The Cotton Sector of Côte d'Ivoire

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Abstract

This report is the final product of a country case study prepared in the framework of the comparative analysis of organization and performance of cotton sectors in Sub-Saharan Africa, a study published by the World Bank in 2008. The objective of the overall study was to carry out a comparative analysis of the links between sector structure and observed performance outcomes on a sample of nine of the major cotton exporting countries of Sub-Saharan Africa, and draw lessons from each country's experience that can provide useful guidance to policy-makers, industry stakeholders, and interested donors agencies in the design of future cotton sector reform programs. This paper describes and reviews the situation of the cotton sector of Côte d'Ivoire, as well as the reforms that the sector has undergone since the mid-1990s.

At the beginning of the current decade, profound structural reforms were implemented in the sector, including the establishment of a geographic zoning system during a transitional period (2000-2002) and the introduction of free competition among ginners (mainly private) as of 2002. However, these reforms took place in the context of the major socio-political turmoil that the country experienced from 2002 onward. These events had a negative impact on the overall economy and cotton sector operations in particular, thus making it particularly difficult to assess the influence of this broader context on the outcome of reforms implemented in the sector. In spite of this caveat, the analysis of the Ivorian cotton sector is interesting because of the original reform path - at least in West Africa- that the country decided to follow.

A restructuring process is currently in progress, involving a core of a few professional operators, combined with the return to a system of vertical integration by cotton companies. The report concludes that a move towards exclusive cotton seed purchase zones, advocated by some cotton companies, is neither feasible nor desirable, while the proper operation of the current concentrated, yet competitive, system requires critical improvements in the regulatory framework.

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COMPARATIVE ANALYSIS OF ORGANIZATION AND PERFORMANCE OF AFRICAN COTTON SECTORS

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By

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Acronyms and Abbreviations

ACE	Audit Conseil et Expertise
AFFICOT-CI	Association des Faîtières de la Filière Coton de Côte d'Ivoire (RCI's Federation of Umbrella Producer Organizations)
ANADER	Agence Nationale de Développement Rural
APROCOT-CI	Association professionnelles des sociétés cotonnières en Côte d'Ivoire (RCI's federation of cotton companies)
ARECA	Autorité de Régulation du Coton et de l'Anacarde (Cotton and Cashew Regulating Agency)
CFAF	Franc of the Communauté Financière Africaine
CFDT	Compagnie Française de Développement des Fibres Textiles
CIDT	Compagnie Ivoirienne de Développement des Fibres Textiles
CNRA	Centre National de Recherche Agricole (National Agriculture Research Institute)
CSSPPA	Caisse de Stabilisation et de Soutien aux Prix des Produits Agricoles (Stabilization and Price Support Fund for Agricultural Products)
DOPA	Département des Opérations Agricoles
GVC	Groupement à Vocation Coopérative (Cooperative-type farmer group)
IC	Ivoire Coton
IDB	Islamic Development Bank
IDESSA	Institut des Savanes
IRCT	Institut de Recherche sur le Coton et les fibres Tropicales
LCCI	Le Coton de Côte d'Ivoire
OPA	Organisations Professionnelles Agricoles
SC	Société cotonnière
SICOSA	Société Ivoirienne de Coton S.A.
URECOS-CI	Union Régionale des entreprises coopératives de la zone des Savanes de Côte d'Ivoire
USD	US Dollar

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Executive Summary

Although it is not the primary export crop in the country, since the 1970s, cotton has played an especially important role in the rural development of the North of Côte d'Ivoire, where it has traditionally represented the core of the rural economy.

At the start of the current decade, the Ivorian cotton subsector underwent some especially significant and profound structural reforms. However, these reforms took place in a period of serious socio-political difficulties that seriously destabilized the subsector and affected its proper operation. Among the most prosperous in West Africa in the past, the Ivorian cotton subsector abruptly deteriorated starting in 2002, both due to the political situation and to gaps in the establishment and oversight of reforms, in a context also marked by the deterioration of the global cotton market. Because of this fact, it is especially difficult to evaluate the effects that reforms to the subsector may have had in the absence of the socio-political problems that have affected the country. Despite this difficulty, analysis of the Ivorian subsector is especially interesting because of the direction the country selected was innovative (at least in West Africa), and because this analysis may contribute to reflection on the future of a subsector needing restructuring.

Until 1998, the Ivorian subsector was organized around a vertically integrated, public company (the CIDT) that held a monopoly for purchasing seed-cotton and for commercialization of lint and seed. Implemented in 1998, the reforms consisted primarily of privatizing some of the CIDT plants, sold to two private operators (Ivoire Coton and LCCI), and the abolition of the CIDT's monopoly; after a two-year transitional period, each of these two private cotton companies being free to purchase seed-cotton from producers to whom they had previously supplied inputs (on credit) and technical assistance. The rest of the CIDT plants (called CIDT Nouvelle or residuelle [New or Residual CIDT]) would be privatized later.

This privatization accompanied by deregulation, was part of a global policy of State disengagement from production activities, and responded to the heavy financial constraints weighing on the country's Public Finances at the time, under the framework of a sector adjustment program supported by the Bretton Woods institutions. It took place in a disinterested climate and there was wide consensus on it among the actors, especially the producer organizations. At the time it was privatized, the CIDT showed an attractive profitability, leading to a high sale price upon privatization.

The changes to the subsector after privatization were marked by the following major events:

- The intention of the main umbrella producer organization,[1] URECOS-CI, to take advantage of deregulation to help producers take control of the subsector through the umbrella organization's takeover of the supply of inputs and technical assistance to farmers (for which it did not have the resources), and by building their own ginning plant in 2002;

[1] An intention that was manifested in particular at the Yamoussoukro workshop in 2002 (see paragraph 2.4.4).

- The political instability beginning in 2000, and then the outbreak of conflict between the North and the South (in 2002), that led to the de facto division of the country and the loss of control by the central authorities over the cotton producing area in the North;
- LCCI's internal management problems that very quickly led to its inability to regularly pay producers.

The conjunction of these three events led to a deep crisis in the subsector beginning in 2002:

- The poorly structured cooperative movement imploded with a proliferation of holding organizations, a separation of corporate control and the links between umbrella organization, cooperatives, and their members, making it unable to play the role that it aspired to in terms of input distribution and loan recovery;
- LCCI's financial difficulties, and then those of the CIDT Nouvelle and SICOSA (the plant belonging to the cooperative movement) led to considerable delays in paying the producers, which in turn led to the intervention of intermediaries (who purchased the seed-cotton for cash but at a price much lower than the official price) and the discouragement of the producers;
- The failure of the cooperative system, the development of intermediaries, the separation of the supervisory system, and especially the failure to pay the producers strongly upset the reimbursement of input loans, leading to the withdrawal of commercial banks from the subsector, the accumulation of unpaid loans and repeated State intervention to maintain a minimum supply of inputs;
- The conflict also led to the destruction of the research station, destroying the organization of seed production as well as that of the classing unit, making homogeneous classing of Ivorian production impossible.

Because of these events, production dropped rapidly, from 400,000 tons (T) in 2000 to less than 150,000 T over the past two seasons, while yields have been subject to fluctuations, though with a downward trend. The small producers with no access to cultivation using traction were the first to abandon the subsector, with this movement becoming generalized by 2006. This drop in production led to a disastrous underutilization of production facilities (usage rate of 23% in 2007/08) and soaring fixed costs for cotton producing companies.

While the deterioration of the situation is largely due to these events, it was also aggravated by unfortunate actions or decisions: (a) the awkward decision to sell on e of CIDT's plant (during the privatization process) to an unscrupulous operator (LCCI) and the absence of Government reaction to the first signs of LCCI's failure; (b) URECOS-CI's strategy which did not have the resources to match its ambition and which was significantly weakened by the political crisis; (c) the absence of specific rules of the game guaranteeing respect for contractual bonds between producers and the ginners who supply them with inputs and supervise them; (d) the ineffectiveness of the regulatory mechanism, including both a regulatory agency without real power and an inter-branch organization paralyzed by internal dissent.

In this context, a comparison between the performance of the Ivorian cotton sector and that of other cotton sectors[2] can only lead to disadvantages for Côte d'Ivoire:

- The prices paid to producers, while often subsidized by the government, have been systematically lower than those paid in other cotton producing countries in the sub-region since 2000;
- The relationship between the price paid to the producer and the factory output value of seed-cotton (which measures the ability of the subsector to maximize producer remuneration) is lower than that in countries with national monopolies (Burkina Faso, Mali, Cameroon) as well as that in countries with open competitive systems (Tanzania, Uganda);
- This mediocre performance is due to the elevated costs borne by the cotton producing companies because of the underutilization of processing facilities, significant levies (legal and illegal) imposed on the subsector, and, in the case of Ivoire Coton, elevated extension costs. The operating costs of the cotton producing companies are the highest in the sample, which emphasizes the fact that the subsector has not taken advantage of competition between operators;
- Ivorian cotton has lost the quality premium that it had traditionally had on the market because of the physical destruction of the classing unit, poor quality seed, and the lack of traceability due to the proliferation of intermediaries;
- Despite the notable drop, Ivorian yields remain among the best in the sample (especially among countries in the sub-region, with monopoly systems), and significantly exceed the average yields obtained in competitive and concentrated systems;
- In the end, compensation for a producer's workday is lower than that observed in monopoly countries (because of lower producer prices), and is about average in relation to performance of the competitive and concentrated systems in Eastern and Southern Africa.

The liquidation of LCCI and the 2008 sale of its plants to three operators (including one newcomer, OLAM), marks the start of the restructuring of the subsector, which nevertheless includes a highly diverse range of actors:

- two stable and vertically integrated private cotton companies holding a natural area of influence around their factories (Ivoire Coton, and as of the 2009 season, OLAM);
- one cotton company (COIC) that is also vertically integrated and has a network of producers, but no geographically defined area of influence;
- other operators with factories that are more or less marginalized: the CIDT Nouvelle, consumed by especially critical cash flow problems and which owes its survival to government support; SICOSA, close to cessation of payments, and DOPA,

[2] Comparison based on a comparative study conducted by the World Bank in 2008, distinguishing three groups of cotton sectors: those with purchasing monopolies (Burkina Faso, Mali, Cameroon), those completely open to competition between operators (Tanzania, Uganda), and those with concentrated operations and a small number of operators (Zambia, Zimbabwe)

which is attempting to build a contractual network of producers, but which also faces cash flow difficulties;

- lastly, an umbrella producer organization, UCAP-CI, that continues to pre-finance inputs for some affiliated cooperatives and uses the processing facilities at SICOSA, to export lint and seed-cotton.

Thus, a restructuring process is in progress right now, involving a strong core of a few professional operators. We are also witnessing a return to vertical integration among cotton producing companies, who have learned that, to ensure supply, they, themselves, must be able to supply inputs to the producers that they supervise. Lastly, we are seeing an individualization of relations between these companies and producers (due to a lack of stable cooperatives), and the development of informal farmers groups for organizing input collection and distribution markets in the field, under the control of the cotton companies.

The move toward exclusive production areas, desired by some companies, does not seem workable in this context because of the geographic spread of the factories, and less desirable in the sense that it would create an unbalanced power relationship between cotton companies and producers. The maintenance of a competitive system, in which the producer or village groups of producers has some freedom of choice concerning cotton companies seems desirable, on the condition that it include effective regulation to ensure that input loans can be secured. In all likelihood, this regulation must include: (a) the contractualization of relations between cotton companies and individual producers or village groups, (b) the implementation of coordination between companies so that contractual bonds between village groups and cotton companies are known to all, (c) the establishment of clear rules of conduct for cotton companies and the institutional resources to monitor implementation of those rules, (d) the prohibition of intermediaries.

A recent study financed by the EU presented an interesting alternative path for resolving the subsector's chronic debt problem, proposing to replace the input credit with “input savings” : over the course of a given year, producers would allocate a share of their cotton sales revenue to a savings account, to be used for the cash purchase of inputs in the following year. This approach is worth refining and testing.

Restructuring the sector also calls for clarification of the respective roles of the inter-branch organization (Intercoton) and the regulatory authority for the subsector (ARECA). This must be accompanied by Government and donor actions targeting the restoration of the cotton production research and seed production facilities, as well as action to restart the cooperative movement from the existing village groups, so as to strengthen the negotiating power of the producers within the inter-branch organizations. Questions about CIDT Nouvelle's future and the desirability of its privatization also remain.

Lastly, it is interesting to note that alternatives to cotton cultivation seem to be spontaneously developing in the absence of specific support for reconversion. Cashew production has seen especially strong development in parts of the cotton producing zone and now brings in three times the revenue of cotton production for rural populations.

1. INTRODUCTION:

1.1 Relevance of a case study on the cotton sector of Côte d'Ivoire

Until the end of the 90s, the Ivorian cotton sector was organized according to the classic model in Francophone Africa of a single semi-public cotton company integrating all functions necessary to the operation of the sector. Along with Benin, Côte d'Ivoire is the country in which reforms were the most radical, bearing both on deregulation of seed-cotton sales and on the privatization of a large part of the production facilities for the cotton companies, while the producers, represented by a powerful association, invested in the subsector as part of this deregulation. This approach was very original in relation to that adopted in Benin a few years earlier, and thus merits its own examination.

The Ivorian cotton sector was one of the highest performing cotton sectors in West Africa up to the time of the reforms. Starting in 2003, the status of the sector abruptly and significantly deteriorated, while immediately after the implementation of these reforms, the country experienced a period of serious socio-political difficulties, leading to a de facto division of the country, and leaving the cotton producing area outside of government control. Because of this fact, it is difficult to assess the effects that the reforms may have had in the absence of these events.

Despite this difficulty, it seems particularly interesting, in the context of a comparative analysis of reforms of the cotton sectors in Africa, to analyze the content of the reforms undertaken, the ways they were implemented, and the consequences they had (or might have had in the absence of exogenous events) on the operation and performance of the sector. This analysis is even more essential as the landscape of the cotton production sector in Côte d'Ivoire is in the process of being restructured following the bankruptcy of one of the primary operators. As much as the changing political situation in the country and the international economic situation allow, the Ivorian cotton sector must be rebuilt on a solid foundation. Thus, the present report also has the ambition of contributing to reflection on possible future directions for the sector, through understanding the failures and successes of past experiences.

1.2 Importance of cotton in the Ivorian economy

Until the middle of the current decade, cotton played an important role in Côte d'Ivoire's agricultural sector, even though it only ranks third among agricultural export products, behind coffee and cacao. In 2001, the sector represented about 7% of the country's exports and generated CFAF 53 billion in foreign currency revenue. Additionally, it was the main economic engine in Côte d'Ivoire's rural North, being the direct source of livelihood for 180,000 producers, or about 2.5 million inhabitants. However, cotton's share of the economy has dropped continuously since 2003, because of a drop in production and in cotton prices.

2. COTTON SECTOR REFORM PROCESS

2.1 History of the sector and its operation up to reform

Since before colonization, cotton had been cultivated traditionally in the North of the country for local weaving. The first action to develop cotton cultivation was started around 1902 by French spinners, and the first mechanical gin plant appeared in 1912. The first experimental stations were built in Ferkéssédougou and Bouaké in 1926, under the aegis of the Institut Français de Recherche sur le coton et des fibres textiles (IRCT [Research Institute for Cotton and Exotic Textiles]).

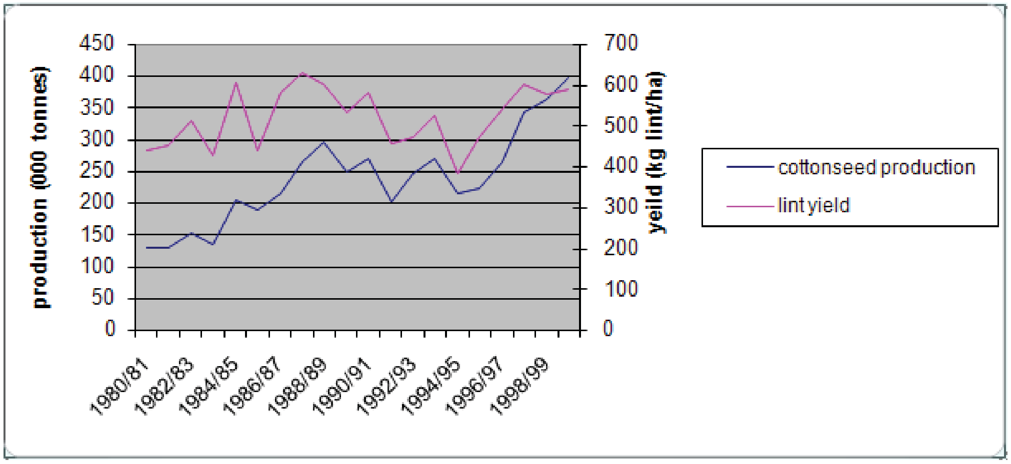
Starting in 1963, the independent Côte d'Ivoire entrusted the responsibility for developing cotton production (support to producers, collection and ginning of seed cotton, lint sales) to the Compagnie Française pour le Développement des Fibres Textiles (CFDT [Textile Fiber Development Company]). It was at this time that cotton cultivation truly began to flourish. On October 1, 1973, The government of Côte d'Ivoire created the Compagnie Ivoirienne pour le Développement des Textiles (CIDT) in which the CFDT holds a 30% share (and the government holds 70%), and plays the role of technical advisor.

Production grew steadily over the 1970s and 1980s due to improvements in yield and especially due to an increase in area devoted to cotton. This growth was supported in part by a policy of massive public investment and input subsidies, made available to producers by the CIDT at prices below production costs. The financial resources necessary for the CIDT to maintain this policy came primarily from the *Caisse de Stabilisation et de Soutien des Prix des Produits Agricoles* (CSSPPA [Stabilization and Price Support Fund for Agricultural Products]), which collected significant revenue from the cacao sector, allowing it to finance the agricultural development of the country.

This development model faded at the end of the 1980s, a time when global prices saw significant drops and when the countries in the Franc zone suffered a loss of competitiveness due to the over-valuation of the CFA Franc: the CIDT acknowledged a cumulative loss of CFAF 14 billion in 1990, within the context of a national economic crisis, while yields and production dropped. Faced with this crisis and within the framework of a restructuring program, the Government decided to assign the CIDT the goal of financial balance, which led to the signature of a framework performance contract through which the company agreed to improve its performance and reestablish its financial balance over a period of 5 years (1991-1996), with the goal of future privatization. Another objective of the restructuring program was improving the transparency of a company that had been criticized for behaving like “a Government within the Government.” A guarantee fund was created in parallel with the establishment of this program, to be fed by future surpluses in the subsector. This strategy was successful, and the CIDT accounts were straightened out over the following years, helped by the 1994 devaluation and its heavy impact on production.

At the end of the 1990s, production attained a peak of 400,000 T of seed-cotton, and yields were among the highest in Africa, reaching 1400 kg of seed cotton/ha.

Figure 1: Production and yield before the reforms



2.2 Institutional organization before the reforms

CIDT's mandate before the reforms exceeded that of an ordinary cotton company and included a wide ranging rural development assignment throughout the North of the country. In particular, the CIDT was responsible for:

- The promotion of cotton cultivation;
- The modernization of agricultural extension services and the promotion of animal traction;
- The supply of inputs (seeds, fertilizers, insecticides, agricultural equipment); this activity was handled through the intermediary of the cooperatives, responsible for estimating needs, placing orders with the CIDT, and then distributing inputs to the producers and recovering loans after commercialization of the seed-cotton;
- The purchase, shipping, and ginning of the seed cotton for the whole cotton producing area; the collection of seed cotton was also handled through the cooperatives, who managed the village markets and received a return for this service; the seed-cotton was collected by the CIDT, cotton collection begin typically coupled with the supply of inputs so as to minimize shipping costs;
- Lint and seed cotton commercialization;
- Creation and maintenance of rural roadways.

2.3 Objectives and rationale for sector reforms

The first discussions on privatizing the CIDT date back some time: they took place in the middle of the 1980s, at a time when the Ministry of Agriculture was seeking to strengthen its control over the all powerful state companies producing the primary commercial crops.

On the other hand, the CIDT experienced difficult periods of financial crisis (in 85/86 and again in 91/92) related to drops in the cotton lint market, which called the company's management and its potential privatization into question.

The economic crisis that occurred in the country at the start of the 1990s (and which deepened in the middle of the decade) led Côte d'Ivoire to enter into a structural adjustment process, supported by an Agricultural Sector Adjustment loan from the World Bank in 1994. The privatization of many state companies in the agricultural sector (palm oil, rubber, sugar, rice, cotton...) was part of this reform program. Privatization of the CIDT was planned after a period of five years (starting in 1991), during which the company would be restructured to become more attractive to private investors. The decision to privatize CIDT was made in 1996, a time when public finances were heavily restricted to reimburse debts to international donors.

It is important to note that the reforms of the sector, while taking place in an overall context of heavy economic and budgetary constraints in the country, were not carried out during a crisis in the sector, which, by contrast, had achieved record performance at this time both in terms of yields and in terms of production and profitability.

The privatization of the cotton company, which followed that of many other State companies in the agricultural sectors (sugar, rice, palm oil, rubber, ...), does not seem to have raised serious objections; debates were much livelier in other sectors with greater economic challenges, especially the cacao sector and the role of the Caistab. The fact that the debate on privatizing the company had already taken place a decade ago undoubtedly also helped establish a more rational and dispassionate reflection on the subject.

On the other hand, the form of the privatization was cause for debate between supporters of wholesale privatization, which would allow conservation of the sector's vertical integration and supporters of a privatization by plant (through asset transfer), which would lead to competition between operators. The Bretton Woods institutions strongly insisted upon the second option, while the CIDT and the Ministry of Agriculture preferred the first. The decision to privatize by factory led the CFDT, a minority shareholder in the CIDT who was strongly opposed to what it considered the dismantling of the sector, to sell its shares back to the government[3]. The privatization process, entrusted to an investment bank (Société Générale Finances), was submitted to the Council of Ministers in September 1996, who adopted a two stage privatization plan: (a) first stage: transfer of some of CIDT's assets divided into two groups; (b) second stage: privatization of the remaining assets of CIDT.

2.4 History and content of the reforms

The partial privatization of CIDT took place in 1998, in line with the initial schedule. The specifications for the sale of CIDT's assets foresaw a transitional period of two years, which was carried out as planned. After this period, we witnessed an attempt by the producer organizations to take control of the sector (especially at the Yamoussoukro Workshop), in favor of deregulation, while one of the private cotton producing companies experienced

[3] For a total of CFAF 18 billion

serious financial difficulties due to high-risk management strategies. Additionally, the end of the transitional period coincided with the exacerbation of political tensions in the country, which heavily affected the operation of the cotton sector, with the legal government losing control of the production zone.

2.4.1. Partial privatization of CIDT

The privatization of the operations in the two zones identified by the Société Générale study was carried out in mid 1998, following an international invitation to tender, awarded to two groups:

- Ivoire Coton, controlled by IPS, a company of the Agha Khan "Foundation for Economic Development" group with the participation of trader Paul Rheinhardt, was awarded the North East section including three factories and the respective supervisory units (for a total of CFAF 24 billion);
- LCCI controlled by the Swiss group, Aiglon, belonging to Cheikna Kagnassi, and with the participation of the Bolloré Albatros group and the International trading company Shorex Investments, was awarded the North East zone also including three factories (for a total of CFAF 29 billion).

The four other CIDT factories remained part of the State company, renamed "CIDT Nouvelle," which would be privatized in 2000.

The sale of these factories was a good deal for the government, due to overbidding by the bidders. This high price, partly justified by the good performance of the CIDT in previous years, seriously affected the balance sheet of the purchasing companies over the following years.

2.4.2. The transitional phase (1998-2000)

The partial privatization was followed by a two year transitional period (planned in the contractual texts), during which the sector would remain highly regulated, with the CIDT continuing to play a coordinating role until new structures were implemented. During this period, which ended in April 2000, the sector was managed by a Tripartite Commission created by decree and consisting of fifteen members representing the government, the cotton companies, the producers, and the spinners. This commission was responsible for setting the price for seed cotton, allocating seed cotton to the three companies, and creating Producers (AFFICOT-CI) and Ginners (APROCOT-CI) Federations, and lastly for creating the inter-branch organizational body, Intercoton.

During this period, the operation of the sector was characterized by the following aspects:

1. The exclusivity of technical assistance to producers devolved to CIDT for the entire cotton producing area (a supervisory agreement between CIDT, Ivoire Coton, and LCCI was signed for this purpose);
2. The collection of and payment for seed cotton were entirely handled by CIDT, which then transferred one third of the volume collected to each of the other two companies;
3. The pre-financing of inputs was carried out jointly by the three companies based

on a national invitation to tender that included all needs; the three companies also shared financing equally for supervisory expenses (handled by CIDT);

4. CIDT was in charge of the classing of cotton lint for all production[4];
5. Each company handled the ginning and commercialization of its own cotton and seed cotton;
6. Each company participated in the Tripartite Commission that was established.

It was also planned that during this period, no new factory construction would be authorized.

2.4.3. Deregulation and establishment of the industry organization (2000)

The tender documents for the transfer of the CIDT's assets (which contractually obligated the government to the purchasers) stated that after the transitional period, CIDT's monopoly would end and the sector would be completely deregulated, which implied the freedom to set seed cotton prices and the freedom to collect seed cotton. An inter-branch organization would be created, and the ginners would become responsible for operating (or financing) extension services and collecting seed-cotton in their area of activity. The installation of new factories by outside operators would become possible under the new plan, if these investors provided supervision for their producers (or financed it). Additionally, it was specified that operators must handle their relations through contracts, subject to obligations imposed on the processor in the specifications. In principle, each ginner was supposed to purchase seed cotton from producers or professional organizations that it supervised or financed. It would advance inputs and handle seed production. However, it was also noted in the tender documents that a ginner would be able to purchase seed cotton from another ginner under the framework of freely negotiated commercial contracts.

In parallel with the deregulation of the subsector, the inter-branch organization (INTERCOTON) was created on November 22, 2000, as a successor to the Tripartite Commission.

The complete deregulation of the sector occurred as planned in the contractual documents. However, the organization of the sector, and the role that the cotton companies were to play in it changed in ways that were noticeably different from the vision described in the initial documents, because of changes to the context and because of interactions between the actors, as described in the following paragraph. For the same reasons, the privatization of the CIDT Nouvelle did not take place (and still has not been carried out to this day).

2.4.4. The increasing role of producer organizations and the Yamoussoukro workshop

The deregulation of the sector took place in a context of heavy escalation of socio-political

[4] Carried out by a classing unit located in Bouaké, and owned by the CIDT. A management agreement for the classing unit, to be applied during the transitional period, had been signed between the CIDT, IC, and LCCI. This agreement planned for a transfer of ownership of the classing unit from the CIDT to the ginners' professional organization that would be created. Additionally, the Parties agreed to put in place and maintain, after the transitional period, a single instrument for classing the cotton lint produced by their respective factories, under the control of the ginners' professional organization.

tensions in the country: tensions between the North (cotton producing zone) and the South of the country were greatly exacerbated between 1998 and 2000, leading to a coup d'état at the end of 1999, and then a war in 2002 which led to the division of the country. In this context, management of the sector could only become politicized.

From the start of the privatization process, the producer organizations (which at the time numbered 3 national umbrella organizations, including URECOS-CI, the clear leader) expressed their intention to increase their role in the sector and claimed their share of the financial proceeds of privatization, arguing in particular that the CIDT should allocate them part of the support fund (foreseen in the 1991 restructuring framework), which in fact had not been endowed. After the 1999 coup d'état, the new head of State, General Guéï, signed a decree allocating 80% of the capital of the CIDT Nouvelle to the producer organizations for a symbolic franc. This decree was in fact, never enforced, and faced strong opposition from the ginners (who saw it as unfair competition), supported by some political actors. Under the new government elected at the end of 2000, the Privatization Commission decided that the transfer price of the 80% of the CIDT Nouvelle would be 16 billion, which excluded the producer organizations de facto by exceeding their financial resources.

In parallel, URECOS-CI, which had built up its war chest thanks to a payment of 3 billion under the old support fund (followed in 2000 by an additional payment of 1.5 billion), decided to take advantage of the ongoing deregulation to increase its role in the sector, and take over the dominant role over the producers, which had been held by the cotton companies up to that time. Its leader, an especially dynamic and entrepreneurial character, decided to build, together with an international merchant (Dreyfus) and an equipment supplier (Continental Eagle), its own gin plant in Korhogo, and obtained approval from the old regime in 1999 (before the transitional period, during which no new plants could be built). Despite strong opposition, the plant was finally built in 2002, and inaugurated a few days before the outbreak of the conflict. This plant, located near the LCCI plant, became a direct competitor. In parallel, URECOS-CI, with support from Swiss cooperation, founded a finance company, SOFICOCI, which obtained a loan (guaranteed by the FSDES) to purchase and distribute inputs to its members.

The URECOS-CI strategy was confirmed and seemed sufficiently credible to be imposed to all of sector stakeholders during the national workshop on deregulation of the cotton sector held in Yamoussoukro in January 2002. At its conclusion, the workshop noted the government's confirmation of its desire to deregulate the subsector, and to allow free competition between ginners, as well as to privatize the CIDT Nouvelle. The workshop also proposed, according to the URECOS-CI positions[5], the immediate transfer to the OPAs of the supervision and supply of inputs; it also proposed that the OPAs take over collection of the seed cotton and payment upon delivery to the gin plant. These recommendations, which in a way sanctioned the intention by URECOS-CI to take over the sector, were implemented over the next season

[5] That was turned into a formula, and used in the production unit "plant operators should not have to leave their plants".

2.4.5. Increasing malfunctions and bankruptcy of LCCI

The war, followed by the de facto division between the North (cotton zone controlled by the rebels) and the South (controlled by the legal government), erupted at the end of 2002, or several months after the Yamoussoukro workshop. URECOS-CI was seriously affected, especially by the pillaging of the Korhogo plant, which had just opened. Because of a lack of control over input distribution, inputs were significantly diverted and reimbursements dropped, while the cooperative movement rapidly disintegrated.

In parallel, and largely independent of the political crisis, one of the private operators, LCCI, experienced more and more serious financial difficulties, primarily due to poor management of the company, which led to its accumulation of overdue payments to producers, the halt of its activities, and finally to its bankruptcy in 2006. The void left by LCCI, which was unable to collect the decreasing quantities of cotton, was partially filled by the OPAs, competing ginners, and intermediaries reselling the cotton to other factories, generating an inextricable situation of cross debts.

LCCI's bankruptcy (declared in November 2006), clarified the landscape a little: its plants were put up for sale by the liquidator. The invitation to tender was awarded to a consortium including Ivoire Coton, SOIC/Yébé Wognon[6] and OLAM[7]. These three entities shared the plants, and placed back into operation by their respective new owners within this new framework for the 2008/09 season.

3. DESCRIPTION OF THE COTTON SECTOR

3.1 Production trends and production zones

3.1.1. Production trends

The area on which cotton is cultivated continued to grow over the transitional period, thanks to the momentum acquired during the previous years, and reached a record of nearly 300,000 ha in 1999/2000. The area under cultivation started to drop in 2000/01, presumably after the first failures noted in the sector; then the drop increased in 2003/04, and as of 2006, the drop in prices for producers added to the generalization of failures. The final figures for area under cultivation for the last two seasons could not be obtained, but indications provided by the cotton companies confirm the downward trend.

Production rose and fell, but with a strongly negative overall trend since deregulation: between 2001 and 2008, it dropped from 400,000 T to 120,000 T. The causes for this trend will be examined in detail in chapter 4.

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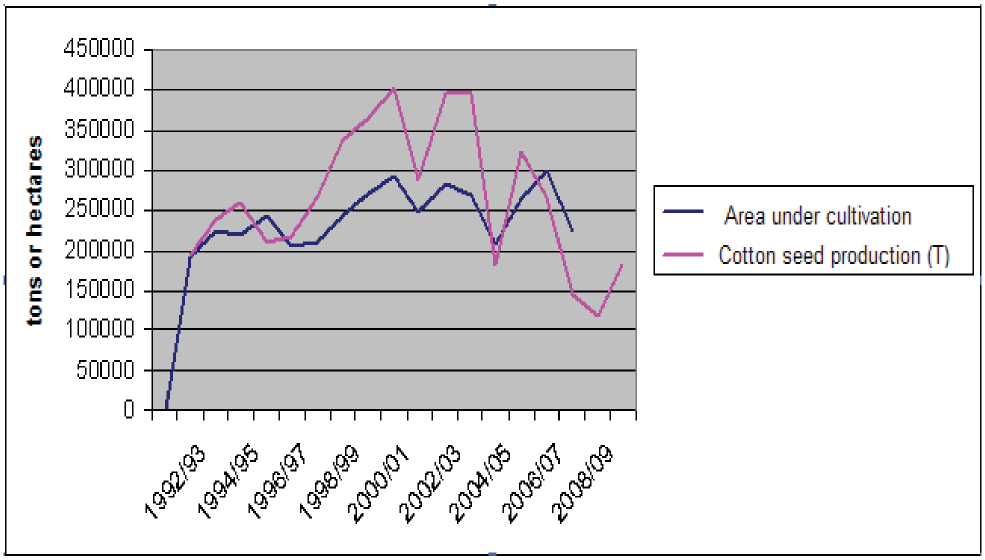
6 A network of cooperatives run by a businessman from Korhogo, which was already ginning and exporting cotton by renting one of the LCCI plants.

7 An international agricultural raw materials merchant, newly arrived in the Ivoirian cotton subsector, but with a significant presence in other subsectors.

Figure 2: Change in cultivated land and area in production



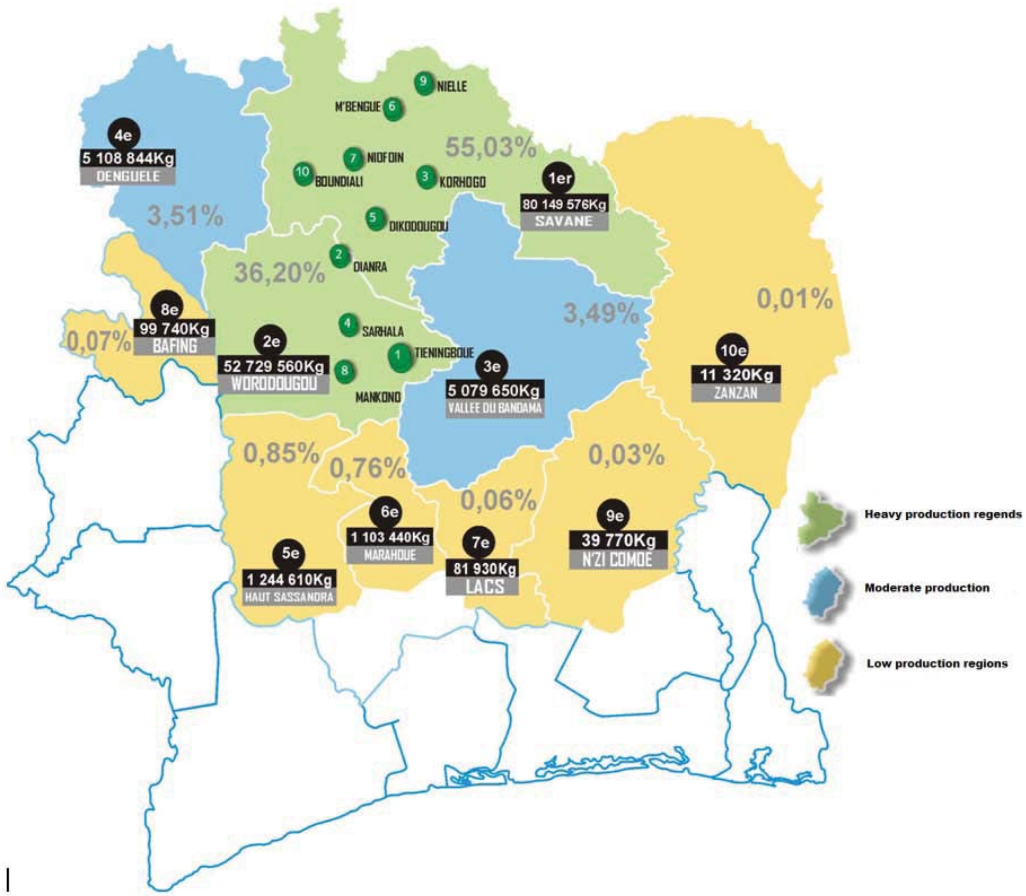
3.1.2. Production zones

The two regions of Savanes and Worodougou (in the North Central section of the country), are by far the major production zones, with more than 90% of overall production in 2006/07. A comparison with the agricultural census in 2001 shows that during this five year period, in which production dropped by half, the share of these two primary regions grew overall, marking a trend toward concentration in the cotton subsector. However, the Worodougou region greatly increased its relative share, as it is the only one to have more or less maintained the same level of production.

Table 1: Regional distribution of production in 2001 and 2006

	2001 census			2006/07 (from ACE)	
REGIONS	Area under cultivation	Production (T)	% production	production (T)	% production
Savanes	182 609	184443	64%	80149	55%
Worodougou	53 122	54926	19%	52730	36%
Denguele	15 751	21409	7%	5108	4%
Bandama Valley	12 391	12173	4%	5080	3%
Marahoue	10 080	7094	2%	1103	1%
Upper Sassandra	3 359	3845	1%	1244	1%
Bafing	2 411	2749	1%	100	0%
Other regions	392	480	0%	130	0%
TOTAL	**280 115**	**287118**	100%	145644	100%

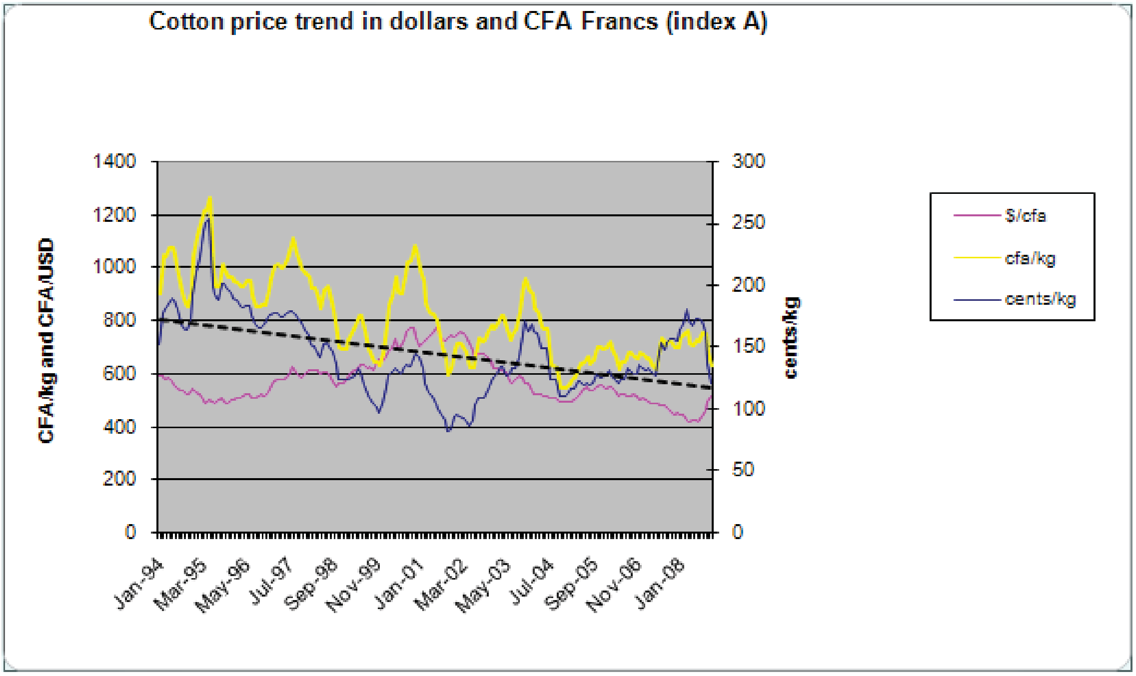
Figure 3: Distribution of cotton production (2006/07 season)



3.2 Trend in cotton prices and exchange rate

Over the period from 1994 to 2008, cotton prices on the global market experienced a downward trend, aggravated between 2000 and 2008 by a semi-continuous deterioration in the USD/CFAF exchange rate, which penalized Côte d'Ivoire, like all the countries in the Franc zone. Because of this, Côte d'Ivoire was unable to take significant advantage of the increase in prices experienced between 2005 and 2008, as shown in the table below. Like the other cotton producing countries, it was hit hard by the extremely abrupt drop in cotton prices that occurred at the end of 2008, a consequence of the global financial crisis.

Figure 4: Coton price trend in USD and CFAF (index A)



3.3 Cotton companies and ginners

3.3.1. Evolution since the partial privatization of the CIDT

After the partial privatization of the CIDT in 1998, three cotton companies were operating:

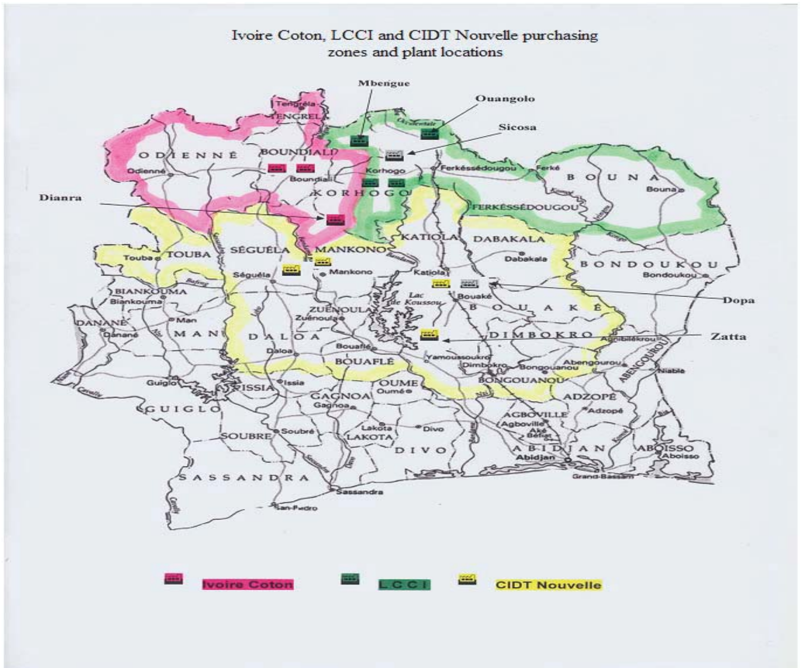
1. **La Compagnie Cotonnière de Côte d'Ivoire (LCCI)**[8]. It covers the Northeast zone (Ferké, Katiola et Korhogo). It owns 3 plants in Korhogo (2) and Ouangolodougou; it built a fourth plant in 2002 in Mbengué, which brought its annual processing capacity to 200,000 T;
2. **Ivoire Coton (IC).** It covers the Northwest zone of Côte d'Ivoire (Boundiali, Odienné, Mankono). It owns 3 plants in Boundiali (2) and Dianra, with an annual ginning capacity of 118,000 T;
3. **La Nouvelle Compagnie Ivoirienne pour le Développement des Textiles (Nouvelle CIDT)**[9]. It covers the Central and Central-West zones (Bouaflé, Bondoukou, Bouna, Daloa, Mankono, Séguéla, Tanda). Its annual processing capacity is 120,000 T with 4 ginning plants in Bouaké, Mankono, Séguéla and Zatta.

Each of these companies was allocated a fixed purchasing zone during the transitional period ending in April 2000 (see the boundaries of these zones and plant locations on the map below).

8 LCCI acquired the Northeast area for CFAF 29 billion. 100% of its capital is held by a private consortium composed of the Swiss agro-industry group, Aiglon, belonging to Cheikna KAGNASSI, the agro-industry group Bolloré Albatros and the international trading company Shorex Investments.

9 100% of its capital is held by the government.

Figure 5: Purchasing zones for cotton companies



The situation changed rapidly with the end of the transitional period, which marked the complete deregulation of the sector:

- The umbrella organization URECOS-CI built a new plant through its subsidiary SICOSA in Korhogo (close to the LCCI plant) commissioned in 2002. It has a capacity of 50,000 T. With the support of the cooperative network of URECOS-CI and the public extension agency ANADER, SICOSA expected to take advantage of the deregulation of the sector to put inputs in place through cooperatives, purchase seed cotton, and gin and export lint, creating a true cooperative cotton company. The outbreak of the conflict at almost the same time as the opening of the plant upset these plans: the plant was partially destroyed, the inventory was stolen, the inputs implemented were diverted or used for food crops, and because of this, the input loans were not repaid. Additionally, ANADER, who was supposed to provide extension services to farmers, was forced to leave the cotton production zone. These events heavily affected SICOSA's operating capacity; SICOSA did not operate in 2002/03, and then operated over the following seasons primarily through contract ginning for other umbrella organizations.

- In 2004, a new operator arrived, the Département des Opérations Agricoles (DOPA), and built a new plant in Bouaké with a capacity of 35,000 T. As a subsidiary of the local textile group COTIVO/STG, the operator's intention was to thus ensure supply for the spinning mill, by relying on the URECOS-CI cooperative network. DOPA had to reassess its strategy because of the collapse of the local textile market and the inability of URECOS-CI to supply it. The operator then worked with other umbrella organizations that were not able to honor their agreements, but nevertheless attempted to pre-finance and implement inputs from autonomous cooperatives itself, through its own network of supervisors.

- In parallel, a trader from Korhogo, holding a significant loan to LCCI, decided to promote the creation of a cooperative network (Yébé Wognon) to supply it with seed cotton, and to use the LCCI plant for ginning. He thus created a new ginning and lint exportation structure (COIC) that has all the characteristics of a true cotton company, except that it did not own a ginning plant until 2008.[10]

- Lastly, LCCI, after a prolonged agony, declared bankruptcy in 2006, and its assets were sold in 2008 to three entities who between which the plants were distributed: Ivoire Coton, COIC and the OLAM group, a newcomer to the subsector.

3.3.2. Ginning capacity and activity

In 2005, the country's total ginning capacity reached 520,000 T of seed cotton, which translated into a growing excess capacity as production dropped. The utilization rate of plant capacity thus dropped to 23% for the 2007/08 season, with only Ivoire Coton still able to maintain its operating rate above 30%. This situation had the clear consequence of pushing up production costs.

Table 2: Production distribution by ginning plant

thousands of tons	CIDT	IC	LCCI	SICOSA	DOPA	Total
2002/03 season						
Purchasing	109	155	131			396
total share	28%	39%	33%			100%
ginning capacity	120	118	200			438
production/capacity	91%	131%	66%			90%
2003/04 season						
Purchasing	33	79	59	10		180
total share	18%	44%	33%	6%		100%
ginning capacity	120	118	200	50		488
production/capacity	28%	67%	30%	20%		37%
2004/05 season						
Purchasing	94	147	52	11	19	323
total share	29%	46%	16%	3%	6%	100%
ginning capacity	120	118	200	50	35	523
production/capacity	78%	125%	26%	22%	54%	62%
2005/06 season						
Purchasing	74	135	19 (a)	10	30	268
total share	28%	50%	7%	4%	11%	100%
ginning capacity	120	118	200	50	35	523
production/capacity	62%	114%	10%	20%	86%	51%
2006/07 season						
Purchasing	24	79	19 (a)	11 (b)	13	146
total share	16%	54%	13%	8%	9%	100%
ginning capacity	120	118	200	50	35	523
production/capacity	20%	67%	10%	22%	37%	28%
2007/08 season						
Purchasing	28	45	25 (a)	12 (c)	9	120
total share	23%	38%	21%	10%	8%	100%
ginning capacity	120	118	200	50	35	523
production/capacity	23%	38%	13%	24%	26%	23%

a) factory rented by Yébé Wognon
b) of which 7,700 T were ginned under contract for other umbrella organizations
c) of which 8,000 T were ginned under contract for other umbrella organizations

[10] The date it acquired an LCCI plant.

3.3.3. Current sector environment and ginners' strategies

In 2008, the Ivorian cotton sector included a number of operators. Ivoire Coton, an integrated cotton company with a relatively homogeneous area of influence (expanded to the Mbengué area after the purchase of the LCCI plant), handling input supply and providing extension services to the producers in its area. The company has increasingly worked with village consortia, whose creation it has often promoted, or with village-level cooperatives, bypassing the umbrella organizations. It desires zoning to protect it against the risk of intrusion by speculators into its area, and in particular, has argued that the absence of zoning gives cotton producing companies no interest in maintaining roadways in their areas (which Ivoire Coton currently does in its zone).

OLAM, which owns a plant in Ouangolodougou (former LCCI), started purchasing cotton for ginning at the end of 2008. According to its directors, OLAM hopes to work according to the same plan as Ivoire Coton, in an area of influence that corresponds to the old LCCI zone.

COIC owns one (former LCCI) plant in Korhogo that it just purchased at a reasonable price. COIC has purchased seed-cotton from the cooperatives in its network (Yébéwognon), ginned, and exported it for several years (up to the present by contracting out its processing to the LCCI plants), and nevertheless has all the attributes of a vertically integrated cotton producing company. Yébé Wognon, supported by its leader, provides inputs to its cooperatives. However, its network is not geographically concentrated in a given zone, which led it to opposing the idea of zoning. Hoping to develop cooperation with the other two companies that jointly participated in the purchase of LCCI's assets, COIC hopes to establish a code of conduct based on the contractualization of commercial relationships between producer organizations and cotton producing companies and on the respect of these contractual bonds by all of the cotton producing companies.

CIDT Nouvelle owns four plants in the center of the country. CIDT's financial situation is extremely precarious because of the deficits it has accumulated over the past years. Because of this situation, it is particularly vulnerable to competition both from speculators as well as professional organizations and other cotton producing companies in the sense that, without State support, it cannot supply inputs to the producers in its area of influence, and it has built up significant delays in paying producers for seed-cotton.

DOPA seems to want to change its role from that of simple ginning plant purchasing most of its seed-cotton from umbrella organizations to that of an integrated cotton producing company, providing inputs to the producers that it supervises. However, the company, whose plant is located in Bouaké, on the edge of the cotton producing area, does not have a "natural" area of influence. It also seems to have serious financial difficulties, casting doubt on its ability to make such a transformation. The 2008/09 season, during which projections for global rates have recently become quite somber, will undoubtedly be a determining factor in the company's future. As it lacks a natural area of influence, the company is clearly opposed to the idea of zoning.

SICOSA accumulated significant debts both to input suppliers and to producers, and to which the URECOS-CI network no longer seems ready to extend credit. The SICOSA plant, located in Korhogo, has not operated in a year. SICOSA did not distribute inputs for the most recent season (2008/09). At least for now, the company seems condemned to disappearing or to using its plant for providing contract services to other operators.

Lastly, UCAP-CI is an umbrella organization associated with a local businessman, which allows it to pre-finance inputs for its affiliated cooperatives, and to build a dependable supply of seed-cotton. This company uses SICOSA's plant to contract ginning of its cotton, which it then exports.

3.4 Producer organizations

The first producer organizations in the cotton producing zone were the cooperative-type groups (GVC - Groupements à vocation coopérative), created as informal entities at the beginning of the 80s to handle cotton collection, distribution to its members of inputs delivered by the CIDT, and from whom they benefited from a mutual guarantee for the repayment of input loans. The GVCs were federated into GVC unions, and then into umbrella organizations, including the primary one URECOS-CI (the Regional Union of Cooperative Companies in the Savanes zone of Côte d'Ivoire), created in 1991.

Producer organizations were restructured under the framework of the 1997 law on cooperatives: the GVCs were regrouped into village-level cooperatives (having a legal status allowing them to act as an independent economic agent) covering about ten villages on average, which were themselves federated into regional or national cooperative unions. This restructuring, in answer to a concern with building economically viable entities, had the negative consequence of relaxing corporate control by members of the collective management bodies, the cooperatives being further away from the base than the old GVCs.

Despite this negative effect, the professional cotton producing organizations were considered to be better structured than in most of the other cotton producing countries in Francophone Africa at the end of the 90s, due, in particular, to the support they had received from the CIDT over the previous years. In 1997, at the time the law on cooperatives was promulgated, there were 1105 cotton producing GVCs.

At the time, the cooperatives had the following role:

- They assessed input needs at the local level, together with supervisors;
- They handled the distribution of inputs to their members;
- They managed the consolidation and weighing of seed-cotton produced by their members, and received a commission of CFAF 6.3/kg for this service from the cotton producing companies;
- They paid producers out of the sums wired to their account by the cotton producing companies;
- They supervised repayment of loans made to their members for inputs and agricultural equipment.

However, since 2002, we have seen an implosion of the cooperative movement: there were six umbrella organizations in 2005; eight new umbrella organizations were authorized in 2006, and three are in the process of being approved. We counted about 300 village-level cooperatives in 2004, with 1750 local sections, covering 3300 villages. Today, we estimate that there are between 2000 and 2500 cooperative structures in the cotton producing zone (double the number of GVCs existing before the reforms). In parallel, URECOS-SI, after successive divisions, has lost its dominant position: while it included about 80% of the village-level cooperatives at the start of the decade, as of 2006, it only represents 37% of the cooperatives delivering cotton.

The primary cause of this implosion seems to be the Agriculture Ministry's inability to enforce the law on cooperatives because of political instability, especially concerning the requirement for licensing, which is sometimes handled by central agencies and sometimes by regional agencies, with no real coordination between them. The implosion of umbrella organizations is also due to the politicization of the cooperative movement (in an extremely tense political context) and to the fact that as of 2005, these organizations were funded by a fee of CFAF 2 /kg collected from the subsector (Ministerial decree dated 2/3/2005). Although in reality this fee was only paid during two seasons, it undeniably encouraged the divisions and the creation of new umbrella organizations.

In parallel with this implosion, we have seen a progressive separation of the operation of cooperatives from their umbrella organizations:

- In terms of the organization of village-level cooperatives:
  - administrative meetings are no longer held regularly, directors no longer have regularly fixed terms;
  - with the multiplication of structures and the drop in production, village-level cooperatives no longer have the resources, from the seed-cotton collection committee, to pay an accountant (these committees are also often paid after long delays);
  - the joint guarantee at the cooperative or section level, designed so that good producers repay loans for defaulting producers, pushes the good producers to move from one cooperative to another.
- The umbrella organizations have the same dysfunctions as the village-level cooperatives in terms of governing bodies; they have been shown to be incapable of providing their members with factor inputs, giving rise to, sometimes founded, accusations from members of incompetence and embezzlement, and accumulation of unpaid debts that undermine their financial credibility.
- For this reason, the links between the village-level cooperatives and the umbrella organizations have become strained; due to a lack of Administration oversight, it has become almost impossible to know which cooperatives belong to which network, and the cooperatives themselves are often unable to produce lists of their members, who frequently belong to several cooperatives working in the same village.

This situation resulted in many cooperatives withdrawing from the network to which they belonged (thus becoming independent cooperatives), as well as the withdrawal of some village sections from the cooperative to which they belonged, becoming "informal consortia." Today, about 25% of the peasant structures active at the village level are informal consortia. This movement is often encouraged by the cotton producing companies, especially Ivoire Coton, who sees this both as a restructuring of the peasant farmer organizations and as an opportunity to find more reliable and malleable partners than the old umbrella organizations.

3.5 Cotton farms

Since the beginning of the decade, we have seen a heavy reduction in the number of cotton producers. Until 2006, this phenomenon was limited to the CIDT and LCCI zones (where cotton was not regularly paid for). It primarily affected the smallest and least well equipped producers, who left the subsector (50% of the producers between 2001 and 2006). Beginning in 2006, this phenomenon also affected the Ivoire Coton zone, while the pace of departures accelerated and the best-equipped producers also began to reduce the amount of area devoted to cotton production. These phenomena are described in detail in the following paragraphs.

3.5.1. Number of farms and farm size: recent trends

Number and size of cotton farms in 2006

The number of cotton growers was estimated at 72,000 for the 2005/06 season (based on seed cotton delivery reports from the ACE), which, for an area devoted to cotton production of 300,000 ha for that season, gives an average cotton production area of 4.2 ha per farm.

Trends in the number and size of exploitations between 2001/02 and 2005/06

If we compare these data with those from the 2001 agricultural census (180,000 cotton growers on an area of 288,000 ha), the first half of the decade has shown a trend toward a sharp reduction in the number of cotton growers (which translates to more than 100,000 farmers abandoning cotton). The drop in number of producers was, at that time, localized in the LCCI and CIDT areas of intervention (where problems with paying producers have been concentrated), while the Ivoire Coton zone has been able to maintain its number of producers (see table 5).

The overall drop in the number of producers was however accompanied by an increase in the area under cultivation by farmers remaining in the sector, with the average farm size more than doubling during this period (increasing from 1.7 ha to 4.2 ha). Statistics from Ivoire Coton and the CIDT confirm this increase in average area under cultivation (see table below).

Trends after 2006

While overall data are not available for the seasons after 2005/06, partial data collected by Ivoire Coton and the CIDT suggest that the trend toward abandoning cotton continued or even accelerated in 2006/07 and especially in 2007/08 (campaigns during which production decreased sharply). This time, the accelerated drop affected the Ivoire Coton zone, as well as the other zones, leading to the assumption that the price of seed cotton (which fell considerably in 2006/07) played a significant role. In fact, we observed a reduction of more than 50% in the number of growers being assisted, both at Ivoire Coton and at CIDT (see table below).

However, average area under cultivation by farmers continued to increase until 2006/07, suggesting that small producers were more likely to leave the sector, with, it seems, a reversal of the trend (which should be confirmed in the coming years) in 2007/08, a year during which the average area under cultivation diminished, suggesting that the smallest producers are no longer the only ones leaving the sector.

Table 3: Number of growers assisted by Ivoire Coton and the CIDT and area under cultivation

	Ivoire Coton	CIDT
number of growers		
2004/05	44300	37000
2005/06	40370	21500
2006/07	31216	13100
2007/08	19000	11600
change 2007/2004	-57%	-69%
Area		
2004/05	111700	71000
2005/06	105300	56200
2006/07	85900	41300
2007/08	41636	28400
change 2007/2005	-63%	-60%
area/grower		
2004/05	2,5	1,9
2005/06	2,6	2,6
2006/07	2,8	3,2
2007/08	2,2	2,4

Distribution by farm size

An analysis of the distribution of cotton production by farm size in 2005/06[11] also shows a relative homogeneity in the size of cotton farms: there a few large farm (greater than 10 ha), while medium sized farms (between 2 and 5 ha) represent one third in number of farming units and nearly 40% of production.

Table 4: Distribution of cotton production by farm size in 2005/06

	Number of operations	% operations	production	% production
>10 ha	1 075	1%	21 706	8%
between 5 and 10 ha	8 227	11%	75 611	28%
between 2 and 5 ha	23 056	32%	104 678	39%
<2 ha	39 935	55%	65 484	24%
Total	72 293	100%	267 479	100%

Source: ACE reports

3.5.2. The role of cotton in farming systems

Few data are available on the percentage of farms cultivating cotton in the cotton producing areas, and on the role that cotton plays among other crops within cotton farms.

[11] Carried out by examining ACE seed cotton delivery reports.

Percentage of farms cultivating cotton

A very rough calculation (with the objective of getting an order of magnitude) can however be made to estimate the percentage of farms producing cotton in the Savanes region, the major production region: according to the 2001 census, there were 77,000 farms in the region, which would correspond to about 83,000 in 2005/06 taking demographic growth into consideration. According to data collected by ACE, there were 72,000 producers in 2005/06, of which about 40,000 in the Savanes region. A comparison of these two figures suggests that more than 50% of the farms in the region still cultivated cotton in 2005/06. Ivoire Coton and CIDT data indicate that 50% of the producers abandoned cotton between 2005/06 and 2007/08. Thus, we can conclude that about 25% of farms are still cultivating cotton today in the major region of production.

Cotton's role in agriculture

According to the 2001 census, cotton represented 38% of the area cultivated in the Savanes region, the primary production zone, with food crops (in decreasing order of importance: corn, upland rice, peanuts, millet, sorghum and yams) representing about 60% of the area under cultivation.

CIDT's monitoring system, based on data from the cotton farms it assists, reported that in 2006/07 cotton represented about 46% of the area cultivated by the cotton producing farms. This figure is very similar to the rates observed in cotton producing zones in neighboring countries. This proportion dropped noticeably in 2007/08 (36% if we take yams into consideration, which for some reason strangely was not included in the 2006/07 figures, perhaps because of a statistical error), which is coherent with the observation of a reduction in the area on which cotton was cultivated during this season (see above).

Table 5: Area cultivated by CIDT registered farmers

	2006/07			2007/08		
	ha	%	% except yams	ha	%	% except yams
Cotton	41368	46%	46%	28393	36%	42%
Rice	19574	22%	22%	14446	18%	21%
Corn	19045	21%	21%	16571	21%	24%
Peanuts	10706	12%	12%	8755	11%	13%
Yams		0%	0%	11276	14%	
Total	90693	100%		79441	100%	
total not including yams	90693		100%	68165		100%
number of operations	13106			11601		
area/operation	6,92			6,85		

3.6 Extension, input supply and credit

3.6.1. Input delivery and input credit

Following the privatization of cotton operations, there was no specific mechanism put in place for securing input loans after the transitional period, i.e. after the CIDT had withdrawn from supplying inputs in the areas covered by the private companies. During the first campaigns after the end of the transitional period (1999/00 and 2000/01), it seems that the three cotton producing companies continued to operate according to the same scheme as before deregulation, and thus financed inputs used by the cooperatives in their respective zones, thanks to a bank loan that the cooperatives repaid upon the sale of cotton lint. Because of the new opportunity to sell seed cotton to a company other than the one that provided the input credit, the risks attached to these loans grew rapidly, and credit terms granted by banks became more demanding and onerous. Some cooperative companies (LCCI, followed by CIDT) also quickly encountered financial problems that limited their ability to access inputs.

In parallel, the umbrella organizations, in line with the strategy they had outlined at the Yamoussoukro workshop in particular, looked for ways to move away from the dependency of the cotton companies to develop their own alternative input supply channel for the producers. In this spirit, the umbrella organizations created a private Ivorian cotton input finance company (SOFICOCI) in 2002, supported by the Ivoiro-Swiss Fund for Economic and Social Development (FISDES), to guarantee input purchases from suppliers. SOFICOCI thus guaranteed a loan by Citibank to the professional organizations of CFAF 5 billion to enable them to reduce their arrears to input suppliers, which at that time had already reached CFAF 11 billion (this reimbursement was a condition for a new supplier loan of CFAF 14 billion). As the loan was only partially repaid, SOFICOCI was sued and thus lost its funding. It was forced to cease its activities.

For the 2003/04 season (following the civil war), URECOS-CI again financed (essentially through supplier's credit) CFAF 15 billion of inputs, which were partly confiscated by the rebels, and partly used by producers for food production. The government considered that this operation had had a highly beneficial social impact at a difficult time, and decided to take over this debt.

In 2004/05, as some cotton producing companies were no longer bankable, the government decided to guarantee input purchases by LCCI and URECOS-CI/SICOSA, which allowed the purchase of 10,000 T of fertilizers, 150,000 l of insecticides and 65,000 l of herbicides (for a total of about CFAF 3 billion). Ivoire Coton, financed the inputs it used on its own, for a total of CFAF 8 billion.

The same system was extended in 2005/06: LCCI and URECOS-CI distributed 4,800 T of fertilizers as well as phyto-sanitary products, for a total of about CFAF 3 billion, while Ivoire Coton used CFAF 12 billion worth of inputs.

In 2006/07, because of a lack of State support, each cotton producing company used whatever quantity of inputs it could finance: thus, the inputs used represented CFAF 15 billion (9.2 billion for IC, 1.2 billion for DOPA, 2.1 billion for Yebé, 1 billion for CIDT, and 1.5 billion for the umbrella organizations). Repayment for inputs was about 72% overall, with 84% at Ivoire Coton, 83% at Yébé, 63% at DOPA, and 34% at CIDT.

In 2007/08, the government obtained a loan from the Islamic Development Bank for the purchase of inputs.[12] This loan was on-lent to CIDT, with government's guarantee. This loan benefited the entire cotton-producing zone, except Ivoire Coton, which continued to distribute its own inputs. CIDT distributed this loan to the umbrella organizations (including YébéWognon, URECOS-CI, UCAB-CI, CMID, UCODEPMA) and to the cooperatives working with CIDT in its traditional zone. The total disbursed was CFAF 5.9 billion, to which we can add purchases by Ivoire Coton and DOPA, for a total input bill of CFAF 10.8 billion.

In 2008/09, the Islamic Development Bank renewed its input-financing project (still with the exception of the producer organizations assisted by Ivoire Coton). To improve CIDT's control, the operating mode for the loan was modified: CIDT changed its role from simple supervisor to managing the village-level producer organizations, and to do this, it put a network of managers in place. Only YébéWognon remained responsible for directly supplying its producer organizations. CIDT itself had to collect the cotton and directly obtain reimbursement for the cotton collected (except from the producer organizations supervised by IVOIRE COTON and YébéWognon). The organizational methods for the forthcoming campaign have not yet been set as of the publication date of the present report. A joint ARECA/INTERCOTON/ACE mission carried out in September 2008 concluded that the risks of overlapping are significant, in the sense that some umbrella organizations and cooperative companies distributed inputs (especially seeds) in the same villages as those served by the CIDT, which presents a strong risk of generating confusion in the repayment of these loans. The IDB loan mobilized a total of 4 billion, corresponding to the purchase of 6,600 T of NPK, 2000 T of urea, 173,000 liters of insecticides, and 89,000 liters of herbicides.

Although chaotic, changes since the failure of the umbrella organizations to supply inputs show a trend toward a return to the classic system of supply through the cotton companies that have the means to do so (Ivoire Coton, then Yébé Wognon and DOPA). This trend was countered during the last two campaigns by the intervention of the IDB loan, necessary to fill the gap in the CIDT and former LCCI zones.

In total, the quantities of inputs distributed (excluding Ivoire Coton) have progressively diminished, from a value of about 15 billion CFAF at the beginning of the decade to less than 5 billion CFAF during the past campaign. It is clearly difficult to know whether the reduction in input volume was a cause or a consequence of the reduction in areas under cultivation, and the cause and effect relationship likely functioned in both directions. We can thus note that in 2006/07 the inputs used represented 75% of the theoretical needs for the campaign.[13] On the other hand, in 2008/09, the fact that the IDB loan was not entirely used suggests that the quantity of inputs available was not the main factor influencing decisions to cultivate cotton.

3.6.2. Provision of extension services

Up to the end of the transitional period, the CIDT was in charge of providing extension services. In 2002, when the umbrella organizations decided to replace the cotton companies, they had planned to use the services of ANADER, the public extension organization for the whole country. This was not possible because ANADER was forced to

[12] At a LIBOR of +3, which is to say about 8%; to which handling fees must be added, for an actual rate of about 12%.

[13] Based on a cultivated area of 226,000 ha and recommended doses

leave the cotton-producing zone as a result of the socio-political strife. The umbrella organizations then attempted to put in place their own extension network, but lacking resources and experience, this network remained largely virtual, which explains, in large part, the lack of control of the umbrella organizations on the inputs they provided.

Currently, a variety of extension services are available through the ginning companies. Ivoire Coton has a network of 70 agricultural extension agents[14], allowing it to control input distribution and credit recovery, support producer organizations, and provide technical advice to farmers (especially concerning sustainable soil management). For its supervision, Ivoire Coton, relies upon the village-level cooperatives, but has also attempted to develop individual oversight of farmers, through the establishment of a "farmer notebook." This supervision allows it to distribute inputs at individual level, and to be more selective in selecting the farmers that it supplies: it limits input loans to a maximum of 70% of the value of the farmer's production from the previous campaign, and plans to eliminate poorly performing farmers.

The CIDT has a swollen yet quite ineffective extension service, due to the company's financial difficulties. In 2008, it declared to have assisted 11,000 producers (or half as many as in 2006), to whom must be added the control of input use in the former LCCI zone, under the oversight framework of the IDB input loans for which it was responsible.

For the 2008/09 season, OLAM is relying upon CIDT's assistance, but with the obligation to build its own network, according to its terms of reference. It plans to develop a customized system for assisting its producers, inspired by the system implemented by Ivoire Coton.

COIC/Yébéwognon has a network of about thirty agricultural consultants around Korhogo. This structure also provides customized assistance to producers and requires a minimum yield of one ton/ha in return for input supply.

SICOSA does not have an extension network, and in its first years, DOPA also operated without extension (in violation of the privatization tender documents, that specified that the opening of new plants would be authorized under the condition that they provide an extension network). In 2008, DOPA stated that it had a network of about thirty supervisors, primarily responsible for overseeing input distribution and commercialization.

The umbrella organizations only have an embryonic extension network. UURECOS-CI has about twenty supervisors, UCOOPAG-CI eleven supervisors, and UIRECOOPAG six supervisors.

Placing management and supervision of input distribution in the hands of the umbrella organizations has thus translated into a considerable weakening of extension services. Cotton companies such as Ivoire Coton, who have understood that having their own high quality extension service is necessary for the proper operation of the input supply system, are however working to strengthen their assistance to farmers, though clearly within the limits of their budgetary constraints at a time of low cotton prices.

[14] For about 20,000 farmers supervised, or one advisor for less than 300 producer.

The weakening of farmer organizations and the abandonment of the mutual guarantee system has forced cotton companies to turn to individual supervision of producers, which is certainly effective, but quite onerous. Because cotton companies are increasingly involved in the supervision of input distribution, less emphasis is put on agricultural advisory services, which are no longer considered by cotton companies as a priority today. This fact is undoubtedly not without consequence for the observed drop in yields.

3.6.3. Repayment of input loans

Repayment of input loans has been especially mediocre:

- URECOS-CI only recovered CFAF 16 billion of the 27 billion injected in input credit between 2002 and 2005; this loss was reimbursed by government;
- The other operators also have alarmingly low repayment rates: DOPA bore an unpaid debt of 1.8 billion in 2005/06, following the defection of the umbrella organization to which it had made an advance payment; Ivoire Coton recovered only 76% of its input credit in 2006/07, that it still hopes to get back;
- The repayment rate of the IDB loan for the 2007/08 season, managed by CIDT, has only reached 73%; the balance, guaranteed by the government, still has to be recovered from the cooperatives.

Aside from factors related to the market situation (socio-political strife, exceptionally low yields in 2006/07, low prices for seed-cotton, etc.), some organizational factors also contributed to poor credit recovery performance:

- Weaknesses and lack of viability of the cooperative system,
- Insufficient supervision and oversight,
- Lack of control and operating rules for the commercialization of seed cotton (as explained in the following paragraph).

3.7 Seed cotton marketing and payment of producers

3.7.1. Organizational and marketing dysfunctions

Until the end of the transitional period, CIDT was in charge of the purchase of seed cotton, with cooperatives handling the primary collection and managing collection points. At the end of the transitional period, the two private cotton companies continued the same system in their areas of intervention for the first two years under the rule imposed by Intercoton bylaws according to which cotton was to be sold to the entity that financed the inputs (however the methods for enforcing these rules were never established).

SICOSA's arrival, and LCCI's failure, put a de facto end to the area of intervention system; in any case, SICOSA purchased in the LCCI area as LCCI could no longer pay the producers. Over the following years, the rule imposed by Intercoton was further attacked due to the following factors:

- Failures or delays in payment for seed cotton (by LCCI, and also by CIDT) pushed producers to sell their cotton to the first to come, giving rise to "speculators";[15]

[15] Traders buying seed cotton without having financed inputs, at a price below the established price, either on behalf of a structure, or to then resell to a ginning plant.

- The practice of selling cotton for payment upon delivery to the factory (instead of sale at the collection points which can be monitored), authorized after the Yamoussoukro workshop, makes it impossible to verify the origin of the cotton delivered, and thus to enforce compliance with the rule that says that cotton must be sold to the body that financed the inputs.

The impossibility of ensuring that cotton is actually sold to the entity that financed the inputs largely explains the defaults on input loans, and pushed the cotton companies to put in place an individualized supervision of producers, while leaving local producer organizations (informal pre-cooperative groups, autonomous cooperatives, or sections affiliated with an umbrella organization) to handle the primary collection of seed cotton.

ACE's oversight (see section 3.9), which consists in verifying the collection sheets for deliveries to plants, was designed to help ensure compliance with this rule. This system is only partially effective as only oversight from the beginning, in the villages of production, could truly certify the origin of the cotton delivered.

3.7.2. Payment of producers

LCCI's collapse, followed by the growing cash flow difficulties of the cotton companies and umbrella organizations commercializing on their own (because of the increasingly conservative attitude of banks and suppliers) sometimes led to considerable delays in the payment of producers, with some entities refusing to pay until after exporting the lint and receiving payment from the client:

- LCCI's bankruptcy left an overdue debt to producers of CFAF 6.3 billion, which was finally paid by the European Union in the framework of its assistance to the Ivorian agricultural sector;
- On 7/31/2006 (i.e. more than three months after the start of the campaign), 49% of the cotton from the 2005/06 campaign had still not been paid for, the most significant delay being due to CIDT; for the last two campaigns, the situation remains manageable: it has improved (80%), but still remains highly unsatisfactory.

Delays in payment force producers with liquidity constraints to turn to local (clandestine) buyers (*pisteurs*). This practice has the consequence, on the one hand, of upsetting repayment of credit, and on the other hand, of leading to prices paid to producers that are much lower than official prices, with farmers often being willing to sell at any price, as long as payment is immediate. These delays are one of the primary causes of producer disinterest in cotton.

3.8 Seed research and supply

The National Agronomic Research Center (CNRA) is responsible for agricultural research; this body was created in 1998 as the successor, as far as cotton research is concerned, of the old Cotton and Textile Research Institute (IRCT) and of the Savanes Institute (IDESSA). The CNRA was designed as a limited liability company, in which government holds 40% of the capital, and the agricultural and agro-industrial operators working in Côte d'Ivoire hold 60%.

Before deregulation, cotton research was primarily financed by the CIDT – receiving about about CFAF 150 million/year. Since deregulation, this service was supposed to be taken up by the cotton producing companies, but because of their disorganization, revenue dropped sharply, to only CFAF 45 million/year since 2003/04. From that point on, only requested services have been covered, especially by Ivoire Coton.

In addition to the problem of funding, the CNRA suffered quite significant damage during the crisis: the primary cotton research station, located in Bouaké, was destroyed during the war in 2002; the basic seed production plan, implemented in 2002, could not be carried out because of the war, as the seed farm had been pillaged.

Under these conditions, the CNRA has not been any longer able to satisfy needs for basic seeds. Some cotton producing companies have taken to importing from neighboring countries, but for the most part, producers have had to use local seeds of all grades, with highly negative consequences, both in terms of yields and in terms of cotton quality.

Since the war, the seven researchers in the CNRA's cotton program were pulled back to Abidjan, and carry out minimal activity at the Gagnoa and Abidjan sites.

The Bouaké center is currently being rebuilt, and the restart of seed production has been planned as part of the European Commission's assistance framework.

In 2008, a new mechanism for financing research was implemented by decree (but has not yet been put in force as of the time this report was written). This system relies upon the Inter-professional Fund for Agricultural Research and Consulting (FIRCA) created in December 2002 to finance research for sectors that contribute to the Fund. A required levy of CFAF 5/kg of seed cotton will be imposed on the sector beginning in 2008/09 to finance this contribution.

3.9 Sector coordination, professional organizations, and regulatory framework

3.9.1. Professional organizations

AFFICOT-CI

The Association of Cotton Sector Umbrella Organizations of Côte d'Ivoire (AFFICOT-CI) was created in July 2002 by the six umbrella organizations existing at the time (URECOS-CI, UCAP-CI, UCEA-CI, UCOOPAG-CI, UIRE-COOPAG and UCOSA-CI). As the number of umbrella organizations increased, new members joined the AFFICOT-CI, which now has ten members.

AFFICOT-CI represents producers within the AIC and has a mandate to defend the interests of the producers, which it has difficulty carrying out. The association is based in Abidjan, without any office in the production areas, cutting it off from the realities of the field. Its entire human resources consist of a secretary and a treasurer, instead of an accountant. It also has a severe lack of financial resources, in the context of the deep crisis that the cooperative movement in the cotton producing zone is experiencing.

APROCOT-CI

In the technical specifications for privatization, it was foreseen to put in place a Professional Association of Cotton Companies of Côte d'Ivoire (APROCOT-CI), as the body for bringing together cotton companies. It was de facto created in October 2000 by the cotton companies of that time, i.e. the CIDT, Ivoire Coton, and LCCI. The objectives of the association were the defense of the interests of its members, the promotion of healthy and honest competition in the sector, and the amicable resolution of conflicts between members. In its bylaws, it acknowledges the freedom of each member to purchase seed cotton from any producer of its choice, subject to verification that no other member has supplied inputs or technical advice to this producer.

After long internal discussions, SICOSA and then DOPA were allowed to join the APROCOT-CI, which affected its internal cohesion because of the coexistence of traditional cotton companies with other types of ginneries. Its resources, coming from the voluntary contributions of its members, have decreased over the years. The association is currently financed essentially by Ivoire Coton, which seems to hold a dominant influence over it. It is deeply divided over the vision for the future of the sector, because of the diverging interests of its members, some opting for a zoning system, others rejecting such a system.

3.9.2. The AIC (Intercoton)

Intercoton was created in November 2000 under an organizational statute bringing together the cooperative umbrella organizations, APROCOT-CI, ANADER, the spinning mill companies, TRITURAF, and the CNRA, organized into seven colleges. Its bylaws and operating procedures were redefined by Presidential decree in September 2002, following the Yamoussoukro workshop. According to this decree, Intercoton is a "special type of private body," created by the operators in the cotton sector to exercise a control and regulation mission over the cotton sector, "for the areas falling outside the authority of the ARECA."

At its creation, Intercoton planned the creation of five permanent commissions: seed cotton commercialization, supervision, agricultural credit financing, production factors, and local industry supply. In reality, these commissions never functioned, with the exception of the commercialization commission, which conducted a study of the mechanism for determining producer prices, and proposes each year the prices to be applied based on this mechanism.

Until 2004, Intercoton's resources came solely from member contributions. Starting in 2005, a fee of CFAF 0.71/kg of seed-cotton (paid on lint exports) was implemented to fund it[16]. These resources only allow it to keep a limited staff (one executive secretary, one communication manager, one assistant, and two operating agents).

Intercoton's weak operating capacity can be explained by the serious lack of precision in its bylaws and mission (especially concerning the respective powers of Intercoton and ARECA), the weight of its internal organization, the lack of resources in its first years, and the weakness of some member organizations. A new statute adopted in June 2008, brought the beginning of a solution by reducing the number of colleges to two (producers and ginners). Intercoton, should also benefit from technical assistance financed by the European Union, which would allow it to play a pivotal role in the future of the sector.

3.9.3. The Cotton and Cashew Regulatory Authority (ARECA)

The Cotton and Cashew Regulatory Authority (ARECA) was established following the Yamoussoukro workshop in September 2002, by the same decree that defined Intercoton's missions. Its mission is both to prepare and enforce the legal framework governing the operation of these two sectors (despite their significant organizational differences, grouped into a single body for economic reasons and because they cover the same geographic areas). Its status is that of a State company, which a priori, does not seem well adapted to its essentially regulatory mission. It was placed under the double authority of the Ministry of Agriculture and Ministry of Finance, which seems logical, but often condemns it to impotence, given the communication difficulties between the two Ministries, who hold conflicting positions in the current political context.

According to its establishment decree, ARECA's missions are: to license seed cotton buyers, ginners, and lint exporters; to monitor the application of legal provisions by the actors in the sector; to impose or propose sanctions for infractions; and to arbitrate conflicts between actors. However, it was never clearly given the regulatory power to exercise these functions (especially in terms of licensing and sanctions), reducing its role to that of an advisory body. For this reason ARECA prepared some legal texts to clarify its functions and the organization of the sector (in particular concerning the role of the AIC, licensing procedures, and seed cotton commercialization rules), but the Ministry overseeing it did not retain these projects.

While ARECA has been unable to play its regulatory and oversight role because it lacks the legal authority, it does however play a useful role in the sector: it manages levies; it analyzes

[16] Which brought in CFAF 157 million in 2006, but only 80 million in 2008 because of the drop in production.

the seasonal reports prepared by the service provider ACE; the government gave it specific responsibility for overseeing the IDB loan; and lastly, it has conducted some studies of the cotton sector.

ARECA employs a team of 9 executives (for both cotton and cashews). Its resources, for cotton, come from a levy of CFAF 0.5/kg of seed-cotton on the subsector.

3.9.4. Monitoring physical seed cotton flows

In 2005, the government mandated a service provider, *Audit-Contrôle et Expertise Côte d'Ivoire* (ACE-CI – Audit-Supervision and Reporting – Côte d'Ivoire), to monitor cotton flows from their delivery at ginning plants through export. To accomplish this mission, ACE has officials in each operating plant as well as at the port. At the end of the campaign, ACE delivers a report with complete data on reception of seed cotton by the ginneries (by quality and by collecting body), plant activity, and export activity. The actors in the sector unanimously consider this work to be of high quality. However, its cost is very high (close to CFAF 1 billion per campaign, paid by government). The cost is supposed to be covered by a levy of CFAF 1.79/kg of seed-cotton, but this revenue is insufficient because of the drop in production.

3.10 Setting producer prices

Until 1998, producer prices were set by the CIDT and government, at a level often subsidized by the CSSPPA, which collected significant revenue from the cocoa industry. With the deregulation of the sector and dismantling of the CSSPPA, a new mechanism for setting producer prices was indispensable. It was developed by the National Bureau for Technical Studies and Development (BNEDT) with the help of Horus, a consulting firm, and adopted by the Tripartite Committee for the Oversight of the Cotton Subsector in 1998. This mechanism is still in force, but its replacement by a new mechanism was under discussion at the time this report was written.

The mechanism in force is based on the principle of a pan-territorial price valid for the entire campaign, as in all Francophone countries. However, unlike in other countries, the price is not announced before the sowing period, but in October, which is to say, just before the start of the harvest. Another difference is that the price is intended to be a minimum price, which competing operators may theoretically bid up (which almost never happens in reality).

The price is calculated from the established global price (average of monthly prices from the A Cotlook index from May to September for the year in progress), from which fixed and variable intervention costs for the cotton producing companies (estimated by BNEDT/Horus in 1998 and never updated since then) are deducted according to a pre-established formula. A guarantee factor is then applied, to protect against a potential drop in actual prices during the lint sales period in relation to the past prices considered in the formula.

This initial price is set to be revised at the end of the campaign, once the actual sale prices for lint and seeds are known, and a premium is to be paid to producers if the actual price is greater than the rate calculated in determining the initial price. It was also specified that the producer price may not be lower than the seed cotton production cost, estimated by the consultant at CFAF 172.5/kg in 1998.

The parameters of the formula for determining the initial price are collected by Intercoton, who calculates the theoretical initial price on this basis. The decision to set the initial price rests on the Ministry of Agriculture, who may decide upon a higher price, committing to providing a subsidy if the supplement granted is not compensated by a rise in cotton prices by the time the final price is calculated.

In practice, the initial price calculated according to the formula was, as of 2001/02, systematically below the production cost, and the initial price set by the Government systematically greater than the result of the formula. Thus, government was forced to subsidize producer prices (by payments to the cooperatives) in 2001/02 (CFAF 15/kg), in 2002/03 (CFAF 5/kg), in 2003/04 (CFAF 15/kg), and in 2005/06 CFA Francs/kg)[17]. As of 2005/06, government no longer provided the subsidy, leading to a sharp reduction in producer price in the context of falling prices. As of 2001/02, with the final price calculated being systematically lower than the initial price set (except in 2005/06), there has no longer been an end of season rebate, and the initial price has been considered as the final price.

Overall, this method of calculating the producer price was certainly applied correctly from a purely formal perspective, however the price mechanism as a whole has been revealed to be globally unenforceable, in the sense that no provision, outside of a potential State subsidy, existed to guarantee the minimum price (below the production cost of CFAF 172.5/kg). Ginners were apparently the losers, in that over the past four seasons, the price paid, excluding subsidies, was greater than the final price calculated according to the formula. In reality, this apparent loss was partly compensated for by the fact that the lump sum costs for the cotton companies taken into account in the formula were calculated on the basis of costs reported by the CIDT in 1998, while the real costs borne by the companies were actually lower.

Table 6: Parameters of prices paid to producers since 1999

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08
Initial price calculated	na	207,74	168,79	152,48	164,65	161,76	140,24	135,87	119,21
Initial price retained by Intercoton	na	210,00	175,00	155,00	185,00	162,00	140,00	145,00	150,00
Initial price set by the government	na	210,00	190,00	180,00	200,00	185,00	165,00	145,00	150,00
final price calculated	na	216,39	169,60	176,45	159,51	144,77	144,77	111,16	Na
Final price paid excluding subsidy	183,32	216,06	175,00	175,00	185,00	162,00	140,00	145,00	150,00
Subsidy granted	0,00	0,00	15,00	5,00	15,00	23,00	0,00	0,00	0,00
Final price including subsidy	**183,32**	**216,06**	**190,00**	**180,00**	**200,00**	**185,00**	**140,00**	**145,00**	**150,00**

Source: COWI study (2008)

The current mechanism for setting the producer price is unsatisfactory for all actors in the cotton sector. A study currently being carried out by COWI proposes a new mechanism, still based on a pan-territorial price valid for the entire campaign. The main proposals are:

- An initial price announced before the sowing period, based on projected rates;

17 The subsidy that had been promised was never paid to ginners in 2005/06.

- A final price calculated at the end of the campaign, based on actual rates recorded during the campaign ;
- Creation of a support fund, belonging to and managed by the producers;
- Payment of a price supplement when the final price is greater than the initial price and a parallel contribution to the support fund;
- The initial price, like the final price, is calculated according to a percentage of gross revenue actually earned (respectively 63% and 37% of the FOB price for producers and for ginners, assuming a return on an average production of 350,000 T of seed-cotton);
- Existence of a minimum guaranteed price of CFAF 145/kg, regardless of the result of the calculation of initial and final prices, the difference between the initial price and the minimum guaranteed price (when the initial price falls below the guaranteed price) being paid by the support fund or by government.

3.11 Downstream activities (crushing and spinning)

Until the first decade of the new millennium, Côte d'Ivoire exported 95% of its cotton lint, with the remainder (about 6,000 T) being processed by local spinning mills. Like most African countries, especially those in West Africa, the local industry increasingly suffered from increased competition from Asian imports, especially since the end of the Multifiber Arrangement in 2006, and from the availability of used clothing imports. The Ivorian industry has also been specifically affected by the post-deregulation elimination of preferential sales prices for lint granted to it by CIDT, as well as by the socio-political events, for those situated in the Northern zone. The quantity of lint used by the local industry under these conditions has been constantly falling down: 4,000 T in 2005/06, 1,500 T in 2006/07, and 875 T in 2007/08. The following companies are the primary operators:

- **UTEXI SA**: it was created in 1973 and is located in Dimbokro (Central Côte d'Ivoire). It has a cotton lint processing capacity of 7,000 T/year. It is not currently producing.
- **COTIVO SA**: it was created in 1975 and is located in Agboville (Southern Côte d'Ivoire). Its cotton lint processing capacity is estimated at 8,000 T/year. Today it is operating at reduced capacity and is close to cessation of payments.
- **FTG SA**: it was created in 1995 and is located in Bouaké (Central Côte d'Ivoire). Its cotton lint processing capacity is estimated at 7,500 T/year. Today it is operating at reduced capacity and is close to cessation of payments.
- **UNIWAX SA**: The company was created in 1975. Its headquarters and production unit are located in Abidjan. Its activities are focused on the production of Wax prints (95%) and high end Fancy prints (5%). Today, it has almost stopped production.
- **TEXICODI SA**: It was created in 1995 and its headquarters is in Abidjan. Its production unit, located in Bouaké, specializes in Fancy printed *pagnes*.

Until 2004, cotton seed was crushed locally by TRITURAF, a company located in Bouaké; a State company created in 1974, privatized in 1984, purchased by the UNILEVER group, and then resold to the AIGLON group (owner of LCCI before its bankruptcy) in 2004. Since then, the company has experienced growing difficulties due to competition from often fraudulently imported Asian oils, from the drop in its supply of seeds, and it seems, from internal management problems. The plant operated at reduced capacity until 2006/07 and has now stopped operations.

For its last purchasing campaign, TRITURAF bought cotton seeds at between CFAF 25 and 30/kg delivered to the plant. In 2007/08, seed was valued at an average of CFAF 40/kg. Today (in 2008), it is primarily exported at prices between CFAF 50 to 75/kg paid upon delivery to the plant because of the recent explosion of oilseed prices on the global market; an explosion that was short-lived however, as prices returned to the level of previous years by the end of 2008.

Table 7: Cotton seed destinations

Tons	2004/05	2005/06	2006/07
sales to TRITURAF	78200	42000	10000
Export	38100	45000	35000
seed, losses, and donations	12800	13000	12300
other sales	20900	18000	13500
Total	150000	118000	70800

4. SECTOR PERFORMANCE

4.1 Production and yield performance

4.1.1. Changes in crop size and yields

Changes in crop size, production, and yields between 1991 and 2008 are indicated in the figures below:

Table 8: Change in production, crop size, and yields since the reform

Growing season	Crop size (ha)	Seed-cotton production (T)	Yield (kg/ha)
1991/92	190,473	193,768	1,017
1992/93	224,078	238,784	1,066
1993/94	219,395	258,343	1,178
1994/95	242,400	209,584	865
1995/96	204,380	217,261	1,063
1996/97	210,534	265,145	1,259
1997/98	244,313	337,097	1,380
1998/99	271,371	365,003	1,345
1999/00	291,457	402,367	1,381
2000/01	248,478	287,000	1,155
2001/02	282,678	396,236	1,402
2002/03	269,730	396,417	1,470
2003/04	206,387	180,000	872
2004/05	263,486	323,141	1,225
2005/06	299,197	267,000	869
2006/07	226,000	146,000	644
2007/08		120,000	

Source: Italtrend Report and numbers compiled by the study group

Figure 6: Change in yields

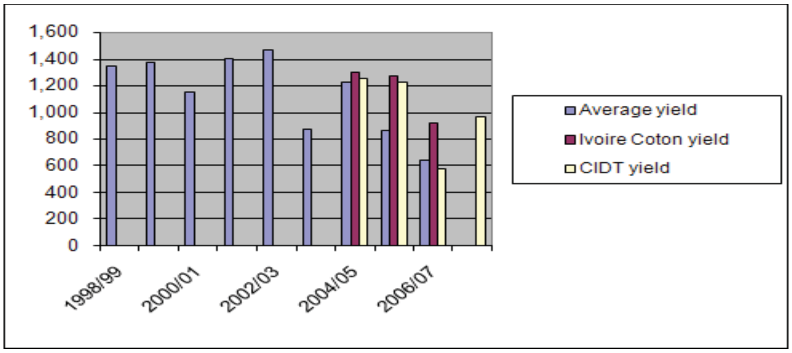
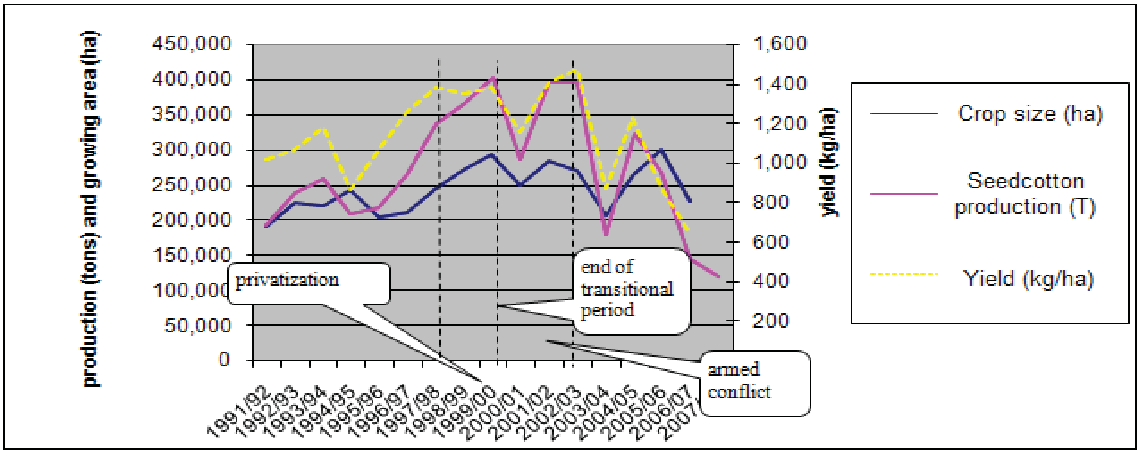
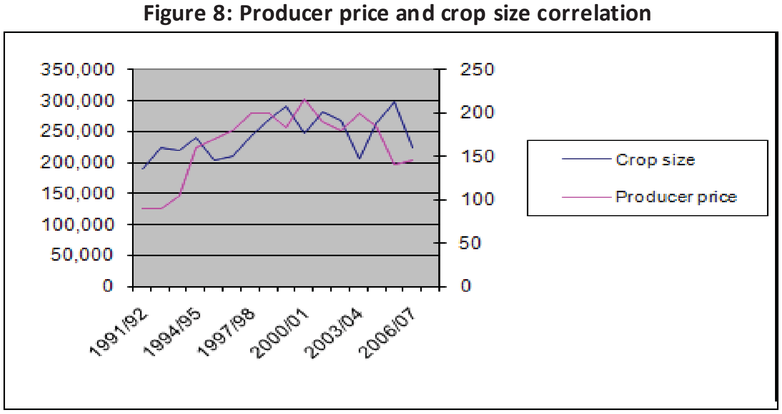


Figure 7: Changes in production, crop size, and yields since the reforms



While there is an obvious correlation between crop size and producer price, it is important to note that it is not perfect (see graph below). This seems to indicate that failures in the sector have played a role at least as important as pricing in producers' decision to reduce the size of their cotton crops. Factors that explain this drop include: late payment for cotton discouraging for producers; ineffective third-party guarantees with the same effect; and drop in cotton prices, which starting in 2005/06 was added to the previous factors and accelerated the trend.

Figure 8: Producer price and crop size correlation



After reaching a high point in 2002, yields started declining and this has amplified the impact reduced crop sizes have had on production. Yields in 2006/07 were exceptionally low. In addition to the poor climate conditions that year, other limiting factors included: poor seed quality following the disruption of the seed subsector; drop in the quality of agricultural consulting, and growers' low receptivity to recommended crop management techniques (less fertilizer use, less dependence on direct seeding, etc.) due to the ongoing drop in crop profitability.

4.1.2. Yield results by farm type and equipment level

A typology of farms in Côte d'Ivoire's traditionally includes three categories: manual farms, animal-powered farms, and mechanized farms.

Animal-powered farms and trends

Animal-powered farms are especially well developed in the country's North-East zone (former LCCI zone) where they account for 74% of cotton farms followed by the North West zone (Ivoire Coton zone; 58% of cotton farms). It is the least practiced in the CIDT zone (23%). In total, 45% of cotton farms are animal-powered, which shows the rapid growth this method has experienced in the last two decades (the yearly changeover rate to animal-powered farming in the cotton zone was only 11% in 1985 according to CIDT). The current rate, however, is still slightly lower than rates in Mali or Burkina Faso (over 80%).

Animal-powered farming in the Ivoire Coton zone increased dramatically until 2005/06. This rapid growth led to a decrease in the total number of cotton farms (see Table 9).

Detailed data is not available for the other zones. However, some data on the CIDT zone is available for certain years. This zone has undergone the same trend in terms of upgrading during the last three years for which data is available (2004/05, 2005/06, 2006/07). This might seem paradoxical because no program to stimulate the development of animal-powered farming in this zone over the same period was in place due to insufficient funds. If we keep in mind that the number of cotton farms has dropped dramatically over the last three years, the increased percentage of animal-powered farms shows that **manual farms are the ones that have left the industry en masse**. This is because their yields were not high enough for them to survive in the cotton subsector under current conditions.

Table 9: Percentage of animal-powered farms in the Ivoire Coton zone

Crop year	Number of growers		
	Total (in units)	Animal-powered farms (in units)	Animal-powered farms (in %)
2000/2001	43.156	19.894	46%
2001/2002	46.287	21.361	46%
2002/2003	43.699	22.022	50%
2003/2004	37.477	21.804	58%
2004/2005	44.412	25.594	58%
2005/2006	40.370	28.095	70%
2006/2007	31.216	23.776	76%

Source: Ivoire Coton

Correlation between farm type, crop size, and yield

In both the Ivoire Coton zone and the CIDT zone, there is a perfectly logical high correlation between farm type and crop size (see tables below): **the average size of manually operated farms is 1.26 ha versus more than 3 for animal-powered farms,** and more than 7 ha for mechanized farms (initially very marginal).

There is also a high correlation with yields: the smallest farms (the majority of which are manual) have yields 20 to 30% lower than larger animal-powered farms. Like in neighboring countries, this correlation is due to the general rule that animal-powered and mechanized farms have more human and material resources. This enables them to be more attentive to utilizing the right crop management techniques and especially to complete farm operations on time.

Table 10: Breakdown of yields and crop size by farm type (Ivoire Coton zone)

	2004/05			2005/06			2006/07		
Producer type	% farms	Av. cotton crop size	Yield	% farms	Av. cotton crop size	Yield	% farms	Av. cotton crop size	Yield
Manual	42.2%	1.04	1037	30.1%	1.07	1,044	23.5%	1.26	785
Animal	57.8%	3.60	1362	69.6%	3.25	1,308	76.3%	3.19	934
Mechanized	0.3%	7.56	1579	0.26%	7.41	1,720	0.26%	7.35	1256
total	100%	2.52	1305	100.0%	2.61	1,278	100.0%	2.75	920

Source: Ivoire Coton statistics

Table 11: Breakdown of yields and crop size by farm type (CIDT zone)

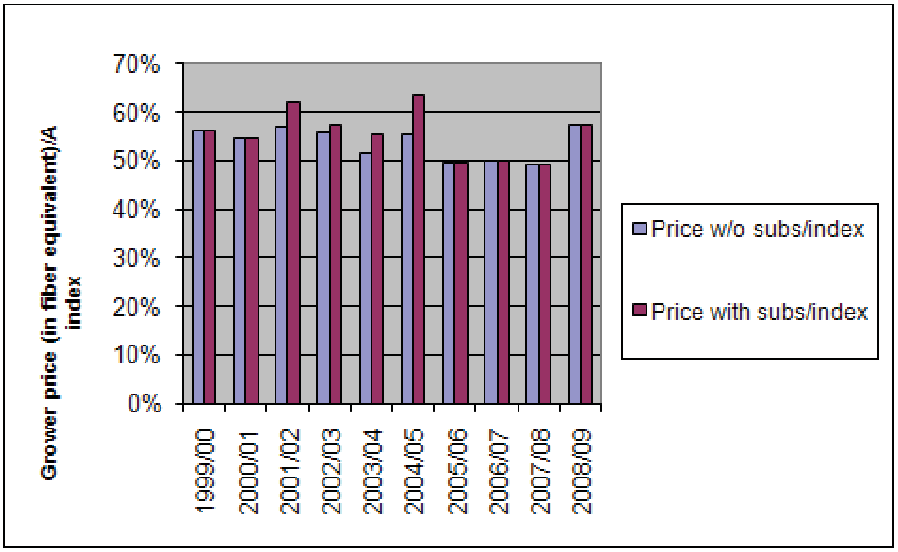
	2004/05			2005/06			2006/07		
Producer type	% farms	Av. cotton crop size	Yield	% farms	Av. cotton crop size	Yield	% farms	Av. cotton crop size	Yield
Manual	76.9%	1,02	1000	67%	1.16	896	56%	1,26	514
Animal	23.1%	4,91	1433	33%	5.50	1372	44%	5,59	599
Mechanized	0.1%	4,60	1435	0%	5.73	1392	0%	7,40	679
total	100%	1,92	1256	100%	2.61	1231	100%	3,16	580

Source: CIDT

4.2 Producer prices

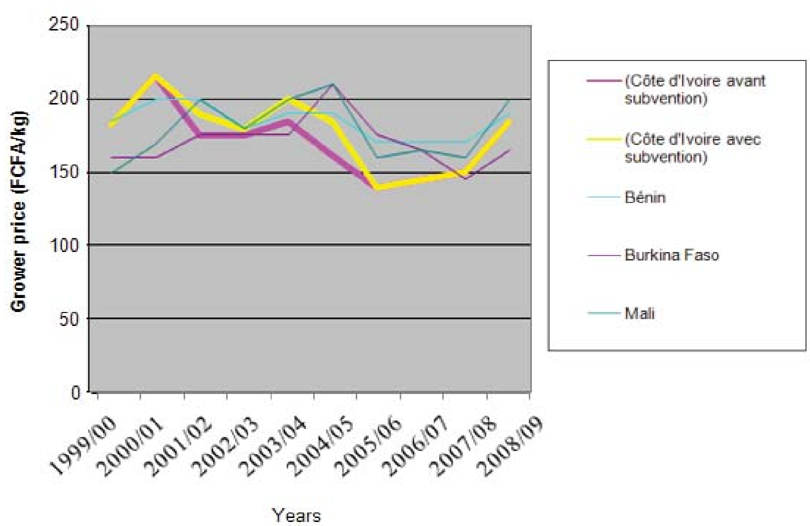
Sector performance in terms of producer prices can be measured by the ratio between the producer price expressed in fiber equivalent (meaning price divided by yield after ginning) and the world market price reported by the Cotlook's A index. As the table below shows, this ratio has been declining globally since 2004/05 given the mandatory levies in the sector and the poor performance of cotton companies in times of crisis.

Figure 9: Grower price/A index relationship



A comparison between producer prices in Côte d'Ivoire and those in neighboring countries highlights the poor performance in Côte d'Ivoire: while prices were higher in Côte d'Ivoire until 2001/01 (which can be regarded as normal given Côte d'Ivoire's comparative advantage in terms of proximity to the loading port and the high ginning rate in the industry), they dropped steadily as of 2003 despite subsidies.[18]

Figure 10: Comparison of producer prices in Côte d'Ivoire and neighboring countries

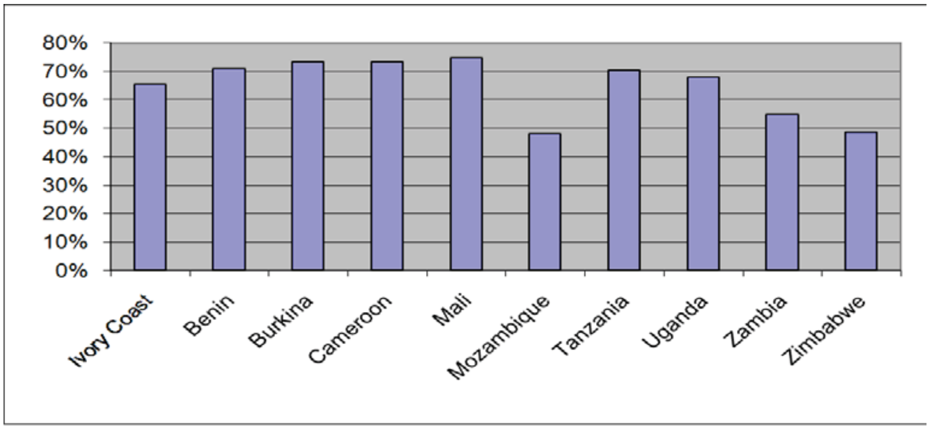


Another indicator better suited for measuring the performance of cotton companies is the relationship between producer price and factory gate price (A index minus factory gate price and transport costs). Comparing the average ratio over the period 2000-2005 with that

[18] This figure does not take into account purchases by local buyers (*pisteurs*) at prices much lower than official prices.

from a sample of other producing countries in Sub-Saharan Africa (according to calculations done for the World Bank's comparative study[19]) shows that performance in Côte d'Ivoire is slightly lower than in other countries in the sub-region (it is also true that some of these countries paid a price for cotton higher than the equilibrium price), as well as lower than East African countries using the competitive model (Tanzania and Uganda), but better than East African countries using the concentrated model (Zambia, Zimbabwe).

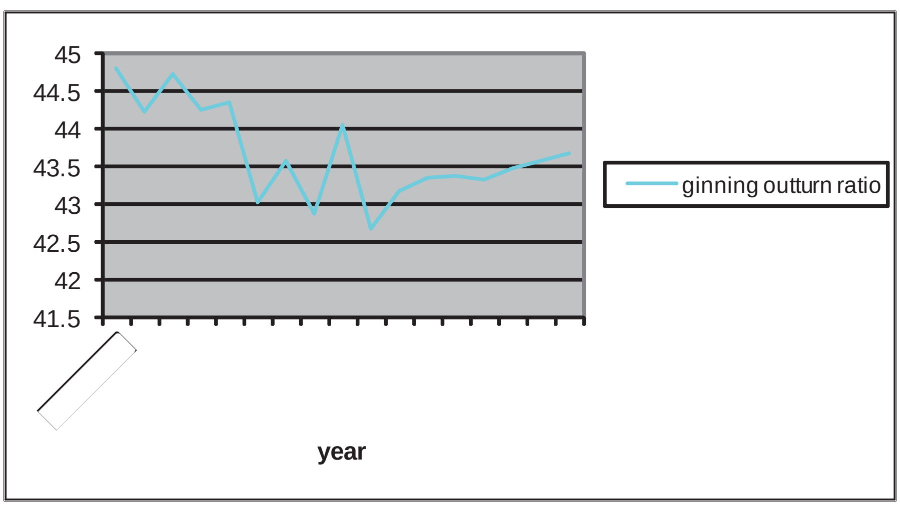
Figure 11: Comparison of the average ratio producer price/FOT value of cotton: 2000-2005



4.3 Ginning ratio

Ginning yield has traditionally been very high in Côte d'Ivoire and was often the highest in Sub-Saharan Africa. However, ginning yield did drop in the mid 1990s[20] prior to liberalization and never rebounded to previous levels. Since liberalization, yield remains just above 43% and has not been affected by the difficulties of the cotton sector.

Figure 12: Ginning yield (%)



[19] Comparative Analysis of Organization and Performance of African Cotton Sectors: Learning From Reform Experience; World Bank (2008).

[20] The causes of this drop are not fully understood.

4.4 Cotton quality and quality premium

On the market, cotton lint from the Côte d'Ivoire has traditionally had a good reputation as being good quality, which translated in higher premium for top types than for the standard middling quality. However, quality has dropped off heavily in recent years, mainly due to:

- the destruction during the civil war, of CIDT's grading room in Bouaké through which passed all Ivorian cotton: since then exporters have been grading their own cotton and this has caused a lack of homogeneity that has damaged the reputation of the cotton's origin[21];
- poor seed quality;
- the proliferation of purchases by local buyers (*pisteurs)* and ginning factory sales, leaving producers without clear market signals;
- the fact that quality grading by some operators in village markets did not comply with rigorous standards (as shown on the table below, the percentage of top graded seed-cotton purchased is much higher than the percentage for top types, especially in the LCCI, SICOSA, and Ivoire Coton factories).

According to Intercoton, due to the declining reputation of the cotton's origin, bonuses for top types have dropped to as low as two cents/pound for the best growers and to zero for the least reliable growers. This drop is due more to the socio-political situation than to the liberalization of the sector.

Table 12: Percentage of high grade seed-cotton and lint

	IC	LCCI	CIDT	DOPA	SICOSA	Total RCI
2004/2005						
% high grade lint	50%	54%	31%	58%	56%	46%
% top graded seed-cotton	84%	100%	26%	81%	91%	70%
2005/2006						
% high grade lint	40%	56%	39%	66%	50%	45%
% top graded seed-cotton	81%	81%	40%	79%	92%	69%
2006/2007						
% high grade lint	48%	38%	38%	76%	37%	47%
% top graded seed-cotton	82%	74%	29%	84%	65%	71%
2007/2008						
% high grade lint	49%	37%	37%	75%	33%	44%
% top graded seed-cotton	87%	86%	66%	97%	69%	81%

Source: ACE reports

4.5 Performance of cotton companies

Detailed costs of cotton companies and ginners are unavailable. Only two companies (Ivoire Coton and CIDT) agreed to disclose their costs. Unfortunately, they were not detailed enough for analysis. Moreover, these costs vary considerably from one entity to the next given that each has its own unique way of operating.

[21] A new grading room for all exporters is currently being built with European funding.

An analysis of the costs for the 2006/07 growing season provided by Ivoire Coton (based on a total output of 75,000 T corresponding to 67% ginning capacity) gives a total intermediate cost of 385 CFAF/kg (all costs, from cotton collection to FOB shipping minus seed sales). If we add the purchasing price of seed cotton (averaged 142 CFAF/kg for that growing season), total production cost comes to 711 CFAF/Kg. Factory gate intermediate cost excluding critical functions (which allows comparisons between the specific performance of each cotton company) comes to 280/kg.[22]

An estimate of the average costs over the same period provided by the COWI study[23] (figures used for the estimate are not provided for confidentiality reasons) gives a slightly lower amount. The difference between the two estimates is probably due to overhead, which are apparently much higher for Ivoire Coton.[24]

Table 13: Cost structure of Côte d'Ivoire's cotton companies (2007)

	Ivoire coton 2007; 75000T base, or at 67% capacity			Ivoire Coton at 100% capacity	COWI Study (2007 average cost estimates)		
CFAF/kg lint	fixed	variable	total		fixed	variable	total
seed-cotton purchases		326	326	326		326	326,00
collection							
transport	6.26	21.13	27.39	25.82		22.99	22.99
other		14.48	14.48	14.48		14.48	14.48
total collection	6.26	35.61	41.87	40.31		37.47	37.47
Ginning							
amortization	16.87		16.87	12.65	17		17.00
other fixed costs	38.54		38.54	28.91	3.6		3.60
variable costs		50.74	50.74	50.74		66.2	66.20
total ginning	55.41	50.74	106.15	92.30	20.6	66.2	86.80
overhead costs	129.85		129.85	97.39	79.5		79.50
financial costs		2.38	2.38	2.38		10.7	10.70
FOT production cost	191.52	414.73	606.25	558.37	100.10	440.37	540.47
FOT production cost excluding SC	191.52	88.73	280.25	232.37	100.10	114.37	214.47
FOT to FOB costs		57.07	57.07	57.07		47.8	47.80
FOB production cost	191.52	471.80	663.32	615.44	100.10	488.17	588.27
critical functions	71.52		71.52	53.64	[25] 71.52		71.52
FOB production cost with critical functions	263.04	471.80	734.84	669.08	171.62	488.17	659.79
minus seed sales		[26] 23.45	23.45	23.45		23.45	23.45
total net production costs	263.04	448.35	711.39	645.63	171.62	464.72	636.34
total net intermediate costs	263.04	122.35	385.39	319.63	171.62	138.72	310.34

[22] Costs provided by the CIDT are much higher than those for Ivoire Coton. This is due to: heavily underused factories; maintaining same staff levels in spite of the drop in production and the related costs; the fact that CIDT provides extension services on behalf of other operators; and lastly the low performance of semi-public companies.

[23] Study on mandatory levies and a price fixing mechanism (2008).

[24] It is impossible, however, to analyze this difference without further details; obviously levies (4.71 CFAF/kg of seed-cotton for ARECA, ACE, and Intercoton) and unofficial levies (as much as 5 CFAF/kg of seed-cotton charged at roadblocks in the North and South of the country) are included in overhead costs given that they are not listed in other categories.

[25] Data from Ivoire Coton.

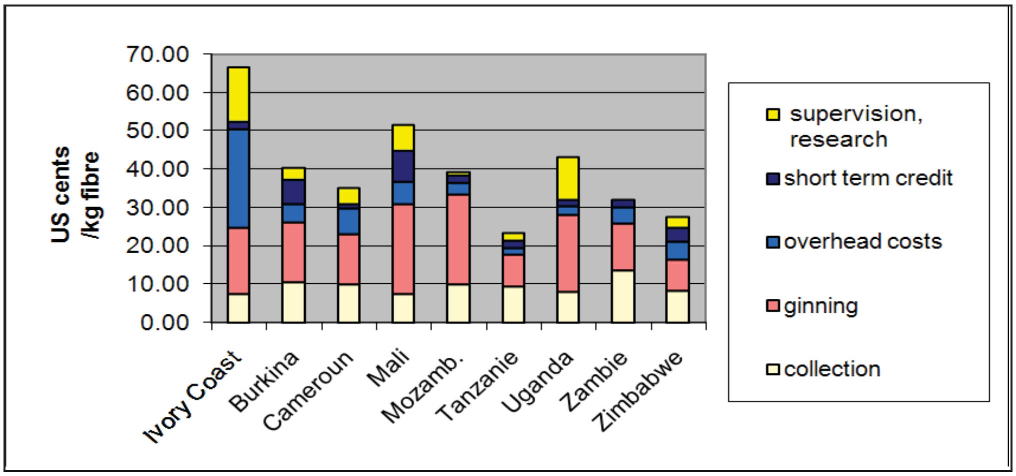
[26] Author's estimate.

A comparison between numbers from the COWI study with data collected in other African cotton sectors[27] shows that the performance of Ivorian cotton companies ranks last in the sample and that their costs are much higher than in monopoly companies. The latter generally have higher costs than companies operating in a liberalized environment like in the othre four countries in the study sample (Tanzania, Uganda, Zambia, Zimbabwe). These high costs are due to:

- much higher overhead costs due to both the high levies imposed on the sector and production below installed capacities;,
- very high extension costs, which, in the case of Ivoire Coton, is likely due to individualized grower support provided, in the absence of credible cooperative organizations, and also to the drop in production.

The other costs are similar to those of other cotton sectors in the subregion.

Figure 13: Comparison of intermediate costs at factory gate



The result is that due to the specific situation in the Côte d'Ivoire, introducing competition between cotton companies did not improve performance as was expected.

4.6 Fiscal impact

Government and donors (in this case the European Commission) have repeatedly supported the cotton sector since 2002 to help it make it through the difficulties it encountered:

- The European Commission provided funding for the payment of arrears of LCCI vis-a-vis producers (6.2 billion CFAF);
- Government reimbursed URECOS-CI for supplying inputs for the 2002/03 growing season (15 billion CFAF);

[27] Comparative Analysis of Organization and Performance of African Cotton Sectors: Learning From Reform Experience, Banque Mondiale (2008),

- Government will bear the loss on the Islamic Development Bank's loan it guaranteed (roughly 1.6 billion in 2007/08);
- Government subsidized grower prices between 2001/02 and 2004/05 (to prevent massive sales of RCI cotton to neighboring countries), at an overall estimated cost of 10 billion CFAF[28] ;
- Subsidy on cotton inputs will cost the State around 10 billion in 2008/09;
- In addition, government had to support CIDT due to its recurrent deficit since 2000/01 (42 billion deficit accumulated between 2001 and 2005, and undoubtedly even higher amounts post 2005).

The total cost incurred to rescue the sector probably comes to 100 billion CFAF for the last eight years, or more than 10 billion per year. Some of this amount (particularly the repayment to URECOS-CI), however, can be seen as support to small farmers from the North impacted by the crisis rather than support for the cotton sector.

4.7 Grower incomes and returns to labor

4.7.1. Consumption and price of inputs

The technical package provided by cotton companies or umbrella producer organizations includes the following standard doses based on research recommendations. The packages are identical to those provided in other countries of the sub-region:

- Compound fertilizers: 200 kg
- Urea: 50 kg
- Insecticides: 8 liters

Herbicides are used by some growers but they are still not part of the input package delivered on credit (but Ivoire Coton does include it). Seeds are provided free of charge.

In practice, all people questioned admitted that growers sell some fertilizer for cash or use it for growing food. This is not a new phenomenon, but it has been on the rise in recent years due to the decreasing interest in growing cotton at current prices, to the fact that cereals respond better to fertilizer, and to problems related to food and cash security that have been affecting the cotton growing areas since the country was partitioned as a result of the civil war. It is commonly estimated that at least 50% of the quantities of fertilizer purchased is used for something else than for growing cotton.

The sale price of inputs for small farmers is determined by the operators. In general, they match prices set by Ivoire Coton. The price of technical packages rose between 2000 and 2008 (see table below). For the 2008/09 growing season, the government decided to put in place a 50% subsidy to offset the surge in fertilizer prices on the world market.

[28] Without counting the last year, which the government has not paid in spite of its commitment.

Table 14: Changes in input costs

Input	Dose/ha	Unit	2001/02 growing season		2002/03 growing season		2003/04 growing season		2004/05 growing season		2005/06 growing season		2006/07 growing season		2008/09 growing season	
			Price	Value	Price	Value	Price	Value	Price	Value	Price	Value	Price	Value	Price[29]	Value
NPK	200	Kg	190	38 000	180	36 000	220	44 000	220	44 000	240	48 000	250	48 000	183	36500
Urea	50	Kg	180	9 000	165	8 250	190	9 500	220	11 000	260	13 000	260	13 000	169	8 425
Insecticides	8	Liter	4 180	33 440	3 980	31 840	4 265	34 120	3 895	31 160	3 770	30 160	3 770	30 160	2095	16 756
Total				80 440		76 090		87 620		86 160		91 160		91 160		61 681

4.7.2. Margins after payment of inputs

As a consequence of rising input prices, falling cotton prices, and lower yields, a growing fraction of producers' gross income is going towards repaying input credit (delivered at the recommended amounts). In 2006/07, this portion exceeded 80%, which heavily indebted the producer and made the non-repayment risk too high for the distributor to bear. At the same time and for the same reasons, the net income of farmers after payment for input dropped considerably, as shown by the data from Ivoire Coton (see table below). Low net income (22,000 CFAF/ha in 2006/07 and 63,000 CFAF/grower) largely explain the growers' rising lack of interest in cotton cultivation and non compliance with recommended crop management practices, which are obviously no longer profitable.

Table 15: Changes in profit margins after repayment of inputs at Ivoire Coton

Growing season	yield	SC purchase price	gross income/grower	input cost/grower	input/gross income	repayment/ha	net income/grower	net income/ha
01/02	1,371	190	527,214	187,073	35%	89,530	340,141	162,786
02/03	1,541	180	620,763	209,024	34%	90,899	411,739	179,054
03/04	871	200	413,675	226,746	55%	91,852	186,928	75,722
04/05	1,307	185	596,967	274,225	46%	108,188	322,742	127,330
05/06	1,278	150	550,059	358,374	65%	121,136	191,686	64,793
06/07	931	145	356,113	293,187	82%	106,573	62,927	22,874

Source: Ivoire Coton

4.7.3. Return to labor and profitability of cotton

Given that it was not possible to launch field surveys, the following methodology was adopted for assessing producer remuneration and cotton profitability:

- The yield used is the average yield in the Ivoire Coton zone between 2000/01 and 2006/07 (1,235 kg/ha on average; 1,290 kg for animal-powered farms and 1,034 for manual farms); the yield used is taken from the most favorable zone, which is also the main cotton producing zone;
- Labor inputs are drawn from the estimates in the BNEDT HORUS (2002) study and were adjusted according to the COWI study (2008) where necessary: 119 man-days for hand farming et 93 man-days for animal traction farming (without herbicide use); these figures are similar to the ones found by the author of this report during field surveys in Burkina Faso (92 man-days with animal traction) and higher than the ones from Mali (76 man-days with animal traction with slightly lower yields);

[29] After 50% subsidy.

- Equipment cost, equipment amortization, and oxen and equipment maintenance on animal-powered farms are higher than what the ITALTREND study found in 2006; regarding costs related to animal-powered farming, we can make the hypothesis that was not considered by ITALTREND: equipment is used 50% of the time for cotton and for other crops the rest of the time;
- Regarding cotton prices, we used the price of 145 CFAF/kg set for the 2006/07 harvesting season;
- Regarding input costs, we used the cost determined by Ivoire Coton in 2006/07 based on distributed input; it is well known, however, that the amount of fertilizer actually applied to cotton is much lower than the recommended amount; we therefore used a more realistic assumption that only considered 50% of fertilizer cost should charged to the cotton crop.

Labor requirements were estimated as follows:

Table 16: Labor requirements

Labor inputs	Manual	Animal-powered
soil preparation	30	7
sowing	12	4
weeding	32	25
spreading	6	8
treatment	2	2
harvesting	37	47
total	119	93

Farm budgets were estimated as follows based on 2006/07 prices, costs, and average yields:

Table 17 : Farm budget (based on 2006/07 prices and costs)

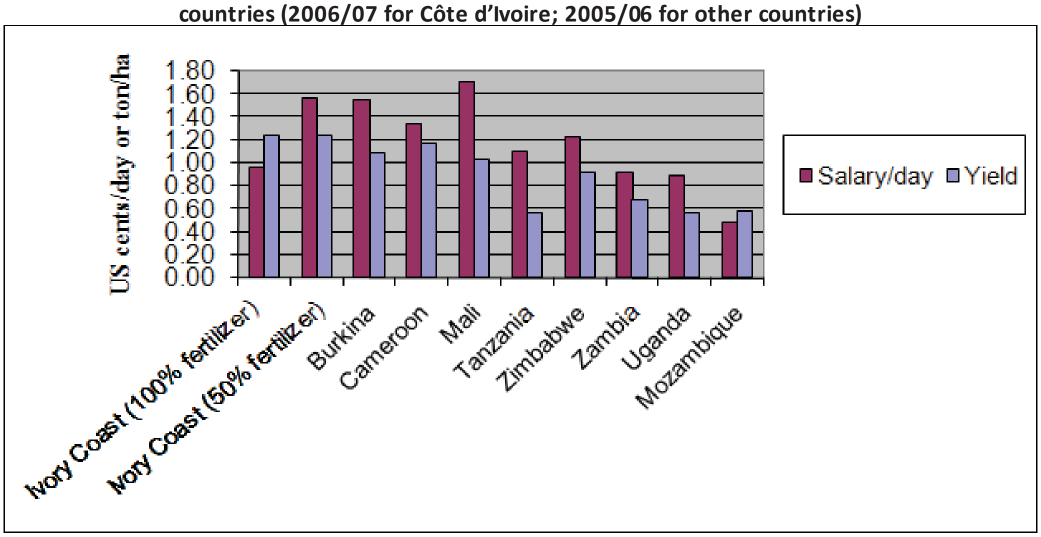
	animal traction 100% fertilizer	Animal traction; 50% fertilizer	hand farming 100% fertilizer	hand farming; 50% fertilizer
yield	1,290	1,290	1,034	1,034
gross income (145 CFAF/kg in 2006/07)	187,010	187,010	149,896	149,896
input	91,160	60,660	91,160	60,660
equipment amortization	11,500	11,500	500	500
Maintenance of equipment	21,600	21,600	8,100	8,100
transport of seed-cotton	12,000	12,000	10,000	10,000
net income	50,750	81,250	40,136	70,636
work days	93	93	119	119
value/day	546	874	337	594
labor valorization (basis of 700 CFAF/day)	65,100	65,100	83,300	83,300
production cost/ha	201,360	170,860	193,060	162,560
production cost/kg	156	132	187	157

If we assume that all fertilizer is applied to cotton, remuneration per day is slightly lower than costs for animal traction farming (around 700 CFAF/day currently) and much lower for hand farming. If we use the realistic hypothesis that only 50% of fertilizer received is applied to cotton then per day salaries are acceptable on animal traction farming (874

CFAF/kg) but not acceptable for hand farming producers (594 CFAF/kg), which explains why the latter are turning away from cotton in increasing numbers.

If we compare how Côte d'Ivoire performs in terms of per day labor remuneration with other cotton producing countries in Africa,[30] we see that in spite of good yield performance, the return to labor for Côte d'Ivoire's cotton producers is lower than that recorded in other countries of the sub-region and matches levels observed in eastern and southern Africa. However, if we account for the fact that a part of fertilizer is used on other crops, the producer remuneration in Côte d'Ivoire ($1.56/day) is among the highest (close to Burkina and Mali).[31]

Figure 14: Comparison between labor remuneration of Ivorian producers and producers from other African countries (2006/07 for Côte d'Ivoire; 2005/06 for other countries)



4.8 Cotton's impact on poverty and impact of the cotton crisis

Since the early 2000s, surveys[32] (carried out in 2002) highlighting cotton's positive impact on the reduction of rural poverty have shown that:

- the number of inhabitants living above the poverty level is much higher in villages where cotton is grown extensively (95%) than in those where it is grown on a limited scale or not at all (76%);
- rural habitats are of higher quality in cotton areas where houses built with mud or with straw roofs are tending to disappear whereas they still represent 38% of habitations in cereal based systems and 80% in yam based systems;
- the number of two-wheel engines is much higher in cotton producing villages, which facilitates rural mobility;

30 Based on the 2008 World Bank comparative study

31 However, in this case, the comparison is truncated because input consumption in Mali and especially in Burkina is also overestimated

32 Cote d'Ivoire/Belgian project "dynamiques agraires et sécurité alimentaire dans les zones cotonnières de la Côte d'Ivoire" (*agricultural dynamics and food security in Cote d'Ivoire's cotton growing zone*); 2001-2005

- cotton has had a positive impact on literacy and healthcare by making it possible to build more schools and health centers;
- it has had a positive impact on both direct and indirect job creation;
- it has also had a positive impact on gender equality by reducing the strenuousness of women's labor and increasing their income thanks to the development of animal-powered farming and the time it saves.

While no recent study is available on this topic, it is probable that this positive impact has greatly diminished, or even disappeared with the drop in cotton revenues since the middle of the decade.

Given its recent nature, the impact of the drop in cotton production on growers' income has not been studied. The interviews carried out with farmers confirm that the drop in cotton crop sizes was compensated by an increase in other crops (corn, rain-fed rice, peanuts, yams, legumes, etc) as shown by crop size statistics in the CIDT (see section 3.23). The rapid and continued rise of the urban population should open up more consistent and reliable commercial outlets for these crops in the future. Presently, these crops suffer from serious price volatility, which means lower security for growers and cotton buyers.

But it is especially important to note the significant rise of cashew nuts in a portion of the cotton zone. In fact, since the last decade, farmers have massively invested cotton revenues in cashew plantations. Production currently sits at 300,000 T. Compared to cotton (150,000 T produced with net income around 60,000 CFAF/ton), **net income from cashew farming is roughly CFAF 30 billion/year, or three times higher.**

It seems as though cotton is no longer the dominant crop in the northern part of the country and that a diversification of production systems is currently underway.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of evolutions and issues in the sector

The analysis shows a steep decline in the operating environment and performance of Côte d'Ivoire's cotton sector, which has been underperforming other sectors in the region:

- Declining or volatile world prices have affected all cotton sectors in the CFA Franc zone and the drop in production affected Côte d'Ivoire earlier and more significantly than any other country in the sub-region;
- Yields have tended to drop in alarming proportions due to the weak agricultural support in large areas of the cotton growing zone, poor seed quality, and farmers' growing lack of interest for cotton which pushes them to use fertilizer for other crops;
- Professional organizations have fallen apart;

- Since 2002, producer prices have been lower than in other countries in the sub-region in spite of government subsidies and of a geographical location that should favor Côte d'Ivoire over its Sahelian neighbors in terms of transport costs; the Côte d'Ivoire's cotton grower thus has not benefited from the advantages expected from the introduction of competition between operators through the reforms made;
- Growers are not paid regularly, consistently and uniformly for their cotton seed;
- Cotton companies are particularly ineffective, their operating costs are much higher than in the East African competitive sectors but also than in the monopolistic sectors of West Africa; opening the sector to competition has not had the expected positive impact of improving the performance of cotton companies; underused capacities following the drop in production, excessive levies (legal and informal) on the sector, and the need for technical advice and support to farmers in the absence of reliable professional organizations are in part responsible for this disappointing performance;
- Lint quality, previously of good reputation on the market, has dropped slightly, depriving Côte d'Ivoire of the quality bonuses it received in the 1990s;
- Farmer incomes have dropped significantly and cotton farming is no longer profitable for smaller growers due to the drop in yields combined with low prices;
- Initiatives by the government and donors to revitalize the sector were costly, amounting at least to 100 billion CFAF over the 2000-2008 period;
- The main causes of these shortcomings lie in the socio-political crisis that the country has experienced;
- Early in the decade, socio-political tensions led to a politicization of producer associations, which is largely responsible for their collapse;
- The 2002 war resulted in the destruction of a research station, stripping research services of operational capacities. It also destroyed the communal grading room without which the homogeneity of cotton quality from Côte d'Ivoire cannot be guaranteed. It also caused many ginners to incur huge debts, some of which never recovered;
- The de facto partitioning of the country since 2002 prevented government from playing its regulatory role, especially in terms of overseeing professional organizations and cotton companies; this caused a political roadblock that kept ARECA from passing the regulatory texts needed. It also led to informal levies on sectors that hurt cotton's competiveness;
- It is also certain that other decisions (or absence thereof) further aggravated the situation;
- The selection of LCCI in the bidding process for privatization of the CIDT turned out to be very unfortunate, and the lack of reaction by the Governement when LCCI started to default in 2001 played an important role in worsening the situation in the sector; this lack of reaction was mainly due to the absence of a performance monitoring system for companies that were selected through the privatization

process. Bidding documents should have included a monitoring mechanism that should have been in place before launching the liberalization of the sector;

- Even though it was a perfectly legitimate strategy for a grower organization, URECCOS-CI's attempt to take control of the subsector was particularly unfortunate insofar as it had neither the organizational network, the management capacity, nor the financial credibility in the eyes of banks to ensure the supply of inputs, and in the sense that it was undermined by internal dissent and political interference;
- The absence of precise rules needed for guaranteeing, in a competitive environment, the respect of contracts between growers, their organizations, and the cotton companies that fund and regulate them can also be seen as one of the major causes of the dysfunctions regarding repayment of input credit; these rules should have been established before the call to tender or at least before the end of the transitional period; provisions in the call to tender, however, were vague and sometimes contradictory.

This problem was later aggravated by non operational regulatory measures for the sector set by the Government; the latter was unable to choose between interprofessional regulation and regulation by a state agency. This led to the simultaneous creation of Intercoton and ARECA without clearly dividing the roles of each body, without letting Intercoton have the resources needed for coordinating actors, and without giving ARECA the political weight needed to regulate the sector. In fact, neither of these two entities was able to play the type of regulatory role needed and make up for the initial imprecision of the institutional privatization framework (how to enforce the rule stating that companies funding input had cotton buying priority).

5.2 Options for reorganizing the sector: toward a crisis exit strategy

Options available for securing input credit

The reorganization currently underway based around a core of a few cotton companies with a network of growers provides some prospects for ending the crisis. One obvious condition is that the political situation in the northern part of the country returns to normal. The observed trend toward building vertically integrated cotton companies ensuring input supply to their producers is positive, but will require a solution to the problem of securing input credit. There are two options:

1- Adopting a system where some zones are exclusively for cotton companies: some cotton companies support this solution, but it does have some major pitfalls:

- the location of cotton companies' factories makes it practically impossible to utilize zoning (especially for Yébé Wognon whose network is not geographically concentrated and stretches into other zones, as well as for DOPA); this solution cannot be forced on operators having invested heavily in the sector;
- this solution would put growers under the control of cotton companies although none of them pays the farmers on time (which farmers do not accept) and although their interests are no longer defended by powerful professional organizations;

- it does away with competition between cotton companies and therefore is likely to harm producers.

2- Keeping the liberalized and competitive system while adding a regulatory mechanism to keep seed cotton from being channeled to operators that did not finance input provision; this system would include systematic contracts between the cotton company supplying the inputs and community groups or cooperatives. This type of contract would not make it impossible to sell cotton to an operator different from the one having financed the inputs, but would require complete repayment of input credit to the cotton company that supplied the inputs.

The European Commission has been funding a study[33] of an alternative solution (or one that that could complement the previous solution): the shift from the current system of supplying inputs on credit to a system in which producers pre-finance their own inputs (input savings system). In the planned system, a sum (required at the beginning) would be withheld from the seed cotton producer's payment to finance inputs for the following season. According to the preliminary results from this study (not completed by the time this report was written), such a system would help: (a) solve the problem of securing input loans in a deregulated environment as the problem would no longer exist; (b) significantly reduce the cost of financing inputs by eliminating the need for bank loans; (c) better adapt the types and quantities of inputs to producers' actual needs; (d) reduce producers' dependence on cotton companies, as producers could sell their cotton to the highest bidder; (e) eliminate input delivery delays, as financing would be available by the end of the season. Thus, this proposal is a potential way out of the sector's chronic debt problem and merits discussion by stakeholders. In particular, its implementation would require: the Government or a donor to provide funding for one season of inputs (an initial grant of about CFAF 15 billion), as it would not be possible to accumulate enough money to reimburse the input loan (for the past season) and fund the input savings (for the coming season).

It should be noted that this solution is inspired by the “passbook system” established in Tanzania in 2003. In this system, each sale of seed cotton by a producer is recorded in his personal passbook (validated by a stamp), which grants the right to the supply of seed and pesticides for the following season. The system, which consists of having the producers pre-finance part of the inputs (as the cost of inputs is actually deducted from the sale price paid by the ginning plant), only allows financing seed or pesticides for one or two treatments. The system planned for Côte d'Ivoire is much more ambitious, as it must cover operators' full input needs.

To manage such a savings system, the study envisioned two options: either bank management of input savings, which requires the intervention of the cooperative network (which is currently poorly developed) to combine deliveries, or management by the cotton companies, which may be easier to implement.

Regulations needed for a properly functioning competitive model

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[33] *Faisabilité d'une nouvelle organisation du financement de l'approvisionnement en intrants de la filière coton en Côte d'Ivoire*; Joël Le Turioner (March 2009).

As the option of returning to exclusive zones is neither desirable nor practical, the two possible options are the new proposed input savings formula or a formula with a deregulated, competitive framework accompanied by appropriate regulations (as described in point 2 above). The latter formula implies the establishment of an adequate regulatory framework, including:

a. Drawing up a standard contract between cotton companies and producer groups;

b. Creating a body enforcing mandatory consultation among cotton companies (which should occur before distributing inputs and could, for example, be put under the control of the AIC) so that harvesting plans and contractual agreements between village level producer organizations and cotton companies are made public;

c. Drawing up a code of conduct for cotton companies that would keep them from buying seed cotton from individual growers or producer groups with whom they have no contract, unless these groups or growers have completely reimbursed their input credit; this code should include automatic legal sanctions (for example, decided by an interprofessional association with the authority to enforce them, and not by the legal system, which would be too difficult to implement);

d. Ensuring minimum traceability so that the origin of seed cotton delivered at the ginning mills can be identified;

e. Outlawing "pisteurs” (local buying agents).

This type of change requires clarifying the roles of interprofessional groups (Intercoton) – whose mission could be to verify that rules are followed – and of the sector’s regulatory authority (ARECA) whose mission would be to make the rules.

Other measures to restore the sector’s competitiveness

Government and lenders intervened massively in recent years to pay off arrears owed to producers and to compensate for the non repayment of input credit and the CIDT’s deficits. In retrospect, while these actions were very costly, they did not help improve the sector but rather just delayed inevitable structural changes.

Sector competiveness is further hampered by the amount of levies it must pay (some, such as those in favor of, ARECA, ACE, and FIRCA are at par with eminent domain taxation), as well as the freeze of critical functions (rural roads, research, oversight). Findings above call for more effective responsibility sharing between the government and sector stakeholders: rather than spending substantial sums to bail out operators a posteriori, government should take responsibility for all critical government functions needed for the sector to operate smoothly. These are functions that the subsector clearly cannot assume on its own given the current trends in cotton prices. The government must also find a solution to the chronic deficits of the CIDT Nouvelle, whose privatization, planned as part of the reforms, has been delayed continually in anticipation of elections, which also have been delayed. This privatization project must be a priority project once the country's political situation is stabilized.

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