The degrading Environment of Cocoa Planters in Côte d'Ivoire. 2008, a Critical Year

Report to the **World Cocoa Foundation**

Francois Ruf
CIRAD
UMR Innovation
March 2009

"The views expressed in this report are those of the Consultant and do not necessarily reflect those of the World Cocoa foundation or CIRAD"

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As in many other cocoa producing countries, cocoa used to be a source of pride in Côte d'Ivoire's villages. When you own cocoa, even with a national average around 5 hectares of cocoa, or even with a mere two-hectare farm, you become a *planteur*, no longer a *cultivateur*. However, in the 2000s, this distinction is quickly eroding, if not vanishing. As said by a *planteur* of the Soubré cocoa belt "Nowdays, you grow cocoa or you grow yam, you are now in the same troubled waters".

It was thus decided to focus on prices and revenues for this first report to WCF, which funded this research for the year 2008.

1. Introduction

For some 20 years, cocoa planters[1] in Côte d'Ivoire have been experiencing a severe decline in revenues. In 2008, despite a rebound of the world cocoa price, domestic prices and current revenues remain weak. Most planters are trapped in poverty, reducing the number of children sent to school, cutting the annual gift to their spouses, stopping fertilizer purchases (Ruf and Agkpo 2008). On the ecological side, the shrinking forest and the spread of diseases such as *P. megakarya* are increasingly worrying (Asare et al, 2008, Gockowski and Sonwa, 2008). For instance, the cocoa economy of some villages close to the (former) protected forests of La Marahoué is devastated by this combination.

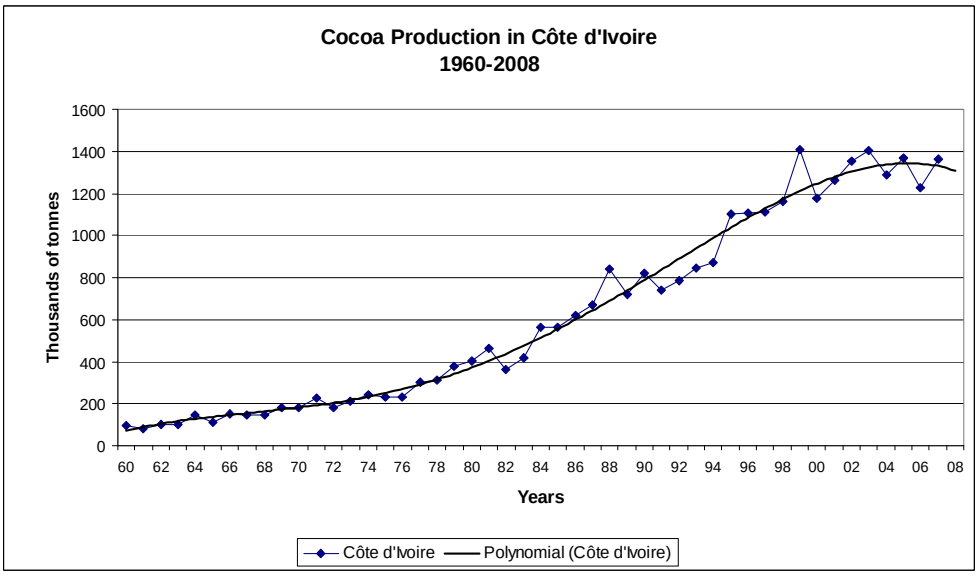
Despite this degrading environment, at least until 2007/08, the Ivorian cocoa production seemed to be maintained at record levels. How to explain this apparent paradox? In most cases, cocoa planters have no serious economic alternatives. This is why some economists find a 'surprisingly' low price-supply elasticity in the tree crop sectors when commodity prices slump (Guillaumont 2006). Family agriculture's resilience to low

[1] Although the English term of 'planter' is often understood as the owner of a large estate, not as a smallholder, we will keep here the English word, keeping in mind the average of some 5 hectares of cocoa per 'planter'

prices is amazing. As long as families have limited alternatives, they have no choice but to optimistically anticipate higher prices (Ruf 1996).[2] They also keep in mind that cocoa is a patrimony that can be a security for the future, an asset that can be transferred to children. This family agriculture resilience, especially that of migrants of foreign origin who cannot complain much openly, is one of the main reasons accounting for the apparent stability of the cocoa production in Côte d'Ivoire along the 2000s. Until when? It cannot last for ever. Too low prices during too many years ends up with a lower resilience of family agriculture and certainly a lower resilience of their cocoa trees.

Actually, most experts do think that a negative trend has started in the mid-2000s, which seems coherent with the national production statistics (Fig.1).

Fig.1



Sources: Data from ICCO, various issues

Regarding these major determinants of the future of cocoa in Côte d'Ivoire, what can we learn from 2008? How did the price evolve in Côte d'Ivoire compare to previous years? How did it evolve compare to Ghana, its neighbour and competitor? What has been the output of these changes in terms of revenues? Finally, against a backdrop of low price and low revenues, how do planters evolve in their strategies of diversification? Many national and International media celebrate the emergence of the new rubber planter and sometimes that of the new 'Sunday planter' coming back from Abidjan to his village during the weekend. After years if not decades of declining land prices, the year 2008 brings the first signs of land prices starting to increase and this is mostly explained by the 'rubber rent' (Ruf 2008 b). What can be the impact on cocoa farmers and cocoa supply?

The method applied here (and funded by WCF in 2008) is based on the follow-up of some 400 planters scattered in 6 to 7 small regions, from Abengourou (close to the Ghana border) to San Pedro (on the way to Liberia border). Prices and production data are recorded every month.

[2] Let's insert here an anecdote that says more than a long analysis of relationships between governments and workers. When I presented this analysis to the French Ministry of Cooperation in December 1995, at a time where Paris streets were bounded by demonstrators complaining about their diminishing purchasing power, one high rank civil servant started to dream openly to benefit this optimistic behaviour in France…

We start with prices paid to producers, then look at the revenues and profile of revenues in 2007/08, and finally explore the emergence of rubber diversification as a deep technical and economic change in the environment of cocoa farmers in Côte d'Ivoire.

1. Too low producer prices

Before 1999 and the dismantling of its marketing board, the *Caisse de stabilisation*, the planters were receiving a fixed price decided for one year by this body. After paying the traders according to a forfeit for their services, and after paying the administration costs of the *Caisse de stabilisation*, the difference between the world price and this fixed producer price formed the government revenues: Stabilized revenues for the planters, fluctuating revenues for the government.

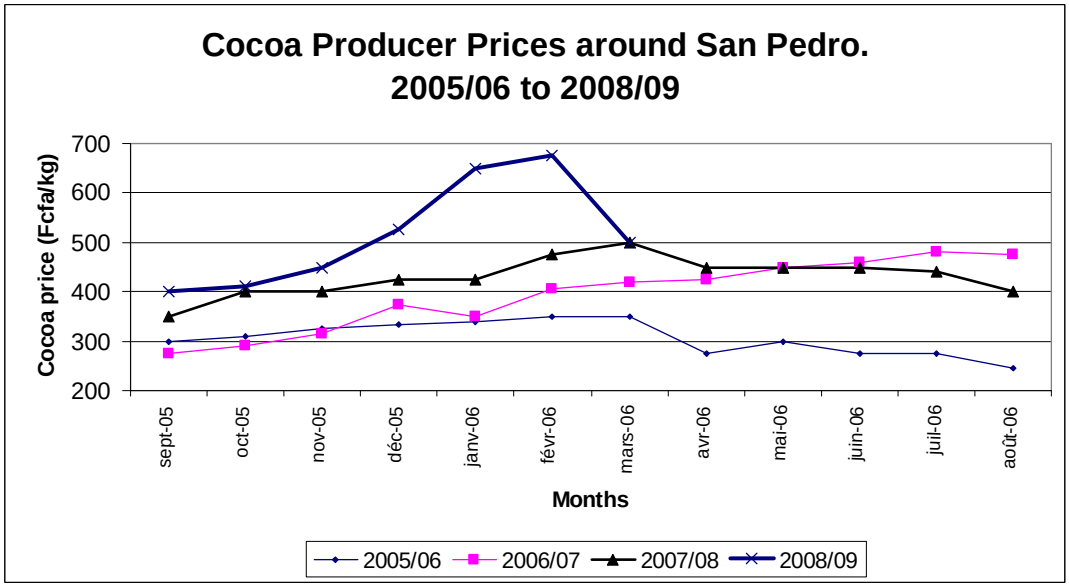
Since 1999, the mechanism is reversed: stabilized revenues for the government, fluctuating revenues for the planters. The government stopped fixing the producer price but established an export tax and parallel tax per tonne. Producer prices fluctuate according to the world price, but at a much lower level, due to the taxation.

The producer price is thus highly determined by the world price and the taxation level and to a less extent by the costs and margins of the exporters and middlemen (varying according to the distance, the state of tracks, the degree of local competition between traders, and the number of road blockades) and finally by the £/Cfaf and $/Cfaf exchange rates. Bean quality may play a role but it is difficult to prove.

1.1 Nominal producer prices increase: the case of San Pedro

Although extremely high and penalising to cocoa planters, the taxation did not increase much during these last years. With a world cocoa price starting to increase during the same period, this enabled an apparent and relative recovery of the cocoa price paid to planters. At least in nominal terms, the price environment slightly improved in 2006/07 and 2007/08 and seems to be booming in December 2008 (Fig.2).

Fig.2



Sources: CIRAD / author's surveys.

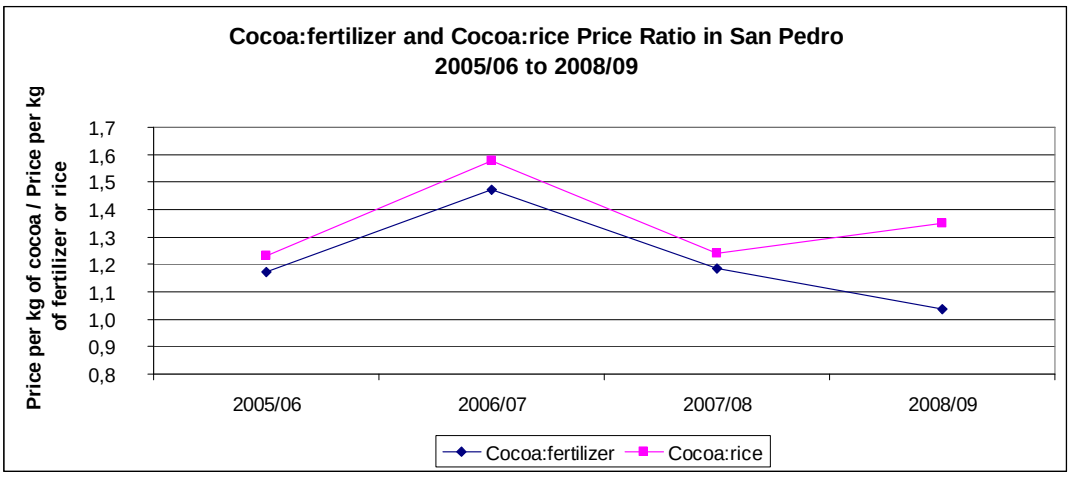
However, this apparently favourable picture is badly tarnished by a more in-depth view.

First of all, the 2005/06 campaign here taken as the starting point was a year of terrible suffering for the cocoa farmers of Côte d'Ivoire, close to lowest revenues and hardest conditions ever faced by two generations of cocoa farmers.

Secondly, these curbs do show how difficult it is for farmers to anticipate prices and revenues to optimize their investment decisions. The only common trend to the 4 annual curbs is a low start in September. Then, each year has is own profile with for instance a price decline during the light crop in 2005/06 and 2007/08 and an increase in 2006/07. This is a good illustration of the risks being passed on to planters by the liberalisation and more importantly by the excess of taxation. In itself, the risk could be reasonably managed, but with such levels of taxation and so poor prices in absolute terms, it is extremely difficult for a planter to take any costly investment decision.

Thirdly and most importantly, most of this increase in prices in nominal terms is killed in real terms. Farmers are getting back to the terrible situation faced in 2004/05 and 2005/06/ In 2008/09, despite farms badly need to benefit fertilization, it is becoming extremely risky and non-economic to apply fertilizers to cocoa farms in Côte d'Ivoire (Fig.3).

Fig.3



Sources: CIRAD / author's surveys.

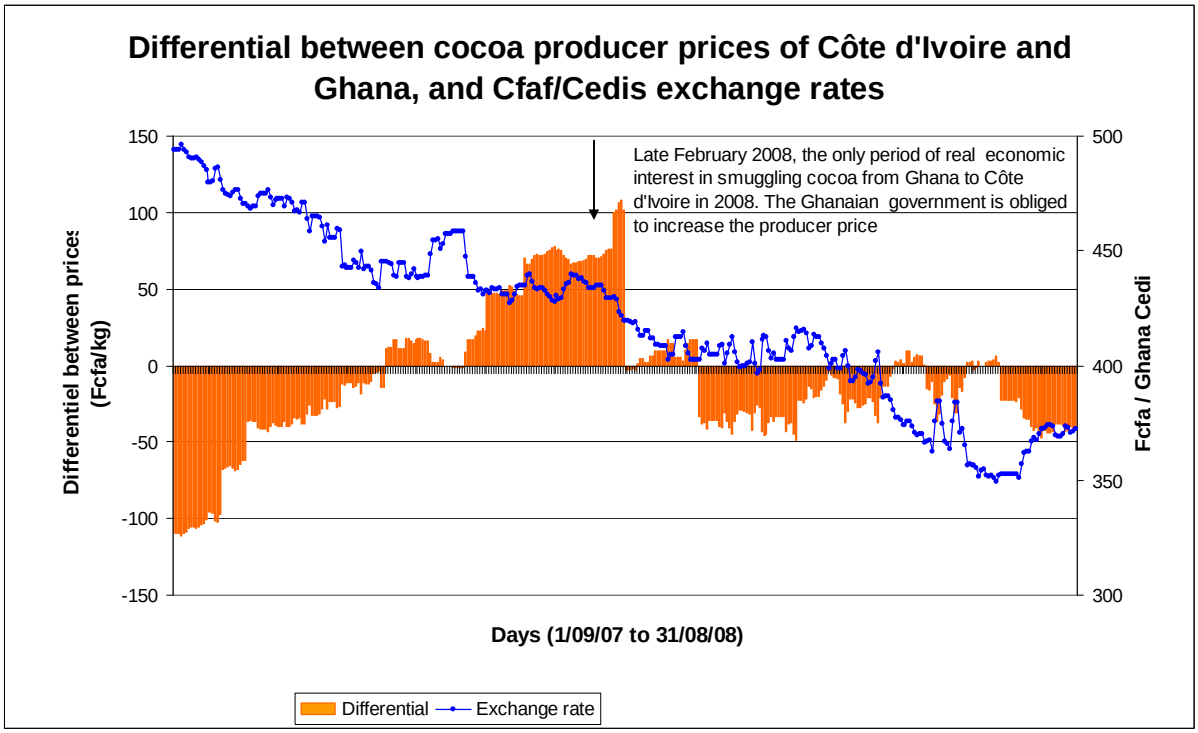
Fourthly, the apparent attractive rebound of the cocoa price in December 2008/January 2009 does seem to last. By the end of February, the producer price dropped to Cfaf/kg500 from 700. At the time we are finalizing this report, the price even dropped to 400 in many regions: a terrible source of disappointment, even for the most 'blasé" planters.

1.2 Comparison with the neighbouring Ghana: the smuggling indicator

Contrary to Côte d'Ivoire, its neighbour and 2nd world cocoa producer, Ghana, kept its marketing board and its mechanism of a producer price fixed every year, every October, at the beginning of the main crop, possibly revised at the mid crop. As in Côte d'Ivoire before 1999, the marketing board and the government get fluctuating revenues from this kind of taxation. What is also necessarily fluctuating is the differential between producer prices of the two neighbours.

Depending on the export tax in Côte d'Ivoire, depending on the fixed producer price in Ghana, and overall depending on the exchange rates, the differential may vary deeply and rapidly. The 2007/08 campaign is a showcase. From September to December 2007, The price in Côte d'Ivoire remains significantly lower that in Ghana but in January-February 2008, the world price increase pushes the Ivorian producer price to Cfaf/kg500 (approximately $1.12) and reverses the differential (Fig.4).

Fig.4



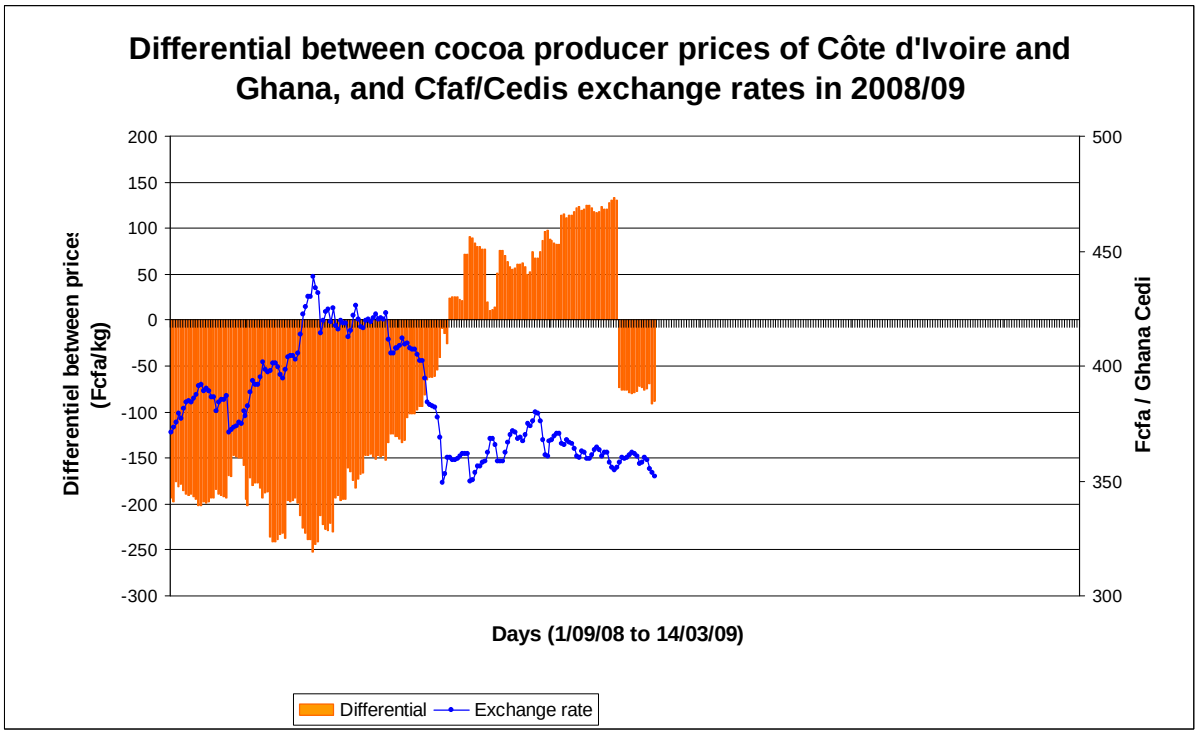
Sources: CIRAD / author's surveys.

In February, a positive differential of 100 Cfaf per kg (around 20 US cents per kg), is generated in favour of Côte d'Ivoire.

At this level, a kind of sanction or adjustment is immediately applied through smuggling from one country to another. In February, the smuggling from Ghana to Côte d'Ivoire reaches some 30,000 tonnes, which obliges the Ghanaian government to increase the producer price by 30% (to 12000 from 9300 old Cedi per kg, approximately $1.2 from $0.93). In September 2008, it repeats further the operation, putting the price at 1.6 New Cedi per kg (approximately $/kg1.36). The main motivation was probably related to the electoral period but it also encouraged the reverse of smuggling, restarting from Côte d'Ivoire to Ghana.

Although conclusions should not be driven too quickly from one year only, this comparison over the 2007/08 campaign brings up two main issues.
- If the two neighbours and two leaders in the cocoa sector wish to keep smuggling at marginal levels, the two public policies will have to be better coordinated than they were until a recent past.
- Ivorian public policy is often criticised by experts and by stakeholders of the international cocoa community for its too heavy taxation. This is truly a critical issue. However, the 2008 year and especially the end of 2008/ beginning of 2009 show that the neighbouring Ghana, often praised for its more encouraging policy, which was also true in the early-mid 2000s, is turning towards a more opaque taxation. As the world price increased in late 2008/early 2009, as the Ghana Cedi lost some ground again, the Ivorian price passed that of Ghana again in February (Fig.5).

Fig.5



Sources: CIRAD / author's surveys.

A brief look at the 'mirror' between the two neighbours shows that price policy is becoming an issue in Ghana as well.

In 2007/08 and 2008/09, in the two leading producing countries of the world, representing some 60% of the world cocoa supply, cocoa planters are underpaid.

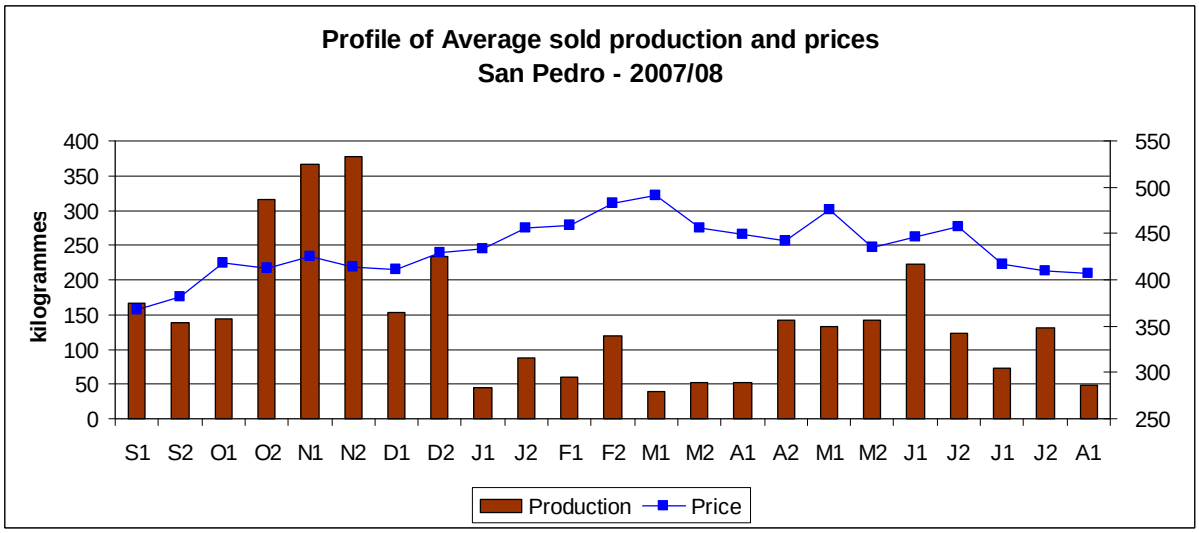
2. Low and too seasonal cocoa revenues

2.1 The 2007/08 year

As most planters cannot afford storing cocoa very long, they did not benefit the highest price of the year that was almost coinciding with the beginning of lean months.

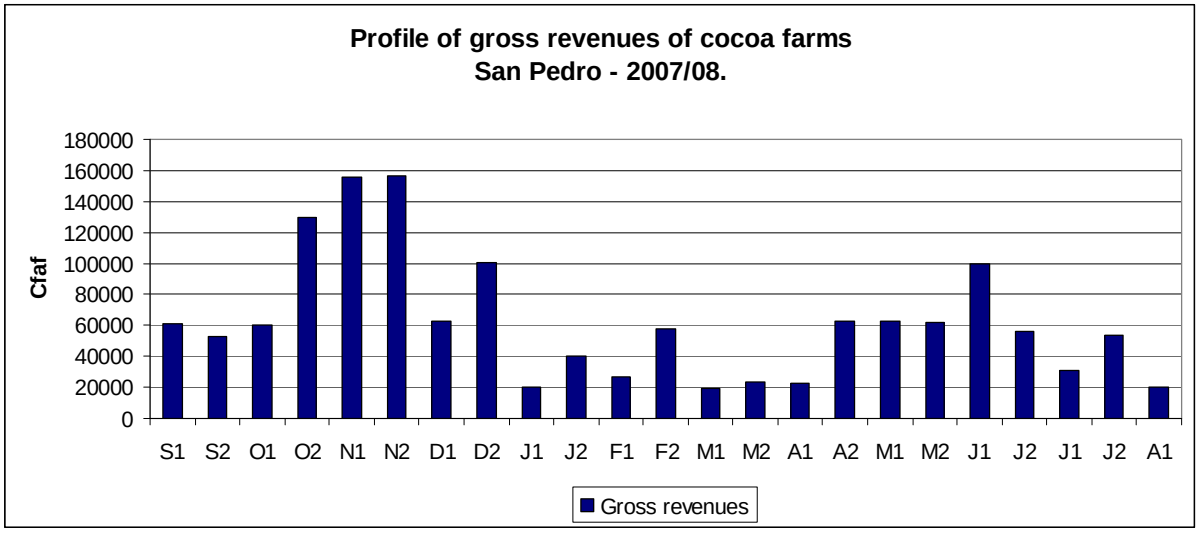
Around San Pedro, a region with one of the highest and most regular rainfall in the country, and with cocoa trees that are still relatively young, planters are lucky with regard to their intra-annual distribution of production (Fig.6). As the studied villages are also relatively close to the asphalt road and to San Pedro port, the prices are relatively good and regular, varying only between 350 and 500 cfaf per kg along the 2007/08 year. All in all, monthly revenues were reasonably distributed. This is exceptional.

Fig.6



Sources: CIRAD / author's surveys.

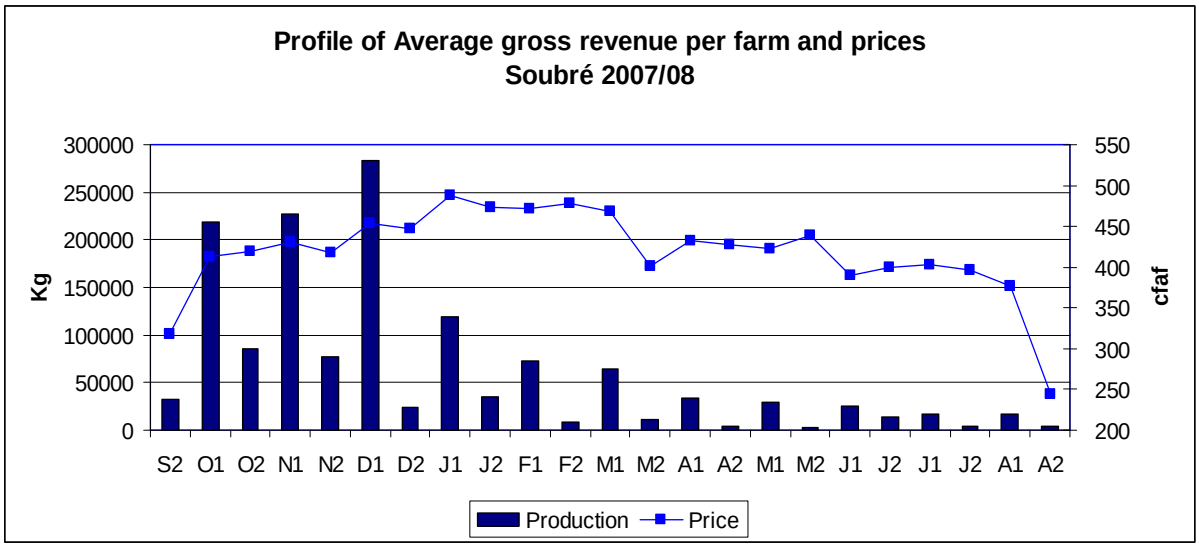
Fig.7



Sources: CIRAD / author's surveys.

Some 80 km further in the north, with a less favourable rainfall pattern and aged cocoa farms, the picture is quite different. In addition, as cocoa in this region is produced by remote villages, with roads and tracks in disastrous conditions, marketing costs are higher and the *pisteurs* can play more easily with prices. All these conditions lead to slightly lower and less stable prices combined with a highly concentrated pattern of production. The 2008 climate also did not help. The consequence is of course a serious problem of revenue concentration over 3-4 months and a long period of 7-8 months with very low revenues or no revenue at all (Fig.8).

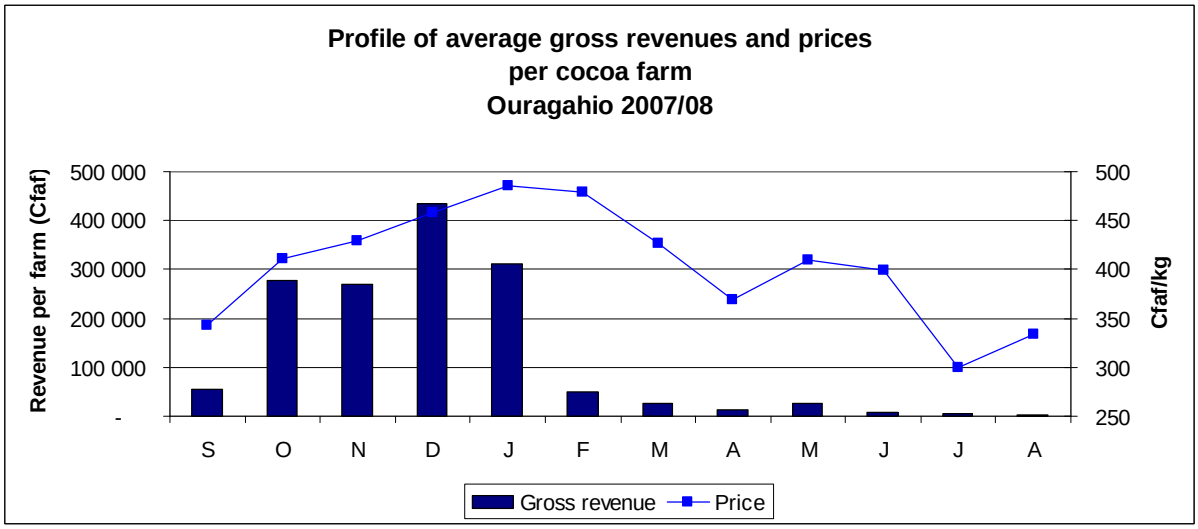
Fig.8



Sources: CIRAD / author's surveys.

Further in the east, in the central-west of the country, with an aggravation of the tree ageing process and possibly a still less favourable rainfall pattern, and the total absence of fertilizer, there is sometimes no more cocoa revenue during 7 months.

Fig.9



Sources: CIRAD / author's surveys.

These 2008 data confirm that a very unequal distribution of revenues along the year in many regions of Côte d'Ivoire, especially in regions with aged trees, is one of the main weaknesses of the cocoa sector, and one major constraint for its future.
One also notes non-negligible differences in producer prices according to regions, which can be explained by distance between villages and towns/ports but also by unequal degrees of competition between traders.

2.2 The 2008/09 year: preliminary results

In October 2008, an official announcement put the producer price put at f/kg700 but it remained an announcement. Prices were still lagging around fcfa/kf400-500 until mod-December. The increase started only in mid-December with the rise of the world price, itself mostly generated by buyers' fears of shortage of Ivorian cocoa beans. In some places, especially when a cooperative is working well, the prices reached Cgfaf/kg800 during a few days in mid-February (Table 1).

Table No 1. Producer prices in various districts of Côte d'Ivoire in December 2008 and February 2009

Site	6/12/08	15/12/08	22/2/09 *'Pisteur'*	Cooperative	Comment
Agnibilikrou	650	675	600	600	Until February 21st, the price was still 800. Since the, it dropped to 600. The *pisteurs* say the price has dropped at the port of Abidjan
Abengourou-Niablé	650		750	820	
Arrah-Kotobi	650	680	725 650	750 650	Dropping to 650 today, on February 22nd
Aboisso	650	650	700	780	
Agboville-Offumpo	500	550	475	500	Very low prices that remain to be explained
Adzopé	605	650	755	820	
Yamoussoukro	500	550 650	715		
Divo	550	600	650		
Ouragahio	550	600	600		
Daloa	575	600	600		Small beans, due to the lack or rains in November and December
Soubré	600	600	725		
San Pedro	550	575	750 725		
Duekué	650	650	700	810	
Vavoua	700	550	525		Since mid-Dec, cocoa has no more buyers in Vavoua. Planters are obliged to store it

Sources : Survey by CIRAD and "Agriculture et Cycle de Vie", Dec 2008/ Feb 2009

Buyers' fears were partially justified. This means that from planters' perspective, production remained low, hence a limited impact of the price increase on their revenues in December 2008. Then in late February/early March, the price collapsed again, to fcfaf/kg500, 400, even 300 with *pisteurs* complaining about the low size of the beans.

However, meantime, in January/February, some regions benefited from the temporary increase. The last harvest of the main crop was usually sold at a 'good' price, around 700.

For the time being, we have a qualitative estimate of the way planters used that relatively unexpected additional revenue. As so many cocoa farms are suffering high mortality rates, low yields, and of a lack of fertilizer, one could have imagined that migrant planters, usually the most dynamic entrepreneurs, would have tried to buy fertilizers to try to rejuvenate their

farms. This is not the case. The price of fertilizers is too high compare to that of cocoa. The level of mineral fertilizer purchase, already close to zero in 2007/08 (Ruf 2008), remains nil in 2008/09. So how do farmers use their revenues?

Interestingly, at least in two regions out of the 5 sites studied, this unfavourable cocoa: fertilizer price ratio price opens a window for organic fertilizer. However, at least at first view, these unexpected revenues have been mostly devoted to consumption and social relationships, and investment to improve their daily life environment.

2.21 Travelling to the home village and participating to funerals.

More than 50% of migrant farmers followed in our samples visited their home villages in January/February 2009, either in Côte d'Ivoire or Burkina Faso. The intensity of travelling expresses a frustration of many migrants that could not afford going back to their home village during several years. Interacting with this price/revenue factor, this planters' arbitration in favour of travelling can be also explained by a partial removal of blockades and abusive controls along the main roads.

This is rather encouraging. In addition, the frontiers between consumption, social investment and productive investment in cocoa farming are full of holes and let interactions operate. Travelling can also play a role in cocoa farming. From each home village in the savannah area, migrants have often settled in several places in the forest zone. When they meet each other in their home villages, they exchange information

2.22 Communication: Cell phones

The universal frenzy for cell phones and the need to communicate in Africa started to reach cocoa farmers in the late 1990s. Any unexpected revenue is an opportunity to enhance the trend. To put it on a half-pleasant note, researchers will be soon able to launch surveys by phone…

It also facilitates cocoa farming. For instance by ordering his pesticides by phone, a farmer may save time, transportation money and risks of being tapped at various road blockades.

2.23 Innovation and familial comfort: Solar panels

More marginal but still more interesting, on of our six sites, in the Centre-west of the country, started to invest in solar panels in February, with a down payment of cfaf25,000 and a contract with the panel provider.

2.24 Innovation and more direct investment: organic fertilizer: chicken manure

Two sites, that of Agboville (in small quantity) and that close to Soubré started to adopt chicken manure as an alternative to mineral fertilizer. Approximately 30% of our sub-sample of cocoa farmers around Soubré started to buy and apply chicken manure (.. mixed with rice husk) in February 2009.

2.25 Migrants are still looking for land and forests

Around San Pedro, where there is still some land and forest available on the way to Sassandra, 10 to 20% of the migrant planters restarted their purchase of land to plant cocoa.

2.26 The spread of the "Partager-Travailler" contract

One also sees a development of land acquirement through a specific institutional arrangement, locally called "partager/travailler" (literally share/work) or "planter/partager" (plant/share) (See box 1).

There were some traces of this way to get land from the 1960s to 1980s (Ruf 1982) but is started to be more visible although still marginal in the 1990s (de Fina 1993). In 2008, I estimate that it still represents less than 3% of all the total land covered by cocoa and acquired since the 1970s. It is now rapidly developing, although with a huge time lag compare to Ghana where it already became the dominant channel to get land (See box 1).

It is extremely interesting because it triggers less frustration from the autochthon side. Instead of getting money which is rapidly spent, they get half a plantation. This way to get land looks more safe and secure for both parties and thus for the future of cocoa in the two countries.

Box No 1. The development of the '*Partager/travailler*' contract

A person with rights to land, who is generally autochthon, concedes a plot to another person, generally a migrant, on condition that: the latter clears it, plants it entirely with cocoa trees, maintains it until it starts producing, at which point the plot is divided, definitively or provisionally (as long as cocoa is producing), into two halves between the stakeholders.

In neighbouring Ghana, the same contact under the name of *Abunu* (literally share in two parts) has already taken enormous importance. The late development of this contract in Côte d'Ivoire compare to Ghana is probably related to the 30-year gap between the cocoa cycles of the two countries. However, it may also be related to the policy of the former President Houphouët-Boigny in Côte d'Ivoire, which greatly supported migrants, reducing autochthons' capacity to negotiate their land rights. There was massive but insecure selling of land at very low prices as a result.

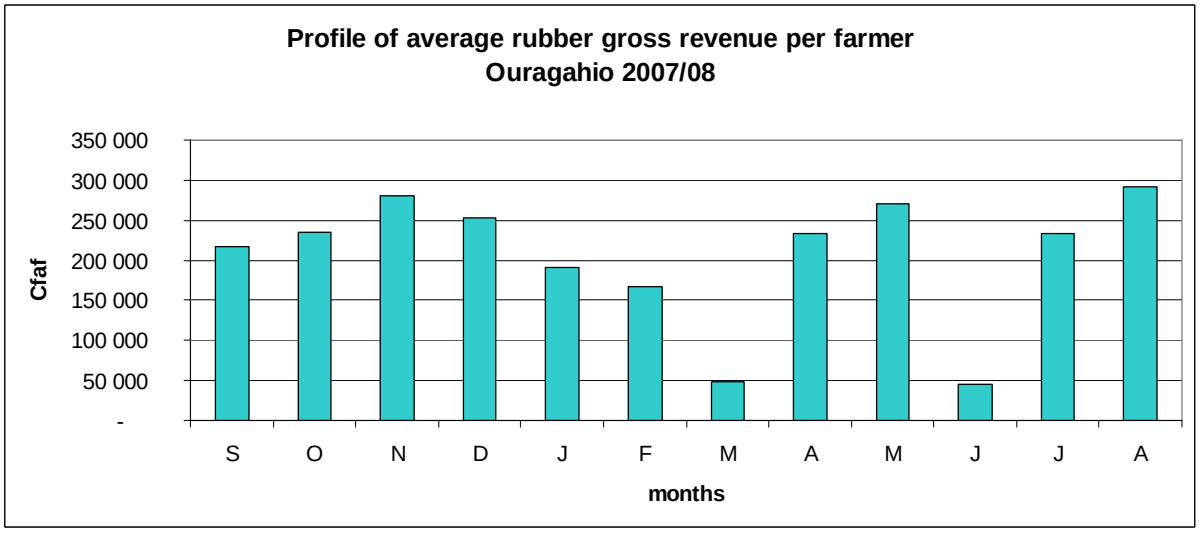
The recent change in Côte d'Ivoire in favour of the *partager/travailler* contract is partially related to the civil war/civil unrest in 2002, which highlighted land conflicts and encouraged migrants and autochthons to find a safer contract that the mere sale/purchase of land.

Whatever the prospect of modernisation of cocoa farming, the future of cocoa in any country and especially in Côte d'Ivoire relies on the capacity of societies and governments to accept migrants and find ways to give room to the next generation. A contract such as *Partager/travailler* may contribute to this aspect of cocoa sustainability.

3. **Diversification: the new 'rubber rent'**

Against a backdrop of cocoa mortality and high taxation, a 'new' tree crop is attracting more and more planters. Under the 2007/08 condition of yields and prices of the two crops/commodities, rubber planters get more than 200,000 Cfaf per month during 10 months of the year, with three times less surface, 2 to 3 hectares of rubber instead of 7 to 10 hectares of cocoa. The regularity of rubber revenues has no match (Fig.10).

Fig.10



Sources : Follow up of rubber farmers' production, by CIRAD and "Agriculture et Cycle de vie".

Even though the attractiveness of rubber is somewhat reduced in 2008/09 due to the decline of the rubber price, it still forms a source of wealth and a feeling to become a 'civil servant' with monthly revenues. This fascinates cocoa farmers. Those who own rubber can send their children to school without borrowing money in August/September. This drives tens of thousands of cocoa planters crazy about rubber.

In each of our sample village, a few farmers have started to plant rubber. Out of a total of 400, they are still around 20 only, approximately 5%, but we expect an exponential increase.

Even if the rubber price keeps declining, the regularity of the revenues along the year is a fantastic pulling factor. The rubber boom has a bright future in Côte d'Ivoire.

It is too early to strictly evaluate if rubber revenues would have a positive effect on cocoa by funding some reinvestment or rather a negative one by encouraging more and more farmers to reconvert their farms into rubber. However, the second hypothesis looks more likely.

4. Conclusion

The way farmers spend their money when the price rises demonstrates that cocoa could play an amazing role in Côte d'Ivoire and beyond, in West Africa to combat poverty and improve the daily life of hundreds of thousands of families. Especially in this world crisis period where Africa is expected to be hit as much as other continents, cocoa remains a fantastic tool of resilience to the crisis. From cell phones to solar panels without forgetting organic fertilizer, cocoa looks like a splendid vehicle for spreading innovation in West Africa.

Due to a too high taxation, the unfortunate paradox is that the environment of cocoa planters in Côte d'Ivoire keeps degrading. We can still find planters volunteering to acquire land and plant cocoa but the trade-off between tree ageing and mortality one hand and tree planting on the other hand seems negative.

One anecdote could be quoted as a symbol of this degradation, relative to the Kroumen who are the famous autochthons living around San Pedro (box 2). The Kroumen are famous as sailors on European cargos and also famous for selling out land and forest to tens of thousands migrants coming to plant cocoa. This situation triggered many hard conflicts and is part of the roots of the Ivorian conflict.

Box 2. A new version of the "Ivoiro-Burkinabé" story

Let's call this chief of village "Jean-Pierre". In the 1980s and 1990s he sold a few thousand of hectares of forest to Burkinabe migrants who converted this forest into cocoa farms and are now by far the most economically powerful community. Recently, he was suffering a serious medical problem. He could not afford getting the surgical operation in San Pedro. He was also afraid of being operated too close to his 'brothers' "who could trigger some sorcery and kill him to capture his land business" or what is left of it. Finally, the chief of the community of the 300 Burkinabé installed in his village offered him to be operated in Burkina Faso. They took every expense in charge and organised the least details. The surgical operation was successful. Since then, Jean Pierre considers himself as "Ivoiro-Burkinabé" and wishes to stay in Burkina Faso, build a house in Koudougou (Burkina Faso) and wishes to encourage his son make his life in Burkina Faso.

Beyond the emotional aspect of this personal story, it wonderfully illustrates the close contacts between autochthons and their Burkinabé 'clients' who smartly manage their relationships with autochthons. More importantly, the story is a symbol of a serious social and economic change in West Africa. After decades of a rich Côte d'Ivoire attracting migrants from Burkina Faso, are we not observing a beginning of reversed flow of migration, supplied by disappointed Ivoirians, looking for a more peaceful life in the Sahelian country? Had Burkina Faso something more substantial than cotton to develop itself, no doubt that it would receive Ivorian migrants…

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