

INDOOR NATURAL TURF

All Systems Go at the Silverdome



Thirty years ago, someone at one of America's large

carpet mills had an ingenious idea — indoor-outdoor carpeting. Three years ago, Dr. John (Trey) Rogers, turfgrass specialist at Michigan State University, had a somewhat similar vision — outdoor-indoor turfgrass.

But even Rogers must have wondered how his natural turf would survive four World Cup Soccer matches scheduled this month, indoors, at the Pontiac Silverdome.

In 1991, Rogers was a member of the Michigan bid committee that convinced the Federation Internationale de Football Association (FIFA) to hold first-round World Cup Soccer games indoors at the Silverdome near Detroit.

World Cup Soccer has never been held indoors because FIFA requires World Cup games be played on natural turf. Rogers, had studied other attempts and constructed a plan to maintain turfgrass indoors, and FIFA went along with the idea.

The first real test for the turf was an exhibition match between England and Germany June 19, 1993. The turf, originally grown in California and then trucked to Michigan, had been nurtured in 2,000 hexagon-shaped trays and then

Most of this past year, the Silverdome field was maintained outdoors next to the stadium.

arranged on the Silverdome floor to form a world-class soccer field.

"When we first saw the German national team walk out there with these 3/4-inch-long steel spikes, we had some misgivings," says John Stier, research assistant at Michigan State University. "But we quickly learned that the turf was so thick and so dense that it held up to their cleats and their jumping and sliding on the turf."

"We also had an unofficial pickup game between World Cup officials and Michigan State University staff and students. Then, we had three other sanctioned games between U.S. and England men's clubs, and one game between the U.S. and Canadian women's national teams. So, in all, we had five games and six practice sessions last year."

The field received rave reviews from the players, even though the turf, a mixture of Kentucky bluegrass and ryegrass, was less than a year old. According to Stier, David Platt, co-captain of England's national team, says the field was perfect and that there were no problems with it.

The turf's density and high level of durability was the result of an intensive management program during the two-month grow-in period last April

and May. "And we didn't hold a lot of other events on the turf before the games," Stier says. "We didn't have any Rolling Stones concert, or truck pulls, or carnivals."

Once the turf was indoors, it stayed there for almost a month. "It held up great," says Stier. "Everything just fit together so well that we probably could have gone about 45 days (indoors)."

It took 30 people four-and-a-half days to put the 7.5-foot diameter hexagon metal trays in place last year. Stier says they've learned a few things from the trial run and should whittle the placement time down to three 10-hour days this year.

Other than a faster placement time, not many changes are planned for the indoor maintenance program.

"Everything we did last year we'll do over again this year," says Stier. "We didn't really have to water inside last year because the grass used very little water — the evapotranspiration rate was very low. We probably won't have to water this year, not unless a lot of conditions are much different than they were last year, and I don't expect that."

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WORLD CUP SILVERDOME

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The turf spent the winter in Michigan, outdoors in the Silverdome's parking lot. Rogers and his staff covered the turf December 10 to help prevent winter damage, and removed the covers March 13. The turf was still dormant when the covers were removed, and frost heaving had caused some unevenness. A Jacobsen Greens King IV triplex greens mower with QuickRoll greens rolling attachments was used to smooth out the bumps.

The turf is mowed with Jacobsen Tri-King triplex reel mowers with five-blade reels, and Greens King IV triplex greens mowers with nine-blade reels. Turf Groomer conditioners are used to help promote a denser, more vertical stand of grass. The greens mowers are used to cut the grass at less than 1-1/4 inches; the other triplex mowers used to cut the grass at heights greater than 1-1/4 inches. For World Cup play, the height of the cut will be somewhere between 7/8-inch and one-inch, but a specific height of cut is not set by FIFA.

"Everybody we asked from FIFA has always given us a different answer on the height of cut," says Stier.

"The temperature and humidity are fairly consistent — very consistent," he adds. "It's mild temperatures and relatively high humidity that promote disease."

World Cup games are scheduled at the Silverdome June 18, 22, 24, and 28.

The most difficult task, however, for Rogers, Stier and the entire crew from Michigan State University may come when the turf is removed from the Silverdome for the final time. "We're all going to be looking for a support group," Stier laughs. "It will be hard to top this, it really will."

But the project is far from over. "We're trying to focus a lot of our research effort toward the management and use of natural grass indoors, or in reduced light conditions," says Stier. "If other covered stadiums want to do this on a permanent basis, we'll be ready."

At Michigan State University's simulator dome, built in August 1992 to simulate conditions inside the Silverdome, advanced research is already under way.

"We see a lot of stadiums where they have trouble keeping turf alive in the corners or on the sidelines because the turf is shaded 90 percent of the day by the stands," Stier explains. "Our research

is directed toward maintaining turf under those conditions. We're also looking at maintaining turf under shade trees in backyards because that, naturally, falls under the realm of reduced-light conditions."

This month, after years of preparation, the natural indoor turf at the Silverdome will be put to the World Cup acid test under the watchful eyes of the world soccer community. Its success will not only reflect on the Michigan State University

team of researchers, but will also in part determine the future of natural turf indoors. □

Editor's Note: For additional information on the indoor turf preparations at the Silver Dome, see "Laying The Groundwork For World Cup Soccer," sportsTURF June 1993, Volume Nine, Number Six.

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