

April 30, 2014

Dr. Silke Elwers
ForestFinest Consulting eG
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Ketzendorfer Weg 2v
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Germany

Dear Dr. Elwers,

Thank you for the opportunity of evaluating the Panama beans.
Panama Grand Cru, Province Bocas del Toro, Select Trinitario (1.05 kg beans)
(CATIE Released clones basis from pptx of 4/11)

They have been given the following sample codes in our system:

- 7555 liquor evaluation
- 7556 chocolate evaluation

Processing—

Beans were roasted 1 layer deep (400 gm) in a Binder FD 53 convection oven set at 121°C. Roasting time was 21 minutes timed from oven recovery to 119°C following bean tray insertion.

Roasted beans were cracked by hand and winnowed with a Capco Test Equipment Winnow. Nibs were hand picked following winnowing to remove all remaining shell including attached shell.

A Cocotown ECGC-05 Melanger was used for both liquor milling and chocolate milling. The chocolate formulation is:

- 55% nibs
- 10% deodorized cocoa butter
- 35% sugar, cane (verified odor free)
- 0.35% double bleached soya lecithin added extra

Cut Test—

85 beans / 100 gm (1.18 gm / bean average)
Cut test photo attached



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NOTE: This sample is very fluid (high fat--I will get the fat content)

Qualitative Chocolate Flavor Evaluation—

Evaluation of the chocolate was in solid but not tempered form.

Made 4/29 Evaluated 4/30/14:

Color: Moderate brown with light / trace yellow hues (on the lighter side of chocolates and would make an interesting milk chocolate for a dark milk in terms of color.

Aroma: Distinct fresh fruit notes of under ripe berries with some yellow fruit traces. Mild browned character.

Flavor: Lots of bright, fresh fruit notes--berries are prominent (strawberry-like in character on the under-ripe side). Moderate cocoa notes that come in mid-taste. The fruit notes are immediate. This chocolate could stand to run at a 70-75% cacao, I think. The bitterness is controlled and moderate as is the astringency. Some late taste / aftertaste astringency with browned notes.

Lots of brightness in the character of this sample.

The flavor profile of these beans is exactly what I would expect from the CATIE Released Clones that I have evaluated in the past.

In one of your early emails you indicated you were interested in pursuing with the ICCO a designation for Panama as an exporter of Fine Flavored Cocoa. The flavor profile of this sample would certainly place it in the category of a Fine Flavor Cocoa. The ICCO process, however, is not based on evaluation of samples. In order for consideration to take place, the country must submit a report which includes shipment information on physical shipments of cocoa to customers who consider it to be of fine flavor status. The status is most commonly evidenced by premiums paid on the shipped cocoa. Note that if a country has no export shipments of cocoa, the Fine Flavor designation is not applied under the ICCO rules.

Note that in 2009, Wilberth Phillips submitted several of the Released Clones to the Salon du Chocolat Cocoa of Excellence in Paris. Two of these clones, CATIE R-4 and CATIE R-6 won awards for their flavor profiles. The remaining clones independently are also quite good tasting and qualify in themselves as Fine Flavor types.

You are most certainly on the right track in terms of flavor profiles. It will be important as you move into the future that you a) continue to verify flavor consistency of the supplied cocoa and b) track quantities (metric tonnes) and verify the premium status of the shipped cocoa.

Let me know how I can continue to assist you. I look forward to visiting the facility in Panama some time in the future.

Ed Seguire
President



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