



Semi-tropical

Use these maintenance hints to bring paradise—or a reasonable facsimile thereof—to your neighborhood.

by STEVE & SUZ TRUSTY

Think of Hawaii—sandy beaches, perfect soils, ideal weather and lush vegetation. But even paradise needs a little help from its friends to meet tourists' vacation expectations.

The island of Kauai's "red dirt"—a sticky, mucky clay—is one hindrance to plant growth at the Kauai Marriott Resort and Beach Club in Hawaii. Landscape superintendent Kevin Gavagan, however, has a multitude of answers to local problems.

"Red dirt is hard to push a shovel into, and it sticks to the shovel when you dig it out," explains Gavagan, who adds that the material drains and dries quickly to compensate for high moisture. "We create specific, pot-like planting areas for plants that prefer lighter soils. We tailor fertilization programs by plant type to include sufficient nitrogen at the proper intervals to sustain even plant growth."

▲ Salt-resistant seashore paspalum thrives on the lawn areas bordering the ocean.

▶ Gravel beds were added to the water features so they'd serve as biological filters.

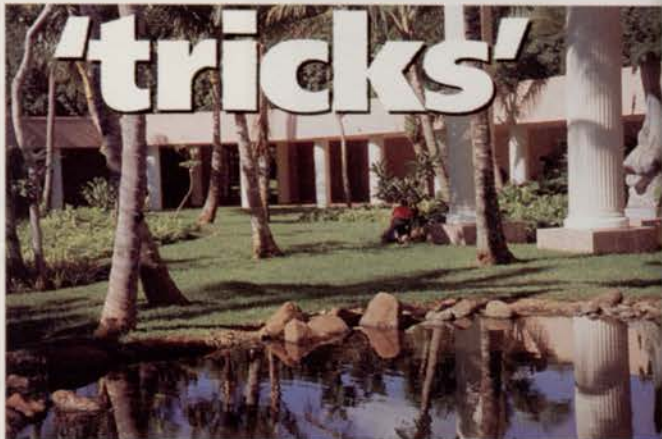
High moisture, low light

It rains nearly every day in Kauai, so little irrigation is needed. And while the stunning rainbows breaking through the clouds delight tourists, light levels are too low for some sun-loving plants.

Almost unbelievably, seasonal fluctuations are also a factor.

"Though seasonal changes are minimal by most stateside standards, by December we've gradually lost one hour of light and five degrees of temperature, so adjustments must be made," says Gavagan.

"We do frequent changeouts of the annual beds to keep color at its peak. Impatiens here hold prime condition for about two months. In similar settings on Maui, they'll last five months. We also use the annual beds to create seasonal effects, such as the massive plantings of poinsettias during December."



Other solutions

Gavagan increases landscape color with a wide variety of trees and shrubs so that several different plants will be in bloom at any given time. Some provide only a few weeks of color, but add texture and shape to the overall design. Others, like the bougainvillea, bloom year-round.

"Plants grow rapidly here, so tree and shrub trimming is a constant task," observes Gavagan. "At approximately 40 pounds each, a falling palm frond could cause injury or property damage. To avoid liability, coconuts must be removed when they approach the size of oranges."

Coconuts washing up on the beach become seedling trees. Windborne seeds sprout wherever they find a foothold. Small plantlets form in the blossoms of plants like

red ginger, and when the weight of the bloom drops the tip of the plant to the ground, these plantlets quickly root. Even trimmings left in place for a few days put out roots. So selective removal is as important as planting in maintaining the integrity and diversity of the design, Gavagan notes.

Invasive weeds and grasses also require constant attention. As aggressive kalinga grass struggles for a foothold on the sandy beaches, Gavagan fights back with the equally aggressive salt-resistant seashore paspalum on the lawn areas bordering the ocean.

Battling high costs

Any landscape renovation on Kauai is compounded by the natural limits of the remote islands—space, materials, equipment and transportation time and costs.

"We're gradually crowding out weeds and bringing existing turfed areas up to our standards," Gavagan says. "With labor costs included, sod runs \$7 per square foot. We can stolonize an area for \$1 per square foot, including labor. We've been working with St. Augustine planted in furrows of rhizomes spaced six inches apart. Our red dirt is deficient in phosphorous, so we incorporate 10-30-10 fertilizer during soil preparation to get it down to the rootzone.

"With our low light levels, it takes twice as long to establish here, about eight weeks, as compared to an average of four weeks on Maui. We'll get full fill-in by five months. To keep existing turf thick and thriving through all the rainfall, we keep steady fertility levels with applications of slow-release nitrogen every three months. Other nutrients are added according to soil

Kevin's tricks:

WHAT: Create pot-like planting areas for plants that prefer lighter soils.

WHY: To correct areas with heavy soils.

WHAT: Frequently change annual beds so plants are seen at their peak.

WHY: To create seasonal effects where seasons are subtle.

WHAT: Shape and control taller plants.

WHY: To allow sun penetration and air movement to understory plantings, turf and groundcover.

WHAT: Selectively remove some new plants promulgated by Mother Nature.

WHY: To maintain diversity of the original design.

WHAT: Use seashore paspalum on areas bordered by salt water.

WHY: To keep invasive weeds and grasses from getting a foothold.

WHAT: Avoid susceptible plant materials; use cultural practices to discourage pests.

WHY: To let natural predators work and avoid extreme pesticide use.

WHAT: Use ferns and vines as groundcovers.

WHY: To provide cover for natural predators when people traffic becomes intense.

test results."

In the hard-to-establish shady areas, Gavagan also is using "El Toro" zoysiagrass, which is a good blend of texture and color with the St. Augustine. Because of its performance in tough spots, Gavagan plans to integrate "El Toro" with the bermudagrass in the sunny areas as well.

A little design

Gavagan worked with Kauai Nursery & Landscaping to create an open, interior courtyard with a meandering stream from what had been one massive pool.

"We brought in cranes and earth-moving machines to change the pool to a con-

crete 'pot,'" he says. "We planted mature trees through the membrane of the pool and used its existing suction lines for underground drainage. We added gravel beds to the water features so they'd serve as biological filters. Once excess water works its way through the natural organisms within the gravel beds to the suction lines, it's pure enough for landscape use. Smaller trees and shrubs were selected for their color, texture and form as well as their bloom cycles, so there's always something to see, night or day." □

—The authors are frequent contributors to
LANDSCAPE MANAGEMENT.

Native grasses are imports

Tourists seeing the Hawaii of today assume all the lush plants are native to the area, but many are tropical imports. Most are propagated for landscape use; others have escaped cultivation and "naturalized"

throughout the islands.

To retain some of that original biodiversity, and to spread interest in and appreciation of the Islands' unique beauty, Gavagan plans to establish "pockets" of native areas on the property. "We'll plant natives in natural settings, mark the plants with their botanical names and Hawaiian names, the background of the plant, including the

story behind its name, and its original and current use.

"For example, the kikuyugrass that holds the beach together against winds and washing was named for the priests, the kikuyus of the old island culture who held the people together throughout adversity."

—S.T.