



COCOA A LEVER FOR DEVELOPMENT



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LOW PRICES DESPITE INCREASING DEMAND

Cocoa is a mythical food with surprising origins that has made its way around the globe. Starting in Central America, it spread in the holds of merchant ships during the era when the world was opening up to explorers. Limited to the zone between the tropics, from which it cannot escape, the cocoa tree is fragile and delicate and its trunk and branches hold a bizarre, inedible fruit. A fruit, though, that is highly prized.

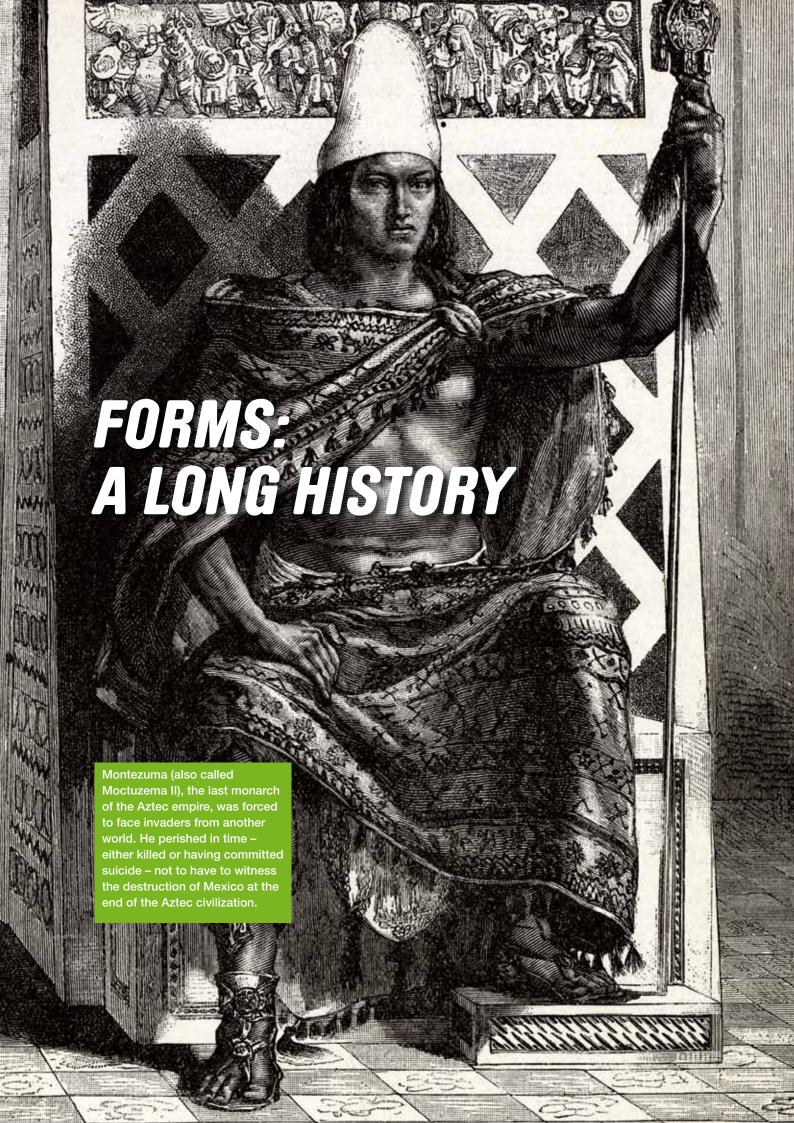
Already, this first contradiction provides an important key to understanding cocoa: it is not part of the diet of the farmers who grow it, but is a cash crop.

The cocoa tree originates from South America and is still cultivated there. Brazil, a country with a fast-growing economy, consumes more than it produces. In these countries, where planters develop relevant economic strategies, some productions have become known for their aromatic qualities and command good prices with selective buyers. In Asia, Indonesian production is captured by its transforming neighbour, Malaysia. Lastly, there is Western Africa. It is there (mainly in Ivory Coast and Ghana) that the cocoa destined for consumption in northern countries and mainly Europe is produced. It is the commercial cocoa of the Ivory Coast that determines the reference prices on the New York Stock Market.

Another crucial factor is the fact that 85% of cocoa production is grown on small family farms measuring only a few hectares. The farming method is manual and non-mechanised. Cocoa is also a perennial crop; the trees live for several decades, which accounts for the care devoted to selection, maintenance and upkeep of the orchards.

It is not easy to remain impervious to the contrast between African farmers growing their cocoa trees to eke out a meagre living and European consumers. Between them lie finance professionals. Though demand pressure continues to rise, the prices paid to planters remain low. This has been the situation for a long time. To such a point that the sector is declining: disinvestment, aging plantations, vanishing know-how, competition from other crops etc. Unfortunately, the development policies of African countries frequently lack concrete support, suggesting that agriculture is not seen as a priority. But is the situation much different in developed countries?

Today, however, there seems to be a good amount of will to come together and give a new boost to the sector. The choice to renovate cocoa orchards seems to be the most appropriate, or at least more accessible than the search for new zones. The techniques necessary to obtain resistant and productive trees already exist and are accessible. They require a realistic transfer of knowledge, without a profusion of technologies. Most importantly though, they demand an enormous amount of work from planters. These efforts will of course need to be compensated at their true value.



FROM THE MAYA TO CHOCOLATES

The ancestor of chocolate was called xocoatl in the country of the Maya who cultivated it to make an energising drink from the grilled beans. The word 'chocolate' probably originates from the same region (cacahuatl in Aztec) and means 'whipped drink' in several dialects spoken in Mexico. Indeed, cocoa trees were grown in South and Central America several centuries ago. The cocoa beans were also used in those times as currency, including afterwards during the Aztec period. This practice lasted until the 16th century.

The first encounter of Europeans with cocoa was rather chaotic: it took getting used to this strange tasting drink. We should mention that the Indians added pepper, which made it rather... stimulating! The story goes that Christopher Columbus threw the beans received from the Amerindians overboard, thinking they were goat droppings. Already a culture shock at that time...

It was the conquistadores of Cortez who first had the idea in the early 16th century of adding cane sugar to this bitter drink, thus inventing chocolate. The pepper was replaced with vanilla – and one can only imagine the difference... The story according to which the Mexican emperor, Montezuma, the last Aztec emperor, drank a bowl of the drink before going to his harem, may be at the origin of chocolate's reputation as an aphrodisiac! Chocolate was thus brought to Europe through Spanish ports. Frightened by the heretical reputation of cocoa, monks took great pains to keep the drink shut away, though without success! Charles Quint enjoyed the potion and handed the monopoly of this trade over to the Spanish.

It was when Anne of Austria, the daughter of Philip III, King of Spain, married Louis XIII in 1615 that the recipe for chocolate came to France. In the following generation, their son, Louis XIV married Maria Theresa of Austria, infanta of Spain, and chocolate was introduced to Versailles. Chocolate (drink with milk) thus made its sensational debut at the court of France. As for the cocoa tree, it was exported from its native soil and adapted easily to other tropical colonies. The first of these was the Philippines...

In was in 1674 in London that the first plain dark chocolate was offered to gourmets. However, it was chefs who would use it to create desserts that were gaining in popularity. In 1802, the Swiss developed a technique to create bars of chocolate. However, it was a Dutchman, Caspar Van Houten, who invented the hydraulic press used to separate the butter from the cocoa powder (1825). It was a Swiss man, Henri Nestlé, who invented milk chocolate in 1875. In Belgium, it was the chocolatier Neuhaus who first had the idea in 1912 to create a delicacy composed of filled chocolate. And, thus, the chocolate was born . Lastly, all that was necessary was to conceive of a suitable package to sell it to the public. This time, it was Mrs. Neuhaus who first came out with the 'box of chocolates'! Charles Neuhaus also created the brand Côte d'Or (in 1883) in reference to the Gold Coast (Côte de l'Or) in what is today Ghana where the chocolatier bought his beans.

^{1 |} Some prefer to attribute the invention of the chocolate to the Count of Plessis-Praslin (XVIIth century) who developed a recipe for an almond coated in sugar or chocolate.



The cocoa tree

The cocoa tree is an evergreen tree that grows in the equatorial zone. Its botanical name is *Theobroma cocoa L* and includes several groups.

The cocoa tree first appeared in the Upper Amazon, a region spanning between Ecuador and Brazil. Varieties of the hardy *Forastero* can still be found in this region today. It first moved towards the north, where it developed in Central America (Mexico). From there, the cocoa tree travelled the seas westward and reached the coast of the Philippines (1775), Indonesia and then Sri Lanka.

It was also transported by English ships who took it aboard in Trinidad, also bringing it through London to Sri Lanka (1880). From there, it colonised Madagascar, Mauritius and Reunion Island. Another voyage starting in London brought it past Australia to the Samoa Islands.

Lastly, cocoa plants were exported from Brazil in 1850 and spread to several countries in Western Africa.

The cocoa tree is a rather fragile plant. It gives good yield at temperatures ranging from 24-26°C, but starts to suffer below 18°C and above 32°C. It requires a high level of humidity (80%), soil rich in phosphorus and potassium, organic matter and trace elements. Annual rainfall above 1700 mm must be distributed well, with a dry season lasting no more than four months. As the cocoa tree is sensitive to the sun and wind, it must be planted under the shelter of larger trees such as banana trees, coconut trees or rubber trees (Heveas).

A cocoa tree can live for over fifty years, reaching up to 8-10 metres in height. However, in plantations, it is cut back to 4-6 m. In plantations, the cocoa trees are often replaced after 40 years as their yield decreases with age. The longevity of cocoa trees depends on several factors: the richness of the soil (and thus the use of fertilisers and humus), the upkeep of the trees, and the care and protection provided by the 'cocoa growers'. The density of the plantations is between 1000 and 1200 cocoa trees per hectare.

The cocoa tree starts flowering in its third year and flowers continuously throughout the year. A fly, the *Forcipomyia*, is responsible for its natural pollination. The tree bears buds, flowers and fruit at the same time. The cocoa tree produces several thousands of flowers per year. It regulates its own production: only 5 to 10% of the flowers are pollinated to give a fruit (the pod) after 5 or 6 months depending on the variety and the climate.



The pod

The pod grows directly on the trunk and branches of the tree. Depending on the variety, it weighs between 200 and 800 grams at maturity and measures around 20 cm in length. The pods change colour as they ripen, going from green to purple or yellow-orange.

The pods of the Forastero group are yellow when ripe, while those of the *Trinitario* and *Criollo* are red and orange. The pods contain 30 to 40 seeds (beans) coated in a white pulp or mucilage.

Starting in its fourth year, one cocoa tree yields between 20 and 80 pods per year, or 0.5 to 2 kg of beans per year. However, many farms are not able to reach such high yields (300 to 400 kg/ha). 85% of global cocoa production comes from family farms where the orchards measure only 2 to 4 hectares.



AN EQUATORIAL CROP

The cocoa tree is grown in equatorial regions between the latitudes of 20° North and 20° South.

The crop is cultivated over 8 to 10 million hectares. Around 3.5 million people are currently involved in the production of around 3.5 million tonnes per year. These three factors together form the crux of the cocoa problem: one tonne per producer per year over an average of 2.5 hectares. At an average price of 2000 USD/tonne in 2010, can this really be called a cash crop?

From its origins in Latin America where 80% of the cocoa consumed was produced in the early 19th century, the cocoa tree then spread to Asia followed by Africa, the continent that now provides the bulk of its cultivation.

Africa

Two million small farmers produce cocoa in Western Africa.

The biggest producing country is **Ivory Coast** with over 40% of the global bean production. The first plants arrived from Brazil in around 1900. The varieties present in Ivory Coast are those of the *Forastero* group (*Amelonado* variety) as well as selected hybrids. Over one million small planters (less than 5 ha of cultivation each) contribute to the production of the country's greatest asset which totalled 1.3 million tonnes in 2009. Ivory Coast also boasts a transformation industry that absorbs around 20% of its production. The remainder is sold to large chocolate manufacturers throughout the world. Cocoa represents over 10% of the GDP of Ivory Coast and 40% of its export revenues.

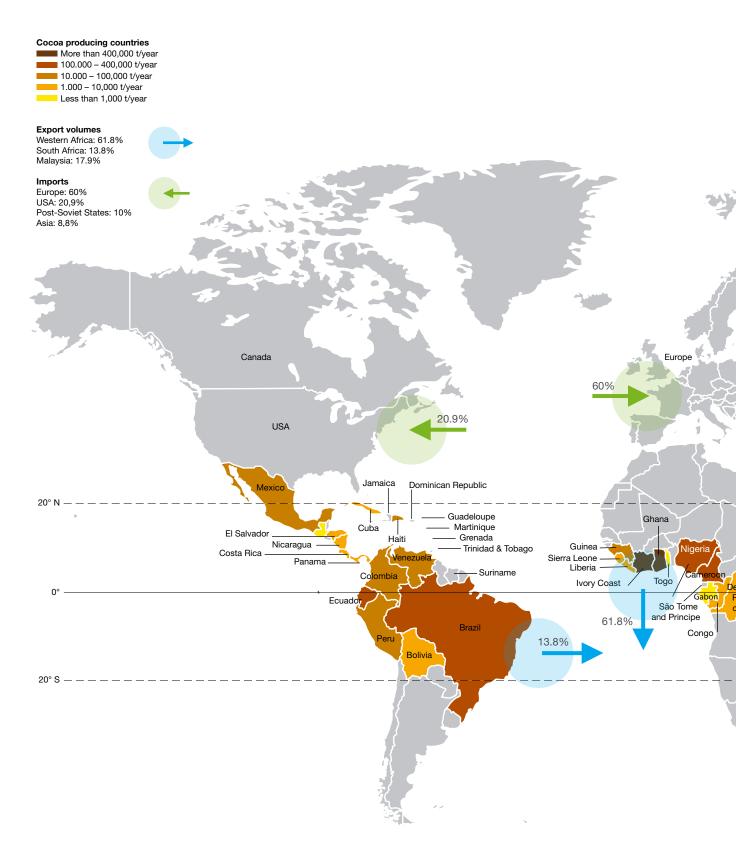
Ghana received its first plants from São Tomé in 1875. Despite general liberalisation of the economy, Ghana has retained a stabilisation fund that serves as the foundation for its quality control reputation. The cocoa of Ghana systematically receives a premium compared with that of its neighbour, Ivory Coast.

The Ghana Cocoa Marketing Board, more commonly known as the Cocobod, has attempted to stimulate cocoa production over recent years. It coordinates the distribution of agricultural inputs (products, fertilisers, sacks, etc.) to the planters in exchange for a percentage of the cocoa price: the planters earn 70% of the market price. This practice has led to the smuggling of tens of thousands of tonnes of cocoa each year.

In 2009, the Cocobod raised 1.2 billion dollars in funds (investors, manufacturers and financiers from countries around the world rushed to get a piece of the pie). This money was intended to give a boost to the cocoa sector that represents 720,000 local producers and provides a livelihood to two million people. Cocoa currently represents around 20% of the agricultural GDP and 7% of the national Ghanaian GDP.

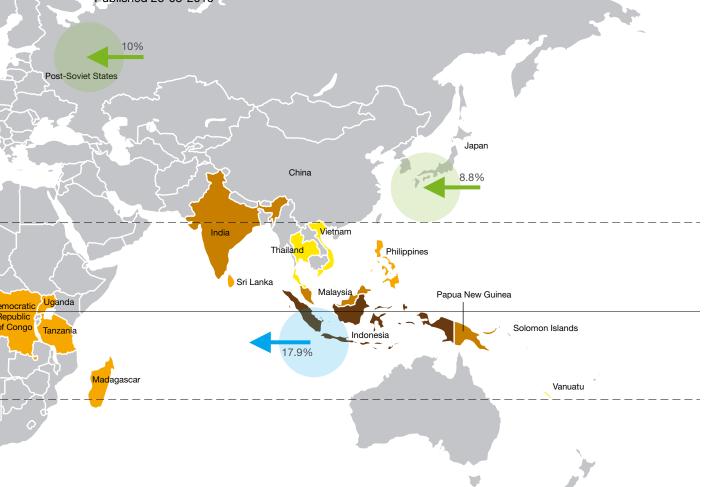
Ghana also has a sizeable transformation industry: large manufacturers (Barry-Callebaut, Cargill) have subsidiaries (grinding mills) there.

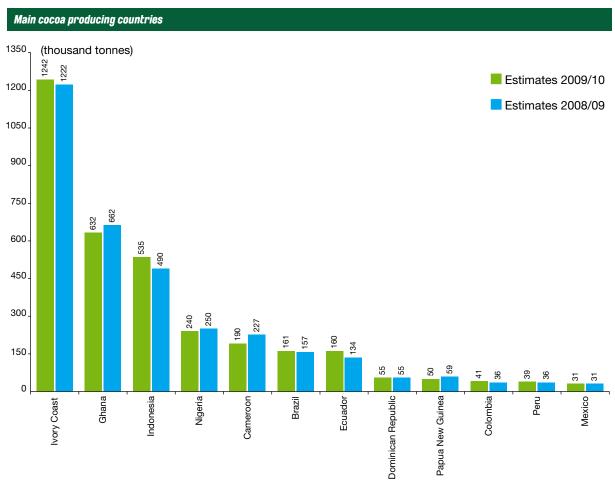
Distribution of cocoa cultivation in the world



Production of cocoa beans (thousand tonnes)									
	2007/08		2008/09		2009/2010 (forecasts)				
Africa	2693	72.1%	2520	69.9%	2459	68.4%			
Cameroon	185		227		200				
Ivory Coast	1382		1223		1190				
Ghana	729		662		650				
Nigeria	230		250		260				
Others	166		158		159				
America	450	12.1%	487	13.5%	505	14.0%			
Brazil	171		157		155				
Ecuador	113		134		150				
Others	167		196		200				
Asia & Oceania	591		598		632	17.6%			
Indonesia	485		490		535				
Papua New Guinea	52		59		50				
Others	54		49		47				
World total	3734	100.0%	3604	100.0%	3596	100%			

Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVI, No.3, Cocoa year 2009/10 Published 26-08-2010





Source: International Cocoa Organization - QBCS, Vol. XXXVI No. 4, Cocoa year 2009/10

>>> Other African countries: Nigeria (7%) and Cameroon (5%): their plantations are old and characterised by low yield.

Other producing countries: Togo, Sierra Leone, Equatorial Guinea, DRC, Congo, São Tomé, Gabon, etc.

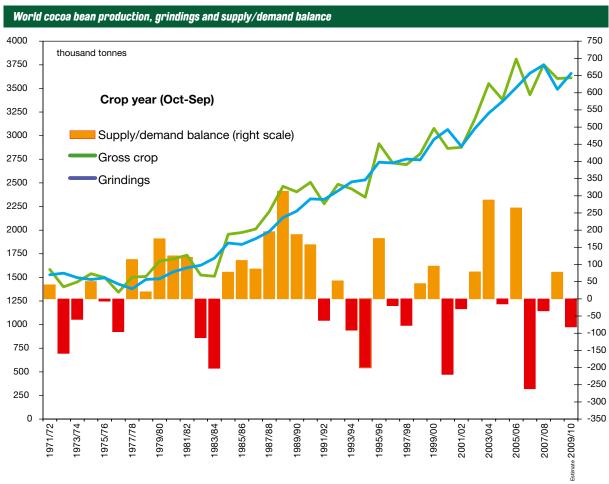
Asia

Penalized by mediocre yield, the cocoa tree is often replaced in this region with the oil palm tree.

- Indonesia: this country has been producing cocoa since the 19th century.
 Its production recently experienced strong growth. It now reaches 16% of global production. Indonesia sells its cocoa to its neighbour, Malaysia, which has a transformation industry. Fine cocoa is produced on Java.
- Papua New Guinea: faced with decreasing yield, the country has received funds from the UN to support its planters.
- Malaysia: chiefly a transformer of beans from Indonesia.

Latin America

- Brazil: Brazilian plantations, which are often large farms, were hard-hit by diseases in the 1990s and now only supply 10% of the global production of beans, a quantity that no longer suffices to feed its own transformation industry: therefore, Brazil now imports cocoa.
- Ecuador: the seventh leading producer worldwide, Ecuadorian agriculture is dominated by small planters.



Source: International Cocoa Organization - QBCS, Vol. XXXVI No. 4, Cocoa year 2009/10

 Other small producing countries: Dominican Republic, Colombia, Mexico, Venezuela, Peru, Haiti, Jamaica, Bolivia, Cuba, etc. In these countries, we can find 'vintages': limited, high-quality crops that delight the discerning customers of renowned chocolatiers.

The groups

Chocolate manufacturers select their beans from among several varieties of cocoa trees. Each variety offers a different flavour that is also affected by the place of production.

- The Forastero (meaning 'foreign') group is resistant and productive. It represents 80% of global production. It comes from the Amazon Rainforest and is still found in its wild form in the Upper Amazon (Peru, Ecuador, Colombia). When cut, the beans are purple. The various varieties supply nearly all of the common types of cocoa.
- The *Criollo* group, the ancient cocoa (criollo means 'child of the country'), is found in Venezuela, Latin America (Caribbean, West Indies, Mexico, Venezuela, Peru), Madagascar, Comoros Islands, Sri Lanka, Java and Samoa. Considered as the prince of cocoas, it only represents 5% of the global production due to its fragility towards diseases and insects. These are the fine flavour cocoas that are mild and slightly bitter. They are found in very old plantations or in the form of isolated trees. The Chuao, a Criollo cultivated in a protected enclave in Venezuela, is considered by many to be the best cocoa in the world.
- The *Trinitario* group (15% of global production) derives from the natural cross between the Forastero and the Criollo (performed in Trinidad, thus

INTERVIEW



ENZO BARATTINI: "COCOA IS A MAJOR LEVER FOR DEVELOPMENT IN PRODUCING COUNTRIES."

Enzo Barattini is the Director General of Development and Relations with African, Caribbean and Pacific States and spokesman for the EU within the ICCO (International Cocoa Organization).

What is the position of the European Union towards the cocoa industry, an example of North-South relations?

Cocoa is a foodstuff that serves as a basis for the development of several southern countries. This is why it falls under the Directorate General for Development of the European Union. Cocoa is also considered by the UNCTAD* as a strategic product that serves as a basis for development. The numerous attempts to stabilise and secure the revenues of producing countries have until now been disappointing. Globalisation and the opening up of markets became crucial and required a change of approach.

Did these stabilisation efforts produce any effects?

Producing countries still adhere strongly to the principle of dialogue with consuming countries. International organisations organise forums and other panels to provide a global vision of the markets. This has contributed to commercial agreements between producing and consuming countries, which are tools to support development. The EU participates in these intergovernmental organisations such as the ICCO** for cocoa. Now, we only need to find the right rhythm and give the countries time to make progress.

What are your guiding principles?

Sustainable development, in its three main aspects: economic, social and environmental. This leads to sometimes delicate discussions with the producing countries who generally complain of the measures to be implemented. We strive to promote quality, to secure supply and, most importantly, to avoid excess supply.

Is it possible to protect European consumers, European manufaturers, the environment and development in producing countries all at the same time?

Each has its own objectives and priorities and arbitration is inevitable. The various European DGs consult with each other. The directive setting the allowance for vegetable fats in cocoa at 5% brought the DG Industry that was rather open to the idea in conflict with the DG Environment that tends to be protectionist towards producing countries. Though the matter initially caused a great deal of stir, we now see that no-one has been the loser. From a health standpoint, the EU lays down measures to protect consumers. The issue of setting a maximum limit for ochratoxin A*** in cocoa irritates producers, not to mention that there would be several technical difficulties connected with such a standard. Therefore, this standard will have to wait. Furthermore, we are naturally attentive to humanitarian aspects such as child labour. In this case, the real problem is poverty. That is what we need to fight.

- * United Nations Conference on Trade and Development
- ** International Cocoa Organization
- *** Carcinogenic toxin.

its name). These varieties are mainly grown where Criollo was formerly cultivated (Mexico, Central America, Trinidad, Colombia, Southeast Asia). They are selected mainly in Trinidad. Their flavour is fine, though less intense than that of the Criollo.

'Fine flavour' cocoa

All cocoa producers naturally dream of producing top-quality cocoa and, most importantly, of commanding above-average prices.

Below is a list drawn up by the ICCO of the origins of fine and rare cocoas:

- Ecuador (Forasteros Nacional and Arriba varieties)
- Venezuela (Trinitarios and Criollos)
- The Caribbean, from Trinidad to Cuba (Trinitarios)
- São Tomé and Principe (Forastero Amelonado since 1882)
- Madagascar (Forastero sambarino)
- Java (ancient Criollos)
- Papua New Guinea (Trinitarios)





A FRAGILE TREE REQUIRING CLOSE ATTENTION

Pollination

Pollination of the cocoa tree promotes the natural hybridisation of trees and loss of their original identity. The heterogeneous nature of the tree is one of the main obstacles to the quality of plantations, both in the quantity and quality of the beans. Certain exceptional sites protected from their environment have allowed ancient races, such as the famous Criollo of Venezuela, called the Chuao, to remain 'pure'. A confidential output (10 to 15 tonnes/ year) that is fought over!

Seedlings, cuttings and grafts

Many planters use the beans generated by trees in their own orchards. This method does not guarantee high yield for the plantations: it would be better to use the material selected by research institutes.

The seedlings are organised into nurseries controlled by cooperatives or development centres. The plantling that grows from a seed can be replanted after a few months.

The vegetative material is also propagated by leaf grafts and/or cuttings. These methods only apply for material selected in specialised stations under the careful eye of experienced technicians. The plantlings resulting from this work are sold (1 USD per seedling) for new orchards.

The regeneration of ancient orchards or ones that are not highly productive can be performed by grafting material – selected in the research stations – on the trunk. For Philippe Bastide, a researcher at the CIRAD, this is a possibility that is considered seriously to revamp the sector: "The historical diseases affecting the cocoa tree have led research institutes to develop 'cultivars', clones resistant to assailants. Clone CCN51 developed in Central America is currently resistant to diseases and provides a yield of 3 tonnes/year (in the research station). This is ten times the current yield observed in Western Africa. Multiplying the cocoa tree in the form of cuttings requires technical know-how that is attainable by any farmer with a small degree of motivation. There are thus avenues to provide qualitative and quantitative solutions to countries experiencing difficulties."

Upkeep of the plantation

Like any perennial crop (lasting more than 20 years), the young cocoa trees require careful upkeep: control of the shade, of self-propagating vegetation and, if possible, enrichment of the soil with organic matter.

Upkeep of the young trees is also a factor for success. Pruning is necessary to eliminate suckers and forked trunks. This practice keeps the crop within the reach of the farmer and ensures high production, mainly on the trunk and at the start of the primary branches. A good understanding of the tree's physiology helps to improve yield.

INTERVIEW

PHILIPPE BASTIDE: "A LABEL OF ORIGIN COULD BE A WAY TO INCREASE THE VALUE OF COCOA."

Philippe Bastide is the correspondent for the cocoa industry for the CIRAD*

How could cocoa producers meet current demand from the markets?

First of all, the cocoa must meet the health requirements imposed by the buyer. Though certain toxins currently benefit from dispensations that were negotiated well by lobbyists, not one kilogram of foodstuff enters into Europe outside the predefined health thresholds. This is the first challenge placed before the producing countries.

Then what is the second challenge?

The second challenge consists of respecting social and environmental production conditions. Child labour is naturally a repellent factor. Nevertheless, the finer points of this component should be considered as it is also a form of training. From an environmental standpoint, biodiversity is the key factor. The cocoa tree cohabits with other plant species and can tolerate ecological corridors that allow the flora and fauna to move about. This is not a monocrop that requires deforestation.

How can producers increase the value of their work yet further?

Over the last fifteen years, grinding mills (bean buyers) have sought primarily to keep their plants running, focusing on quantity. This blind-sighted priority led to a drop in quality and a deterioration of the supply. Today, demand remains high while planters are very slow to adopt technical progress and are growing older with their trees, while the new generation is reluctant to take over. The question is how to break this vicious cycle. Some master chocolatiers have played the distinctive feature card, directly purchasing highly characteristic productions at

lucrative prices for the producer. This is great, but is not accessible to all.

Do you think that fair trade or organic labels can provide the solution?

I do not see nearly any organoleptic characteristics in the specifications that are given to producers. The labels require a work method more than quality and producers do not have a good understanding of what is asked of them. I see certificates of origin in a more positive light. In this case, it is the producers who characterise the specificity of their product based on the land and tastes. This type of labelling is interesting because it transfers the power to the producers. The only current example is the Chuao of Venezuela. This seems to me to be a realistic possibility to increase the value of the sector.

* CIRAD: A French research centre working with developing countries to tackle international agricultural and development issues.

Harvesting

80% of the harvest starts in the middle or at the end of the rainy season and ends towards the middle of the dry season. A second harvest (20%) starts a few months later.

Harvesting is performed using a sharpened tool, sometimes attached to a long handle, to detach the high pods.

The harvested pods are gathered together in the work zone in the middle of the plantation. Splitting (opening) of the pods is usually performed using a stick. The beans, which are coated in mucilage (a white, viscous substance), are detached from the placenta. Fresh, good-quality beans are white.

The mouldy, black, germinated, flat or double seeds are eliminated.

The cocoa is processed using traditional methods. Preparation of the cocoa includes natural fermentation and drying, possibly followed by sorting.

Fermentation

Fermentation is a highly complex phenomenon that brings about external and internal changes. It starts once the pods are opened. It modifies the organoleptic properties of the beans, creating what is called the flavour precursors.

Fermentation is delicate and must be controlled. It lasts between 2 and 8 days depending on the origins: *Criollo* 2 to 4 days, *Trinitario* 4 to 6 days, *Forastero* 5 to 8 days. During the fermentation phase, the mucilage is destroyed and development of the seed is stopped.

Drying

Various techniques are used to dry the fermented beans. The preferred technique is drying in the sun on enormous racks in the open air, under permanent or mobile shelters. This type of drying lasts more than seven



days. During this time, the internal fermentation continues and confirms the refinement of the taste and development of the characteristic aroma of the cocoa. Static dryers heated by gas, wood, oil, rotating hot-air dryers, etc. allow for faster drying of the beans (24 hours) under safer conditions, but are associated with the risk of disturbing the aroma of the beans. Drying must thus be carefully controlled and the beans must be monitored.

This step results in 'commercial cocoa'. The beans must then be stored in dry, odourless locations. Some claim that "three-quarters of the aromatic value of cocoa depends on the producer and the last quarter is the result of the processes carried out by the manufacturers and master chocolatiers to transform it into the final products."²

In general, the entire operation must be performed at a steady pace, under close control. Inattentive monitoring of the process leads to damage to the beans and affects the quality of the commercial cocoa.

Quality control

A series of controls (longitudinal cuts in the beans), measurements (humidity -7 to 8%, weight - minimum 1 g per bean) are performed on representative samples at several stages of the process to ensure the quality of the goods. These controls serve to quantify defects. Mouldy seeds or a foul smell are considered as significant defects as they can affect the flavour of the finished product.

Internatio- nal market Grade I	Mouldy	Infested with insects	Germinated	Slaty (insufficient fermentation)	Flat	Total defects
Tolerated defects	2%	2%	1 to 2%	2 to 3%	3 to 4%	10 to 13%

Commercial cocoa

Lastly, the beans are placed in new sacks, stored on wooden pallets in dry, ventilated warehouses. From this time, it is 'commercial cocoa'. Commercial cocoa (dry bean with 7% humidity) contains 10 to 15% shells and 85 to 90% almonds that are highly rich in fat.

The planters sell their production to intermediaries, often through cooperatives that provide them with greater security. The beans are purchased by merchants or certain chocolatiers.

The beans are transported by boat in their original sacks or in bulk. The growing trend towards bulk transport has begun to invert under the pressure of demands for high-quality cocoa. The arguments for packing in sacks are traceability and compliance with food standards. Traceability (and connected labelling) is however currently nothing but a pious hope reserved to very small productions, such as for certain organic cocoas.

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 $^{2\}mid \mbox{Philippe}$ Bastide, CIRAD, in a presentation on native cocoa, September 2010

CHILD LABOUR ON COCOA FARMS

The fight against child labour is one of the major challenges faced by the cocoa market. The use of child labour is a daily reality for the poorest populations of poor countries (small farmers). However, unscrupulous intermediaries sometimes also 'recruit' children from poor families, sometimes far removed from the plantations, and 'rent' or even 'sell' them to the planters. In such cases, this is a situation of child slavery. We should also point out some of the dangers of the activity, such as the use of machetes or chemicals. These factors formed the basis for a vicious campaign launched by the NGO Oxfam in Belgium in 2010.

Today, all players involved in the cocoa sector are working to curb the phenomenon. They have turned to the International Labour Organization (ILO) convention that was ratified worldwide in 1998. An international protocol was accepted in 2001 in Washington (Harkin/Engel) to eradicate the worst forms of child labour and forced labour in cocoa plantations. Professional organisations have become involved: the

International Cocoa Initiative (ICI) has set up with the ILO a certification process to encourage producers to eliminate child labour.

All of these efforts have come from rich countries. In the field, that of the poor countries, things are not as simple... In fact, poor countries do not really have the will or the means to take up this fight effectively. It is often more effective to rely on the activities of NGOs present locally.

"A myriad of small family producers are concerned. Their production moves between the orchard and the shipping port through successive assemblies and strict traceability is difficult to achieve," stated the association of chocolate, biscuit and confectionery industries of the European Union, Caobisco. "For nearly ten years now, we have joined with several other players in the industry to help fight against child labour on the plantations. (...) We have observed some positive progress in the field, though the road ahead is still long."

The enemies of cocoa

The diseases that affect cocoa trees sharply decrease yield. "Each year, nearly 30% of the production is lost due to diseases," estimates Geert Waelkens, a consultant with the World Cocoa Foundation. "We carry out programmes to heighten awareness and teach the appropriate use of products to protect the trees."

- In Latin America, the cocoa tree is attacked by a fungus that damages
 the pods, flowers and buds. As a result, the tree becomes sterile and is
 covered with branches (like witches' brooms, which gave this name to
 the disease).
- We should also mention monilia, a fungus feared by fruit trees, including the cocoa tree.

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- >>>
- In Africa, the number one enemy is brown rot of the pods caused by *phytophthora*. Brown spots first appear on the surface of the fruit and then attack the inside. They can decimate an entire production.
- Swollen Shoot is also a dreaded disease in Africa. This virus is transmitted by aphid bites and directly attacks the trees that lose their leaves and die.
- Pests: Rats, monkeys, squirrels and parrots see the pods as a delicacy!
 Boring insects can also cause significant damage.
- Last of all, the cocoa tree is sensitive to changing meteorological conditions. Too hot and too dry, too cool and too moist? This affects its productivity. According to ICCO statistics, the worst season was that of 1965-66 during which global production dropped by 19%. On the other hand, during the year 1984-85, 30% "super performance" was recorded.

THE ICCO, A MEETING PLACE FOR COCOA PRODUCERS AND CONSUMERS

The ICCO (International Cocoa Organization) was founded in 1973 and is based in London. The producers and consumers belonging to the ICCO represent 80% of global production and 60% of consumption. The current president of the organization is Guy Alain Gauze, the permanent ambassador representing the Ivory Coast in Geneva.

The principal mission of the ICCO is to negotiate international agreements on cocoa, under the auspices of the United Nations Conference on Trade and Development (UNCTAD). The seventh international agreement was concluded in July 2010 and should come into force in 2012 for a period of ten years. It was signed by 14 exporting countries and 29 importing countries, plus the European Union. It lists several intentions to promote a sustainable cocoa economy and increase the price of cocoa for producers.

Global agreements have attempted for several

decades to regulate global prices of this foodstuff - without real success. The global cocoa economy is still managed empirically. The concept of a sustainable economy thus became essential, with its three economic, social and environmental pillars: principles which are not accepted with great ease by producing countries that see them as a threat to their interests. And yet they form the basis for the most recent cocoa agreement.

The ICCO also plays an important role in the area of information. The ICCO publishes real-time data on the amounts of cocoa stocks, a key piece of information for global prices. The ICCO publishes the indicative price of cocoa in USD per tonne, in Euros per tonne, in Pounds Sterling per tonne and in SDR (special drawing rights) per tonne.

The last meeting of the ICCO on this issue was held in January 2011 in Malaysia.

INTERVIEW



WILLY GEERAERTS:"COCOA DEMAND IS RISING AND YIELD MUST INCREASE."

Willy Geeraerts is the Director of Corporate Quality and Environmental Affairs with Barry Callebaut.

What do you think of the situation of the cocoa market in 2011?

Though harvests look rather good for the 2010-2011 season, cocoa agriculture suffers from structural problems that can only be improved over the long term. Poorly adapted farming practices keep harvest yields and quality at insufficient levels. This is why we launched our own "Quality Partner Programme" in which 48 cooperatives participated in 2009, representing around 40,000 planters. We translate in the field the three pillars of sustainable development: social, economic and environmental.

You are looking to concentrate your efforts on Western Africa?

Ivory Coast, Ghana, Nigeria and Cameroon concentrate 70% of global production of cocoa beans. Yields from family plantations are largely insufficient at 300 to 400 kg/ha, while it would be possible to achieve three times more. This in turn means that the revenues of planters are insufficient. Having said this, to reach 1,000 kg/ha through structural means requires implementing an approach that covers all aspects of the cultivation. Avoiding deforestation, ensuring enrichment of the soil, treating the trees properly against insects, plan-

ning renovation of the plantations, etc. To do this, we need to train the farmers, teach them to manage their business, support educational efforts, improve health, etc. This is a comprehensive development programme.

But you are not a development agency...

We act through the World Cocoa Foundation (WCF) created in 2000: this foundation brings together 80 manufacturers representing 80% of the market. Barry Callebaut joined this platform in 2005 and participates in a certain number of programmes as part of the Sustainable Tree Crop Programme of the WCF, which is in its second phase (2007-2011).

Is this an organisation reserved for manufacturers?

The WCF operates through programmes involving public-private partnerships that unite cocoa buyers, governments, NGOs, research centres, planters etc. We are convinced that the WCF is the most effective platform for our sector. It concentrates on the cultivation of cocoa. This is our basic supply input and it is truly in danger.

Do you think that it is not enough to provide aid to planters?

It is essential to increase the revenues of planters and that is what we are doing in the field. We try to contribute to structural progress of cocoa production in Western Africa. Farming practices are medieval, the work is difficult, the plots and farms are too small and too numerous, preventing mechanisation. The planters are aware of the need to improve quality, but this would be insufficient in the current structures. The yields required to meet increasing demand can only be achieved with the investment of considerable funds and energy, in a coordinated fashion. We need to pull out all of the stops, and now.

- Barry Callebaut: 26 countries, 43 plants, around 7,500 employees
- Transforms 570,000 tonnes of cocoa beans per year.
- Growth of sales in 2010: +7.6%
- Profits in 2010: 251 million CHF
- Quoted on the SIX Swiss stock exchange in Zurich

THE WORLD COCOA FOUNDATION: SIGNIFICANT RESOURCES AND PRAGMATIC ACTION, IN THE FIELD

Faced with a vital threat to their industry, meaning the trend towards declining cocoa production, and the observation that there did not seem to be any organisation able to act effectively in this situation, chocolate manufacturers created the World Cocoa Foundation in 2000.

Geert Waelkens is the representative of the World Cocoa Foundation in Europe: "This organisation brings together 80 companies representing 80% of the global cocoa and chocolate market. Its goal is to achieve sustainable cocoa production. The WCF sets up partnership programmes in 15 producing countries (Africa, Southeast Asia and the Americas) with the goal to transmit more productive and profitable farming practices, to support the creation of cooperatives and associations of producers, to promote agrodiversity (inclusion of other crops in the cocoa orchards), to promote access to education in the cocoa growing communities and to contribute to research."

The WCF has significant resources available to it. It manages a budget of 40 million USD over five years,

one half of which was allocated by the Bill and Melinda Gates Foundation, the remainder coming from industry. Its efforts are concentrated in Western and Central Africa that produce 70% of the cocoa.

Geert Waelkens: "420,000 planters participated in the WCF's programmes over the last ten years throughout the world. Some have been able to increase their revenues by 50%. In Western and Central Africa, our 'Cocoa Livelihoods Programme' reaches some 200,000 cocoa producing families over a period of five years. We are in contact with NGOs on site, governmental departments, various local players, research centres and we strive to act at all stages that could contribute to the creation of a sustainable cocoa economy."

For the WCF, certification programmes (Fair Trade, Rainforest Alliance, UTZ or organic certifications) can play a role in sustainable development actions. "Our guidelines share many common points with certification systems and the producers who participate in our programmes are often able to obtain certification after very short training," concludes Geert Waelkens.

Belgian cooperation projects in Peru and Bolivia

The CTB-BTC launched two projects concerning the cocoa industry: the first in Peru finished at the end of 2010 and the other is ongoing in Bolivia.

In northern Peru, the project promotes the cultivation of cocoa as an alternative to coffee in the lower parts of the valleys (below an altitude of 800 metres). This involves the restructuring and renovation of 180 hectares of cocoa crops. The project also supports cocoa producer organisations and training for local technicians.

In Bolivia, in the region of the Tropic of Chapare of Cochabamba, the Belgian cooperation aims to improve the socioeconomic conditions of the populations through the wood industry. Cocoa plays a role in these efforts as an element of agroforestry biodiversity. The aim is eventually to generate additional revenues for the producers.



The UNDP, cocoa and the millennium development goals

We are two thirds through the period that the United Nations gave itself (2000-2015) to meet eight goals, the first of which is that of eradicating one half of the extreme poverty and hunger in the world. The United Nations Development Programme (UNDP) is an influential player in the issue of cocoa. Reducing poverty and promoting the growth of fair trade is one of its cornerstones. As a result, several partnerships are created with the UNDP.

In 2008, Cadbury launched, in collaboration with the UNDP, the Ghanaian government and other partners, financing totalling two million USD. The goal is to increase yield, produce top-quality beans, introduce new sources of rural revenues through microfinancing and investment in community development (schools, health, drinking water).

Matt Shattock, President of Cadbury for Great Britain, Ireland, the Middle East and Africa: "Sustainable production of cocoa is essential to the commercial success of Cadbury. It is not simply a question of supplying us with our most important ingredient, but of guaranteeing to us a reliable, long-term source of high-quality cocoa produced according to our company's strict standards and our customers' needs."

FAIR TRADE, ORGANIC: CREDIBLE ALTERNATIVES?

Though these two approaches provide better revenues for the producers, they remain limited to particular cases and their application is sometimes random. Sought out by consumers, they constitute growing niche markets.

Fair trade allows producers to obtain better prices. This formula has met with success with consumers who are prepared to pay a bit more to participate in ethical trade that is more profitable for producers. Supply of fair trade chocolate and derivative products (cocoa powder, cocoa butter) is on the constant rise. In order to produce fair trade cocoa, cooperatives perform their activities according to specifications proposed by the certification body.

Cooperatives continue to grow

Created in 1993, the cooperative Kuapa Kokoo in Ghana includes over 48,000 members in more than 1,000 villages. The premium paid is generally invested in community projects.

In the Dominican Republic, the cooperative Conacado brings together 10,000 small farmers and records between 40% and 50% of its total turnover in fair trade cocoa. Present in the northwest of Bolivia, the association of cooperatives, **El Ceibo**, includes nearly 800 families. This organisation received Fairtrade certification in 1997. Nearly 50% of the cocoa production is sold at fair trade conditions. The fair trade revenues are used for educational support, medical security (illness and accident insurance), structural investments (transportation and industrial infrastructures), operation of the nursery and development of organic farming.

As for the cooperative **Toledo Cocoa Growers Association** (TGCA) of Belize, it sells 100% of its cocoa production as fair trade to one single buyer who developed a Maya Gold bar of chocolate based on the cooperative's history. Fair trade conditions stipulate contracts for at least one year, but the TGCA obtained five years with the buyer, which compensates for the commercial risk of working with one single buyer, that, in passing, is also Max Havelaar/Fairtrade certified.

Ethiquable, a French distributor of fair trade products, develops similar projects with five cooperatives in Haiti, Peru, Ecuador and the Dominican Republic. In total, nearly 15,000 producers are concerned (cocoa, coffee, sugar).

BARRY - CALLEBAUT CERTIFIES ITS FAIR TRADE CHOCOLATES

The four classics of Callebaut - 811NV (plain), 823NV (milk), W2NV (white) and 70-30-38NV (plain) will be available under the Max Havelaar fair trade label starting in January 2011. These recipes are Callebaut's best sellers. This new range offers customers (hotels,

restaurants, catering) the possibility of developing new products with fair trade chocolate - a resounding success for Belgian and European NGOs that promote fair trade.



Organic, especially by default

Organic cocoa currently represents between 20,000 and 25,000 tonnes, or less than 0.5% of global production.

The main producers of organic cocoa are currently found in the Dominican Republic, Caribbean or Latin America. An organic product is not always certified. Nico Regout Marcolini, who buys the cocoa beans for the Belgian chocolatier Marcolini, puts it well: "Some farmers simply do not have enough money to pay for pesticides. Of course they do not always have organic certification, but their cocoa is 100% organic."

The price of organic cocoa is superior by 5 to 15% or even by up to 70% for superior quality. The first varieties were produced in São Tomé and Togo in 2004. Ghana launched organic productions in 2006-2007. The chocolatier Cadbury carries out some projects to this end. Others such as Barry-Callebaut or Cargill are also studying the possibilities. However, these productions are still marginal. Naturally, the fear of loss of one's harvest from not protecting against diseases is greater. Kofi Nketsia Afful, representative of planters with the Ghana Cocoa Board: "Though there is great demand for organic cocoa, we are sceptical about the idea of foregoing the use of agricultural inputs. We need insecticides and fungicides to treat and protect our plantations and harvests."

ETHICAL COCOA: SEVERAL INDIVIDUAL INITIATIVES

The French family-owned group, CEMOI, the third biggest European chocolate manufacturer, launched a programme for 2.3 million Euros in Ivory Coast in 2010. The goal: to increase the professionalism of the sector and its suppliers and triple the yield from the cocoa trees. This programme includes the

construction of fermentation centres and training in good practice for cocoa bean production and transformation, grafting and pruning in the orchards. The margins achieved by the cooperatives thanks to this restructuring will be redistributed to the producers and invested in social initiatives.



STRUCTURAL DEFICIT, RISING PRICES

The global cocoa economy represents around 10 billion US dollars. Estimated global cocoa production in 2009/2010 is said to be around 3,596,000 tonnes of beans distributed as follows:

- 1. Africa: 68.4%,
- 2. North and South America: 14.05%,
- 3. Asia: 17.6%.

and a production deficit of around 82,000 tonnes (ICCO quarterly bulletin of cocoa statistics, Vol. XXXVI, No. 3, Cocoa year 2009/2010).

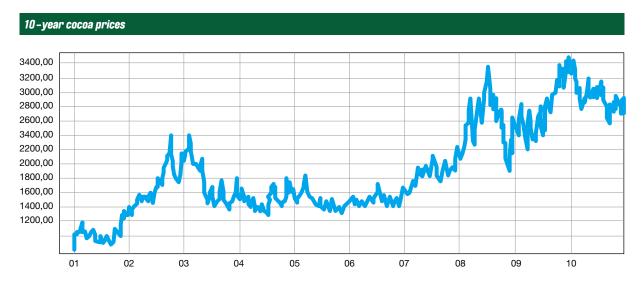
Nearly 65% of the production is exported, mainly to Europe, North America and Japan.

The buyers are mainly the chocolate transformation and confection industry in developed countries; a handful of multinationals³ control the transformation and confection of chocolate.

An increase in milling by 168,000 tonnes is planned in order to reach 3,632,000 tonnes. If these predictions come to fruition, the statistical stocks at the end of the 2009/10 season should be around 1,629,000 tonnes (compared with 1,713,000 for the previous season), representing 44.9% of the projected annual milling.

Cocoa prices

It is sales on the futures market that determine the price of commercial cocoa. 1% of contracts lead to effective delivery. The futures market is a market used to hedge an operation on the physical market. The liquidity is provided by the participants and by a compensation chamber. The market players are the producers (sellers), starting material merchants (Cargill, Louis Dreyfus, etc), farming cooperatives, brokers, negotiators (banks, financial funds), hedgers (professionals in relations with the physical markets), speculators (or traders) who supply the market with liquidity by acting as counterparties.



Source: ICCO

^{3 |} Mars, Nestlé, Barry-Callebaut, Lindt, Kraft Suchard, Valronha, Belcolade

Analysts predict a structural deficit of cocoa production that should keep prices on the rise. A stock of at least 40% of the milling capacity is generally sufficient to prevent cocoa prices from climbing. However, despite sufficient stocks, we can see that cocoa prices still remain high. The reasons for this are a structural deficit of production and the outlook for continually increasing demand (particularly under the influence of Asian markets).

Fair trade cocoa prices

To protect producers from unpredictable fluctuations in cocoa prices on global markets, Max Havelaar/Fairtrade has set up a sort of economic safety net. The cooperatives of Fairtrade certified farmers receive a price that covers at least the production costs, the evaluation of which is regularly revised. These prices are thus not negotiated under pressure and the prices on global markets are not the only reference. The trade relationship is established on a long-term basis.

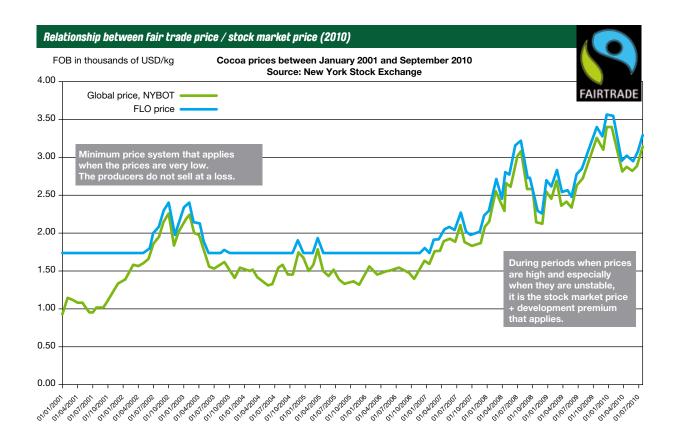
According to the international certification organisation FLO, fair trade cocoa sales increased by 35% in 2009, thanks in part to large chocolate manufacturers who committed exclusively to use fair trade for some of their products. FLO also indicates that more and more companies are using Fairtrade certified cocoa derivative products in their products: ice creams, cookies and baked goods. The cosmetic industry is also considering the use of cocoa butter from fair trade. In just over one year, the number of organisations of fair trade certified producers of cocoa increased by nearly 50%. FLO predicts continued spectacular growth in these sectors in 2011.

According to international fair trade standards for cocoa, the customer pays a minimum of 2,000 USD per tonne of Fairtrade certified cocoa beans. Furthermore, the customer also pays a Fairtrade Premium. The premium for fair trade cocoa went from 150 to 200 USD/tonne in January 2011. If the global

OPPORTUNIST SPECULATION

In July 2010, an English hedge fund called Armajaro bought 241,000 tonnes of cocoa beans all at once for a sum evaluated at 650 million pounds. This is the equivalent of European stocks or 7% of annual global production. Enough to fill 155 Olympic-sized swimming pools... The price of cocoa was above 3,250 Euros at that time. Yet more surprisingly, this was not a futures transaction. The cocoa was effectively delivered to Armajaro and unloaded in European warehouses. It now needs to be traded and resold, most likely only to European buyers. The time will then come to do the books.

Already in 2002, the same player had purchased over 200,000 tonnes of beans. Purchase price: 1,400 pounds. Sales price: 1,600 pounds. Profit: 60 million dollars. Since then, traders in London call Anthony Ward, the manager of the hedge fund, 'Chocolate fingers'. Nevertheless, trading is a risky business: in 1996, Armajaro had purchased an even greater quantity of cocoa (300,000 tonnes!), foreseeing a difficult harvest. That harvest was abundant and the sales price was below the purchase price.



price on the market rises above 2,000 USD per tonne (= minimum Fairtrade price), this global price will then be adopted and supplemented with the 200 USD per tonne premium.

FLO estimates that a total of at least 10 million dollars in premiums will be refunded to the organisations of producers of fair trade certified cocoa in 2011. The fair trade premium allows producers to invest in their community and in their farm to improve quality and productivity.

Fair trade and organic cocoa

Since January 2011, the price of fair trade organic cocoa is calculated based on the minimum price for conventional cocoa (2,000 USD/MT), to which a Fairtrade premium (200 USD) and an organic differential of 300 USD/MT are added. When the market price is above the minimum price, the price is at least that on the market.



THE MANUFACTURE OF CHOCOLATE

Roasting (between 100°C and 140°C depending on the varieties) develops the flavour of the chocolate. The roasting time is calculated with great precision and can depend on the cocoa varieties. The roasted beans are cooled rapidly.

The next step is winnowing and then, sometimes after certain mixtures, hot milling.

The milling generates a paste called the **chocolate mass** that can also be mixed with other pastes to obtain different products.

The chocolate mass or liquor is the starting material for all chocolate transformers, manufacturers of special chocolates, filled chocolates, candy and various chocolate bars.

These manufacturers increasingly demand specific recipes from the whole-saler. The wholesaler thus produces a 'custom-ordered' mass for its customer.

The chocolate mass can also be pressed to extract:

- cocoa butter (re-injected into the process of chocolatiers for white and milk chocolate) or purchased by cosmetic manufacturers.
- the filterpress cake, a leftover of the pressing process to make the cocoa powder used to make sweets (or in milk for children).

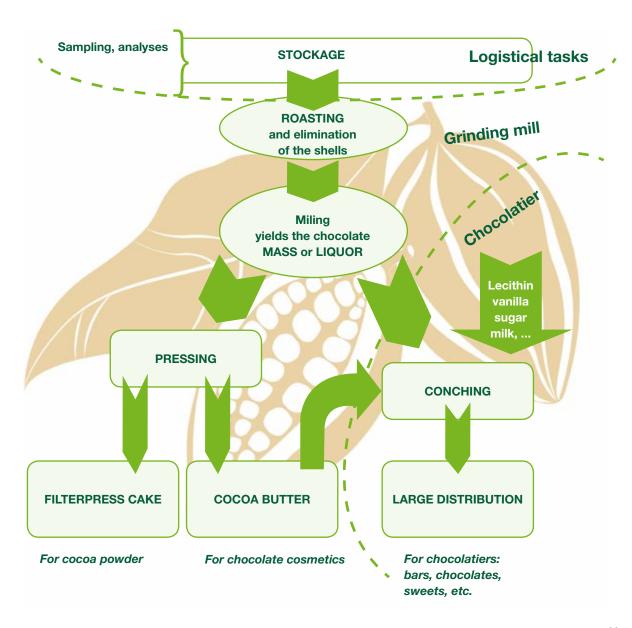


Milling process

The milling of beans is performed either by millers who only perform this activity (medium-sized industries) or by large chocolate manufacturers who have integrated this preliminary transformation phase.

The semi-products resulting from the milling are:

- The chocolate mass or liquor used as a starting material for the manufacture of chocolate. This mass can also be transformed by the miller into:
 - a. filterpress cake, from which cocoa powder is obtained.
 - b. cocoa butter, also used in the manufacture of chocolate (white or milk), but also in cosmetics.





THE UCL AT THE CUTTING EDGE OF COCOA RESEARCH

Several research stations work to improve the cocoa tree in Western Africa. This includes Ghana, Nigeria, Ivory Coast, Cameroon and Congo. The consuming countries also have agricultural research centres. One of the most renowned centres for cocoa is certainly the CIRAD in Montpellier. In Belgium, the academic world has turned its attention to the issue. Sonia Collin is a professor at the Breweries and Food Industries Unit of the Université Catholique of Louvain where she teaches courses in organic analysis to bioengineers. "Good cocoa is not enough. You also have to make good chocolate," she declares, first mentioning the now long-standing cooperation that her institute has developed with the Belgian manufacturer Belcolade (Puratos group).

"We have been working with Puratos (Belcolade) for some time on optimisation of the conching process that is part of Belgian know-how. Conching is a long hot mixing step that lasts several hours (currently between 8 and 12), during which time several flavours develop. We perform research on polyphenols, a family of compounds with several interesting properties for consumer health. We have registered a patent for a low-temperature conching technique that amplifies the antioxidising activity of polyphenols."

The coordinator of a network of French-speaking researchers in the food sector, Sonia Collin proposed a cooperation project to 'Wallonia Brussels International' to provide aid to Cuba for development of its cocoa sector. Proposal accepted. "This three-year project began in 2008 and we are currently studying a series of fine varieties, a few Criollos that we are trying to preserve, and Trinitarios. The goal of this programme is to detect and develop commercially-interesting varieties. We are also developing useful analytical techniques with Cuban scientists."

The researchers at the UCL have thus detected resveratrol, a molecule already revealed in wine to have beneficial effects against cardiovascular diseases, in cocoa. Yet another virtue of chocolate!

Outside the academic world, large manufacturers are not staying on the sidelines. In mid-2010, Nestlé inaugurated a research centre entirely devoted to chocolate in Broc (France), in partnership with the Belgian chocolatier, Pierre Marcolini, who provides his creative know-how.

THREE BELGIAN CHOCOLATIERS EXPLAIN THEIR PURCHASING POLICY AND POSITION TOWARDS LABELS

Nico Regout Marcolini, Co-founder of the company Marcolini



"Chocolate is like wine."

What is the specificity of the company Pierre Marcolini?

We have made our dream come true of making our chocolates and controlling the entire process, from the purchase of the bean to the finished product. One century ago, all chocolatiers worked in the same way. In Belgium, chocolate was concentrated in the hands of large distribution manufacturers who did develop undeniable technical know-how. Unfortunately, the technical nature of the process led to a levelling out of the taste.

How did you initiate your approach?

Our goal was to have our own vintages. We visited chocolatiers, I collected knowledge, followed classes with the CIRAD⁴. I then started my search for origin specific cocoas. This was intense exploration and research work. I've been to Brazil, Java, Madagascar, Mexico, Cuba, Trinidad and soon will go to Cameroon - everywhere where origin specific cocoas are located.

In concrete terms, how do you make your selection?

You have to visit the plantations, meet the people, see how they work. These are small farms, most of which are organic simply because they do not buy chemicals. But for us, it's the taste that counts. In 80% of cases, we buy from the farmer. I look for properties, well-defined zones of a few hectares that give exceptional beans.

Can you already detect the flavours of the chocolate in the cocoa bean?

When biting into the bean, I can already detect its essential flavours that will be found in the bar. Naturally, the aroma of the chocolate, the thermal aroma comes later with the roasting. I come back with 500 g samples that I have analysed in the laboratory. If the test is positive, we order a few 60 kg sacks to manufacture one bar of chocolate and perform a taste test. It is only after having tasted the chocolate that we negotiate the purchasing contract. The purchase price varies between 3 and 12 Euros per kilogram. For small quantities of estate vintages, the beans come by plane!

 $^{4\}mid \text{CIRAD: French Centre for International Cooperation in Agronomy Research for Development}$

Thierry Noesen :Managing Director of Belvas Chocolate



"Quality, yes, but also respect of fair trade."

You manufacture chocolates and chocolate truffles, luxury products. Do you adopt quality labels?

We have chosen to manufacture fair trade and organic products. However, there are not fair trade versions of all of the materials. For example, the hazelnuts mainly come from large properties in Turkey, the almonds from California; these are not developing countries. To receive the fair trade label for a product, we must use only ingredients available in fair trade (at least 51%). At Belvas, we reach 80%. We push our suppliers to adopt the same approach, for example by using fair trade sugar.

And what about an organic label?

There are no compromises for organic. The definition of organic is 95% + 5% natural non-organic materials accepted, as long as they are shown on a restrictive list! At Belvas, we reach 100%!

Have you been able easily to combine the two labels?

This reduces the number of possible suppliers. We only find organic fair trade cocoa in Santo Domingo, Peru and Ecuador. In Colombia, we have found organic, but the producer is not yet fair trade certified.

Jean Galler, managing director of Galler Chocolatier



"Our strategy: high quality organic, deliberately."

How do you obtain your starting material?

We buy chocolate mass or liquor in quantities of 4 to 8 tonnes from large distribution chocolate producers according to our own recipe: for example, an exclusive mixture of cocoa from Venezuela and Papua New Guinea. We composed this mixture based on a number of tests.

What are the criteria that guide your choice?

The origins, of course, but also the taste and texture of a chocolate that depend on all of the transformation steps: fermentation, roasting, milling, conching, balance between cocoa butter and the other ingredients. The Belgian large distribution producers are still the best.

Have you adopted a labelling policy?

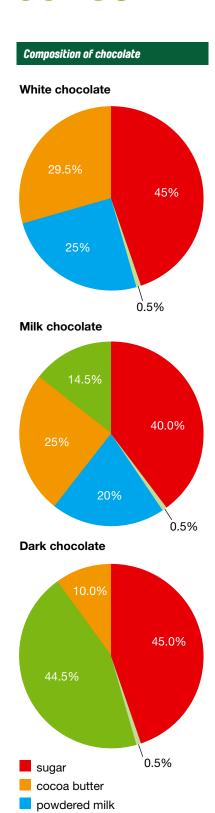
Our goal is to purchase only 'organic' cocoa. We have been preparing for this change for two years and, in 2011, will bring out our first organic products on the market. Once possible, all of our products will be organic.

Have you adopted a 'fair trade' label?

Our first attempt was not a success. Large distributors who adopt the fair trade label for their own brand are not interested in Galler doing the same. As for the franchises, some have unfortunately exaggerated the price of fair trade and consumers did not follow.



PRODUCED IN THE SOUTH, CONSUMED IN THE NORTH



other ingredients cocoa mass

The 3.5 million tonnes of cocoa produced in the South are consumed in the North!

In 30 years, the share of milk chocolate went from 77% to 40% and the dark chocolate market shot up from 2% to 42%.

Demand for origin specific cocoa and special cocoas (organic agriculture, fair trade products, origin certified products) continues to grow. This trend pushes the price of fine and rare cocoas up, but has no impact on the commercial cocoa from Western Africa.

Cocoa butter

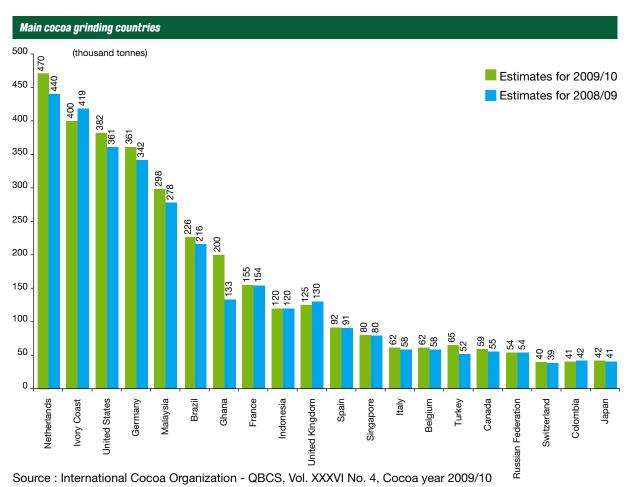
Cocoa beans contain 52-54% cocoa butter. This is one of the essential ingredients of chocolate, but also serves for other applications such as cosmetics and pharmacy (with a key role in suppositories!). Around one quarter of cocoa butter production is taken up by these non-foodstuff applications. We may tend to forget this fact, but demand for these products also affects cocoa prices, which are thus not only dependent on the consumption of chocolate.

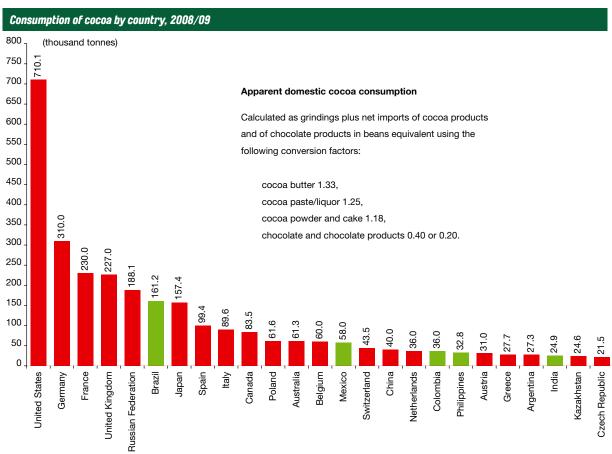
The composition of chocolate must meet very precise standards:

- 1. Chocolate (whole): a minimum of 35% dry cocoa solids, of which at least 18% cocoa butter and 14% dry non-fat cocoa solids.
- 2. Milk chocolate: a minimum of 25% dry cocoa solids, 14% dry milk solids and 25% fat (cocoa butter + milk fat)
- 3. Cooking chocolate (for home use): a minimum of 20% dry cocoa solids, 20% dry milk solids and 25% fat (cocoa butter + milk fat).

Storm in a cup of oil

In June 2000, the European Parliament and Council adopted a directive (2000/36/EC) authorising the addition of vegetable fats other than cocoa butter up to a maximum of 5% of the weight. The fats concerned are illipe, shea, palm oil, sal, kokum and mango kernel oil. In doing so, it harmonised practices already followed in several European countries such as Great Britain, Ireland, or... Sweden, which authorized up to 10% of vegetable fats other than cocoa butter! This measure caused an uproar: the quality of chocolate was in danger! As were the already ridiculous margins of producers! Indeed, palm oil costs ten times less than cocoa butter, which represents up to 8 to 9% of the final price. But, in the end, nothing much happened. Consumers ended up following most manufacturers who opted for quality; they continue to manufacture chocolate with cocoa butter.





Source: International Cocoa Organization - QBCS, Vol. XXXVI No. 4, Cocoa year 2009/10

CERTIFICATIONS AND OTHER SAFEGUARD SYSTEMS



1. Rainforest Alliance

The label with the frog indicates goods and services produced in a sustainable manner, in compliance with social, environmental and economic criteria. The association headquartered in New York promotes the respect of biodiversity and seeks to safeguard the revenues of farmers by transforming commercial and consumer practices.

2. Organic

a. IFOAM: International Federation of Organic Agriculture Movements. Its members come from several countries throughout the world. For cocoa, the size and rustic nature of the farms are sometimes more a guarantee (at a lower cost) of the organic nature of the cocoa than a certification!



 European label: The European organic logo that indicates an equivalence of the production and control methods with European regulations is mandatory since July 2010 for all products pre-packaged on European soil.

3. Fair Trade



a. The Fairtrade label (FLO-Max Havelaar), the first and main labelling organisation for fair trade founded in the Netherlands in 1988, will undoubtedly soon be joined by other certifiers in light of the recent development of this market. The new players are already active on the organic market.



 Ecocert, a certification organisation, has developed the EFT standard (Ecocert Fair Trade in the spirit of solidarity and responsibility) that aims to combine fair trade, sustainability of the industries and the principles of organic farming.



c. World Fair Trade Organization (WFTO): groups together 350 associations, present in 70 countries.



d. "Fair for Life" is a brand-neutral, third-party certification programme for social accountability and fair trade in agricultural, manufacturing and trading operations.



4. UTZ Certified: with its detailed Code of Conduct, this programme certifies a sustainable production and supply and offers online traceability in real time.



CHARITY BEGINS...

The problem of West African cocoa farmers... affects chocolate manufacturing industries in the North.

Drops in production have been observed in nearly all cocoa producing countries (in the South). Demand is on the rise in nearly all cocoa consuming countries (in the North). This situation perhaps provides a unique opportunity to all inhabitants on the planet Earth at the turn of the 21st century.

A planet still characterised by sharp contrasts between rich countries (in the North) and poor countries (in the South). A dichotomy that is certainly a bit exaggerated, but does highlight the always very complex issue of development. Europeans in particular have real-life experience in the not so distant past of colonisation, and know better than anyone else that no problem connected with development can be resolved with a magic wand. They know that we cannot only concentrate on the technical or organisational aspects of progress while neglecting the human and relational aspects.

Development is only successful when carried out gradually, in respect of the beneficiaries, however difficult that may be to guarantee.

The North is of course impatient, especially the big chocolatiers, consumers of cargos of commercial cocoa that arrive in bulk at the ports of Rotterdam or Antwerp. Who will supply their factories? How to guarantee the quantities of cocoa necessary to meet consumer demand? These giants with chocolate feet watch apprehensively as cocoa production slides into depression as a result of demotivating pay given to planters and the inability of cocoa producing countries to come together to defend them.

They have ended up taking the bull by the horns.

Will they be more effective than the programmes of the United Nations or European Union? Only the future will tell. Considerable funds raised by the industry and sometimes by prestigious donors have been deliberately devoted to a lasting restoration of a declining agricultural sector. Focused on the two key commercial cocoa countries, Ivory Coast and Ghana, these initiatives aim to avert the danger of a serious crisis... of chocolate production. Charity begins at home? We are witnessing an attempt to save not only a large sector of African agriculture, but also an entire industry in consuming countries.

ORGANIZATIONS INVOLVED IN THE ISSUES SURROUNDING COCOA

ICCO	International Cocoa Organization	United Nations organisation grouping together cocoa producing and consuming countries
WCF	World Cocoa Foundation	Private foundation financing several programmes that promote sustainable cocoa cultivation
ICI	International Cocoa Initiative	Created in 2002 to work with the cocoa industry, in partnership with the community, unions and governments to eliminate child and forced labour in cocoa production. It is financed by the chocolate industry.
ILO IPEC	International Labour Organization International Programme on the Elimination of Child Labour	International programme to eliminate child labour - a member of the International Labour Organization ILO. Created in 1992.
ICA	International Confectionery Association	International lobby of confectionery/pastry manufacturers representing 3000 members in 30 countries.
FCC	International Federation of Cocoa Commerce	Private organisation representing all fields of the cocoa industry. Based in London.
ECA	European Cocoa Association	An association of the principal companies active in the cocoa industry in Europe: 2/3 millers, 50% industrial chocolatiers and around 40% of the global production of liquor, butter and cocoa powder.
COPAL	Intergovernmental organisation of cocoa producing countries	Created in 1962 in Abidjan. It includes 10 member countries: Brazil, Cameroon, Ivory Coast, Dominican Republic, Gabon, Ghana, Malaysia, Nigeria, São Tomé and Principe, Togo
CAOBISCO		Association of European chocolate, biscuit and confectionery manufacturers in Europe. Based in Brussels.
OICC	Organisation Interafricaine du Cocoa et du Café	Includes 25 member countries.
ICVF	International Cocoa Verification Board	A non-profit organisation that aims to control the fight against child labour on cocoa farms.

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Helpful sites

- ICCC
- International Federation of Cocoa Commerce: www.cocoafederation. com
- European Cocoa Association: http:// www.eurococoa.com
- Ghana Cocoa Board www.cocobod.gh/
- Coffee and cocoa stock exchange in Ivory Coast www.bcc.ci
- Agritrade, Technical Centre for Agricultural and Rural Cooperation ACP-EU
- agritrade.cta.int
 Max Havelaar: www.maxhavelaar.be
- The site of Barry-Callebaut, with videos illustrating work in cocoa tree orchards.
 www.barry-callebaut.com

- Cargill
- http://www.cargillcocoachocolate.com
- World Cocoa Foundation www.worldcocoafoundation.org
- Website of the European chocolate industry for the fight against child labour on cocoa farms www.cocoafarming.org.uk
- A site developed by Belcolade to understand the combination of aromas
- www.chocolatefoodpairing.com
- Cacao en Chocolade online Multilingual internet site developed by the chocolate industries in the Netherlands as training information for their employees.
 www.cacaochocolade.nl

TRADE FOR DEVELOPMENT CENTRE

The Trade for Development Centre is a programme of BTC (Belgian development agency) to promote fair trade, sustainable trade and Aid for Trade.

This Centre has three main missions:

> Centre of expertise

- It is the centre of expertise on Aid for Trade, fair trade and sustainable trade. It collects, analyses and edits information (opinion polls among consumers, market studies...).
- It coaches a working group of the "Business for Development" platform, which supports the private sector.

> Support to producers

The Trade for Development Centre supports producers' organisations. It supports marginalized producers, micro and small enterprises as well as social economy projects that are embedded in Fair Trade or sustainable trade.

- Strengthening of organisational, technical and productive capacities
- Transmission of relevant information (about the markets, existing certifications...)
- Advice in strategic marketing and market prospection.

> Raising awareness

The Centre sets up campaigns and develops awareness-raising tools for consumers, economic actors and Belgian authorities.

- Fair Trade week
- Presence at different exhibitions, fairs
- www.befair.be Internet site

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