



Penncross green at Las Colinas Country Club in Irving, Texas. Photos copyright: Larry Kassell.

Bentgrass Southern Style

By Michelle D. Sterbakov



Jerry Lemons changing cup at Old Hickory.

Creeping bentgrass, the “Rolls Royce” of grasses according to one golf course superintendent, has expanded its range of popularity in the past 10 years. Even in the South, where this cool-season grass traditionally is susceptible to various ailments, many superintendents say it’s worth the struggle to maintain creeping bentgrass greens.

Jerry Lemons, superintendent of Old Hickory Country Club in Nashville, TN, says golf course superintendents in his area with bentgrass greens call the time period between Memorial Day and Labor Day “90 days of hell.” Greens maintenance during the summer months requires almost constant attention, and at times, a sixth sense ability for troubleshooting. Still, many golfers prefer bentgrass because it provides excellent putting quality.

“They used to have bermudagrass at this course,” notes Lemons. “But even in the summer months it wasn’t consistent. And in the fall they overseeded spots in the fairway with ryegrass. Instead of playing on

bermudagrass, golfers would end up playing on ryegrass throughout the winter while the bermudagrass was dormant. I had used bentgrass at the course I last worked at in Kentucky. One reason I was hired here was to convert this course to bentgrass. It’s more difficult to maintain than other types of grasses, but with use of proper fungicides, pesticides, and irrigation and mowing practices, it will work.”

One of the most widely used creeping bentgrasses is Penncross, an aggressive turfgrass developed at Pennsylvania State University by Drs. Burton Musser and Joseph Duich. Lemons uses a newer bentgrass on the Old Hickory Country Club course—PennLinks, a less aggressive turf developed by Duich more recently.

“We think it the finest and most true cutting grass that handles our southern climate,” Lemons comments. “Many people are skeptical about it compared to Penncross, which they know more about, but people who have used PennLinks have

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never regretted it. On the other hand, I know of some supers who have used Penncross and now wish they used PennLinks.

"With PennLinks you get better cutting—there's no grain and there's no need for verticutting. That eliminates the need for one maintenance practice that's common with Penncross. Also, the PennLinks blades are superb. They're fine and upright."

Lemons believes that one of the biggest problems with creeping bentgrass is isolated dry spots. These areas often must be hand watered to provide uniform turf. Aeration and treatment with wetting agents are also helpful in solving problems with dry spots.

Another problem, says Lemons, is some greens chairmen who think the course should be "U.S. Open-ready" throughout the summer. This causes problems because in the humidity, the cutting height needs to be raised for the turf to withstand traffic. "We try to grow creeping bentgrass nine months a year," he says. "During the three summer months we just try to keep it alive."

The Vintage Club in Indian Wells, CA has been using Penncross since its inception 10 years ago. Jeff Markow, superintendent of the course, says that Penncross is on 35 of the 36 holes on the golf courses. The remaining hole needed to be replaced last year, and Markow decided to try PennLinks there. Markow says the PennLinks green has not been in place for a full year, so he does not know how it will handle the summer heat in the desert climate.

"The bentgrass provides an excellent putting surface, but when growth slows down in the summer, there is a small problem with traffic and wear," Markow notes. "The turf actually tolerates quite a bit of it—it's just not as aesthetically pleasing during the summer."

"It's not difficult to maintain the turf during the summer. But it does require diligent care. We have very limited disease problems because we're in a desert climate. The only time we really have to worry is at the end of the summer when we get some humidity."

"Mainly, with humidity it's important to have good cultural practices," Markow states. "We do frequent syringing during the summer, and verticutting and light topdressing during the season (not during the summer). In the summer we promote as much rooting as possible, then we just leave the turf alone. We raise the cutting heights

as signs of distress appear. We'll skip some mowing if it's needed.

Humidity is the biggest problem for southern golf courses using creeping bentgrass, most superintendents say. In fact, south of central Florida, it's nearly impossible to manage creeping bentgrass during the summer, according to Dr. Milt Engelke at the Texas Agricultural Center in Dallas. He has conducted research on the heat and drought resistance in bentgrass since 1985. Humidity causes many disease problems in bentgrass and a lot of stress for superintendents.

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"Palmer and Nicklaus use bentgrass on their courses in Florida," Engelke remarks. "But it causes the superintendent stress because of its biological shortcomings in Florida. The only way some plants can survive in that environment is to alter the environment. There is some success at growing bentgrass in Florida, but at what cost?"

"In the breeding program we've targeted those problems. If we can get little or no stress where there is very high heat and humidity, then we can move toward those zones. We will grow bentgrass in Florida, but not yet. We're learning more and more, and it will take time—maybe up to 15 years. In the meantime, we're hoping our work on warm season grasses such as zoysia and bermudagrass will be positive enough so that golfers and superintendents will be satisfied with that turf."

A few golf courses in Florida, such as Audubon Country Club in Bonita Springs (near Naples on the southwestern coast of the Gulf of Mexico) overseed with bentgrass in the winter so that the club's members can at least enjoy it at that time of year.

"During the summer we use bermudagrass, and during the winter we verticut and overseed with SR-1020," explains Walter Owsiany of the Florida golf course.

"During the winter, our turf is about half bentgrass and half bermudagrass. Our members, especially retirees who live up north in the summer and come here for the winter, want or even expect to play on the bentgrass. Sometimes it does get cold here in the winter—our average temperatures fall into the 50- to 60-degree range at night."

Owsiany points out that a comparison between bentgrass and perennial ryegrass for overseeding should consider more than price per pound. Seeding rates for bentgrass are lower since there are almost 20 times more seeds per pound than perennial ryegrass.

L.R. "Skip" Maul at Innsbrook Village Country Club in Ruidosa, NM finds bentgrass management challenging, not because of the humidity as much as the high altitude where the course is located. During the summer, ultraviolet rays hit the course harder than most places, and the winds blow more. Both of these factors are detrimental to the survival and healthy growth of bentgrass.

"Water management is very important," states Maul. "We do a lot of syringing and hand watering. We can't use too much water or that will hurt the grass. We have to know when we've done just enough. And we have to use just the right amount of fertilizer."

The course in New Mexico has been there for 20 years, but Maul just reseeded with bentgrass in May 1990. Originally, the course had Seaside bent, but Maul switched to Putter. He had used Putter bentgrass previously at another course and was satisfied with it.

"When I first got here, the greens were desiccated," Maul reveals. "I thought it would take a year to get healthy turf, but it only took two months. We get a lot of rain, which makes bentgrass susceptible to disease, but the Putter shows resistance to all patch diseases. Putter is a real hardy bentgrass. It's very disease tolerant with normal maintenance."

"We run a lot of preventative maintenance. We start applying fungicide during the last two weeks in May. We look for high humidity and heat, because patch disease will really hit fast and hard up here. We don't wait for the sun to get to the turf before we treat it. We can't afford to lose any turf. We use the fungicides four months a year. I use chelated iron to enhance the color."

Like most superintendents using bentgrass, Maul allows the turf to grow higher at certain times during the year to

help prevent diseases. While creeping bentgrass can often be cut to 1/8-inch, Maul lets his grow to nearly 3/8-inch during the winter because short-cut, frozen turf gets damaged easier when there's still traffic on it. And he also mows higher if he runs into heat stress during the summer.

For Maul, the biggest problem is *Poa annua*. "Verticutting and overseeding in the spring and fall help control *Poa*, but it's still a constant struggle to keep it away. Last week I bought 75 pounds of seed so I can go next week and get out the *Poa*. Some courses just give in and use it, but it doesn't work nearly as well as bentgrass. *Poa* really likes it wet."

The Bethesda Country Club in Bethesda, MD was among the first golf courses to use bentgrass turf on its greens. The course opened during the 1920s and began using C-series creeping bentgrasses. Dean Graves, who has been superintendent at the course for the past two years, notes that there are six different ages of the courses. The older ones still use Cohansey, while the newer ones are of Penncross.

"Penncross is a darker green, more aggressive grass that withstands summer heat better," says Graves. "I'd like to convert the

More superintendents have become educated about bentgrass management.

Cohansey greens but that would cost \$1 million, to completely renovate all the old greens and start from scratch. You can't reseed if you want immediate results. It would probably take four or five years to do that. It's less expensive, but it's more time-consuming.

"To care for the greens, I usually just try to keep them as dry as possible. I apply pesticides as needed. In the summer this is a very high stress area for diseases. I do spoon feedings of fertilizer and hand water often to accommodate the turf as much as possible."

"In the past five years, it's gotten easier to manage bentgrass. New aeration equipment has become available, new fungicides are being used, and in general, more superintendents have become educated about how to grow bentgrass properly," notes Lemons.

In addition, new types of creeping bentgrasses have been developed in recent years and more are still in the works. Dr. Engelke, whose work is sponsored by the United States Golf Association and Bentgrass Research, Inc., a group of southern golf course superintendents, is optimistic that conditions for bentgrasses will soon be improved.

Two years ago, bentgrass test plots were seeded at test locations across the U.S. and Canada. The first results have just become available and are very pleasing, according to Engelke. When the new bentgrass goes on the market, which he hopes will be two to three years from now, close to \$1 million will have been spent on the research.

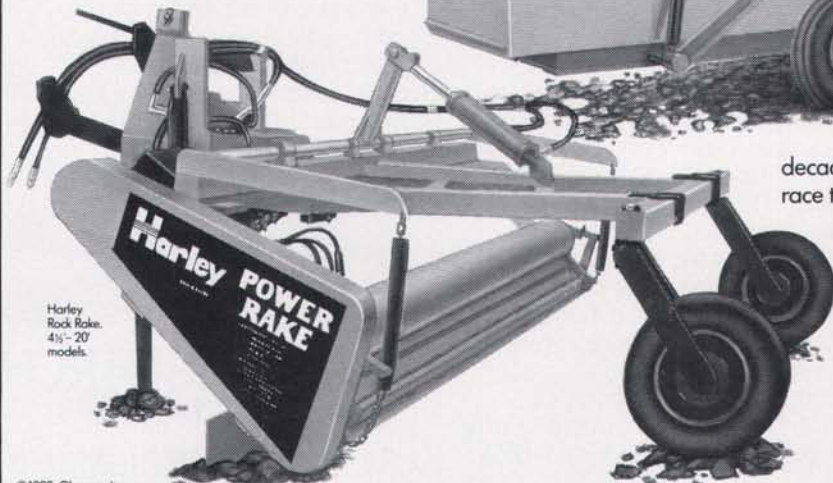
"We're trying to get bentgrass better adapted to its environment," Engelke says. "There is a very good chance for success, and we will all benefit from it." ●

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