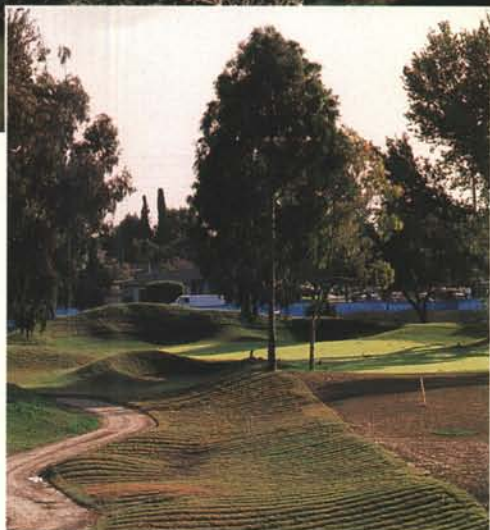




Two views approaching first green at Cypress Golf Club. Forty-two of the courses's 105 acres are Prairie Buffalograss (strip sodded on left).



## Cypress Golf Club Installs Buffalograss to Help Save Water

*Having devised a course filled with dramatic mounds, Dye's next challenge was to find a turf that would thrive in Southern California's drought-stricken environment.*

The challenge facing developers at Cypress Golf Club was how to construct an 18-hole championship golf course on just 105 acres. The site is in the city of Cypress, CA, surrounded by urban development.

The owner, Fuji Country Ltd. (FJC) of Tokyo, Japan, hired Perry Dye of Dye Designs, Inc., Denver, CO, to design the course. He wanted a memorable course that was also in harmony with environmental concerns. With his legendary flair, Dye used railroad ties and mounding to create an amphitheater effect.

In all, there are more than 20,000 railroad ties on the course. Of that number, more than 10,000 ties form the lake edges for the series of nine interconnected lakes. Special drainage funnels runoff water into the lakes where pumps use the water to irrigate the course.

The mounds range from small, undulating swells to severe vertical drops that accent greens and fairways. "He did some very dramatic mounding," said Tom Buzbee, project manager for Kajima Engineering & Construction, Pasadena, CA, the course's construction contractor.

*continued on page 8*



## Cypress Golf Club

*continued from page 7*

The radically sloped mounds also serve a safety function. They keep errant shots from sailing off course, Buzbee said. On some holes, if a golfer hits an approach that looks as if it will fly past its target, a mound catches the ball and rolls it back toward the green.

Having devised a course filled with dramatic mounds that rise and dive, Dye's next challenge was to find a turf that would thrive in Southern California's drought-stricken environment. Although Cypress is not yet under mandatory water reductions, most Southern California water districts have required 10- or 20-percent reductions, said Alan Andreassen, golf course superintendent for Cypress Golf Club.

After examining the different turf options, Dye decided to go with Prairie's buffalograss. Dr. Milt Engelke of Texas A&M University developed Prairie, one of the newer buffalograss varieties.

### History of Buffalograss

Native buffalograsses thrived on the country's vast arid prairies. They provided

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***What attracted Dye to Prairie was its low growth habit. It grows about 5- to 6-inches high and stops growing.***

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a food source to giant herds of buffalo and sod for little houses on the prairie.

Researchers originally developed buffalograss as a forage grass. Buffalograss is naturally adapted to areas with 12 to 35 inches of annual rainfall, according to the Bamert Seed Company. It also has the ability to survive long periods of drought.

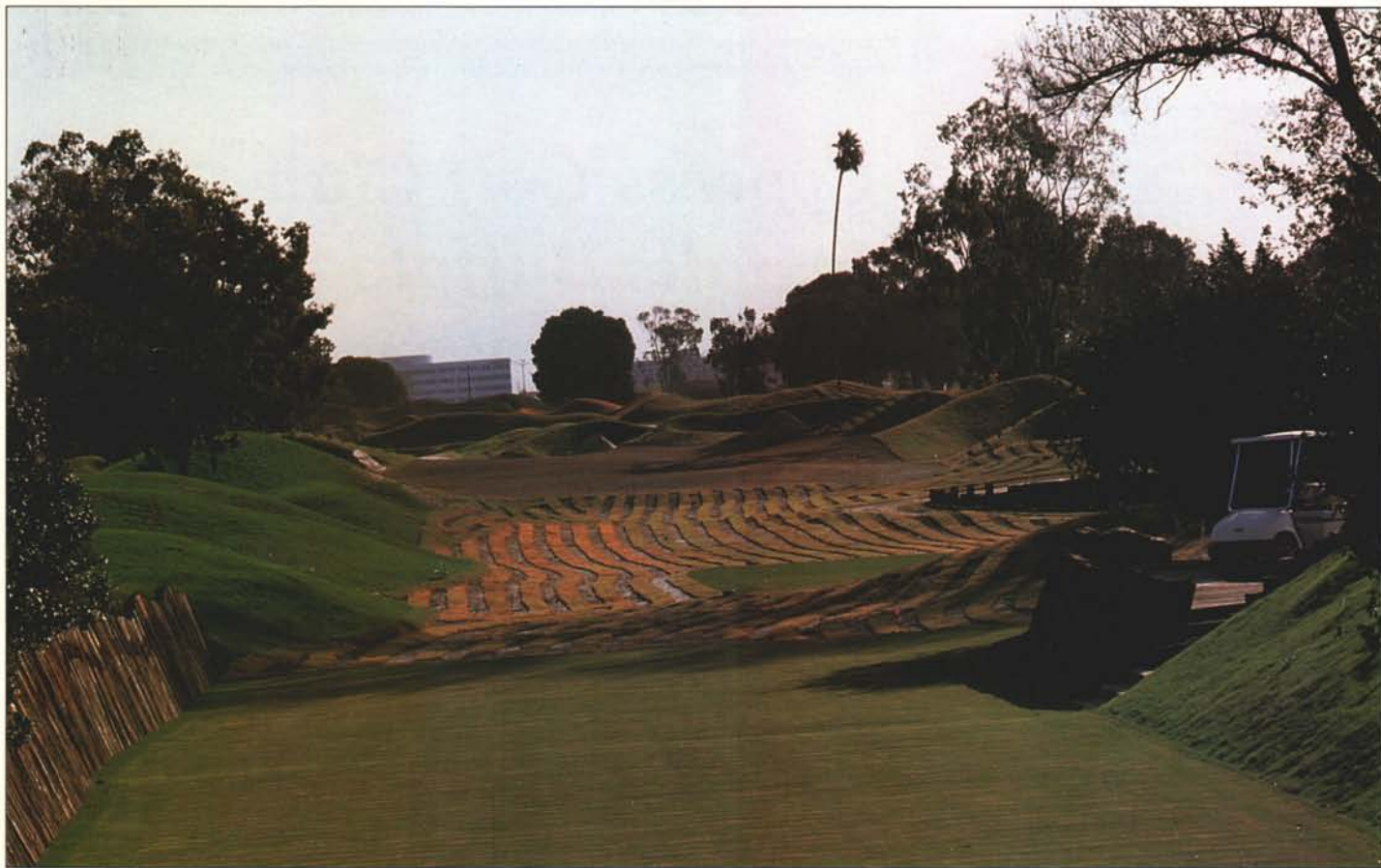
Texoka, Sharp's Improved and common seeds have been available to turf managers and agricultural growers for years. Newer varieties designed for turf use are gradually becoming available.

Topgun and Plains are two varieties Bamert Seed Company is hoping to have available for 1992 or 1993. At the University of Oklahoma, researchers are working on Bison, a variety they hope will be available soon.

Prairie and 609 are the two most available of the newer buffalograss varieties. Prairie is being grown by six producers, of which two have the right to sublicense. Crenshaw & Doguet Turfgrass, Austin, TX, is one of the producers with the right to sublicense. David Doguet, president of Crenshaw & Doguet Turfgrass, estimates that 400 acres of Prairie will be commercially available in Texas in 1992. There will also be 10 acres in California, five in Arizona, five in New Mexico and 10 in Oklahoma, he said.

The variety 609 was developed by the University of Nebraska under the direction of Dr. Terry Riorden. Crenshaw & Doguet Turfgrass is the exclusive producer of 609. Doguet estimates that in 1992 there will be 200 acres of 609 in Texas, 10 acres in California, five acres

*continued on page 12*



View from tee on the eighth hole with Buffalograss strip sodded in fairway. Photos courtesy: Kenneth May, Dye Designs.



## Cypress Golf Club

*continued from page 8*

in Arizona and five acres in Oklahoma. The company is taking bookings from developers hoping to use 609 on projects in 1992. Doguet said 1993 will be the year when 609 will be more widely available.

What attracted Dye to Prairie was its low growth habit. Prairie grows about 5- to 6-inches high and stops growing, said Doguet. Dye figured he could plant Prairie on his mounded areas and drastically reduce mowing, fertilizer and water requirements, Buzbee said.

Dye specified Prairie for 42 of the course's 105 acres. "This is probably the biggest [buffalograss] golf project in the country," said Doguet.

### Installing Buffalograss

Installing that much buffalograss sod in California was not without its own set of challenges. West Coast Turf, Palm Desert, CA, supplied some of the Prairie sod through its sublicensing agreement with Crenshaw & Doguet Turfgrass. However, the bulk of the sod had to come from Texas.

When sodding is complete in February 1992, more than 100 refrigerated truckloads of sod will have made the trek

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***No other golf course  
in California has  
as much  
buffalograss as  
Cypress Golf Club, so  
everyone is learning  
about how to best  
maintain the turf.***

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from Texas to California, Doguet said. The initial shipments were held up by the California Department of Agriculture for testing. Once the sod passed tests and the permitting was in place, the shipments flowed freely.

Installers solid-sodded the steepest mounds to help prevent erosion. On the remainder of the rough sections, crews strip sodded every other row. Buffalograss sends out runners, causing it to creep. Andreasen hopes the strip sodded areas will grow together by the summer of 1992.

The buffalograss thrived on neglect, Andreasen said. Some freshly sodded sections sat for as long as three days without water. They established as well as sod that was immediately watered in, Andreasen said.

In general, Andreasen tried to irrigate the freshly sodded buffalograss daily for the first few weeks. Then, he backed off irrigation to about 0.15-inch of water twice a week. He found that all the buffalograss turned brown immediately after it was installed. However, he said it started to root even before the turf greened up.

The buffalograss likes dry conditions, Andreasen said. "The drier it was, the more runners it sent out. The less you did to it, the better off it was."

Bringing in sod by refrigerated trucks greatly increased the course's construction costs. Mike Matsuda, secretary-director of FJC USA, Inc., stayed with the decision to plant buffalograss despite the extra costs because FJC wanted to build an innovative course that set a good example for water use, Buzbee said.

"One of the advantages of the buffalograss is that we can regulate its growth," Andreasen said. By controlling the amount of fertilizer and water



View from behind fourth green looking back toward tee. Bermudagrass sod in front of green and stolons on fairway. Photo courtesy: Kajima.



he applies, Andreasen hopes to be able to keep the turf growing slowly but acceptably green.

### Maintenance Considerations

No other golf course in California has as much buffalograss as Cypress Golf Club, so everyone is learning about how to best maintain the turf. In general, buffalograss likes little water and fertilizer. "There are very few people who can tell us exactly what to do," said Buzbee.

The course is about five miles from the Pacific Ocean, so temperatures are moderate all year. Andreasen will wait and see how high the buffalograss will grow in the moderate weather. He hopes to limit mowings to once a month with a combination of Flymos and triplex reel mowers.

Accenting the roughs, the fairways were planted with Tifway II. Tees and aprons are 328 bermudagrass. The greens were seeded with Seed Research 1020, a new bentgrass variety with good drought tolerance.

In order to achieve maximum water



Strip-sodded buffalograss surrounds 12th tee. Photo courtesy: Kajima.

conservation, the course needed a different kind of irrigation system. The fairways and roughs had drastically different irrigation needs, so full-circle heads at

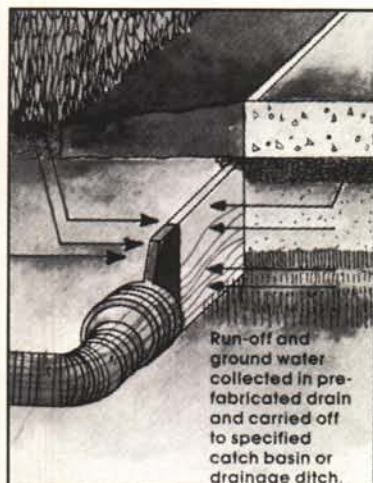
fairway edges couldn't deliver the correct amount of water to both grasses.

The solution was to install a series of part-circle heads along the edges of the

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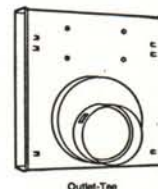
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## Cypress Golf Club

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roughs and fairways. The irrigation designer grouped the heads so bermudagrass areas were isolated from buffalograss areas. In all, the course has more than 2,500 sprinklers, mainly Rain Bird sprinklers with some Hunter high pop-ups.

### *The wild look of the buffalograss accents the manicured fairways and greens.*

A Rain Bird Maxi V central control system tracks and controls the irrigation system. Mike Duszynski, assistant golf course superintendent, was hired primarily to manage the course irrigation system. He is currently developing an irrigation regime for the post-grow-in period. He says only partially in jest that he is going to write 900 programs to irrigate each different area according to individual



Second fairway ready for bermudagrass stolons. Mounds on left were planted with hard fescue.

water needs, said Andreasen.

"We're using only half of the water of the other golf courses in the neighborhood," said Buzbee.

### Combining Beauty and Conservation

Although the up-front construction costs were higher with the irrigation system, drainage and drought-tolerant turf varieties, Buzbee said FJC wanted a course that would be both enjoyable to play and responsible to the environment.

The result is a 6,700-yard, par 71 daily fee golf course that's scheduled for opening in August 1992. "We're doing something here that's an investment in the long run. We've got something that's years ahead of its time,"

The course also has a striking beauty to it. The tight texture and bright green of the fairways yields to the lighter green, coarser mounds filling the roughs. The wild look of the buffalograss accents the manicured fairways and greens.

"It's a pretty grass," Andreasen said. "When it is unmowed and the wind blows through it, it waves like a prairie."

Southern California urban dwellers will have a chance to see a glimpse of the prairie past meeting the urban future on this compact course.

"Golfers who want to have an adventure can come here. It will be controversial. Some people will like it and some people won't like it at all," Buzbee said. □

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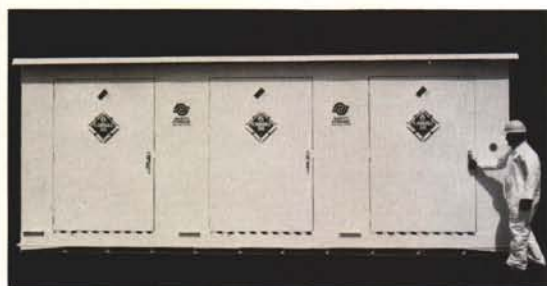


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