



TALK STORY

*Sweet
Celebration*

The History and Future
of Sugar Cane in Hawai`i

BY JON LETMAN · PHOTOS JON LETMAN



The first voyaging Polynesians to reach the Hawaiian Islands arrived in canoes laden with their most important food plants—taro, coconut, breadfruit, sweet potato, banana and yam.

Each of the nearly 30 plants they selected had functions and significance beyond the ordinary, for each had to merit space in the crowded outriggers.

One plant, a perennial member of the grass family, was easy to transport, grew quickly and had a multiplicity of uses from thatching, windbreaks and medicine to borders, recreation and dental care. This grass, known in Hawaiian as kō, was most favored as a food and sweetener.

Saccharum or sugar cane, was first cultivated in New Guinea, then in India as long as 10,000 years ago. The English word sugar is rooted in the Sanskrit *sharkara*, meaning sugar or pebble.

Like the other Polynesian-introduced grass, bamboo, kō was long, sleek and useful, but it was kō that played an unparalleled role in shaping modern Hawai'i. When 18th-century Europeans introduced non-Hawaiian varieties with the intention of growing cane for profit, it quite literally altered Hawai'i's landscape, language and culture.

Kāwika Winter and Kamaui Aiona, directors of the National Tropical Botanical Garden's Limahuli Garden and Kahanu Garden respectively, speak of more than 100 varieties of kō developed by Hawaiians. They explain Hawaiian kō tends to be softer and more colorful than commercially grown sugar cane.

Evocative names like *uahiapele* (smoke of Pele) and *kō kea* (white cane) reflect the light green, golden, pink and reddish hues of kō. Others names like *pua'ole* (without flower) are based on growth characteristics.

Winter says Limahuli Garden on Kaua'i's north shore grows a variety called *kō`eli lima-o-halāi`i* which means “the

sugar cane that is dug by hand at Halāli`i (on Ni`ihau)” because it grew only there, deep in sand dunes.

Aiona tells of a traditional Hawaiian use for kō: as a pūpū. When drinking `awa (kava), small bananas, a slice of coconut or a bit of kō were eaten to offset the drink's bitter taste.

Following the establishment of the first successful commercial sugar cane plantation in Kōloa in 1835, the sugar cane industry ushered in successive waves of immigrants from Scotland, Norway and Germany to the Azores, Portugal and Puerto Rico. Along with massive influxes of first Chinese then Japanese and Okinawan, Korean and Filipino immigrants, they contributed to Hawai`i's multi-ethnic “mixed-plate” society.

Without the introduction of sugar cane, we might not eat sushi, malassadas, kimchi or adobo in Hawai`i today.

Currently the most complete collection of kō in Hawai`i is kept by the Hawai`i Agriculture Research Center (HARC), formerly known as the Hawaiian Sugar Planter's Association. HARC grows and has distributed some 40 varieties of kō to gardens around the state.

HARC also maintains sugar cane germplasm for research and is the authority on genetic composition of sugar cane in Hawai`i. Without HARC, many varieties might have survived only sporadically in backyard gardens with limited outside protection to prevent their loss.

Dr. Susan Schenck, a plant pathologist with HARC, explains kō or “noble” cane is propagated only by stalk cuttings and maintained by replanting.

According to Schenck, Hawai`i boasts the highest yield per acre per year of sugar cane anywhere in the world. Constant sunshine, year-round warm temperatures, fertile soil and irrigation helped ensure the success of Hawai`i's sugar industry until it peaked in production in the mid-1960s and with operations closing across the state from the '70s.

Chris Fayé, curator of the Kaua`i Museum, speaks fondly of sugar, noting sugar cane is one of the most highly evolved plants, adding oxygen to the environment while storing sugar within its stalk. It also adds nutrients to the soil and needs no rotation or heavy fertilization to be productive.

“It is an amazing plant,” she says with reverence, rightly so considering her roots go back to Hans Peter Fayé, the first manager of the Kekaha Sugar Company in 1898. Fayé's family grew up, quite literally, raising cane on Kaua`i and she remembers until recently admiring the view of “an island fringed with a manicured reef of cool green surrounding the purple and pink mountains rising above.”

But the sugar cane industry was the victim of high production costs, advances in automation and competition from other crops like corn, all of which helped drive Hawai`i's sugar cane industry into decline. Adding to this was a complex web of economic and political factors and the rise of commercial sweeteners like high-fructose corn syrup.

According to the Louisiana State University AgCenter, only 25 percent of the natural sweetener market comes from cane sugar (a quarter of which is imported under World Trade Organization quotas) with 20 percent from beet sugar.

Today Hawai`i's last two commercial mills are in Pu`unene on Maui and Kaumakani on Kaua`i.

The larger of these two, operated by the Hawaiian Commercial & Sugar Company (HC&S), produces over 60 percent of Hawai`i's crop. With 36,000 acres dedicated to sugar cane in central Maui, HC&S has had success producing food-grade sugar, but most of its sugar, along with that produced by Gay and Robinson (G&R) Inc. on Kaua`i, is shipped several times a year to the C&H refinery in Crockett, California.

HC&S continues to grow, package and sell its own natural cane sugars under the name “Maui Brand.” Described as the color of “Maui's white sand beaches,” HC&S maintains Maui Brand natural cane sugar is the perfect accompaniment to Kaua`i Coffee (both companies are owned by the Alexander & Baldwin Corporation).

The bulk of Maui-grown sugar ends up in markets in the western United States under the C&H name, as does cane grown by G&R.

Started on Kaua`i's west side in 1889, G&R grew to be one of the most productive, and ultimately Kaua`i's last remaining producer which still maintains 7,500 acres of cane, about 20 percent of HC&S acreage.

As G&R works to establish itself as a producer for cane-based ethanol, the company continues to use bagasse, the excess fiber left over when cane is milled, as a renewable source of energy, selling between 3,000 and 4,000 megawatt hours back to the grid each year.

Unlike HC&S, G&R currently does not produce sugar that can be packaged and sold on island, but plans are afoot to change that.

Howard Greene, G&R's environmental manager, says the company will continue producing sugar and molasses for food indefinitely, and construct a sugar refinery at Kaumakani, possibly as soon as next year.

Greene says G&R hopes eventually every juice, jam, jelly and baked goods producer on Kaua`i will sweeten with its locally grown sugar.

One company already putting Kaua`i-grown sugar and molasses to good use is the Kōloa Rum Company, which aims to bring Hawai`i into the fold of rum producing islands like Cuba and Jamaica.

Greg Schredder, managing director of the Kōloa Rum Company, has been working with distillery experts and is prepared to begin production of Kaua`i-made rum this summer with the expectation that a 2,000-square foot boutique tasting room will open beside Gaylord's at Kilohana on Kaua`i by autumn.

Schredder says that as a tropical island with a rich sugar cane heritage, it is only natural to make rum here.

The Kōloa Rum Company has already purchased the Kukui Brand preserve company near Kōloa and, along with jams, jellies and other sweets, is producing a mai tai mix with local cane sugar which, mixed with Kaua`i distilled rum, may be the perfect drink to raise for a toast in sweet celebration.

To see and enjoy the beauty of traditional Hawaiian kō, visit the Maui Nui Botanical Gardens (Kahuli, Maui), Kahanu Garden (near Hāna, Maui), Amy B. H. Greenwell Ethnobotanical Garden (Captain Cook, Hawai`i) or Waimea Valley (north shore of O`ahu). □

