

Bali's Fabulous Cocoa, from Raw Beans to Chocolate Bars

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Almost everyone loves the deep, complex flavor of chocolate and Bali now produces some of the world's best. Cacao in Bali is a treasure. Protected from industrial cocoa production trends that raise cacao trees with high yields, disease resistance and high fat content at the cost of flavor, the cacao found throughout the Island of the Gods is some of the rarest and most magical. Today, thanks to the vision of Ben Ripple and Frederick Schilling of Big Tree Farms, Bali's wonderful cacao is about to step onto the world stage as a solo act. With 700 cacao farmers now certified organic to international standards and another 700 close to certification, this will be South-East Asia's first organic premium chocolate.

It's a long journey from the cacao pod to the chocolate bar. Big Tree's journey to bring Bali's cacao farmers out of the shadows has taken over seven years. Ben Ripple, Big Tree Farms' founder and Co-CEO, began working with Balinese cacao farmers in the mountains of west Bali in 2004. He focused first on simply rehabilitating tree stocks and teaching basic fermentation of the cacao, a process integral to the development of flavor in the ultimate finished chocolate. Later he worked on value addition through rustic cold-processing of the beans into cocoa butter and powder. In 2008, a USAID program to enhance the volume and quality of Indonesia's non-plantation cocoa partnered with Big Tree Farms. This helped make it possible to train 2000 farmers from Bali in best practices and double their income from cacao. All of these farmers now hold international standard organic certification or will soon do so. The program taught farmers to increase yield and manage pests through the skills of pruning, composting and fertilizing, frequent harvests and keeping the ground under the trees clear. The results in Bali were excellent and as yields began to rise, farmers learned to graft from their highest-producing 'super' trees and to add value to their crops by fermenting the beans themselves.

Indonesia is currently the world's third largest producer of cacao beans. Most of the crop, a hybridized variety grown intensively on 1.5 million hectares of in Sulawesi (accounting for over 90% of production) is exported as a bulk commodity to the grinding industry, the segment of the chocolate industry responsible for producing cacao butter and powder. In Java, Sumatra (Aceh), Flores and Bali, smallholders grow cacao in far more sustainable, diversified 'food forests' along with many other crops.

From its early focus on cacao bean processing, Big Tree Farms began to collect an understanding of the alchemy that turns cacao into chocolate when Frederick Schilling joined the family as Ben's partner. Schilling, who had previously been the founder of Dagoba Chocolate, had been almost single-handedly responsible for the growth of organic chocolate in the US. The writing was on the wall for Indonesia's first organic chocolate factory.

There are three varieties of cocoa beans: Forestero, Criollo and a cross between the two called Trinitario. Originally Forestero beans came from the Amazon and these genetics are responsible for the lion's share of chocolate sold today. Hershey's, Cadbury's, Lindt and other commercial producers use Forestero beans as the basis for their chocolate. Criollo beans were first discovered in Mexico. "These cocoa beans were different from the dark purple beans of the Amazon because they were low in pigment," explains Ben. "They exhibited extremely fine flavors (think of wine tastings) when roasted and prepared for chocolate. Trinitario beans first entered the world scene when these original Foresteros Amazon trees were planted along with the original Criollo trees on the island of Trinidad. The result was a natural cross which exhibited varying degrees of the unique characteristics of both parents."

The first Criollo cacao beans from Soconusco, Mexico, were highly esteemed by the Spanish and the trees were disseminated by them first to the Philippines and then to Indonesia, India, Sri Lanka and around Southeast Asia. Java became the first region outside the New World that began producing these heritage beans commercially and as these genetics acclimated to their new surroundings they took on their own terroir. Today these beans are called 'Light Breaking Javas' for the fact that they still exhibit the famed Criollo low pigmentation when the cacao beans are cut in half. Unfortunately this cacao has largely disappeared in Java over the past 10 years as more and more of the plantations which once guarded this historic treasure have chosen profit over prestige and moved to replant with the same high-yield, disease-resistant varieties that already make up the clonal mosaic of the intensive Sulawesi crop.

Luckily, Dutch planters over a hundred years ago had recognized Bali as a perfect growing climate for the heirloom cacao and tried moving the Light Breaking cacao beans onto Bali soil. Unluckily for the Dutch, however, Balinese wanted no part in the plantation game. So these incredible genetics simply spread across western Bali, casually planted in sustainably managed smallholder plots along with coffee and other crops, and soon became part of the typical tropical landscape. In the absence of commercial plantations, the trees spread informally and evolved into a unique, high quality cocoa. In some areas of Bali, it is still possible to find pure strains of Criollo cacao; beautiful porcelain beans that may be some of the closest cousins remaining to the original Soconusco genetics.

The alchemy art of growing cacao and making artisan chocolate is a craft known only to a few. The craft requires the use of either obscure and very expensive equipment or antique machinery located and pulled from dusty chocolate museum basements. Thankfully for Big Tree, besides being a devoted chocolatier, Frederick

was also addicted to the pursuit of original artisan chocolate processing equipment. This led the team to one of their initial purchases, a 6.5 ton granite melangeur (grinder) from Switzerland built in 1932. Talk about authentic. The massive grinder now has pride of place in Big Tree Farms' new chocolate factory.

All artisan chocolate products (whether they be liquor, couverture or finished chocolate) start with best quality cacao beans removed from extremely fresh pods and fermented for a few days to enhance the flavor 'pre-cursors' of the ultimate chocolate. The next steps depend on what is going to be produced at Big Tree Farms. The vision of small-scale value addition has led the team to produce their own raw (cold-processed) golden cacao butter and powder as well as finished liquor (ground refined cacao bean paste) and chocolate itself.

One of the more unique aspects of production at Big Tree Farms is the focus on raw Cacao to meet the demands of a growing international raw food market. This niche market seeks superfood ingredients processed at minimal temperatures to ensure that minerals, aminos and enzymes, all sensitive to heat processing, are preserved.

Big Tree Farms is already renowned for making some of the world's highest integrity raw cacao products, coconut palm sugar and raw cashews. Its new headquarters and production centre in Sibang near Ubud offers the public a fascinating glimpse into the full process of making both fine chocolate and raw chocolate, as well as the opportunity to taste other world-class products from the Island of the Gods. The soaring bamboo headquarters -- one of largest bamboo structures on earth -- brings together cutting-edge food technology with indigenous foods and products. The facility will be a welcome addition to Bali as a center for community meetings, educational training and sustainable design and intention. The new headquarters will house the administration of Big Tree Farms' archipelago-wide activities, processing, warehousing, an event centre, commercial kitchen and retail showroom. The facility also features a full chocolate-inspired café for those who want to sample raw cacao and other organic superfood treats.

"The facility is truly a remarkable feat in architectural design and execution, not only from the perspective of esthetic beauty, but also in the science of engineering and the celebration of traditional architecture and construction," Ben points out. "With this facility, we hope to break the box of what has been perceived as 'not possible' in regards to sustainable design. Our goal is to show the world that a large-scale commercial building can be built from bamboo -- a highly sustainable material -- and that it can be beautiful, efficient and practical in terms of a commercial production facility, supportive of a creative and inspiring work environment for our employees and a welcoming space for all our visitors to come see the magic that is Big Tree Farms."

Big Tree Farms and chocolate factory will be fully operational in February 2012, accepting guests between the hours of 0930 and 1530 Monday to Friday. The retail space and commercial kitchen will be open by mid-2012 and will offer classes, special dinners and community events. For information, please contact info@bigtreefarms.com

Ibu Kat's book of stories *Bali Daze - Freefall off the Tourist Trail* is available from:

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