DISCOVERING THE TASTE OF FINE CHOCOLATE

by Nancy Oster
Maya Schoop-Rutten, owner of Chocolate Maya, hands me a thin piece of the 100% Arriba Nacional chocolate grown on a plantation she visited in Ecuador. There is no sugar in this sample, just the cacao beans—fermented, dried, roasted and processed into a smooth, deeply flavored chocolate.

I’ve invited a group of friends to join me in Maya’s Chocolate Lounge to learn more about the range and the depth of flavor available to those of us interested in tasting, not just eating chocolate.

The Taste of the Bean

“It has a strong chocolate smell,” Dave notes before tasting his sample.

“Earthy,” says Maya.

I chew the chocolate a little to break it into smaller bits that melt on my tongue.

“Not too bitter,” says Krista.

I agree, and note the creaminess as I move the melting chocolate to my palate and breathe in through my mouth. Suddenly I experience a burst of citrus, then a lingering almond-like nuttiness.

Maya says, “Good chocolate has an aftertaste that keeps working.”

We each interpret flavors differently based on genetic differences in our taste buds and our personal taste histories. Shaun notes a woody fragrance, tastes cigar tobacco and then grassiness. No cigars in my taste memory—but this is what makes a shared tasting interesting and fun.

Letty says, “At one point I tasted flowers.”

Then Anne says, “But this doesn’t taste like chocolate to me.”

The Taste of Chocolate

Fine chocolate provides a symphony of flavors with an opening flavor, a middle flavor and a finish. Anne is right: This particular symphony is not the one I grew up with either. That’s because sugar and vanilla form our familiar chocolate profile and this bar has no sugar or vanilla.

Fine chocolate typically contains two ingredients: sugar and cacao beans. It may also include a lecithin emulsifier and pure vanilla. The percentage listed on a bar tells you how much of the bar is derived from the cacao bean.

To meet cost expectations and maintain consistency of flavor, bulk chocolate manufacturers often add cocoa powder, vanillin, artificial chocolate flavoring or milk powder and replace or supplement expensive cocoa butter with PGPR (from the castor bean) and other oils. To qualify as dark chocolate, a bar only needs to be 35% cacao; so what you taste in mass-produced chocolate is predominantly sugar and vanilla, not the bean. And those flavors don’t dance in your mouth the way the taste of the bean does.

Flavor Starts in the Forest

The photos on the walls around us in Maya’s shop were taken on her trips to cacao plantations in Latin America and Asia. Maya’s camera focuses on the farmers in the forest and the role they play in bringing the taste of chocolate to life.

Cacao trees only grow in tropical forest plantations near the equator. A canopy of taller trees provides sun protection for the young cacao seedlings. The forest duff breeds gnat-like midges.
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MAYA SCHOOP-PUTN

[Images of cocoa pods, farmers, and landscapes related to cocoa production.]
that fertilize cacao flowers. Pollinated flowers produce large red, orange, yellow, green, purple or white pods attached to the trunk and limbs of the tree. The pods are filled with purple-brown or white cacao beans cradled in a juicy translucent white pulp.

Genetics play a large part in flavor but, like fine wine grapes, beans grown in different locations (terroir) have different flavor characteristics. And those flavor profiles vary from year to year, based on weather conditions.

While bulk manufacturers strive for consistency of flavor, fine chocolate makers celebrate the unique flavor of beans from a particular origin (country, region or plantation) or genetic stock.

The Beans of Chuao, Venezuela

When Maya’s exploration of cacao plantations began in 2007, Chuao was at the top of her list. The small village of Chuao produces some of today’s most well-known single-origin cacao beans. Soil, microclimate and genetics contribute to their delicately rich flavor, but so does 400 years of tree care and pre-processing experience.

Like many cacao-growing areas, Chuao is far off the beaten path. From Caracas, Maya took a narrow road up into the beautiful mountains of the Henri Pittier National Forest. Many hairpin turns later, the road descended towards the distant ocean port of Choroni, where she took a fishing boat to Chuao… well, almost. From the harbor, she walked 45 minutes to the village. The fragrance of fermenting cacao beans drew her to the village center, where she saw women taking wheelbarrows filled with beans to drying platforms on the church plaza.

In Chuao, the beans, still encased in pulp, are removed from the pods in the forest, then taken quickly to the village, placed into huge fermentation crates and covered with banana leaves. The crates are protected from weather extremes in roofed fermentation rooms. Maya explains, “In other places, farmers will ferment in baskets, bags, plastic containers or even leave the beans to ferment on the forest floor. I have also seen bags of pods left sitting for days before the beans were removed. The beans deteriorate quickly inside the pods.” Yes, all of this affects the flavor of the dried beans.

As the cacao beans ferment, their juicy pulp drips out through the bottom of the crate for two to eight days. Fermenting reduces the bitterness and astringency of the bean. Optimum fermentation time varies with the variety of bean. White Criollo beans, like many of the trees in Chuao, are low in tannins. They don’t require as much fermentation as the bolder-flavored Foretoso beans grown in other places.

Pouring fermented beans onto a platform on the church plaza, the women sweep them into circles, then rake the beans throughout the day to ensure even drying. The beans go back to the covered structure at night and are returned to the plaza every morning until they are properly dried for storage and shipping.

Maya has seen beans on other plantations being artificially dried using heaters, air blowers and even smoke. In some communities they are spread out on hot asphalt roads to dry. Beans in Chuao are not rushed.

In many remote places dried beans are sold to middlemen or co-ops who mix the beans together, making no distinction for quality of flavor or processing skills. At Chuao, however, chocolate makers buy the beans directly from the farming community. Flavor, quality and processing all figure into the price.

Wild Cacao Genetics

Cacao trees (Theobroma cacao) originated in the Americas, which still host the greatest diversity of varieties. Criollo, the most delicately flavored but least disease-resistant tree, grows indigenously in Latin America. However, fungal diseases have taken a toll on these trees and many have been replaced with disease-resistant fast-growing hybrids that produce less flavorful beans and deplete the soil. More robust high-yielding Foretro trees are also indigenous to Latin America and were planted extensively in Africa to meet the needs of bulk production, but they generally lack the fine flavor of Criollo. An early hybrid, the Trinitario, combined these two wild types to produce higher yielding trees with more flavorful beans.

Up until recently farmers were paid the same price for all their beans regardless of flavor, but that is changing. The number of small bean-to-bar companies has exploded, especially in the United States. Some chocolate makers and confectioners like Maya actually visit cacao forests, where farmers help them find the most flavorful beans. The chocolate makers or confectioners pay to have these beans, or the high quality couverture chocolate made from the beans, shipped to them directly.

The Fortunato Tree in Peru

American Dan Pearson was in Peru with his stepson Brian Horsley supplying machine parts and food for miners in remote locations. While sourcing bananas one day in 2007, Dan met Noe Vasquez, a young farmer, who told him about the delicious bananas growing in a secluded canyon nearby. Dan went with Noe to look at them and saw a strange tree growing under the banana canopy. Noe opened a ripe yellow pod from the tree to show Dan the cacao seeds inside. Half of them were white.

“Around here they’re all like that,” Noe said in response to Dan’s surprised look.

Later Dan Googled “cacao” and discovered that white beans are rare and particularly flavorful. He called the USDA to learn more. Dan was told that trees with white beans do not grow at that altitude.

Dan collected leaf samples to send the USDA as requested. Noe pointed to a scrawny tree owned by his friend Don Fortunato and told Dan it had especially flavorful beans. When Dr. Lyndel Meinhardt called Dan back from the USDA with the DNA results, he asked, “Are you sitting down?”

He explained, “What you found was a highly prized variety that went extinct 100 years ago in Ecuador.” Fortunato’s scrawny tree was an identical match to that Pure Nacional variety, except...
that a **white** Pure Nacional bean had never been found before. If the name Don Fortunato sounds familiar, it might be because he was mentioned in Anthony Bourdain’s “Peru” episode of “Parts Unknown.”

**Sorting Good Beans From Bad**

Maya handed us each a piece of Fortunato chocolate to taste. As the flavors danced delightfully across our palates, my friend Milt suddenly announced, “I’d pay more for this!” Maya smiled.

In 2013, Maya tells us, she flew into Lima, Peru, then north to meet Brian Horsley, who was waiting to take her to the hidden canyon where the Fortunato beans are grown and processed.

Brian oversees careful cutting of the pods from the trees, removal of the beans, then pays the farmer directly for the beans. Brian takes the wet beans to his nearby processing facility to sort, ferment, sort, dry and sort again. Any imperfect or buggy beans are discarded.

Maya compares this to another farm where she helped sort wet beans. “I’m putting this beautiful pulp in one bucket,” she says. “Then I find this black pulp with mold and bugs and I throw it away. But they stop my hand and say, ‘No, no, no! That goes in this bucket. We have customers for this.’”

Brian wholesales many of his beans to bean-to-bar makers. The rest are processed into 68% chocolate in Switzerland and sold to confectioners.

<table>
<thead>
<tr>
<th>Chocolate Maker</th>
<th>Bar Name</th>
<th>Location</th>
<th>Source of Beans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dandelion Chocolate</td>
<td>70% Maya Mountain Belize</td>
<td>San Francisco, CA</td>
<td>Southern Belize</td>
</tr>
<tr>
<td>Dick Taylor Craft Chocolate</td>
<td>76% Ecuador, Camino Verde</td>
<td>Arcata, CA</td>
<td>Camino Verde farm, Balao, Ecuador</td>
</tr>
<tr>
<td>Millcreek Cacao Roasters</td>
<td>Pure 70% Dark Chocolate Bar</td>
<td>Salt Lake City, UT</td>
<td>Arriba Nacional, Ecuador</td>
</tr>
<tr>
<td>Marou Chocolate</td>
<td>Ben Tre 78%</td>
<td>Ho Chi Minh City, Vietnam</td>
<td>Mekong Delta, Vietnam Trinitario type</td>
</tr>
<tr>
<td>Patric Chocolate</td>
<td>74% IN-NIB-ITABLE</td>
<td>Columbia, MD</td>
<td>Madagascar</td>
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<tr>
<td>Ritual Chocolate</td>
<td>75% Marañón 2013 Harvest</td>
<td>Denver, CO</td>
<td>Pure Nacional, Marañón River Valley, Peru</td>
</tr>
<tr>
<td>Rogue Chocolatier</td>
<td>Jamaica 75%</td>
<td>Three Rivers, MA</td>
<td>Bachelor’s Hall Estate, Jamaica</td>
</tr>
<tr>
<td>Rogue Chocolatier</td>
<td>Balao 75%</td>
<td>Three Rivers, MA</td>
<td>Camino Verde, Balao, Ecuador</td>
</tr>
<tr>
<td>Twenty-Four Blackbirds</td>
<td>Madagascar 75%</td>
<td>Santa Barbara, CA</td>
<td>Madagascar</td>
</tr>
<tr>
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Five million small farms produce 90% of the world’s cacao beans. Identifying and mapping fine-flavored beans and recognizing growers who produce the highest-quality beans is the goal of the Heirloom Cacao Preservation Initiative (HCP). This collaboration between the Fine Chocolate Industry Association and the USDA began with the discovery of Fortunato’s Pure Nacional trees.

The Arriba Nacional chocolate from Ecuador, which we were tasting at the beginning of this article, is one of the first beans to be designated an heirloom cacao by the HCP. It was planted by retired Nestle employee Samuel von Rutte to restore indigenous trees to his region. The industry is paying more for these beans as a result of the heirloom designation.

**The Chocolate You Choose Makes a Difference**

Cacao farmers have struggled to support their families on the small amount paid for their flavorful indigenous beans. The average farmer is paid less for cacao beans than it costs to produce them. Some have switched to higher-yield hybrid beans, or to producing coffee beans or palm oil, which bring higher market prices.

However, preservation efforts and the increased willingness of consumers to pay more for directly sourced flavorful chocolate are having a huge impact on cacao farm families. Dan Pearson sees more children in the Marañón canyon going to school and more young people choosing to stay in the canyon to grow cacao, now that they are getting a fair price for their work. Thousands of new trees are being planted.

A strong market for uniquely flavored varieties ensures continued diversity and gives farmers incentive to plant the best varieties for their area, process them carefully and sell them with pride, at premium prices. It’s a win-win-win for farmer, chocolate makers and consumers like you and me.

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**Nancy Oster**’s love for good chocolate is exceeded only by her enjoyment of sharing it with friends. She wants to thank her group of volunteer tasters for their great questions and enthusiasm—especially those she asked to taste bulk unsweetened baking chocolate for comparison.