

Growing Turf in Paradise

By Alan Goforth

The very thought of artificial turf in Honolulu's Aloha Stadium borders on heresy for sports turf professionals. How did a stadium located in a tropical paradise wind up without grass?

"Aloha Stadium was being constructed when I first arrived in Hawaii," says Dr. Charles Murdoch, retired professor of horticulture at the University of Hawaii and state turf specialist. "At first, I was appalled at the thought of artificial turf being used, especially because of the national television exposure with the Hula Bowl and Pro Bowl," he continues, "but the stadium is home to many events, everything from college and high school football to motor sports and concerts. Because of heavy, year-round wear and tear, I realize now that artificial turf was probably the right choice."

If Murdoch has learned one lesson in his 25 years in the islands, it's that, while Hawaii may be a vacationer's dream, it can often pose nightmares for groundskeepers. The year-round growing season is a mixed blessing. On one hand, groundskeepers don't have to worry about winter kill, snow mold or other problems common to the mainland. On the other hand, it's a 365-day season for insects and weeds as well as grass.

Daily turf maintenance takes a heavy toll on equipment. Groundskeepers don't have an off-season to tinker with equipment, Murdoch points out, and equipment companies often run short on parts because of high storage costs.

The bottom line is that successful turf production is not necessarily easier or more difficult than on the main-

land, but it *is* different. Success often comes down to coming up with creative solutions to unusual challenges.

Creating a Sand Base Solution

An unusual challenge is exactly what Honolulu's Punahau School faced in the late 1970s when the exclusive private school received a donation to build a new athletic complex. Punahau wanted to use natural turf but had the same problem as many high schools in Hawaii — heavy clay



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soils with poor drainage. School officials turned to Murdoch for help.

"The field was a quagmire," he recalls. "It obviously needed a sand base for adequate drainage. Our biggest problem is that we had no local deposits of silica sand. Some schools were using regular beach sand, but it has a high pH and is not very effective."

Murdoch scoured the island for an effective alternative and found a local cement company that made sand by crushing basalt. First, drainage pipes were laid 15 inches apart. Then a rootzone of ten-to-one ratio of basaltic sand to soil was created. "We made it

like a USGA putting green, with drainage tile then the rootzone mix," Murdoch says.

The field was seeded with common bermudagrass, a popular all-around grass for sports turf in Hawaii. "Our grasses in Hawaii are similar to those of the southern part of the mainland," Murdoch says.

The field has stood up well to almost 20 years of football followed by soccer and field hockey. Upkeep is minimal. The field is fertilized with a slow-

release 4-1-2 turf fertilizer, and one pound of nitrogen is applied each month. Hawaii has few disease problems, so no fungicides are required. Insecticides are sprayed as needed.

Although most schools on the islands would benefit from similar field construction, he adds that few can afford it. One private high school recently installed a basaltic-rock sand base for its baseball infield.

Murdoch looks back at his work with Punahau School as one of the highlights of his career in Hawaii and believes that effective, creative

groundskeepers will always be in demand in the islands.

"With the decline in traditional plantation agriculture, turf is likely the largest agriculture business in the state," Murdoch says. "Many Hawaiians believe their economic future is linked to tourism, and that means a demand for high-quality turf, from sports facilities to landscaping to golf courses." □

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