Natural turf is "king" in Bahrain

Grass may or may not be greener on the other side of the fence, but halfway around the world, in the nation of Bahrain, it's certainly more appreciated.

Growing quality turf is a stern test for a Mobile, AL, man who went to Bahrain about seven years ago as a vacationer and now serves as an advisor for turf sporting facilities on this desert island.

Earl Stone, a soft-spoken golf architect, spends several months each year developing a golf course, a horse racing track, and world-class soccer pitches in tiny Bahrain, located just east of Saudi Arabia.

Quality turf can be grown in the desert, says Stone, but it's expensive. The biggest problem is water, not only its scarcity, but often its quality, Stone discovered while designing the country's first turf golf tees and greens at the prestigious Bahrain Equestrian & Horse Racing Club Golf Course.

Water for irrigation is scarce (Bahrain gets about two inches of rain annually), and it must be supplied by wells. But, with a pH of about 10 and a salinity of 2,000 parts per million of total dissolvable salt (ppm TDS) at the golf course Stone developed, the water isn't suitable for growing healthy grass.

Stone says the water is first diverted through a "pre-treatment" plant where sulfuric acid is added to reduce the pH (costing the government an estimated $250,000 annually). Then the water goes to a reverse-osmosis desalination plant which, when the membranes are new, drops the ppm TDS to about 900. Constant attention must be given to the plant because of the corrosive effect of the salt water on the membranes which normally last about two years. As the membranes deteriorate, the salinity of the water rises.

This past winter the water registered 1,000 ppm TDS, a level usually considered too high for growing healthy turf.

"We feel like we're getting away with this level because of the leaching effect of the sand," Stone points out. "We were watering ½ inch daily and we feel the salt is leaching right through the root zone."

Sometimes even getting the turf to the site is a major undertaking. In building the country's first grass tees and greens (Bahrain has two other golf courses but they're entirely sand), stolons of Tifton 419 Bermudagrass from Mississippi Grass Nursery, Hattiesburg, MS, were refrigerated and air-freighted to the course.

Bermudagrass, even though it goes dormant because of shortened winter days, is the favored turf for most playing surfaces on the island, including the new soccer pitches Stone is overseeing.

"The government hopes to have the best looking fields in the world for the 1986 Arabian Gulf Cup competition," Stone reports. It's a point of international pride for this small country that now boasts $200 million in athletic facilities.

The Tifton 419 Bermudagrass soccer pitches are overseeded each November with Prelude, a turf-type perennial ryegrass marketed by Lofts Inc. Moderate winter temperatures (from about 50 degrees F. in the morning to 70 degrees F. in the afternoon) provide ideal conditions for the ryegrass, Stone says. Also, water quality in the area of the pitches is significantly better than in other parts of the country.

Natural turf's ability to survive the desert conditions could be signaling the end of Bahrain's dependence on synthetic turf soccer fields.

"They're tearing out all the artificial surfaces," Stone reports "You can imagine the temperature on one of those pitches with artificial turf. (Summer temperatures of 110 F. are common in Bahrain). I can't imagine how they can stand to play on these things."

How are residents of Bahrain reacting to the turf facilities?

Stone reports it's common to see golfers remove their shoes before stepping onto a green for a putt.

Turfgrass experts inspect *18th green at Bahrain Equestrian & Horse Racing Club Golf Course. Pictured (l to r): Earl Stone, Dr. Tim Bowyer, Mohamed Ali Taha, Stan Cath, Dr. Jim Watson, and Barry Gregson.*

National Stadium *in Manama, Bahrain, is planted in Tifton 419 Bermudagrass, overseeded with Prelude perennial ryegrass.*