



Cocoa being transported in Meagui, Côte d'Ivoire. (CNFA, 2019)

MOCA DEMONSTRATES THE VALUE OF CACAO FLAVOR

Marc Steen, Chief of Party, Maximizing Opportunities in Cocoa Activity (MOCA) Funded by USDA, Implemented by Cultivating New Frontiers in Agriculture (CNFA)







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CNFA 1828 L Street, Suite 710, N.W. Washington, D.C. 20010 www.cnfa.org

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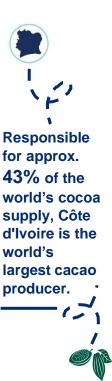


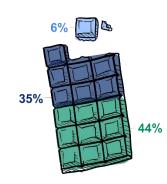
The process to control cacao bean quality includes sorting them in a reading chart. (CNFA, 2019)

Responsible for approximately 43% of the world's cocoa supply, Côte d'Ivoire is the world's largest cacao producer. However, its producers, like many around the world, only earn an average income of \$1.20 per person per day in cacao sales – the cost equivalent of one chocolate bar in the United States.

When cacao prices were relatively high in the 1970s, producers received a larger share of the value of a chocolate bar – approximately 50%. But today that share has shrunk, and most producers receive only 6% of the product's final value1, while manufacturers and retailers earn 44% and 35% of profits, respectively. Many factors contribute to this low profit share, including how global cacao trade and price setting takes place. Ivoirian smallholder cacao producers are price takers and have little to no influence on the prices they receive, even if their product has a higher quality and value than the current market rate.

Overproduction has also negatively impacted producers' incomes. In 2017, Ivoirian cacao producers faced a 30% reduction of the minimum price for cacao due to global overproduction. In the same year, some





¹ Cocoa prices and income of farmers. (2017, August 16). Retrieved February 05, 2021, from https://makechocolatefair.org/issues/cocoa-prices-and-income-farmers-0

international cocoa corporations reported increased profits of more than 10%2. The sector stakeholders are making some efforts to reduce this inequality and improve the livelihoods of cacao producers. For example, sustainability programs and the introduction of the Living Income Differential (LID) in 2020 are two important steps forward.

The Ivorian cacao sector is known mainly for its quantity – making up over 43% of the global cacao supply – whereas it has a negligible reputation in higher value market segments. This is partly due to the perception that Ivoirian cacao only meets minimum quality standards for 'bulk' cocoa, and that Ivoirian producers cannot meet the requirements of higher quality and higher-end market segments.

The U.S. Department of Agriculture (USDA)'s Food for Progress-funded Maximizing Opportunities in Cocoa Activity (MOCA) recognized the potential for higher value market segments in Côte d'Ivoire and sought to connect farmers with buyers from these segments. Its work has facilitated relationships between producers and stakeholders in the cocoa sector to explore opportunities for Ivoirian cacao to infiltrate high-value markets. MOCA is a three-and-a-half-year activity implemented by Cultivating New Frontiers in Agriculture (CNFA) to expand the trade of cocoa and cocoa products, improve the quality of cacao, and increase producer incomes.

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Cacao beans are packaged in banana leaves and ferment for five days. The fermentation process transforms the flavor to cocoa and chocolate flavors – without fermentation, there would be no chocolate. (CNFA, 2020)

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² Adams, T. (2019, February 24). From bean to bar in Ivory coast, a country built on cocoa. Retrieved February 05, 2021, from https://www.theguardian.com/global-development/2019/feb/24/ivory-coast-cocoa-farmers-fairtrade-fortnight-women-farmers-trade-justice



In 2018, MOCA partnered with Guittard Chocolate and the Fine Chocolate Industry Association to advance high-quality cacao produced by cooperatives CAPRESSA, located in the Abengourou region, and CAVA, located in the Daloa region. Participating producers were selected based on their interest in the initiative and their existing market linkages.

From 2019-2020, MOCA developed an inventory of quality control protocols and best practices utilized by participating producers; facilitated "learning by tasting3" trainings to identify quality flavor profiles; and monitored and advised producers on good agricultural practices, as well as harvest and post-harvest handling best practices.

MOCA also organized a series of technical exchange visits, including to cacao farms in Ghana and to the Ivorian producer M N'Koh Ambroise, a 2019 Cocoa of Excellence award winner, to learn about the impacts of applying improved harvest and post-harvest practices on bean quality and flavor.

After just one year of support, MOCA observed physical improvements to the quality of the participating cooperative's cacao, including a new brand of high-quality "MOCA" beans named after the project to differentiate them from the conventional cacao still being produced locally. Hundreds of other cooperative members have also joined the initiative, in part due to higher yields from the improved harvesting and post-harvest practices.

The improved physical quality of the beans is an attractive offering for buyers: the bean count (number of beans per 100 grams) has improved. meaning they buy larger beans, which provide greater yield during processing. Through the MOCA Quality Flavor program, harvesting, postharvesting techniques and export preparation are better controlled resulting in lower waste counts from broken and flat beans, placenta, pieces of cocoa pod, clustered or fused beans and debris. Also, the transportation and storage processes are more closely monitored and controlled so that humidity remains within required limits (less than 8%). Better physical quality directly translates to better processing yields and value as well as reduced costs across the supply chain through lower rejection rates. Furthermore, less sand and stones mixed with the beans reduces wear and tear on processing equipment. Finally, and equally important, physical traceability and direct farmer relationships are improved, as opposed to untraceable "mass balance" beans where issues like the use of child labor and farming in protected areas are more difficult to address.



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³ The Learning by Tasting methodology was introduced by Guittard Chocolate and implies that participating farmers will not only be taught about the importance of good harvesting and post-harvesting practices, but also taste, in most cases for the first time, of cacao paste and the effects of bad and good practices on the flavor quality of cacao.



MOCA shared these specialty bean samples with two internationally renowned cacao taste testers, Ed Seguine of Cocoa of Excellence and John Kehoe of Guittard Chocolate. Of the 26 samples that were tested, all samples scored above 6.0/10.0 on the Cocoa of Excellence Sensory Scale, while 85% of the samples contained no "off-flavors." This indicated that the beans could be classified as quality-flavor cacao.

Of the same group of samples, 30% were rated at or above 8.0/10.0. These highly rated flavor profiles were noted by the testers as containing "surprising" and "very interesting" flavor profiles, confirming Côte d'Ivoire's potential to produce and market quality flavor cacao beans.

Cocoa of Excellence Date 14 September 2020 18:08:00 Sensory Evaluation Form for Sample ID 0879 220/2 Cocoa Liquor and Chocolate Intensity Scale Less Intense 0 1 2 3 4 5 6 7 8 9 10 More Intense Insert the intensity of each attribute in the corresponding boxes 3.0 Astringence 0 Fruit 0 Acetic
0 Berry 0 Citrus
1 Yellow / Orange / White flesh Mineral / Butyric O Acidity (Total) 0 Lactic O Dark
O Tropical 2.8 Browned Fruit (Total) 2 Dried 0 Grassy / Gr 1 Brown 0 Over ripe 1 Earthy / Mushroom /Moss /Wood 0 Orange bl
2 Light
0 Spices 0.0 Spice (Total)
1.3.8 Nutty (Total)
0 Sweet O Savory / Umami 3 Nut flesh 1 Nut skins Sweet - White suga ned sugar, panela o Musty O Dirty / Dusty Mouldy
Putrid / Manure Meaty /Animal /Leather 0.0 Off-flavours (Total) 0 Over-fe 0 Other 0 1 2 3 4 5 6 7 8 9 Overal Flavou The content on this site is licensed under a Creative C visit: http://creativecommons.org/licenses/by-nc/4.0/

The Cocoa of Excellence Sensory Scale evaluation for sample 0879 220/2. (Guittard Chocolate, 2020)

Thanks to MOCA's support, Guittard Chocolate committed to purchasing CAPRESSA and CAVA beans with innovative quality-based pricing based on physical and sensory results, which complements minimum farm gate, LID, and certificate premium prices. The first 25-ton container of quality flavor cacao will represent approximately 50 participating farmers and be valued at \$49,000. This quality flavor bean transaction is expected to further increase from tens to hundreds to thousands of metric tons (MT) in the coming years.

If Cote d'Ivoire doubles the production and exports of quality flavor cacao in higher value market segments each year for the next ten years, there is the potential for approximately 50,000 MT of Côte d'Ivoire's annual cacao production to shift toward higher-value markets by 2031. This shift would increase cacao farmers' incomes, while maintaining the unique flavors that Cote d'Ivoire has to offer to the world and reducing the risks of oversupply in the conventional cacao market.

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From left to right: Bernard Kouakou Pale, Quality Flavor Cacao producer; John Kehoe, Director of Sustainability at Guittard Chocolate Company; Dorine Kassi, Flavor Quality Training expert; and Amy Guittard, Director of Marketing of Guittard Chocolate Company assess the cocoa beans drying process at CAPRESSA cooperative. (CNFA, 2019)









