

Study on production costs and their relationship to the cost of living for producers in our partner cooperatives in the Equity in the Ivory Coast Programme



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I. The context and stakes of the study on the production costs of cocoa in the Ivory Coast

- **Analysis of agrarian systems**

Ivory Coast is the world's largest producer of cocoa, with 40% of global production, and has seen a growing presence of agroindustry. Multinationals develop large-scale activities in a country in order to fulfill high volume demands. This has allowed the Ivory Coast to make cocoa production a major economic activity.

As consumers are more aware of using products that are traceable, sustainable and organic, certification programmes have been developed in the Ivory Coast's production zones, hoping to sell a product that lives up to end clients' expectations: one that is environmentally friendly and creates the best living conditions for families.

Food insecurity is a major issue for cocoa-producing families. Cocoa plantations are often highly specialized. For the first three years, when the cocoa saplings are not yet producing fruit, they are generally protected by subsistence crops (bananas, among others) that allow the producing family to have some income or eat what they produce. However, subsistence crop production has decreased over the past three years.

Everything, or just about, is dependent on cocoa, a crop that is physically very demanding when the forest rent runs out after a few years. Abandoning other cash crops, along with the weak diversification of subsistence crops, increases the economic and dietary dependence of cocoa-producing families.

The combination of an unprofitable, unstable cash crop and insufficient subsistence farming creates food insecurity for cocoa-producing families. Added to all of this is a relatively high cost of living, explained in part by the indexation of the CFA franc to the Euro, and the disappearance of the forest, which previously provided marginal food sources (animal or vegetable) (**Basic, 2016**).

Therefore, free trade and sustainability certification programmes mostly concern production systems that are more and more dependent on only one crop (grown as a monoculture on parcels with essentially no association) and on significant use of chemical inputs. In the end, it progressively became a conventional cocoa production "package" that corresponds with agricultural practices of the "green revolution," which do not include shade trees and which encourage the use of chemical fertilization and pesticides for sanitary purposes. The first goal is to increase "productivity" in order to respond to industrial demand without significant concern for the environmental sustainability of the sector.

50% of the cocoa production in the country is certified sustainable. Ironically, you can honestly wonder if the Ivorian cocoa industry is truly sustainable. In terms of the environment, shadeless "Mercedes" cocoa production, the main system used by technical services (leading to the disappearance of more traditional and rustic varieties, such as "Ghana" or "Français"), in conjunction with a significant use of chemical inputs does not truly uphold the standards of sustainability. Regarding the social and economic sectors, one could also question the sustainability of these production systems, as the majority of farmers have trouble producing more than 500 kg/ha.

One of the main problems described by farmers, identified during the last century, is the disappearance of cocoa trees (or the significant drop in their productivity) caused by aging plantations and prolonged periods of drought. Indeed, in recent years, the consequences of

climate change have had a dramatic effect on cocoa producers. This problem is aggravated by the characteristics of intensive cocoa production systems that have led to the elimination of shade trees that were grown previously (Source: testimony of farmers and Koffi N'Goran, 19981). The latter have been more effective in drought conditions, to protect cocoa plantations from long sunny periods and to maintain a higher level of humidity.

The fact that the global cocoa demand is growing and could face a significant shortage (caused by different actors²) in the coming years, which could encourage intensive production plans that slightly impact short-term production and seriously endanger sustainability in the middle and long term.

- **Price policy**

After liquidation of the farm environment fund in 1999, the two first open campaigns took place in a very troubled political context that lasted throughout the 2000s, in conjunction with a drop in global cocoa prices. At the time of liberalisation, responsibility for quality control of the beans was entirely in the private sector and Ivorian cocoa's international reputation quickly plummeted. Known until that point as a bean of average but consistent quality, the Ivorian cocoa bean is no longer appreciated: trackers are encouraged to optimize their movements and to buy beans that are insufficiently fermented and dried. There is no control at the village level and quantity takes precedent over quality.

The situation is becoming more and more difficult for cocoa farmers, who are feeling the full effects of the collapsed Ivorian prices combined with growing uncertainty related to global price fluctuations. Successive political crises have plunged the majority of producers into poverty and vulnerability; however, having no alternative, cocoa production is continuing to grow, using deforestation in order to benefit from humous-rich soils.

After the restoration of peace in the country, one of the main pillars of the Ouattara government's reform efforts in 2011 was to re-establish a state quality control system in reaction to the crisis in the 2000s. Following the "Quantity, quality, growth" program, implemented in 2009, the reform is inspired by the semi-liberal Ghanaian system:

- a state quality control system,
- a minimum purchase price for the farmer equal to 60% of the FOB price set before the harvest,
- an industry tax level that cannot exceed 22% of the FOB price,
- and an agency to promote the industry, the Coffee-Cocoa Council.

Since its establishment, the producer's price has almost doubled in four years, from 657 CFA francs/Kg during the 2011-12 campaign to 1100 CFA francs during that of 2015-16. In 2013, 14 buyers were prosecuted for paying the producer less than the minimum threshold price. The impact of this price on producers has not yet been described. In 1989, producers received around 1.2 USD/kg of cocoa, equivalent to 2000 CFA francs today. Producers in 1989 were paid twice as much for cocoa beans as today's farmers. Furthermore, many believe that this price does not cover the production costs of the beans.

But the global market price has dropped from 3000 USD/ton in September 2016 to 1950 USD/ton in February 2017, which is below the Fair trade price of 2000 USD/ton which until

¹ Reflections on a Sustainable Production System for Cacao: The Case of Côte d'Ivoire

² https://www.lexpress.fr/actualite/societe/environnement/faut-il-craindre-une-penurie-de-chocolat-a-cause-du-rechauffement-climatique_1956377.html

then had been considered "useless" if not updated. It seemed that the stock market overreacted in the context of slight inequality of supply and demand and, fueled by speculation, collapsed and lost 35% of its value in a few months.

Faced with this situation, the sector is currently frozen by non-payment for cocoa: Many producers have been waiting for over two months to be paid by their cooperatives, who in turn are waiting for exporters to buy their cocoa (who for the moment are hoping for the support of the Coffee-Cocoa Council that will allow them to pay a price based on the farm-gate MPG of 1,100CFA. At the time of the mission, partner organisations' cocoa was still stocked in stores or ports. Also, we saw that over time, cooperatives stopped their collection and purchase activities because they faced a strong, twofold pressure: from their producers (who demand payment for delivered goods) and to cover significant unforeseen financial costs linked to many factors, including the reduction of product because of quality degradation caused by poor storage conditions in delivery trucks and an increase in transportation fees because some trucks were blocked for at least three weeks.

Finally, one can wonder what will happen at the beginning of April after the establishment of the new price (which, without a doubt, risks falling below 1,100 CFA francs). Indeed:

- Producers are going to require that the products they have delivered (before the establishment of the new price) be paid at 1,100CFA/kg.
- Cooperatives are also going to require exporters (who are mostly linked to multinationals) to pay based on the same Price.
- Buyers will only do it if the Coffee-Cocoa Council provides financial support for it. However, before changing the price or moving from one campaign to another, the CCC relies on an inventory. Considering the size of the existing inventory, some are already worried that this will be undervalued in order to reduce the amount of financial support to be paid.

As the minimum Fairtrade cocoa price was never corrected, it is almost never applied (aside from during the small 2017 harvest and sometimes retroactively), and therefore does not represent a solution to the price collapse. At the same time, FI is questioning the relevance of an equitable minimum price guarantee in the Ivorian context where the government "already" guarantees a minimum price. Beyond the questions raised by this Fairtrade International study, we understand that it is urgent to calculate the (farm-gate) production costs of cocoa in order to:

- Appreciate the relevance of the MPGs of the government and of Fairtrade
- Allow RICE to adopt an advocacy position within the government and among buyers to encourage prices that will cover production costs.
- Assist the project through the controls the Programme provides to producers of supported partner organisations in the framework of the facility and more specifically in terms of increased economic profitability of the activities that they are implementing.

The idea of a dual goal for this study thus seems very relevant:

1. Calculate cocoa bean production costs and increase the relevance and the impact (on producers' income) of the state and certifying agencies' MPG (particularly the Fairtrade Price, which is the main equitable certification of Ivorian cooperatives). This study also seeks to inform the overall thinking of the Fairtrade guarantee system that must review the guaranteed minimum price it offers to producers in the second half of 2017.
2. Develop recommendations on the implementation of activities supported by the Equity program in terms of production (cultural practices) and cocoa bean fermentation in the four cooperatives that were visited

The work will be carried out in four partner cooperatives of the Equity programme located in the southwest of the Ivory Coast: SCEB (Société Coopérative Equitable du Bandama), CANN (Société Coopérative Agricole Nzrama de N'Douci), CAYAT (Coopérative Agricole de Yakassé-Attobrou) and CAMAYE (Société Coopérative Mawoubé de Yéré Yéré).

II. Methodology

In each of the cooperatives that were visited³, interviews targeted "medium-size producers" in order to gather the information that best represents the predominant situation. Based on experiences from the program and the work that has already been done, the farm's size appears to be the determining factor; a mid-sized producer had between 2 and 3 hectares in every survey.

The definition of "middle" size was based on the list of cooperative members, focusing on the quantity of cocoa collected and the number of hectares owned.

According to the 1989 General Population Census, the average number of family members in the Ivory Coast is 6.6. In the case of this study, families who were interviewed consisted of an average of 7.4 members.

The majority of growers make use of family labour; the main means of production are rudimentary tools (machetes, spades, pickaxes, shears). Cocoa is transported by bike, or with rented motorbikes for larger volumes. When the weather is unfavourable (in particular when it rains), cooperatives can support their members by making tractors available.

Focus groups were run in each of the organisations we visited. The chosen method was based on open conversations, where participants were free to share their opinions, and participants were also free to comment on the subsequent responses, information or opinions.

In total, we met almost 50 farmers, with an average of 12 per organisation.

In each cooperative, the first part of the group work was to establish the production costs together. The second part involved the families' spending to meet basic needs: food, health and education. In each area, a field visit was carried out to learn about the projects supported by the Equité programme and to validate the information gathered from the interviews.

Even if the work carried out could be more extensive with second-level data, the information obtained from the farmers and the cooperatives seems reliable, given the social control developed between the farmers and the cooperatives and the chosen method of focus groups and open conversations.

³ These cooperatives were chosen on the basis of their close relationship with the AVSF team in Côte d'Ivoire within the framework of the Equity program. This guarantees a degree of reliability concerning information communicated in confidence, which was established between the two parties from the beginning of said program, and the beginning of their acquaintance.

III. Explanation of the given production costs

Costs were established for all the activities necessary for farmers to produce dried and fermented cocoa beans⁴:

- **Manual weeding:** This involves removing or cutting weeds that grow in the cocoa plantations. Weeding can be carried out in three ways. The first requires family labour, the second involves employing other producers to carry out the work (in which case they are paid for each day worked). The third option is drawing up contracts with youths in the village or in neighbouring villages to weed the areas, in general 3 times a year. The amount of work necessary depends on the age of the plantation but all of the producers questioned said that they carried out this task. The data calculations here are based on the average of the various data given by all the producers met.
- **Harvest:** There are two main harvesting periods. The main harvest running from October to March, and a secondary harvest, known as the mid-crop, from April to August. The most difficult periods for families are the months of July, August and September as there is very little, or nothing, to be harvested. Growers say each harvest lasts around 15 to 20 days and estimate that they carry out 4 picking sessions for both the main and the "smaller harvest". The difference lies in the volume picked depending on the harvest.

As sales of beans make cocoa the main source of economic revenue for the families (Basic 2016, "La face cachée du cacao"), families of cocoa growers use mutual assistance between themselves in order to limit labour costs. Harvesting therefore takes place as a "community" as friends and neighbours come together to pick and open the cocoa pods and remove the beans. In the communities we visited, this step in the process allows families to celebrate together despite their limited economic revenue. During the lean period, families face serious financial problems, including purchasing food.

This community collaboration during the key steps of cocoa production is a survival strategy for the farmers, but it also enables them to reduce production costs. When prices drop, living standards often decline and mutual aid is amplified.

To calculate the work days necessary for harvests, we considered a plantation of average maturity (10 to 15 years), between 2 and 3 ha for all those questioned, with average production values (neither abandoned nor excessively productive). With this data we calculated that an average of 21 people were required for this activity (21 hr/d).

- **Gathering the harvested pods (harvest):** During picking, workers leave the collected pods in different areas of the plot before they are gathered together at a single location where they are split to extract the beans. For a plantation of between 2 and 3 ha, 4 to 5 man days are needed to collect the pods.
- **Breaking or splitting:** As with the harvest, friends and family help each other with this step. The owner provides those who come to help with food and the local drink, palm wine. Communities organise the harvests and splitting by determining the areas to be farmed each day in turn. A large group of farmers arrive early in the morning. The number of people depends on the area to be harvested and the quantities to be split. Then, after 3 or 4 hours,

⁴ Moreover, the cost of establishing a plot was not integrated. This will correspond to a slight underestimation of the cost of production. (These costs were estimated after the inquiry to be 500,000 FCA Francs/ha. Keeping in mind that the average plantation can be worked for about twenty years, the corresponding annual cost is therefore about 25,000 FCA Francs.)

they stop work and move on to the neighbouring plot, and so on, until all the sectors have been harvested.

The average number of persons employed for this activity is 12.5 hr/d.

- **Sanitation harvest:** After picking, the majority of farmers try to pick all the fruits that remain on the cocoa trees. The aim of the sanitation harvest is to remove any diseased fruit. Farmers also use this opportunity to clean up their land by cutting off new shoots known as "suckers", branches that grow out from the base of the trunk. 10 people per year are required for this work (10hr/d).
- **Soil fertilisation:** we noted that various levels of technologies and practices are used to refertilise soil. We estimate that around 60% of farmers use chemical fertilisers, in varying doses, but the majority of farmers interviewed use small quantities as they have little money available: *"the money we make is just enough to survive; we have nothing left to buy fertilisers"*.

This partially explains the state of the plantations and the vicious circle of cocoa production in this country where the average production is estimated at 500Kg per hectare. The farmers explained that their incomes are not sufficient to ensure a decent life, let alone to ensure that plantations remain in good condition. This means that each year their harvest and revenues are reduced (see Infra).

In the intensive⁵ system, with an average of 4 bags (20,000 CFA francs each) of chemical fertiliser used per hectare, each hectare therefore costs 80,000 CFA francs.

Of the farmers we met, including those who are not certified organic, some already use up to 30 bags of chicken manure, enabling them to increase their harvests by 1000Kg per ha. This clear example effectively demonstrates the farmers' belief that droppings are beneficial and increase harvests. This technique will be discussed as part of the CAYAT cooperative supported by the Equité programme. The current limit is the availability of chicken manure, as well as the cost, since farmers often need to buy it a long way from their farms and pay for transport and spreading. CAYAT's project aims to promote poultry farming in order to diversify sources of income and increase the availability of manure.

- **Fermenting beans:** this step is key to ensuring high quality products. It is interesting to note that the majority of the visited cocoa organisations ferment their cocoa on site. To do so, they place the beans on banana leaves before folding them over to cover them. This increases the temperature of the process. Using this low-tech system, SCEB farmers, for example, are able to ensure fermentation which is suited to their buyer's (Ethiquable) quality requirements for export. What's more, this fermentation and drying using palm leaves causes the cocoa beans to develop characteristics that are specific to "rural" cocoa, something that consumers value.

Nevertheless, there are sometimes quality issues as some farmers do not turn the beans as often as necessary. This is one of the reasons why certain buyers prefer fermentation in boxes. The issue is that the majority of buyers are "tolerant" with regards to the quality (and do not pay different prices) which does not encourage farmers to improve quality. However, this attitude is changing as poorly fermented beans are rejected, a growing phenomenon.

⁵ Sources: François Ruf, CIRAD

For this work, approximately 4.5 employees are needed to turn 500Kg (10 bags) in one day.

- **Drying and bagging:** This is the final step in all the activities that are carried out on the plots by the farmers. The farmers told us that they have to monitor their products every day because if it rains they must immediately cover the cocoa to retain its quality. Even if the work is not very difficult, it is time-consuming as the beans must be turned regularly to help the drying process. For this activity, 8 working days are required. This includes bagging the beans to transport them to the storage areas at the cooperatives.
- **Equipment and tools:** Farmers take great care when on their plantations as some have been bitten by snakes. They must wear rubber boots every day. The majority of the farmers buy 2 pairs each year.

Another important tool is the machete, used for the majority of farming activities on their plantations. Since the farmers visit their plantations daily, they always have this tool with them. Each year, they buy an average of 3 machetes. We must also consider the "files" (or knives) used to sharpen tools.

The following table shows the details of the cost of producing 590Kg/ha. (All the reports we read mention an average harvest of between 400 and 500Kg/ha for the Côte d'Ivoire).

Table 01: Average total cost of cocoa (for 590kg/ha)

Activities	Unit	Quantity	Cost/unit	Total cost	Average production (Kg/Ha)	Unit price (CFA francs/Kg)
Production					590	
Weeding	Contract	3.00	35,000.00 ⁶	105,000.00	590	177.97
Harvest	hr/d	21.00	3,000.00	63,000.00	590	106.78
Harvesting	hr/d	4.00	3,000.00	12,000.00	590	20.34
Splitting	hr/d	11.00	3,000.00	33,000.00	590	55.93
Sanitation harvest	hr/d	10.00	3,000.00	30,000.00	590	50.85
Fertiliser compost	Bag	8.00	7,000.00	56,000.00	590	94.92
Application	hr/d	1.67	3,000.00	5,000.00	590	8.47
Disease control	Application	2.00	11,800.00	23,600.00	590	40.00
Transport from plantation to the village per bag	Bag	11.80	1,733.33	20,453.33	590	34.67
Fermentation		4.67	3,000.00	14,000.00	590	23.73
Drying		7.00	3,000.00	21,000.00	590	35.59
Machete		3.00	2,500.00	7,500.00	590	12.71
Lime		3.00	1,000.00	3,000.00	590	5.08
Boots		2.00	3,000.00	6,000.00	590	10.17
Total cost of production for the FARMER						677.21

Comments:

- The average production of the organisations we visited is estimated at 590kg per hectare. It is very difficult to find an average reference amount, including in the bibliography. Figures given in the industry vary between 400 and 500kg/ha but the cooperative members we visited have slightly higher harvests. This could be explained by the fact that farmer organisations (chosen for a partnership with the Equité programme) play an important role in supporting members with the management of their plantations.
- The production costs reflect the conventional management system of cocoa plantations without shade, using chemical inputs. The farmers explained that as the dry periods last a little longer each year, they need to use more chemical products to resist the climate.

⁶ All figures represented here were obtained following inquiries held in the field.

- In countries like the Côte d'Ivoire, where basic services are lacking, it is very easy to find small privately run shops where chemical products are sold with no checks made.
- The most costly of the various activities required to grow cocoa are the two most labour-intensive: controlling weeds and harvesting the crop. Many growers routinely use herbicides, which the government and large companies promote, to control adventitious plants.
- Nearly all the growers interviewed use chemical fertilisers, but apply less than the recommended dose due to a lack of financial resources.
- Significantly, however, more growers are choosing to use chicken manure as an organic fertiliser.
- The tools and equipment that growers use are basic. Growers typically rely on a machete for most of the work they do on a plot. All growers said they wear boots to prevent snake bites. During interviews cases of fatal bites have been reported.

Conclusions:

- **During the major campaign**, growers receive a "farm gate" price of 1,100 CFA francs per kg, slightly more than 2,000 USD per tonne. This price covers growers' production costs and meets their essential needs, but does not help them improve their living conditions.
- Starting in April 2017, **for the minor campaign**, the government set a price of 700 CFA francs per kg, reflecting the fall of cocoa prices in the world market. **That price barely covers production costs, which are estimated at 677 CFA francs/Kg, but is far too low to cover farmers' cost of living.**
- **Market prices keep growers trapped in a vicious circle:** their income is too low, so they i) have little to invest in planting, leading to poor yields that have stagnated... and lower production, ii) their families can survive, meeting essential needs but not improving living conditions.
- A new proposal for a minimum cocoa price under fair trade conditions must consider growers' cost of sustainable living.

IV. The cost of living for a family of cocoa growers

Costs related to production through the harvest, collection, and opening pods, etc. were described in part 3. We considered various cost categories here to analyse living costs.

a. Food costs

We calculated food costs based on three meals per day (even if many heads of households skipped one or more meals per day between harvests). We also considered consumption of crops households had grown and food they bought.

Farmers report that they eat mostly rice, yams, semolina, attiéké (cassava couscous), bananas, or fish, while they eat little meat. During interviews, growers explained that we had meat for lunch because we were their guests.

Lastly, most families maintain small gardens and gather fruit.

As we explained earlier, there are three critical months during the year when it is extremely difficult for families to meet all of their daily living expenses. Several growers we interviewed repeated that they had poor cash flow, forcing them to skip breakfast due to a lack of food (and perhaps eat only a small midday or evening meal some fruit, for example). They preferred to give what food they had to their children. Growers go to their plots and look for bananas or cassava, which they grill and eat.

Several growers said that “it’s good” when they can hunt field mice to eat. Another way to relieve hunger is to drink palm wine. This information is quite striking and illustrates that the income families earn is not sufficient to ensure that they can eat.

Table 02: Average number of members per family and average food costs (per person per day)

	member/family	Food expenses/person (CFA francs/day)	Annual expense (CFA francs)	Expenses in USD
SCEB [Société Coopérative Equitable du Bandama (Bandama Fair Trade Cooperative)]	7.44	463.87	1,259,690.39	2,519.38
CANN	6.89	515.36	1,295,847.99	2,591.70
CAMAYE	6.90	505.35	1,272,723.98	2,545.45
Total	21.23	1,484.58	3,828,262.36	7,641.52
Average	7.08	504.86	1,276,087.45	2,552.16

Comments:

- An estimate of the average annual food expense per family (multiplied by seven family members for 365 days) is **2,552 USD**.
- Families grow most of the food they eat in their garden plots (yams, rice, bananas, and other fruits). Families buy other foods in markets, chiefly fish, oil, sugar, salt, canned tuna, etc. It was not possible during the study to quantify how much food families produced and how much they bought in markets. An additional, more accurate study would help determine how much of the 2,552 USD figure represented food families produced versus food they bought.
- As the above table shows, the average family has seven people (parents and children)⁷. The daily expense for three meals is estimated at roughly 505 CFA francs per person (nearly 1 USD per person).

b. Other miscellaneous household costs

- **Expenses for use of basic household items:** soap, laundry detergent, dishwashing liquid, toothpaste, bathroom tissue, etc.
- **Paying for electricity:** Of the organisations visited, two (2) lack electricity, so they buy batteries for lamps or a radio.
- **Paying for water:** Most rural families do not have an indoor water supply and rely on wells to supply water. There are costs for electricity used by generators used to pump water as well as maintenance costs.
- **Health expenses:** Health care costs account for a significant part total family expenses, in part because as Côte d'Ivoire has a high malaria burden. Heads of households often need health services or small health centres to gain access to basic medications and care. More complex problems raise health care expenses as families must travel to the city to receive skilled care from physicians or specialists. We also know that many children contract illnesses related to poor hygienic conditions and to deficient or absent village health services.
- **Educational expenses:** This category represents a major priority for growers as many families consider educating their children crucial. Many families hope that education will help their children escape poverty, as children who work in cities send a little money to their families. Many families, valuing education so highly, and disappointed by the quality of public school education, make sacrifices and pay high tuition to private schools but are disappointed.
- **Funeral expenses:** Just as harvesting cocoa and opening pods requires collective action, covering funeral expenses in the villages we visited require a form of mutual community support. Most households generally lack sufficient resources to cover all funeral expenses, so all families in the community contribute to covering them.

All of the growers interviewed said that paying for funerals remains the best way to care for their loved ones one last time. They also feel that it ensures that their families and

⁷ The last census of Côte d'Ivoire, what's more, indicates that the average rural family consists of 6.6 members.

neighbors will help them. It's like saying, *"I help you knowing you'll help me"*. There is no social security and no funds dedicated to paying for funerals, so communities provide mutual support.

- **Supporting extended families:** Supporting extended families is another survival strategy that families share. All interview participants said that they help their parents and grandparents who are no longer able to work. Children hold their parents in great respect and consider caring for them a duty.
- **Festival expenses:** Celebrating festivals is also part of the national culture. Farmers say that they celebrate an average of three festivals each year, plus Christmas and Easter.
- **Transportation expenses:** Transportation expenses correspond to trips to cities to buy goods, see a doctor, or visit relatives.
- **Equipment repair:** this includes all expenses paid for maintaining bicycles, motorcycles, etc. Bicycles are a common form of transportation that farmers use daily, chiefly for reaching plots far from their homes. Farmers also use bicycles to transport cocoa. Not a single family goes without a bicycle.
- **Telephone expenses:** Globalisation and easy access mean that a large majority of growers have mobilephones.

Table 03: Other household expenses (USD)

Other expenses	Cooperatives						Total	Average	%
	SCEB [Société Coopérative Equitable du Bandama (Bandama Fair Trade Cooperative)]							USD/yr	
			CANN		CAMAYE				
Household expenses	126.86	7%	162.00	9%	101.66	7%	390.51	130.17	8%
Electricity	138.72	7%	179.25	10%	47.66	4%	365.63	121.88	7%
Water	128.00	7%	43.20	2%	31.20	2%	202.40	67.47	4%
Health	302.40	16%	180.00	10%	160.00	12%	642.40	214.13	13%
Studies	305.47	16%	321.11	18%	285.43	21%	912.01	304.00	18%
Books, etc.	161.75	9%	205.56	11%	87.71	6%	455.02	151.67	9%
Funerals	64.00	3%	62.22	3%	100.00	7%	226.22	75.41	4%
Large family	89.80	5%	87.80	5%	80.00	6%	257.60	85.87	5%
Festivals	126.00	7%	106.00	6%	160.00	12%	392.00	130.67	8%
Transportation	127.00	7%	134.44	7%	165.71	12%	427.16	142.39	8%
Equipment repair	240.00	13%	314.67	17%	120.00	9%	674.67	224.89	13%
Telephone	56.20	3%	28.70	2%	18.86	1%	103.76	34.59	2%
	1,866.19		1,824.95		1,358.23.		5,049.37	1,683.12	100%

Table 04: Cost of living in USD/year

Expense category	Cost of living in USD/year	%
Food	2,551.61	60.25
Other expenses	1,683.12	39.75
Total	4,234.73	100.00

Comments:

- Table 03 shows the high expenses families pay for health and education (including for public schools: uniforms, supplies, trips, meals, etc.). The amounts that families pay show that they prioritise basic needs. Lacking sufficient resources, all expenses that growers pay are essential for members of their families.
- Sixty percent of all expenses, or 2,551 USD per year, go to buying food. Approximately 40% of annual expenses, or 1,683 USD, cover other costs, including priorities, such as health and education.
- Monthly expenses per family are roughly **350 USD**.

Conclusions:

- The figure of 2,552 USD for annual expenses for a family of seven represents 60% of total expenses. This data shows that the families of growers in cooperatives use the largest part of their income to pay for food.
- The quality of a diet (consisting mostly of cassava, bananas, and rice) is unsatisfying despite the high food expense. Incomes don't allow families to buy animal protein such as milk, eggs, fish or meat.
- The growers interviewed also confirmed that if they had more income, they'd prefer to eat better and give their children milk, eggs, meat, etc.
- Table 03 shows that education expenses combined with buying school supplies consume 455 USD per year. **This amount is more than one quarter of other expenses (27 %)**, highlighting the value that families place on educating their children.
- Another important expense is health, which accounts for 13% of all other expenses, or 214 USD.

V. Comparing costs of living and production versus income

Table 05: Comparison of costs of living and production versus income
(We used an exchange rate of 1 USD = 500 CFA francs for this analysis)

Production level Kg	Price/Kg	Total income CFA francs	Cost/Kg	Total costs	Remainder	Margin in USD
590.00	1,100.00	649,000.00	677.21	399,533.33	249,446.67	498.89
590.00	700.00	413,000.00	677.21	399,533.33	13,446.67	26.89
500.00	1,100.00	550,000.00	697.27	348,633.33	201,366.67	402.73
500.00	700.00	350,000.00	697.27	348,633.33	1,366.67	2.73

Comments:

- A yield of 590 Kg/ha at a cost of 677 CFA per Kg and a price of 1,100 CFA/kg, the price set for April, allows growers to achieve a margin of 498.89 USD per ha.
- Using the same yield and cost figures with a price of 700 CFA/Kg, the margin falls to just 26.89 USD.
- Using then average national yield of 500 Kg/ha, with growers receiving 1100 CFA francs/kg, the margin rises to 402 USD/Ha. (See annex: Cost table for 500 kg/ha).
- USD\$2.73 per ha. However, **with a present price of 700 CFA Francs, margins are currently USD\$2.73 per ha.**
- Cacao cultivation covers its costs of production. Nevertheless, these revenues are not sufficient to cover the cost of living of its growers.

Conclusions:

- According to all growers interviewed, more than 85% of their monetary revenues depend on cacao cultivation. Cacao is what allows them to pay all monetary expenses necessary for food, education, health, etc. (This was one of the conclusions of the 2016 Basic study "The Hidden Face of Cacao.")
- The principal comparison made in this study, therefore, concerns cacao revenues in relation to daily expenses in response to families' essential needs, and allowing the renewal of landholding production capacity (auto-consumption having been integrated into the calculation). In effect, we should know if the revenue brought in by work covers the costs of daily life, such as expenses related to household, food, healthcare, etc.
- Cacao cultivation covers its costs of production. Nevertheless, these revenues are not sufficient to cover the cost of living of its growers.

- Here, the reality of the situation is truly difficult, explaining why farmers consecrate almost all of their time to work to obtain maximum revenues, since they are not sufficient to pay for costs of living.
- To obtain more precise results, it would be necessary to conduct household surveys for each agricultural production unit, studying an overview of activities conducted by all the members of the APU.

**Table 6: Comparison between margin obtained and cost of living
(For 3 ha for a 7-member family and a yield of 590Kg and 500 Kg)**

Yield (kg/ha)	Price (CFA Francs)	Number of hectares	Margin/Ha (USD)	Total	Cost of living	Loss
590	1,100	3	498.89	1,496.68	4,234.00	-2,737.32
590	700	3	26.89	80.68	4,234.00	-4,153.32
500	1100	3	402.73	1,208.20	4,234.00	-3,025.80
500	700	3	2.73	8.20	4,234.00	-4,225.80

Comments:

- According to all growers interviewed, more than 85% of their monetary revenues depend on cacao cultivation. Cacao is what allows them to pay all monetary expenses necessary for food.
- Since cacao revenues are not sufficient for growers, they sell a part of the production from their vegetable gardens. Alternately, in some instances they work on banana plantations or as construction workers in town. Other families receive money from their children, who study or work in town. This accentuates the importance of education for these farming families, which constitutes an investment in the future with medium-term financial returns.
- Based on 3 Ha cultivated per family, and an average return of 590 Kg per Ha, a complete analysis of revenues and expenses shows a margin of USD\$499/Ha. **Therefore, families lack USD \$2,737 annually.**
- When we consider a margin of USD\$26.89/Ha, corresponding to sales of 700 FCA Francs/Kg, **families lack USD \$4,153/year.**
- With a return of 500 Kg per Ha and with sales of 1100 FCA Francs/Kg, or 700 FCA Francs/Kg currently, **families lack between USD \$3,025 and USD \$4,225 per year.**

VI. Overall Conclusions

- **More than 60% of expenses per year correspond to family nutrition.** Despite a majority of revenues destined for this purpose, generally nutrition is not adequate, neither in terms of quantity nor quality (since it is composed primarily of carbohydrates and very little protein).
- Farmers' strategy for lowering nutrition cost is to consume "basic" products grown on their land, such as manioc and yam. Farmers recognize that harvest months are the only months when they do not lack for food and, **generally speaking, they do not eat enough to satisfy their hunger. Multiple growers questioned recognize that sometimes they don't eat, and they prefer that their children are the ones who have access to food.**
- In the household economy, cacao brings in the majority of monetary revenues. Other crops contribute to their nutritional needs, but remain the minority in the system of production. Therefore, cacao is essential for monetary revenues generated by families and to support basic needs, including nutrition as well as other cost components.
- **The farmgate price of 1,100 FCA Francs/kg of cacao beans (USD\$2,200/tonne) fixed by the state does not allow for the coverage of sustainable costs of living.** Since this price is greater than the minimum FTI certification price (which is USD\$2,000/tonne in FOB), it's clear that the minimum price guaranteed by FTI Certification does not allow cover a sustainable cost of living for growers either.
- In addition, since cacao production is the principal activity and revenue source for families, it is possible to confirm that the level of poverty marked by precarious living conditions and poor nutrition is directly linked to the low prices that they receive. **Therefore, it is urgent that the guaranteed minimum price established by equitable commerce be increased to enable the observation of the goal of guaranteeing decent living conditions to each grower.**
- There is another revenue source unaccounted for here, the majority of which is generated by women, generated via agricultural production grown on individual land parcels and sold locally.
- All of the growers interviewed said that they'd like to make more money in order to better educate their children, eat better, and pay healthcare costs more easily. In the same way, growers said that their primary aspirations are to have a more comfortable home (with more rooms, with a bathroom like those that exist in some houses in town that they've visited or that their children have described to them), to be able to sleep on a mattress, etc.
- From these varying observations spring important lines of questioning about the impact of equitable commerce on the quality of life in households, keeping in mind that equitable certification aspires to guarantee decent qualities of life to families. Unfortunately, this is not the case for the vast majority of households interviewed. We therefore affirm that it is urgent that organizations such as Fairtrade revise their pricing policy in favor of growers, and examine their own intervention strategies and support networks which contribute to the evolution of cultural systems, so that they become less dependent on external input, which, more and

more, is overwhelmingly chemical. Labeling standards such as Fairtrade, on the other hand, seeks to increase productivity without really encouraging growers to adopt agroecological techniques and modes of production. In other geographic zones and other agrarian contexts, equitable commerce, in the form of setting realistic minimum prices, created effects on regulation in conventional sectors. The modes of production that these have supported constituted references for and demonstrations of durable cultural systems, from an environmental point of view. These impacts are not seen in Côte d'Ivoire, at a period when the sector's viability appeared more and more threatened.

VII. Cocoa production in the Ivory Coast from the point of view of a Peruvian agriculturist (first-person testimony)

Achieving this mission in the country with the largest cacao production is the hope of many people working in this sector. Having had the opportunity to get to know the reality of the growers, knowing their problems and aspirations is equal parts gratifying and instructive, because it gives us the opportunity to compare several realities within the cacao industry.

Ivoirians are a very open and welcoming people, and this is why there was very little difficulty conducting interviews and discussions through focus groups, as was envisaged in our methodology. Listening to and watching the faces of people speaking, as well as their colleagues, allowed us to confirm that the things that were said were true and authentic. They can be corrected by the other participants as needed. For that reason, production costs and costs of living alike were very representative of the reality of the cooperative growers implicated in the study.

It was also possible to confirm that the overall condition of the plantations is not sustainable, because the classic system of production, with a single variety (Mercedes) and without shade trees, is intensive, dependent on input, and not resilient to dramatic changes in climate. But most of all, this system is not aligned with the characteristics and production logic of the country's family farms.

Another major preoccupation is that, in comparing sales revenues with production costs, we can conclude that prices cover production costs, but growers' costs of living are not covered. Once we've characterized the cost of families' essential needs, it seems that revenues obtained from cacao cultivation are far from ensuring decent and acceptable living conditions.

The low prices that farmers receive for cacao can sometimes cover production costs, but make plantation upkeep precarious. This partially explains low rates of return. In sum, revenues obtained from cacao do not guarantee decent living conditions, much less plantation upkeep.

This survey was a look into conditions in Côte d'Ivoire. It was conducted by the firm AVSF Peru, which interactions with other, less "difficult" agrarian situations, notably for plots maintained by equitable trade. This is why they've expressed themselves thus:

It is shocking to learn that many growers selling in equitable trade do not know the principle behind this certification. What's more, it is abhorrent that these growers are skipping meals and sacrificing themselves for their children. In addition, hearing that they'll eat field mice when they're lucky enough to find them is a commentary that aptly demonstrates the reality of Ivoirian growers.

We know that farmers live in precarious housing, with difficulty accessing basic services—in sum, with difficult living conditions, with elements missing from every sector. What's more, we hear the testimony of Ivoirian farmers, who say that they'd like to have a nice "normal" house, with better revenues so they can guarantee better nutrition for their families or better education for their children. This allows us to understand that all of the world's farmers (like Peruvian cacao growers) have the same wish of obtaining better revenues in order to build a better future. In Côte d'Ivoire, growers' living conditions are, at the very least, cause for alarm. This includes those who are supported within the framework of equitable trade. There are still many steps to be taken to guarantee decent

living conditions to these growers (which is its primary objective, and is often presented as an achievement to Northern consumers of certified products, like chocolate).

