTS TO BE MORE CREATIVE AND APPROACH MAINTENANCE DIFFERENTLY

by
**JOHN
WALSH**

A dollar saved is a dollar earned, right? Well, golf course superintendents with small budgets are trying to earn thousands of dollars. They're reducing expenses in areas of their budget – equipment, labor, pesticides, fertilizer and water – without negatively affecting course conditions too much.

For Pat Blum, golf course superintendent at the nine-hole, semiprivate Colonial Acres Golf Course in Glenmont, N.Y., the environment is the driving force behind

his budget. Last year, he spent \$61,399, including labor, maintaining the course, which has been certified by Audubon International and is part of the Environmental Protection Agency's National Environmental Performance Track.

"We're the only golf course in U.S. history to be accepted into any EPA program," Blum says.

As part of the Performance Track program, Blum set three goals to reduce outputs – such as waste, volatile organic compound emissions and synthetic pesticides – and is trying to meet those reduction goals in three years.

Blum's first goal is to reduce the total amount of waste produced by the maintenance staff, which used to produce 3,000 pounds of waste annually. Blum wants to reduce that to 2,100 pounds. Currently, the staff is producing 2,500 pounds and has done so by recycling, using more plastic containers and reducing the amount of paper waste.

Blum's second goal is to reduce the amount of synthetic pesticides used to 1,000 pounds a year. In 2004, Blum and his staff used only 438 pounds. In 2005, they used a little more than 1,000 pounds because they were part of a regular-pesticide-use study.

Blum's third goal is to reduce the energy used in the pump house to 1,000 kilowatts a year, and currently is within 50 kilowatts of that goal. To reduce usage further, the pond aerator will run one hour less a day.



Photo: Colonial Acres Golf Course

Last year, Pat Blum spent just \$61,399 maintaining the nine-hole Colonial Acres Golf Course.



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Photo: Gary Gold

Pat Blum's environmental efforts have saved money.

"When we first started the environmental goals, a lot of people said that it couldn't be done, which motivated me even more," Blum says. "It's a snowball effect. You start saving in one area, and that leads to savings in another. Colonial Acres is a course where I found a way to make it happen. Other courses can do it, too, understanding that soil profiles and energy capacities are different."

The savings from Blum's environmental efforts have kept the course in business. In the spring, play declined partly because of weather and fuel prices.

"We would be out of business right now if we were spending what we did in 1998," he says.

Selling the idea of a more environmentally sound course to Colonial Acres' 20 stockholders wasn't difficult, according to Blum.

"I needed to get this place environmentally sound and wanted to do it for my daughter, and that was my pitch to the

owners," he says. "They all have grandkids, so it was an easy decision for them."

Not so well equipped

Aside from savings through sound environmental practices, superintendents can stay within a tight budget by using equipment wisely. Because The Willows at Kenton County in Independence, Ky., is part of the 54-hole Kenton Golf Course, its staff shares maintenance equipment, such as tractors, aerifiers, topdressers and sprayers, with the other two courses that comprise the facility. Sharing equipment that isn't used daily results in noticeable savings, according to Teron Bay, CGCS, at The Willows. He estimates sharing equipment saves each course \$200,000 a year.

Bay and his staff also make due with old equipment.

"The general thought is that equipment should be turned over every five or six years," he says. "We have tee and greens mowers that are in the 15- to 20-year-old

range. We also have to adjust our expectations because this old equipment doesn't work as well as newer mowers or give as fine a result."

Bay says he and his staff have a "beg, borrow and steal" mentality because they have to use every possible resource available to the facility.

"We borrow a lot of equipment from neighboring courses, as well as letting them borrow equipment from us," he says. "We also have to find treasure in what others would see as junk. We're able to rebuild and even build equipment and attachments from scratch."

At the nine-hole Signal Point Golf Course in Fort Benton, Mont., golf course superintendent Cameron Tuss hasn't purchased new equipment in five years. Tuss says he has the basics but doesn't have what he calls luxury equipment, such as a fairway aerifier, leaf blower or debris sweeper.

The equipment Tuss uses forces him to do things differently. When greens are top-

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dressed after they've been aerified, he has to drive around in a truck filled with sand because the topdresser is so small.

Mark Copley, golf course superintendent at the 18-hole Ontario (Ore.) Golf Course, uses older equipment, too. His greens, grounds and rough mowers are 5 years old and the fairway mowers are 9 years old. Although older, Copley says the equipment runs well, thanks to the mechanic who keeps them in great shape. Yet even though the equipment is working well, Copley fears the fleet could go down all at once. Currently, he's working with the green committee to create a capital expenditure budget.

At Colonial Acres, Blum is saving money on equipment, mainly through wear and tear and fuel, because he's maintaining less turf. He hasn't bought a new piece of machinery in three years.

Short handed

Labor is the biggest part of any maintenance budget, yet with smaller budgets, superintendent don't have many people to help them. The staff at The Willows includes three full-time workers other than Bay and three to five part-timers who work 24 hours a week from March 1 through Thanksgiving.

The staff at Ontario Golf Course consists of three people for grounds and two in the clubhouse – all are seasonal. Copley also

has a mechanic that works 20 hours a week for nine months.

Blum's staff consists of two full-time employees (one of which is Blum) and one part-time employee. He has no full-time mechanic.

Blum says the labor line item in his budget has leveled off since 1998 because the amount of maintained turf went from 22 acres in 1997 to 14 acres. Pond and native area expansion contributed to this reduction.

Along the same line, increasing no-mow areas has helped Bay.

"Over the past five years, we have let more than 100 acres of once mowed areas grow up as nature areas to save on equipment and man-hours," he says. "This saves us more than 40 man-hours a week."

Copley says that with a smaller budget, fuel prices hurt a course like his more than a bigger-budgeted course.

"Fuel prices are killing us," he says. "We used to spend 40 hours a week cutting the rough, and now were down to 30. I'm letting the native grass go, but the golfers aren't responding to it well."

Less input

Management of smaller-budgeted golf courses also has to spend money wisely when it comes to pesticides and fertilizers. Because The Willows is a municipal golf course, the county bids on the chemicals

used on all its courses.

"We get better pricing on the generic chemicals," Bay says. "The prices of [some name-brand] products are fixed no matter how much you buy."

Copley says he's able to make two full fertilizer applications that are nutrient specific.

"I'm lucky to get one-quarter of what should be put down," he says.

Thankfully, Copley says he doesn't have to use insecticides. He applies two broadleaf herbicides and uses plant growth regulators on the greens. He also uses fungicides for snow mold and anthracnose. Most of the fungicide use is preventive rather than curative.

With a small budget, Copley says the threshold for acceptance of course conditions is high among the golfers that play at Ontario.

"We struggle with weeds in the fairways, but golfers understand as long as they see us spraying," he says.

Since Copley arrived at Ontario, he trimmed unnecessary items from the budget based on soil tests. For example, he eliminated the broad use of wetting agents and focused on hot spots.

Last year, Blum spent \$4,800, reduced from \$9,800 eight years ago, on pesticides and fertilizers. During that time, there was a trial-and-error period switching from synthetic pesticides to organic ones.

Use sparingly

Water use is another area that needs to be managed carefully. Bay says he keeps the course pretty dry.

"We do a lot of hand watering, even on fairways and tees, to keep water use down at times," he says. "There's some brown grass at times, but we keep it at an acceptable level before we start to lose golfers."

The water used to irrigate Colonial Acres is 100 percent runoff, which is collected in a holding pond. Well water or city water isn't used. Blum says the tees, greens and fairways are irrigated, but the fairways don't get irrigated as much as the greens and tees.

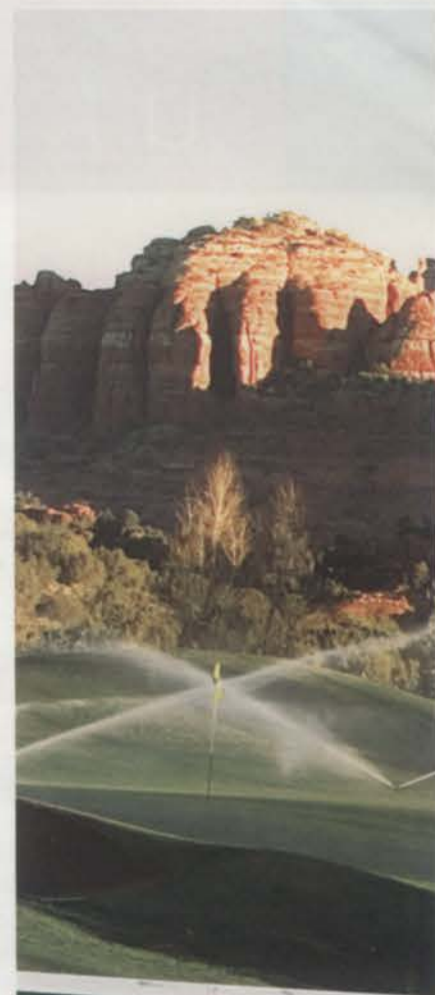
Other examples of getting by on a small budget include making your own tee markers, directional signs and benches, which Bay and his staff do.

"We do a lot of recycling," he says. "We're pack rats. If anybody in the county is throwing something away, we'll take it." GCN



Cameron Tuss maintains the Signal Point Golf Course without what he calls luxury equipment such as a fairway aerifier, leaf sweeper or debris blower.

Photo: Signal Point Golf Course



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PROJECT TIMELINES, CLIMATE AND COST DETERMINE TURFGRASS SELECTION

by
JOHN
TORSIELLO

When members of Oak Hill Country Club in Omaha, Neb., approved a renovation project for nine of their 18 holes, golf course superintendent Dan Maddox went into action. He set in motion a master plan that called for growing sod he and his staff would use to resurface several acres of fairway and tee boxes. The result of Maddox's efforts was a \$200,000 savings and a new playing surface members rave about.

"We didn't have the window to go with seeding the areas that were being redone, so we were forced to go with sod," he says. "To truck sod in would have cost about \$1 a square foot. Do that on four to five areas of fairway and tees, and the cost goes through the roof."

Maddox did his homework. When he knew renovations were possible, he grew

one acre of L93 bentgrass on the property to determine if the strain could withstand the sometimes-harsh climate of Omaha – and if members thought the turf was suitable.

"It was an excellent choice because the bentgrass is disease and heat resistant and it has great upright growth," he says. "It has received the highest grades in national trials. And the members went out there, hit off it and liked the way it felt."

Maddox used four acres of the club's practice area to grow the L93 used for the renovation. He also contracted with a local nursery to grow 12 acres of bluegrass for the rough areas that were resodded.

Additionally, the turf on the greens was killed to make the switch to A4 bentgrass, which provides a consistent putting surface that can maintain its speed daily, according to Maddox.

Of course, not every superintendent has the luxury of available land and a 14-person staff that Maddox had when undertaking such a project.

"It took a lot of coordination, timing and planning," he says. "We even had a 20,000-square-foot nursery where we grew A4 for a worst case scenario if the sod didn't take. You have to have the room to be able to do something like this on a big scale."

Deciding what works best

The project at Oak Hill might be out of the ordinary because most course owners and architects opt for the more traditional process of seeding fairways, tee boxes and roughs when building new courses or renovating existing ones. The choice of grasses used in the process is vital and a decision usually is reached by a consensus of those involved in the project.

"We rely on an architect to help us in the selection of grasses for a course," says Al Martell, vice president of golf properties for Castle and Cooke, which is overseeing the construction of nine new holes at the Saddle Creek Resort in Copperopolis, Calif. "There will be input from myself, the superintendent, the general manager and probably the consulting firm we use. It will be done by

committee and after much research."

Agronomists also are used when selecting turfgrass for a project.

"Almost every golf course architect I know will consult with an agronomist when developing specifications for grassing a new or renovated course," says Jim Connolly, a consulting agronomist who has worked with Pete Dye and Palmer Course Design and in the Asian market. "Every owner will consult with somebody he considers an expert in the field."

"Twenty years ago an architect had a list of grasses he used in his last project and he selected from that," he adds. "Now, while the species used on courses have remained about the same, the strains change every 12 months, or so it seems."

Kevin Atkinson, a golf course architect with and partner of Phelps-Atkinson Golf Design in Evergreen, Colo., still relies on his own track record with certain grasses, as well as input from industry professionals, to determine what grasses will work best for a particular grow-in.

"I lean on seed suppliers for information about the different and new varieties of grasses and what would work best in the climate the course is in," he says. "Everyone is probably going to push their own seed, so I get two or three opinions. We rely heavily on the superintendent who needs to have a comfort level with the type of grass he'll be managing. Some superintendents will have had success growing certain types of bentgrass fairways and others say it takes too much water and that 'this isn't the place for that type of bent.' Usually, it's a compromise of some sort."

"Golf is my passion, so when I'm out playing I'm looking at everything under the moon," Atkinson adds. "I look at the quality of the turfgrass, the color, how well it recovers from ball marks. It's all knowledge that I put into the bank when it comes to the next project."

When renovating a course – when downtime means revenue loss or unhappy members – it's crucial to get the course back in playing condition as quickly as

Tips for turfgrass selection

- Gather as much information as possible. Think big picture and long term.
- Understand the climate and weather conditions that affect the golf course and what it will mean for proper turf growth and maintenance.
- Find out what grasses have been successful at nearby courses or in areas of the country with similar climates and growing seasons.
- Consult with as many experts as possible – golf course architects, seed and turf distributors, agronomists and golf course superintendents.
- Plot test different grasses to get an indication of how well the grass will perform.
- Weigh the pros and cons of sod versus seed.
- When sodding a portion of a course, make sure the imported grass is pure, and purchase it from one source to avoid contamination of existing turf or new grass.

Source: GCN research

possible. That's why the PGA Golf Club at PGA Village in Port St. Lucie, Fla., decided to use Champion ultradwarf Bermudagrass when it renovated the greens last year at PGA Country Club, one of four layouts at the facility. Champion also is being used on green renovations on the club's North and South courses this year.

"We aerified and verticut the putting surfaces multiple times to beat up the organic material, and then removed about 80 percent of the matter on the greens at the country club last year," says Bud Taylor, director of golf. "We finally sprayed the greens to kill them off and then put on a thick layer of topdressing after seeding with the Champion ultradwarf. In eight weeks, we had perfect putting surfaces; and what

we did had a cost factor that was miniscule compared to the traditional way of going in, coring the greens and starting all over."

Because Champion is dense, tight grass, it's highly manageable for the club's needs, Taylor says.

"It's as close to bentgrass without being there," he says. "We can have the greens at a nine or 9.5 on the Stimpmeter or take them to 10 or 11 for a tournament in 14 days. We didn't have that ability or consistency with the old greens."

Like Oak Hill, A4 bentgrass was an ideal selection for the greens at the recently opened Lederach Golf Club in Harleysville, Pa., according to Anthony Cianci, vice president of mid-Atlantic operations for Billy Casper Golf, the management com-

pany that operates Lederach.

"We've gotten great root depth with A4," he says. "It likes to be cut low as opposed to some of the more traditional bentgrasses that will stress if they're cut too low. With A4, we can trim the greens down to micro-inches, and the putting surfaces can be superfast. Comparatively, older strains allow you to take the blades down to perhaps only an eighth of an inch."

The sod choice

An area's climate is always a consideration when selecting seed for grow-ins on new and renovated courses.

"We get triple-digit temperatures in the summer, but it cools off at night with rain during the winter months, so that's why

Management of the PGA Golf Club in Port St. Lucie, Fla., chose Champion ultradwarf Bermudagrass when it renovated the greens last year.
Photo: PGA of America

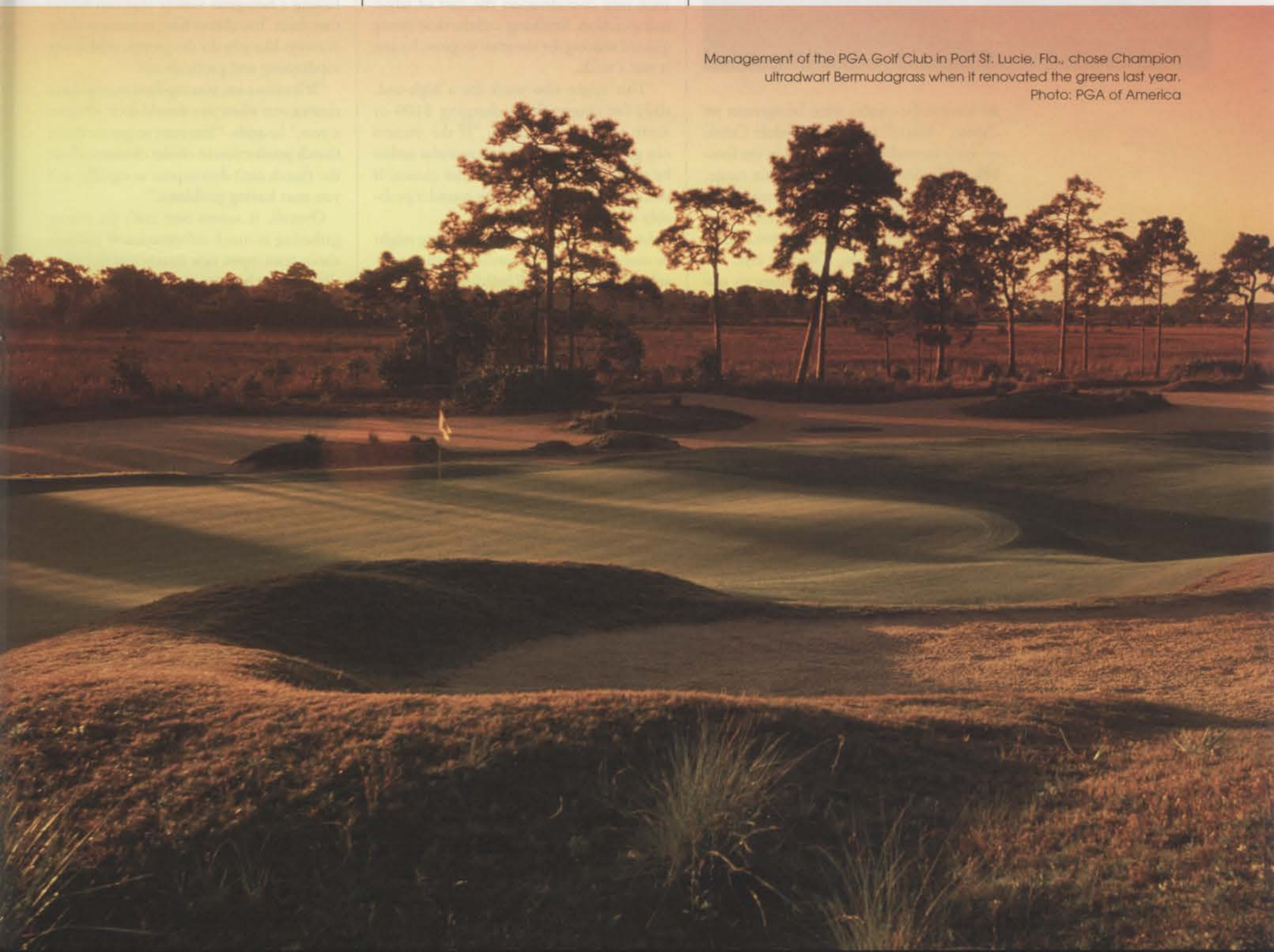




Photo: Saddle Creek Resort

After much research, a committee will choose the turfgrass for the new nine holes being built at Saddle Creek Resort.

we have to be careful what bentgrasses we choose," Martell says about Saddle Creek, which is located 1,000 feet high in the foothills of the Sierra Nevada mountain range.

In some areas, grass grows from mid-April to the end of September, and other areas, especially those with elevation, have a much shorter growing season, Atkinson says.

That's when using sod becomes an option. Trucking in sod is more expensive, but it might be necessary if the climate or the project timeline doesn't allow for a suitable grow-in period.

"We had to do a little of both, seeding and sodding, when we redid the course

for this season," says Jon Wood, general manager of the 108-year-old Waterville Valley (N.H.) Golf Course. "All the greens and tees were sodded, and the fairway areas were either sodded or hydroseeded. Because we wanted to make them playable this year – the project was started last October – we had to use a lot of sod. We are fairly high in the mountains, and winters tend to come sooner and last longer."

Another reason to use sod instead of seed is financial. While it might initially cost more, sodding can be beneficial.

"I'm working on a project where we're sodding 70 acres of fairways, rough and tees for a new private club," Atkinson says. "The biggest reason for doing this is to get the course open sooner and get the cash register going quicker. When the owner took into consideration the cost of labor, fixing erosion, fertilizing and the time sitting around waiting for the grass to grow, he saw it was a wash.

"This might also work for a high-end, daily-fee course that's charging \$100 or more a round," he adds. "If the owners can get the course open six months earlier by sodding, it might be the wise choice. If you're charging \$40 or \$50 a round it probably doesn't make sense."

Another scenario in which sodding might be more effective than seeding is when a developer attempts to sell building lots around a golf course and wants the course open for use as advertising to entice buyers.

Some developers combine growing grass on a majority of the course with sodding areas around greens and portions of the fairway that are susceptible to washouts.

When sodding portions of a course, it's recommended to make sure the imported grass is pure and purchase it from one source to avoid contamination of existing turf or new grass.

Potential pitfalls

With progress and technological advances in turfgrass come potential pitfalls. For example, it's imperative for owners and superintendents to think long-term when selecting fairway grasses, Connolly says.

"One of the biggest issues today is the desire to have a fairway in which the grass can be mowed to a quarter of an inch to provide the optimum playing surface," he says. "You can do some cool things to the golf ball on a fairway like that, but people need to be aware of the increased maintenance needed having a bentgrass variety that can be cut that short. You almost have to manage those fairways like you do the greens, with more topdressing and pesticide use.

"If it rains a lot, you topdress maybe three times a year when you should do it 10 times a year," he adds. "You start to get excessive thatch production in cooler climates where the thatch can't decompose as rapidly, and you start having problems."

Overall, it seems one can't go wrong gathering as much information as possible about grass types, new strains and the affect climates can have on turf growth and management, which usually means consulting an agronomist. GCN

John Torsiello is a freelance writer based in Torrington, Conn. He can be reached at jtorsiello@megahits.com.



Photo: Saddle Creek Resort

Those involved with selecting a type of bentgrass for the new nine holes being built at Saddle Creek are considering the climate of the Sierra Nevada Mountain range.