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## Senegal

### Cotton and Products

### West Africa Cotton Annual

### 2007

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**Report Highlights:**

Despite its importance to the economies of most countries in the region, the cotton sector remains in crisis as cotton companies - both public and private - continue to operate with financial deficits. The deficits in turn delay the financing of the purchase of cotton from farmers and the procurement and distribution of inputs. Financial difficulties in the sector have also delayed critical investments and reforms. Due to significantly lower yields, cotton production for 2006/07 is revised downward for most countries and the outlook is unfavorable for 2007/08 as well.

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Includes PSD Changes: Yes  
Includes Trade Matrix: No  
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**Note:** Compiling a report of this nature across so many countries could not have been done without the valuable assistance of U.S. Embassy staff, donors and stakeholders in each country. The accuracy of all information in the report is the responsibility of the FAS Dakar office, which is open to receive comments and corrections at [agdakar@fas.usda.gov](mailto:agdakar@fas.usda.gov).

## Executive Summary

Four consecutive years of reduced producer prices and at least four consecutive years of financial deficits for the cotton companies in each country leave the sector in a state of prolonged crisis. Seed cotton production in 2006/07 in each of the major cotton producing countries has fallen below pre-season targets due to a significant drop in yields and in some cases area. Preparations – or lack thereof - for the 2007/08 campaign are taking place in an environment of precarious uncertainty. Producer prices for the 2007/08 campaign – which were just announced in several countries – reflect another decline while forecasts are for another increase in input prices. While the lower producer price is still too high for gins to operate profitably based on the current world price of cotton, the farmers' margins are squeezed further. Throughout the region seed, fertilizers and pesticides will again be delivered quite late to farmers. Acreage can only be expected to decline again in this environment. The outlook for yields is also not great due to the likelihood of late planting, late arrival of inputs, pest problems and diversion of fertilizers to cereal crop production.

External forces continue to play an important and negative role for the cotton sector in West Africa. Complaints of western subsidies have been overshadowed by the Euro-Dollar exchange rate parity which prevents West African countries from benefiting from any gains in world prices. While cotton is traded in dollars, fertilizer and pesticide inputs trade in Euros. Producer prices are set early in the year in CFA which is pegged to the Euro. The record-low value of the dollar against the Euro has sent a rippling effect through the cotton sector adding to deficits and financing problems. In most cotton companies the current cost of production for lint cotton is approximately 30 to 100 CFA/kg above the current FOB price. This translates to a production loss on average of about 7 to 21 cents/kg of fiber. Deficits held by the cotton companies in each country total tens of millions of Euros. This creates a cycle of financial insecurity with respect to the financing of inputs and collection of cotton – in an environment of deficits, obtaining these credits is becoming increasingly difficult. Without them, the sector will dramatically shrink if not collapse.

Meanwhile, the well documented internal inefficiencies in the cotton sector continue unresolved and underfinanced. Privatization and structural reforms are moving forward to varying degrees in each country and the financial crisis is often cited as grounds for delaying reforms. In what has become an era of deficits, most planned investments remain unimplemented. Poor roads, poor soils, declining seed quality, lack of storage facilities, aging ginning equipment, and a general lack of market-based risk management techniques persist as endemic problems in each country. Producers in West Africa remain isolated from key decisions that affect the profitability of the sector. Public officials insist that foreign assistance is slow to arrive and is not sufficient to salvage the sector. As the public sector exerts more control in the sector in response to the crisis, private sector actors fear a return to misguided policies that further distort the sector. The situation is concisely summarized by a stakeholder in the region – “We have the expertise, but lack coherence and responsibility”.

Meanwhile, any positive internal development and external forces have yet to arrive. For example, technology advancements and yield improvements – driven to a large extent by the adoption of BT cotton in developing countries in South Africa, Asia and Latin America – are not in use. The absence of other technological developments and extension at the farm level combined with poor soil and seed quality lead to declining yields. The positive link between cotton production, cereal production and food security is also in jeopardy. The fertilizers used to produce cotton provide a secondary benefit to grains planted after cotton, allowing for higher cereal yields in cotton producing areas. Farmers are now able to afford less fertilizer, and the declining returns from cotton are forcing them to market their cereals such as corn, sorghum and millet. The result, quite simply, is increased poverty and malnutrition.

This report updates production, trade and policy trends for the C-4, which includes Mali, Burkina Faso, Benin and Chad. These are the four African countries in which cotton production makes up the largest share of non-oil export earnings (ranging from 25-50 percent) and about 3 to 5 percent of GDP. Since becoming an oil exporter, Chad's reliance on cotton for export earnings has declined significantly. Cotton remains an important cash crop in most of Francophone West Africa and Cote d'Ivoire and Senegal are also included in this report although limited information is currently available on the situation in Cote d'Ivoire. These countries produced about 3.2 million bales of cotton in 2006/07 which is 400,000 bales or 11 percent below the previous year. Production in the region is expected to remain flat for 2007/08. While a reduction in area is possible in the current environment, any increase in production would likely be attributed to a rebound in yields which fell significantly in 2006/07. The region exports about 95-98 percent of its production, making the region one of the top cotton exporters in the world.

#### Summary of Regional Cotton Production in West Africa region

	2005/06	2006/07	2007/08
<b>Burkina Faso</b>	1,367	1,283	1,214
<b>Mali</b>	1,003	802	825
<b>Benin</b>	367	462	505
<b>Chad</b>	335	285	260
<b>Senegal</b>	86	100	96
<b>Cote d'Ivoire</b>	500	325	350
<b>Total</b>	<b>3,658</b>	<b>3,257</b>	<b>3,225</b>

(1,000 480lb bales)

## Burkina Faso Background

Burkina Faso is a land-locked Sahelian country the size of Colorado with a population of about 14 million people. Burkina Faso is one of the poorest countries in the world with per capita gross national income (GNI – World Bank 2006) of \$400 per annum. About 90 percent of the population relies on subsistence agriculture. Drought, poor soil, lack of adequate infrastructure, high energy costs, a low literacy rate, malnutrition and an economy vulnerable to external shocks are all longstanding problems. There are approximately 350,000 cotton farms in Burkina Faso and in addition to farmers the sector provides employment for approximately 700,000 farm workers. All producers diversify their production and cotton producers also are the country's main cereal producers. Cotton remains the primary source of cash revenue for most of the rural population. Most sources estimate that the cotton sector provides a direct or indirect livelihood for over 2 million people. The average farm size is about 2 hectares and the average production per farmer is about 2 tons. All cotton is hand-picked and mechanization of any form is rare. Despite numerous constraints, Burkina Faso has emerged as a leading cotton producer in Africa. Cotton generates approximately 55 percent of foreign exchange earnings. Burkina Faso is also first in the region to conduct field trials of BT cotton with ambitions of commercializing the technology in the very near future.

## Burkina Faso Production

Cotton production for 2006/07 is again revised downwards to 660,000 tons of seed cotton or 1.28 million bales due to disappointing yields. Low yields are linked to poor soils, declining seed quality, lack of fertilizers and late planting in some areas. The cost of fertilizers has been increasing, and due to financial problems in the sector they are often sold by farmers or diverted to cereal crops. Due to the late procurement of inputs and the reduction in producer prices to 145 CFA for the 2007/08 campaign, the production forecast is again lowered to 630,000 MT seed cotton reflecting a reduction in area. This forecast could increase or decrease within certain limits. While farmers should plant their cotton by mid-May, late plantings can occur into July. Any significant increase in area would be planted late and would lack necessary inputs, thereby reducing yields significantly. Likewise, a significant reduction in area is not likely since farmers have few alternatives. The production of cotton is the only way producers have access to fertilizer and pesticide credits. There is a positive effect on cereal production when it is grown after cotton that has been fertilized. Thus, many producers will continue to grow cotton despite diminishing returns.

Burkina Faso	2004/2005	2005/06	2006/07	2007/08 f
<b>Hectares (1,000 ha)</b>	585	630	700	630
<b>Seed Cotton (1,000 MT)</b>	613	710	660	630
<b>Yield kg/ha</b>	1,047	1,126	942	1,000
<b>Lint Cotton (1,000 MT)</b>	257	298	280	265
<b>Bales (1,000 bales)</b>	1,180	1,367	1,283	1,214
<b>1<sup>st</sup> Grade Price (CFA)</b>	210	175	165	145

Note: USDA Official statistics are in '000 bales. 2007/08 figures are an FAS Dakar forecast. \$1=CFA 480

## Biotechnology in Burkina Faso

Burkina Faso has been conducting field trials of BT cotton since 2003. In 2006, BT field trials were conducted with local varieties. In 2007, the field trials will be extended to each major growing region. Preliminary results are quite positive as they have demonstrated a dramatic

reduction in the amount of pesticides needed and an associated increase in yield. While farmers are anxious to have access to the technology, there are perceptions that licensing fees and seed costs will offset the economic benefits. The concept of purchasing new seeds before the growing season is foreign to West African producers. The National Institute for Environmental and Agricultural Research (INERA), which manages the trials, is currently conducting analysis to determine the economic benefit of BT adoption.

### **Burkina Faso Cotton Sector Structure**

Privatization of the cotton sector in Burkina Faso began in 1998 when the Government sold some of its shares to the producers' organization (UNPCB). The subsequent partial privatization of the cotton sector in Burkina Faso has created three regional cotton companies. SOFITEX, the core of the former parastatal, owns 13 gins making up approximately 80 percent of the ginning capacity. The Government of Burkina Faso (GOBF) owns 35 percent of SOFITEX, DAGRIS owns 34 percent and the producers own 30 percent. Faso Coton was formed in 2004 and operates in the central region with its single gin located in Ouagadougou. Reinhart of Switzerland and the IPS Group of Cote d'Ivoire are the two largest shareholders. SOCOMA, which operates 3 gins in the eastern region, is the second private company created in 2004. DAGRIS is the majority shareholder. In addition to private shareholders, the producers own relatively smaller shares of these two companies (20 percent of SOCOMA and 10 percent of Faso Coton). Due to successive financial deficits, Sofitex announced a recapitalization of 6.7 million Euros in the fall of 2006. If the private sector does not participate, the government-owned share of SOFITEX will increase.

The cotton companies currently provide vertically integrated "seed-to-market" services for cotton farmers. For example, within its predetermined region, each cotton company will finance inputs and then deduct the cost from the cotton price when they collect the cotton from the farmers. The collection of cotton is coordinated with producer groups. Cotton growers are organized into approximately 9,000 producer groups. While these groups may have direct contact with the cotton companies, they also elect coordination units at the village, departmental and provincial level. Together, these groups form the National Cotton Producers' Union of Burkina Faso (UNPCB). Cottonseed for planting is traditionally provided by SOFITEX and the other cotton companies which work with INERA for the development of the basic seed which farmers multiply. Cotton is the only sector in which producers receive credit for the provision of agricultural inputs including seed, fertilizer and pesticides. Loans are granted collectively to producer groups at the village level according to the size of members' plots and estimated input needs. After the cotton is harvested and assessed for quality in the villages the amount of the input loan is deducted from the cotton proceeds. Cotton companies use their own vehicles in a combination with private transporters. The state provided a one-time transportation subsidy of approximately USD 6 million in 2006.

The National Institute for Environmental and Agricultural Research (INERA) plays an essential role for research and extension work in the cotton sector. INERA receives funding from the cotton companies and conducts research according to priorities set by farmers and the cotton companies. Seed quality, soil fertility, biotechnology and analyzing the competitiveness of cotton are the current research priorities of INERA.

The Inter-professional Cotton Association of Burkina (AICB), which is represented by the government, producers, cotton companies, financial advisors and INERA, determines key aspects of national cotton policy. For example, the AICB will determine the pricing of inputs and the preliminary cotton price depending on market conditions, place the call forward for seed and fertilizer inputs, and set strategies related to research and development. A pool of banks provides critical crop and input financing for the sector. The cotton sector in Burkina Faso has faced financial difficulties tied to the simultaneous strengthening of the CFA to the

USD, increase in fertilizer prices and decline of world cotton prices. SOFITEX registered losses of nearly \$50 million in 2005 and the regional economic journal *Jeune Afrique* estimates losses of \$52 million for 2006.

Domestic prices are set early in the growing season by the AICB. 2006/07 1st Grade seed cotton prices were set at 165 CFA/kg compared to 175 CFA/kg in 2005/06. The 2007/08 price was set dramatically lower at 145 CFA/kg. At current exchange rates this is approximately 30 cents/kg seed cotton. This reduction should reduce deficits at the gin level; however farmers' margins will be lower due to increasing input costs. For example, the price of NPK and urea respectively increased from 12,400 to 15,485 and 16,720 CFA respectively. The price of insecticide increased from 4,040 to 4,362 CFA. Estimates are that this will cut the producer margin in half to about 60 USD a hectare. Total fiber production costs in Burkina Faso in 2006/07 were approximately 630 to 650 CFA/kg of lint or approximately 60 to 62 cents/lb of lint. While all companies work to reduce costs, they are limited due to the national price established for seed cotton.

### **Burkina Faso Consumption**

FILSAH DG Burkina Faso is the only spinning facility in Burkina Faso and the only major consumer of cotton lint outside of the artisanal sector. The capacity is 5,000 MT lint and the utilization is estimated at about 3,000 MT. A small amount of cotton is hand spun and woven to create artisanal clothing and textiles. High electricity costs are a major constraint to the sector

### **Burkina Faso Trade**

Burkina Faso exports about 98 percent of its cotton fiber. Most sales are made on an FOB basis to any one of a number of major cotton traders. Monthly export data by destination is currently not available and the trade matrices are not completed. According to summaries of GOBF data, Burkina Faso exports approximately 75 percent of its cotton to Asia (China, Pakistan, Indonesia, Bangladesh and Thailand) and 20 percent to Europe (Germany, Italy, Portugal, and Switzerland). A very small percentage is shipped to Latin America and only 2 percent is used domestically. Exports are contracted directly between the cotton companies and international traders. Burkina Faso has one High Volume Instrument (HVI) which classes approximately 30 percent of the bales nation-wide.

### **Burkina Faso Stocks**

Information on stocks is not available.

### **Burkina Faso Marketing**

All cotton in Burkina Faso is hand picked and has a fairly good reputation for quality. Efforts are underway by Helvetas, a Swiss NGO to promote the production of organic cotton. While organic cotton is eligible for a premium, yields are very low and production remains at very low levels. Farmers are also hesitant to grow organic cotton because of the importance of traditional crop rotations. Farmers receive a 'fertilizer boost' when growing corn or other cereals in rotation to conventional cotton. By producing organic cotton, farmers must also be resigned to receive lower yields for their cereal crops as well.

## Mali Background

Mali is a landlocked country the size of California and Texas combined, with a population of about 11 million people. Mali's per capita gross national income (GNI – World Bank 2006) of \$380 places it among the world's 10 poorest nations, with 65 percent of its land area desert or semi-desert. Cotton is a mainstay of the rural economy in Mali and accounts for 30-40 percent of export receipts. Cotton is grown in southern Mali where there are approximately 175,000 cotton farms and the majority of households in the region (estimates range between 2.5 and 3 million people) rely directly or indirectly on cotton for cash revenue. Cotton is grown in rotation with corn, millet, sorghum and groundnuts. Fruit and vegetable production are also important in the southern region of Mali. The cotton sector in Mali is vertically integrated around a single parastatal – the *Compagnie Malienne pour le Développement du Textile* (CMDT). Since there is a long history of agriculture and social extension services tied to cotton and provided by CMDT, there is a positive correlation between production of cotton and other cereals in all of the cotton growing areas. Since cotton producers have access to fertilizer credits unavailable to subsistence farmers, cotton production has had a positive effect on food security in Mali. Likewise, few farmers rely exclusively on cotton production and most farmers will produce a variety of crops to manage risk and provide for cash revenue as well as food needs. About half of the cotton producers grow less than a ton of cotton.

## Mali Production

After production surpassed one million bales in the two previous marketing years, Mali's cotton production is estimated to have declined about 20 percent in 2006/07 to 802,000 bales. The decline is due to a reduction in area taken by the Malian cotton company (CMDT) and farmers to focus on increasing the percentage of Grade 1 cotton as opposed to focusing on producing for quantity. However, yields were also very poor resulting in a significantly smaller crop. Facing the same financial difficulties and uncertainties as Burkina Faso and other cotton producers in the region, area is forecast to decline slightly. The 2007/08 producer price was recently set at 160 CFA/kg. An anticipated and forecast rebound in yield has the potential to increase 2007/08 production to approximately 450,000 tons seed cotton or 825,000 bales.

Mali	2004/2005	2005/06	2006/07	2007/08 f
Hectares (1,000 ha)	533	521	460	450
Seed Cotton (1,000 MT)	590	534	420	428
Yield kg/ha	1,081	1,050	913	950
Lint Cotton (1,000 MT)	248	224	175	180
Bales (1,000 bales)	1,026	1,003	802	825
1 <sup>st</sup> Grade Price (CFA)	210	169	165	160

Note: USDA Official statistics are in '000 bales. 2007/08 figures are an FAS Dakar forecast. \$1=CFA 480

## Mali Biotechnology

Draft biosafety regulations have recently passed through the Counsel of Ministers and will go to the National Assembly for debate. Once adopted, the legislation will allow for field trials to begin. Most stakeholders in Mali acknowledge that they are falling behind their neighbor Burkina Faso with respects to researching and developing agricultural biotechnology.

## Mali Cotton Sector Structure

CMDT is the centerpiece of the Malian cotton industry. As the result of a recent recapitalization, the State maintains approximately 75 percent ownership of CMDT and

DAGRIS retains the other 25 percent. (The State's share increased from 60 percent as there was no private sector participation in the capitalization.) CMDT – which used to provide extensive social and economic services to cotton producing areas – has scaled back its activities to only those directly associated to cotton in recent years. CMDT remains vertically integrated, however and provides farmers seed to market services. Farmers are currently organized in village producer associations which form a national producers' union. There is a good link between producers and CMDT on production and logistical issues; however the farmers remain isolated from key financial management aspects of the cotton sector. CMDT develops and distributes cottonseed for planting, finances, procures and distributes fertilizer and pesticide inputs, coordinates the collection and purchase of seed cotton in villages, and gins and exports the cotton lint. Transportation is semi-privatized. CMDT has 17 cotton gins in Mali, some of which may not operate at full capacity due to maintenance problems. CMDT negotiates the financing of input procurement and cotton purchases with a pool of banks and sells the cotton through COPACO – a subsidiary of DAGRIS - which is their agent in France. The cost of production for 2006/07 is estimated at 720-750 CFA/kg of lint, which represents a loss of about 100 CFA/kg of lint for the most recent season. Note: Specific details on the structure of these costs are limited so comparison to estimates provided for other countries in the region is difficult.

The Institute of Rural Economics (IER) located in the Ministry of Rural Development coordinates with CMDT on cotton research issues. Current priorities are seed variety research, pest analysis and work on soil fertility to address the problem of declining yields. In addition to CMDT, the *Office de la Haute Vallée du Niger* (OHVN) controls cotton production in a small region; however, OHVN does not control any gins and coordinates ginning with CMDT. HUICOMA, which is the only oilseed processing company in Mali, was recently privatized.

The World Bank initiated a program to support and promote the privatization of CMDT in 2001 after years of structural and financial problems plagued the cotton company. This resulted in the creation of the Reconstruction Mission of the Cotton Sector (MRSC) which coordinates privatization reform. Significant progress has been made in recent years. In October 2006 the Council of Ministers adopted an operational plan, and it is expected that by 2008 four cotton companies will be created in distinct zones. Private interests are expected to control 61 percent, producers 20 percent, the state 17 percent with the remaining 2 percent to be held by workers in the mills. Farmers will be organized into legal cooperatives and are expected to benefit from training intended to broaden their skills with respects to production management. There are not expected to be any layoffs of current CMDT personnel. As part of reforms, a new pricing system was introduced which protects the national budget from fluctuations in the cotton sector. In theory, if the world price of cotton falls, the producer price is negotiated downwards. The financial aspects of privatization are significant – annual input demand alone is valued at USD 90 million. The privatization will also create three additional entities; an Inter-professional Cotton Association, a Cotton Classing Office and a Cotton Exchange. Constraints to the development and profitability of the cotton sector remain high input and transportation costs, lack of road and storage infrastructure, lack of rural credit and the ability to classify cotton according to international standards.

### **Mali Pricing Policy**

Domestic prices during the 2005/2006 campaign were set at 160 CFA/kg in the early part of the year, and the final price increased to 169 CFA/kg. Producers decided to contribute 4 CFA/kg of this increase into a stabilization fund (total of approximately \$4.3 million). The EU was also expected to put 5 million Euros into the cotton stabilization fund. The 2006/07 price was announced at 165 CFA/kg for 1st Grade in April 2006 as it was in Burkina Faso. The main difference, however, is that the price has the flexibility to change. In October, the

final producer price remained at 165 CFA/kg. CMDT receives credits from a pool of banks to pay the farmers. The 2007/08 cotton price was announced at 160 CFA/kg. This represents a slight reduction for producers and will lower ginning costs. Still, the likely result will be deficits for CMDT at current world fiber prices.

### **Mali Consumption**

Local cotton consumption represents only about two percent of production. Total ginning capacity is about 9,500 MT of lint, however actual utilization is less than fifty percent. Three spinning and weaving factories currently exist, although they face significant challenges due to high electricity costs and competition in the domestic and international markets from Asia. COMATEX SA is a joint venture Malian and Chinese spinning and weaving plant whose products are primarily destined for the local market. Current consumption of COMATEX is approximately 2,000 MT. BATEXCI-SAU is a Malian owned spinning and weaving plant that is exporting its products. FITINA SA is a spinning company producing for export. Two additional plants are in the planning stages including a spinning and weaving plant (COTEMA SA) and a textile plant (ICOMA SA).

### **Mali Trade**

Approximately 98 percent of Mali's cotton production is exported. COPACO, a French export agency and subsidiary of DAGRIS, handles the majority of exports. Asia remains the dominant destination of cotton exports, with about ten percent of exports going to Europe. Official export statistics are not available.

### **Mali Stocks**

No information on stocks is available.

### **Mali Marketing**

As in the rest of the region, Malian cotton is handpicked and has a relatively good reputation for quality and characteristics. Due to the way cotton is collected and classified in the villages, however, it is often over-classed to avoid conflict, meaning that ginners often pay for premium classed cotton which cannot be sold at a premium on the world market. One of the goals of privatization is to establish a national 'Mali label' to help promote Malian cotton. Helvetas, the Swiss NGO has been working to develop organic production for several seasons, however production is currently only about 400 tons of fiber. Yields are low and farmer adoption is constrained by traditional rotations.

### Benin Background

Benin is a coastal West African Country slightly smaller than Pennsylvania with a population of about 8 million. Benin's location on the Gulf of Guinea (Atlantic) provides a major transportation and trade advantage with respect to the other C-4 countries. Per capita gross national income (GNI – World Bank 2006) in Benin was \$510 in 2005. The economy of Benin remains underdeveloped and dependent on agriculture. Cotton provides the main source of rural cash income for approximately 300,000 producers. Estimates are that the cotton sector directly and indirectly supports the livelihoods of 2.5-3 million people. Average farm size is about 5 hectares of which about 2 ha on average are planted with cotton. Benin ranks third after Burkina Faso and Mali in the C-4 in terms of cotton production. Cotton production accounts for about 4 percent of GDP and roughly 30 percent of official export receipts. Other important cash crops include palm products, peanuts, cashews, pineapples and cocoa. Corn, beans, rice, cassava, yams, and other various tubers are grown for local subsistence.

### Benin Production

Benin has faced two difficult cotton campaigns that have exposed the fragility of the sector's progress towards privatization. The past two cotton campaigns have produced disappointing harvests with repercussions felt throughout the economy and in the government. After a disastrous harvest in 2005/06, Benin is only expected to produce about 240,000 MT of seed cotton in 2006/07 despite pre-season hopes to reach nearly 500,000 MT. The primary problem in recent years has been the lack of timely and effective distribution of inputs and disputes over seed cotton prices. Late planting and the diversion of fertilizers has placed significant pressure on yields in recent years. Severe pest problems followed the pesticide distribution problems contributing to significant yield losses in 2006. In an attempt to prevent further crisis in the sector, the Government of Benin and Ministry of Agriculture is now playing a stronger role. Due to a failure for producers and ginners to agree upon a price in the AIC, the GOB intervened and set the price at 175 CFA/kg in 2006. This price level, which was the highest in the region, has placed additional financial pressure on the public and private ginners. For the 2007/08 campaign, SONAPRA, the state-owned cotton company was awarded the right to import fertilizer and pesticide inputs.

In 2007/08 production is expected to rebound somewhat due to an anticipated increase in area and yield (area and yield are still forecast well below potential due to continuing problems in the sector). This forecast may be optimistic, however as the price of inputs is likely to go up and once again they will be distributed relatively late. As of mid-May, no input or cotton prices have been announced creating an environment of uncertainty. Area is forecast at 250,000 hectares yielding production of approximately 505,000 bales.

Benin	2004/2005	2005/06	2006/07	2007/08 f
<b>Hectares (1,000 ha)</b>	310	200	231	250
<b>Seed Cotton (1,000 MT)</b>	427	190	240	263
<b>Yield kg/ha</b>	1,378	950	1,038	1,050
<b>Lint Cotton (1,000 MT)</b>	180	80	101	110
<b>Bales (1,000 bales)</b>	750	367	462	505
<b>1<sup>st</sup> Grade Price (CFA)</b>	200	170	175	TBD

Note: USDA Official statistics are in '000 bales. 2007/08 figures are an FAS Dakar forecast. \$1=CFA 480

### Benin Cotton Sector Structure

Benin was the first C-4 country to pursue privatization. Before 2000, The National Society for Agricultural Promotion (SONAPRA), a state-owned company, had a monopoly on all cotton related activities. Benin initiated liberalization of the cotton sector with the support of the

IMF and World Bank in the early 1990s as part of their structural adjustment programs. In 1993 the Federation of Cotton Producer Unions (FUPRO) was created as the national organization of cotton producers. At the local level, farmers are organized into Village Groups (GV) or what will be referred to here as village producer groups. The ginning sector was privatized in 1995 followed by the establishment of three private mills. In 1999 a decree was issued liberalizing the import and distribution of inputs and SONAPRA's monopoly to sell cotton ended in 2000. At this stage, reforms led to the creation of three key structures - the Cooperative of Provisioning and Management of Agricultural Inputs (CAGIA), the Central Agency of Securitization of the Payments and Recovery (CSPR), and the Inter-professional Cotton Association (AIC). CAGIA tenders for input suppliers based on requirements submitted by village producer groups. CSPR oversees the financial credits and payments made between village producer groups, input distributors and gins. The AIC is something of an umbrella organization that is composed of producer groups, ginners and input distributors. (In addition to FUPRO, the village producer groups have organized additional producer organizations which have representation at the AIC.) AIC was created to coordinate decisions and promote development in the cotton sector. The AIC promotes cotton research, coordinates activities of all stakeholders in the sector and acts as a counterpart to the government. The AIC, which considers itself to be a private entity, helps determine the amount of cotton grown, the type and quantity of fertilizer used and the distribution of the seed cotton to the various mills for ginning. Seed cotton prices are normally negotiated between producers and ginners with AIC acting as a facilitator. For mills to be eligible to receive seed cotton, they must pay 40 percent of the price up front and the remaining 60 percent once the cotton is contracted for export.

Several problems have resulted from this system which is still vertically integrated offering farmers limited options for purchasing inputs and selling cotton. In 2005, reportedly one ginning company contracted directly with farmers, circumventing the system and resulting in mill defaults for seed cotton and farmer defaults on input credits owed to other ginning companies. During the most recent campaign, there was a delay to secure necessary bank credits to import key pesticides and inputs. The distribution of seed cotton to be ginned between SONAPRA and the private mills is another common area of contention. As a result of these problems, the government has been more interventionist in the sector. In 2005 it paid arrears owed cotton farmers by private and public ginning factories to reinvigorate production. In the 2007 budget, it made provisions exonerating payment of customs duties on all agricultural equipment. Further, the Ministry of Agriculture blocked the bidding process for inputs for the 2007/08 season two times after they were released by the Commission of Cotton Inputs as part of the AIC. The effect was to give more control to the state-controlled company SONAPRA for the importations. The net effect on the process of privatization remains to be seen.

SONAPRA owns 10 mills with a capacity of approximately 300,000 MT. Since ginning was privatized, six private sector companies have constructed 8 mills with a capacity of approximately 275,000 MT. As production has been on the decline for the past two years, there is significant overcapacity in the ginning sector. Privatization of the existing SONAPRA mills was supposed to continue after the 2006/07 campaign with the state, workers and farmers owning 45 percent of the mills and the private sector owning 55 percent – this process appears to have stalled.

Cotton research is coordinated by the Center for Agricultural Research for Cotton and Fibers (CRACF).

**Benin Consumption**

Benin has approximately 7,000 tons of spinning capacity of which only about 2,000 MT is in use. Benin also has two textile factories and two oil mills.

**Benin Trade**

Due to low domestic consumption, approximately 98 percent of Benin's cotton production is exported. Asia remains the dominant destination of cotton exports, with about ten percent of exports going to Europe. Nigeria is also an important importer.

**Benin Stocks**

No stock data is available.

**Benin Biotechnology**

In 2002 Benin declared a five-year moratorium on the research and development of agricultural biotechnology. CRACF would be the appropriate institution to initiate a request to begin research.

## Chad Background

Chad is a landlocked country south of Libya about three times the size of California. With desert in the north, the population of about 8 million lives predominantly in the southern portion of the country. Chad's remoteness, its inadequate infrastructure, its recent history of war, drought and famine make it one of the poorest nations of the world with per capita income (GNI – World Bank 2006) of \$400. Over 80 percent of Chad's population relies on subsistence farming and raising livestock for its livelihood. Cotton, cattle, and gum arabic provide the bulk of Chad's non-oil export earnings. Cotton is grown by about 250,000 farm households and the sector supports the livelihood of about 2.5 million people. Chad became an oil-producing nation in 2003 with the completion of a pipeline linking its oilfields to terminals on the Atlantic coast. Chad began to export oil in 2004, greatly increasing its export figures and reducing the share of cotton exports as a share of export revenue.

## Chad Production

The cotton sector in Chad is facing significant structural and financial problems. Production declined for the third consecutive year in 2006/07. The 2006/07 campaign started very late due to the late delivery of inputs – many of which were then sold by farmers for cash. This is reflected in extremely poor yields which are already the lowest in the C-4 region. Despite its financial problems, CotonTchad was able to finance the crop purchase and inputs for the 2007/08 season. There are still reports of farmers not getting paid, or farmers getting paid a lower price. Transportation logistics are slow and expensive as all imported inputs and exported cotton pass by truck and rail via the port in Cameroon. The 2007/08 producer price is expected to be announced at about 160 CFA/kg which reflects the maintenance of the status quo. Deficits will be the result, and they will likely be financed by the treasury. Unlike the other C-4 cotton producers, producer organizations are quite weak; there is virtually no research and no farmer extension. Due to the absence of stakeholder empowerment, which is organized in an inter-professional association in the other cotton producing countries, unilateral control over the sector remains in the hands of CotonTchad. In this environment of uncertainty, farmers will likely shift away from cotton production. The reform of CotonTchad, as elaborated in a 2005 privatization 'road map', is not moving forward.

Assuming a slight reduction in area and no improvement in yields, production in 2007/08 is forecast at approximately 147,000 MT seed cotton or 275,000 bales. Cotton production in Chad has the lowest yields of production in the Central and West Africa region and is also disadvantaged by poor roads and expensive transportation options. About half of cotton transportation is privatized.

Chad	2004/2005	2005/06	2006/07	2007/08 f
<b>Hectares (1,000 ha)</b>	273	315	295	285
<b>Seed Cotton (1,000 MT)</b>	191	182	152	147
<b>Yield kg/ha</b>	709	578	515	515
<b>Lint Cotton (1,000 MT)</b>	73	73	62	60
<b>Bales (1,000 bales)</b>	334	335	285	275
<b>1<sup>st</sup> Grade Price (CFA) *</b>	190	160	160	TBD

Note: USDA Official statistics are in '000 bales. 2007/08 figures are an FAS Dakar forecast. \$1=CFA 480

## Chad Cotton Sector Structure

CotonTchad was created in 1971 and capital is split among the state (75%), DAGRIS (19%) and a group of local banks (6%). CotonTchad provides farmers seeds and all other inputs on credit, purchases and collects the seed cotton, gins the cotton and exports the fiber. Structural and financial problems continue to disrupt ginning operations in CotonTchad's nine

mills. Cotton is grown in Chad's southern region, which faces significant transportation obstacles and is clearly the most isolated from world markets relative to other C-4 producers. With the support of the World Bank, in 1999 the government established the Cotton Sector Reform Committee (CTRC) to help guide a reform process. In 2005 the government agreed to a road map for privatization for 2006-2008 and set up a technical committee to analyze various privatization options. However, the privatization appears to be at a standstill. Producers are organized into village associations while extension services are traditionally supplied by the Public Extension Service Agency (ONDR). However, due to a lack of funds, little to no training or extension work actually takes place. While Chad has recently become an oil exporting country, the government is also occupied with security concerns on several fronts. Meanwhile, serious progress on privatization has yet to occur. CotonTchad also runs an oil and soap mill in the southern city of Moundou. The soap mill is currently not running as it is in need of rehabilitation. The oil mill is also in need of investment; CotonTchad produced approximately 6,000 MT of cottonseed oil in 2006 which is just under fifty percent of its capacity. The cottonseed meal is sold to local livestock producers. The ginning facility in Moundou also has an HVI machine (that is currently out of order) and a training gin.

### **Chad Consumption**

Chad has no spinning or textile mills. There is a small level of artisanal textile production.

### **Chad Trade**

No official export data by destination are available. CotonTchad officials indicate that the majority of exports are destined for Asia (about 60% to China). All exports depart Chad via truck to the rail-head in Cameroon where they are shipped by train to the port.

### **Stocks**

No official stock data are available.

## Senegal Background

Senegal is slightly smaller than South Dakota and is located on the extreme western coast of West Africa, with a population of approximately 12 million. Per capita gross national income (GNI – World Bank 2006) in Senegal was \$710 in 2005. Approximately 75 percent of the population is involved in agriculture – much of which is subsistence production. Peanuts remain the primary cash crop. Senegal's cotton production is rain-fed and remains relatively low compared to the other West African cotton producing countries such as Benin, Cote d'Ivoire, Mali, and Burkina Faso.

## Senegal Production

Senegal reached a record production of 52,000 MT seed cotton in 2006/07 up from 47,000 MT in 2005/06. The average yield estimated at 1,195 kg/ha, the highest in the past fifteen years and is also highest in the region. The average ginning rate also increased to 42%. This increase in production has been achieved despite erratic and late rainfall in the main cotton producing regions and the late distribution of inputs resulting from the financial crisis in the main local fertilizer company ICS, which prompted SODEFITEX to import fertilizers for farmers.

For the 2006/07 growing season, the price was set at 180 CFA/kg, down from 195 CFA/kg in 2005/06. Because of this decrease in the price, average revenue per hectare is down from CFA 166,000 to CFA 132,000. In order to invert farmers' income loss, SODEFITEX has engaged in a crop diversification program with the objective of providing farmers with other opportunities to raise their income.

Post estimates that 2007/08 production will likely decrease with the implementation of the diversification policy and expected decrease in price.

Senegal	2004/2005	2005/06	2006/07	2007/08 f
<b>Hectares (1,000 ha)</b>	44	40	44	43
<b>Seed Cotton (1,000 MT)</b>	40	47	52	50
<b>Yield kg/ha</b>	911	1177	1195	1163
<b>Lint Cotton (1,000 MT)</b>	17	19	22	21
<b>Bales (1,000 bales)</b>	78	87	101	96
<b>1<sup>st</sup> Grade Price (CFA)</b>	200	195	180	?

Note: USDA Official statistics are in '000 bales. 2007/08 figures are an FAS Dakar forecast. \$1=CFA 480

## Senegal Cotton Sector Structure

Senegal's cotton sector is controlled by the former parastatal SODEFITEX. The company was privatized in November 2003 with most of the shares held by the French company DAGRIS (51%), and the rest by cotton farmers (30%), the Government (10%) and the spinners (8%). The company works and provides technical and financial assistance to about 80,000 cotton farmers, who in return sell their produce to the company. SODEFITEX procures seeds, fertilizers and pesticides, and is responsible for securing prices to producers through its marketing channels and operations. This production-marketing system is supported by the government, which provides additional subsidies in support to the distribution of inputs and for price control.

SODEFITEX processes the seed cotton into fiber at five ginning units, which have a total capacity of 65,000 tons of seed cotton. SODEFITEX also has a cotton seed production unit

with a capacity of 1,200 tons. In 2005, the company was awarded the certification ISO 9001 (2000 version) for the purchase, transportation, ginning of seed cotton; the production and marketing of cotton fiber, seed cotton and cotton seeds.

While Senegal hopes to increase yields by improving production systems through irrigation and mechanization, SODEFITEX will also work on the diversification of production in the cotton belt area by promoting other produce such as grains, sunflower and dairy products.

### **Cote d'Ivoire Background and Production**

Cotton is produced on approximately 250,000 traditional farms and supports about one million people in the northern half of the country. Due to Cote d'Ivoire's relative diversity of cash crop production (including coffee and cocoa) cotton only accounts for 5 to 10 percent of export revenue. In addition to the well-documented endogenous and exogenous problems faced by other West African Producers, nearly five years of civil conflict that divided the country have taken a toll. Between 2002 and 2006 farmers accumulated large debts to ginning companies which provided the farmers inputs on credit to be deducted from their cotton production. Reportedly only a fraction of the cotton was turned over to the mills resulting in arrears of over 50 million dollars. The resulting financial crisis for the ginning companies delayed subsequent provision of inputs and resulted in a lower production estimate for 2006/07. The European Union recently announced it would provide 9.4 billion CFA (approximately 20 million USD) to help resolve producer debts to revitalize the sector. Meanwhile, the Ouagadougou Peace Accord and subsequent dismantling of the buffer zone dividing what was formerly the rebel north from the government held south leaves most observers cautiously optimistic. FAS Dakar will provide more complete reporting on the cotton and agricultural situation in Cote d'Ivoire as the country stabilizes.

## Burkina Faso PSD Table

Burkina Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
Market Year Begin		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
Area Planted	0	0	0	0	0	0	0	0	0	(HECTARES)
Area Harvested	630	0	630	700	0	700	0	0	630	(HECTARES)
Beginning Stocks	397	0	397	343	0	360	364	0		1000 480 lb. Bales
Production	1350	0	1367	1375	0	1283	0	0	1214	1000 480 lb. Bales
Imports	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
MY Imports from U.S.	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Supply	1747	0	1764	1718	0	1643	364	0	1503	1000 480 lb. Bales
Exports	1400	0	1400	1350	0	1350	0	0	1350	1000 480 lb. Bales
Use	4	0	4	4	0	4	0	0	4	1000 480 lb. Bales
Loss	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Dom. Cons.	4	0	4	4	0	4	0	0	4	1000 480 lb. Bales
Ending Stocks	343	0	360	364	0	289	0	0	149	1000 480 lb. Bales
Total Distribution	1747	0	1764	1718	0	1643	0	0	1503	1000 480 lb. Bales
Stock to Use %	24.4302	0	25.64103	26.88331	0	21.34417	0	0	11.00443	(PERCENT)
Yield	467	0	472	428	0	399	0	0	420	(KG/HA)

## Mali PSD Table

Mali Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
Market Year Begin		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
Area Planted	0	0	0	0	0	0	0	0	0	(HECTARES)
Area Harvested	560	0	521	460	0	460	0	0	450	(HECTARES)
Beginning Stocks	313	0	313	271	0	278	198	0	222	1000 480 lb. Bales
Production	1003	0	1003	875	0	802	0	0	825	1000 480 lb. Bales
Imports	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
MY Imports from U.S.	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Supply	1316	0	1316	1146	0	1080	198	0	1047	1000 480 lb. Bales
Exports	1025	0	1018	925	0	835	0	0	850	1000 480 lb. Bales
Use	20	0	20	23	0	23	0	0	23	1000 480 lb. Bales
Loss	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Dom. Cons.	20	0	20	23	0	23	0	0	23	1000 480 lb. Bales
Ending Stocks	271	0	278	198	0	222	0	0	174	1000 480 lb. Bales
Total Distribution	1316	0	1316	1146	0	1080	0	0	1047	1000 480 lb. Bales
Stock to Use %	25.93301	0	26.78227	20.88608	0	25.87413	0	0	19.93127	(PERCENT)
Yield	390	0	419	414	0	380	0	0	399	(KG/HA)

## Benin PSD Table

Benin Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
Market Year Begin		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
Area Planted	0	0	0	0	0	0	0	0	0	(HECTARES)
Area Harvested	200	0	200	285	0	231	0	0	250	(HECTARES)
Beginning Stocks	301	0	301	183	0	183	173	0	135	1000 480 lb. Bales
Production	367	0	367	500	0	462	0	0	505	1000 480 lb. Bales
Imports	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
MY Imports from U.S.	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Supply	668	0	668	683	0	645	173	0	593	1000 480 lb. Bales
Exports	475	0	475	500	0	500	0	0	500	1000 480 lb. Bales
Use	10	0	10	10	0	10	0	0	10	1000 480 lb. Bales
Loss	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Dom. Cons.	10	0	10	10	0	10	0	0	10	1000 480 lb. Bales
Ending Stocks	183	0	183	173	0	135	0	0	130	1000 480 lb. Bales
Total Distribution	668	0	668	683	0	645	0	0	593	1000 480 lb. Bales
Stock to Use %	37.73196	0	37.73196	33.92157	0	26.47059	0	0	5.892857	(PERCENT)
Yield	400	0	400	382	0	353	0	0	399	(KG/HA)

## Chad PSD Table

Chad Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
Market Year Begin		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
Area Planted	0	0	0	0	0	0	0	0	0	(HECTARES)
Area Harvested	350	0	315	350	0	295	0	0	300	(HECTARES)
Beginning Stocks	123	0	123	108	0	108	93	0	78	1000 480 lb. Bales
Production	325	0	335	325	0	285	0	0	285	1000 480 lb. Bales
Imports	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
MY Imports from U.S.	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Supply	448	0	458	433	0	393	93	0	338	1000 480 lb. Bales
Exports	325	0	335	325	0	300	0	0	275	1000 480 lb. Bales
Use	15	0	15	15	0	15	0	0	15	1000 480 lb. Bales
Loss	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Dom. Cons.	15	0	15	15	0	15	0	0	15	1000 480 lb. Bales
Ending Stocks	108	0	108	93	0	78	0	0	73	1000 480 lb. Bales
Total Distribution	448	0	458	433	0	393	0	0	338	1000 480 lb. Bales
Stock to Use %	31.76471	0	30.85714	27.35294	0	24.7619	0	0	16.55172	(PERCENT)
Yield	202	0	232	202	0	210	0	0	206	(KG/HA)

## Senegal PSD Table

Senegal Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
Market Year Begin		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
Area Planted	0	0	0	0	0	0	0	0	0	(HECTARES)
Area Harvested	40	350	40	40	350	44	0	0	43	(HECTARES)
Beginning Stocks	36	123	36	29	108	37	29	93	47	1000 480 lb. Bales
Production	78	325	90	80	285	100	0	0	96	1000 480 lb. Bales
Imports	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
MY Imports from U.S.	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Supply	114	448	122	109	393	137	29	93	143	1000 480 lb. Bales
Exports	65	325	65	60	285	70	0	0	75	1000 480 lb. Bales
Use	20	15	20	20	15	20	0	0	20	1000 480 lb. Bales
Loss	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
Total Dom. Cons.	20	15	20	20	15	20	0	0	20	1000 480 lb. Bales
Ending Stocks	29	108	41	29	93	51	0	0	52	1000 480 lb. Bales
Total Distribution	114	448	122	109	393	137	0	0	143	1000 480 lb. Bales
Stock to Use %	34.11765	31.76471	43.52941	36.25	31	52.22222	0	0	50.52632	(PERCENT)
Yield	425	202	468	435	177	495	0	0	486	(KG/HA)

## Cote d'Ivoire PSD Table

Cote d'Ivoire Cotton										
	2005	Revised		2006	Estimate		2007	Forecast		UOM
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	
<b>Market Year Begin</b>		08/2005	08/2005		08/2006	08/2006		08/2007	08/2007	MM/YYYY
<b>Area Planted</b>	0	280	0	0	0	0	0	0	0	(HECTARES)
<b>Area Harvested</b>	265	280	265	225	0	225	0	0	265	(HECTARES)
<b>Beginning Stocks</b>	398	154	398	323	36	323	248	0	248	1000 480 lb. Bales
<b>Production</b>	500	574	500	325	0	285	0	0	325	1000 480 lb. Bales
<b>Imports</b>	0	2	0	0	0	0	0	0	0	1000 480 lb. Bales
<b>MY Imports from U.S.</b>	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
<b>Total Supply</b>	898	730	898	648	36	648	248	0	573	1000 480 lb. Bales
<b>Exports</b>	525	643	525	350	0	350	0	0	350	1000 480 lb. Bales
<b>Use</b>	50	51	50	50	0	50	0	0	50	1000 480 lb. Bales
<b>Loss</b>	0	0	0	0	0	0	0	0	0	1000 480 lb. Bales
<b>Total Dom. Cons.</b>	50	51	50	50	0	50	0	0	50	1000 480 lb. Bales
<b>Ending Stocks</b>	323	36	323	248	0	248	0	0	198	1000 480 lb. Bales
<b>Total Distribution</b>	898	730	898	648	0	648	0	0	573	1000 480 lb. Bales
<b>Stock to Use %</b>	56.17391	5.18732	56.17391	62	0	62	0	0	43.25	(PERCENT)
<b>Yield</b>	411	446	411	314	0	314	0	0	267	(KG/HA)