



Department of Economics

BACHELOR THESIS 15 ECTS

January 28, 2010

# **Structure, Reforms and Performance of the Ugandan Cotton Sector**



**Hanna Nilsson**

Advisor: Yves Bourdet  
Associate Professor

## **Table of contents**

1. Introduction	p. 7
1.2 Market Structure and Level of Integration	p. 8
1.3 Methodology	p. 9
1.3.1 Indicators and Outline of the Thesis	p. 10
2. Cotton and the World Cotton Market	p. 11
2.1 Genetically Modified Cotton	p. 11
2.2 World Market	p. 12
2.2.1 Production	p. 13
2.2.2 Demand	p. 13
2.2.3 Prices	p. 14
3. The Ugandan Cotton Sector	p. 16
3.1 Organic Cotton	p. 17
3.2 History	p. 18
3.2.1 After Independence	p. 18
3.3 Reforms	p. 21
3.3.1 Liberalization	p. 22
3.3.2 Ginnery Restructuring	p. 24
4. Evaluating Reforms of the Cotton Sector	p. 25
4.1 Production	p. 26
4.1.1 Input and Extensions	p. 28
4.1.2 Yields	p. 29
4.1.3 Value Adding Activities	p. 30
4.2 Quality	p. 31
4.3 Transport	p. 32
4.4 Poverty	p. 33
4.4.1 Producer Price	p. 34
4.4.2 Credit Accessibility	p. 35
4.4.3 Producer Organization	p. 36
4.5 Concluding Remarks	p. 37

5. Views, Issues and Suggestions	p. 38
5.1 Perception of the Actors	p. 38
5.1.1 IFAD and the CDO	p. 38
5.1.2 Producers	p. 38
5.1.3 Ginneries	p. 39
5.1.4 Other Stakeholders	p. 40
5.2 A Way Forward	p. 40
5.2.1 Eliminating Middlemen	p. 41
5.2.2 The Cotton Development Fund	p. 41
5.2.3 Farmer Organization	p. 41
5.2.4 Advances in Technology and Infrastructure	p. 42
5.3 Issues That Occurred During the Study	p. 42
6. Summary and Conclusions	p. 43
6.1 Sector Performance	p. 43
6.2 Cotton Farmers' Financial Situation	p. 43
6.3 Issues that Remain to Be Addressed	p. 44

## References

## Abbreviations

AGOA	African Growth and Opportunity Act
BPA	Bukalasa Pedigree Albar
CDO	Cotton Development Organization
CRI	Cotton Research Institute
CSDP	Cotton Sub-sector Development Project
GoU	Government of Uganda
ICAC	International Cotton Advisory Committee
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
LMB	Lint Marketing Board
LRA	Lord's Resistance Army
NAADS	National Agricultural Advisory Service Program
OECD	Organization for Economic Co-operation and Development
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernization of Agriculture
PIRT	Presidential Investment Roundtable Forum
SAP	Stabilization and Structural Adjustment Program
SCRIP	Smallholders Cotton Rehabilitation Project
Sida	Swedish Development Cooperation Agency
SSA	Sub-Saharan Africa
UGCEA	Uganda Ginners and Cotton Exporters Association
UIA	Uganda Investment Authority
WTO	World Trade Organization

## **Figures and Tables**

Figure 2.1: World Supply and Use	p. 12
Figure 2.2: Monthly Cotton Prices	p. 15
Figure 3.1: Global Demand for Organic Cotton	p. 18
Figure 3.2: Ugandan Cotton Sector Prior to Reforms	p. 20
Figure 3.3: Ugandan Cotton Sector after Reforms	p. 24
Figure 4.1: Cotton Production in Uganda	p. 27
Figure 4.2: Cotton Yields	p. 29
Table 4.1: Producer Share of FOT Lint Price	p. 35

## Abstract

Uganda has fertile soils and climatic conditions well suited for cotton production. The country has a competitive advantage in the good intrinsic quality of its cotton, the cheap labour and the fact that cotton is handpicked. There is a ready market for the cotton once it is harvested and there are many areas of use, such as textile, medical supplies, cooking oil, soap and animal feed. In spite of those favorable circumstances, the Ugandan cotton sector is struggling with low productivity and profitability. The majority of the cotton producers in Uganda belong to low income households and enhancing the performance of the cotton sector could substantially improve their financial situation.

Cotton production in Uganda flourished in the beginning of the last century. With independence in the early 1960s, the parastatal company Lint Marketing Board (LMB) was created to buy and export cotton. The LMB had monopsony power, meaning that there was virtually no competition in the Ugandan cotton sector, which deteriorated its performance. To remedy this, the cotton sector was liberalized in 1994, which led to increased competition, but diminished incentives for coordination. As a result, the areas of input supply and extension services are worse off compared to before the reforms; quality has deteriorated and contamination is a big problem. The lack of coordination has also had a negative impact on transport from farmer to ginnery and credit accessibility is practically nonexistent.

One of the major achievements is the increase in producers' share of revenue and the fact that farmers now get cash for crops. Poverty still persists, though, partly due to the low and volatile world market price, but also because of the sector's disappointing performance. Productivity has gone up since liberalization, but Uganda still lags significantly behind the rest of the world. Improved inputs, especially the introduction of genetically modified cotton, and better farming techniques could increase yields and thus improve the competitiveness of Ugandan cotton. A farmers' organization could also augment productivity, as it would promote larger scale production. Furthermore, it would give them more leverage and political voice.

## 1. Introduction

Uganda offers very good natural conditions for cotton growing and also has a competitive advantage in its cheap labour and the fact the cotton is picked by hand. History has shown that the Ugandan cotton sector can contribute significantly to the national economy, but today there seem to be issues hampering its performance. When production in Uganda was at its peak in the 1960's the country was the largest cotton producer in Sub-Saharan Africa (SSA) and cotton accounted for 40 percent of the country's export earnings (Uganda Investment Authority 2009). Today it is not even among the top ten cotton producers in SSA and cotton's share of export earnings is down to a few percent (Opolot & Kuteesa 2006).

Even if the current figures seem modest, they have been worse. By the end of the 1980's, production was at an all time low and the Ugandan cotton sector was practically ruined. At that time, one company had the exclusive right to buy and export cotton. In 1994, reforms were made to revive the once so prosperous sector; the market was liberalized and ginneries restructured.

Cotton is a smallholder cash crop and most cotton farmers belong to low income households. The ultimate aim of the reforms was to improve the performance of the Ugandan cotton sector and increase the revenue of cotton farmers and other actors. If this succeeded, it would most likely reduce poverty; higher income for farmers has a direct effect and higher revenues to the government could reduce poverty in the long term, if used appropriately. Given these circumstances, the successful reformation of the Ugandan cotton sector ought to be a priority. In order to properly accomplish the measures taken in the mid-1990s, the outcome of the reforms needs to be thoroughly analyzed. There are previous studies on this subject, but few, if any, of them include perceptions of the main stakeholders – the cotton farmers. Those are the ones supposed to ultimately benefit from the reforms and their views are therefore important, even if they by definition are subjective.

The purpose of this study is to examine the structure of the Ugandan cotton sector and the outcome of the reforms. It is also to present the challenges that the Ugandan cotton sector is facing today and to discuss possible solutions. The main questions used in the study to attain this purpose are:

- Have the reforms improved the performance of the sector?
- Have the reforms improved the financial situation for cotton farmers?
- What issues remain to be addressed?

## **1.2 Market Structure and Level of Integration**

A company with monopsony power is a company that is alone in buying a good on a market. The other extreme is a market with perfect competition. The two extremes are primarily theoretical concepts and analytical tools to relate different market structures to. Between the two, markets with various degrees of competition can be fitted. The underlying assumption is that more competition increases efficiency<sup>1</sup>.

A way of analyzing market structures is to discuss their level of integration. Vertical integration is when a company takes control over other links in the value chain, by for example buying a company that supplies inputs. In doing this, the company can decrease transaction costs, avoid conflict, ensure timely inputs etcetera. The drawback, given the above stated assumption, is that it limits competition.

Cotton farmers depend on timely inputs, but often lack means to purchase them without credit. The solution to this has typically been that the party who wants to buy cotton (also called seed cotton) supplies the inputs on credit and then deducts it from the purchasing price. This system is called contract farming or outgrower schemes and is arguably a form of vertical integration.

---

<sup>1</sup> For more information on the move from one market structure to another, regarding cotton producers in Eastern and Southern Africa, see Tschirley et al. 2009.



### 1.3 Methodology

Previous research on the subject has been very helpful in giving background information and creating a foundation for this study. Case studies of the Ugandan cotton sector, performed by the World Bank, have inspired the structure of the analysis (Baffes 2009, Tschirley et al. 2009). The first hand material was gathered during a six-week long field study in Uganda, financed by the Swedish International Development Cooperation Agency (Sida). There are potential difficulties arising from doing a field study in a country such as Uganda. People, who are struggling financially, might think it would benefit them to make their situation sound worse than it is. Data and statistics are sometimes unreliable or missing altogether.

The use of interviews also has its shortcomings. The interviewees offer a subjective view and their statements can be influenced by ulterior motives. However, in combination with observations, interviews allow the actors to present a picture of what their situation is like. Alone, this is not enough to base an analysis on, but when contrasted with data and statistics it gives a fuller image of reality.

Throughout the study the interviews were semi-structured; the farmers were asked questions about the particulars of their activity – how the input supply works, if there are any extension services, whether they can get credit etcetera – but they also spoke freely about their situation and issues they wanted to highlight. The questionnaire was designed to capture how the actors perceive the functioning and performance of the cotton sector. The interviews were conducted in Amuru, Gulu, Kitgum and Lira in the North, Jinja and Kampala in the central parts of the country and Kasese in the West. These are all major cotton producing areas except for Kampala where government employees, NGO and union workers were interviewed. Due to the specific traits of the Ugandan context, the selection of interviewees was made spontaneously on site. It might be possible to make a selection based on registered production, but to locate those farmers in the field would most likely pose great difficulties. The majority of the interviewees were small scale farmers. Discussion groups were used twice with 16 to 20 farmers in each group. An interpreter was used for all the interviews with farmers.

There is always the possibility that something gets lost in translation, but the fact that many of the farmers spoke at least some English reduced the risk.

### **1.3.1 Indicators and Outline of the Thesis**

The Ugandan cotton sector prior to reforms was integrated to a great extent. In relation to the above mentioned scale, reforms were made with the intention to move from the integrated system to a more competitive one, in order to increase both efficiency and profitability. The ultimate goal of the reforms was to improve performance of the cotton sector, its profitability and through that reduce poverty of cotton farmers. To evaluate the outcome, the analysis will be performed based on the impact the reforms have had on cotton production, cotton quality, transport and poverty, because these indicators permit us to assess the overall performance of the cotton sector. To facilitate the evaluation, the main indicators have several sub-categories that are the central to sector performance. Where data is available it is used to measure outcome and support the analysis. Otherwise the examination is based on previous research, interviews, observation and reasoning along the lines of the theory. It would have been optimal to be able to back every part of the analysis with statistics, but that is beyond the scope of this study.

To facilitate the understanding of the cotton market, section two offers some background information on cotton and the supply and demand on the world market. World market prices will also be examined to give a brief view of the larger framework. In section three, the field narrows to encompass only the Ugandan cotton sector. The evaluation in section four contains the results and analysis. To keep the stakeholders' views apart from the analysis, they are presented in the discussion in section five.

## 2. Cotton and the World Cotton Market

Cotton is a smallholder cash crop that supports the livelihoods of millions of poor rural households. It can be used for many things; apart from fabric and textiles, the lint (harvested cotton that has been separated from the seed) can be turned into cotton wool that is used to make different medical supplies and other commodities. The cotton seeds that are not replanted are processed in an oil mill. The oil from the seed is then used to make cooking oil, soap and animal feed. These processes increase the value of the cotton seeds and are referred to as valorization<sup>2</sup>.

The quality of cotton seeds define the limits of what can be achieved in terms of productivity and quality throughout the entire production process, because of its impact on yields, ginning ratios (how much lint that can be obtained from seed cotton) and fibre characteristics. Cotton wool clusters together and the clusters are called staple. Length and strength are determinants of quality. There are different categories of cotton based on staple length; the longer staple length, the finer the cotton. Egypt grows some of the finest cotton in the world with exceptionally long staple lengths. Micronaire (how much an inch of fibre length weighs) is also an important indicator of cotton quality<sup>3</sup>.

### 2.1 Genetically Modified Cotton

Genetically modified cotton has several advantages; in effect the cotton farmers who use genetically modified cotton buy insurance against pests when buying cotton seed. This is especially beneficial to the farmers in developing countries who otherwise would use potentially harmful spray pumps more frequently. Productivity and yields associated with modified cotton are also typically higher.

There are two kinds of genetically modified (GM) cotton: B<sub>t</sub> and herbicide tolerant cotton. B<sub>t</sub> has been prepared so that it is toxic to the pests without the farmers having to spray it. The herbicide tolerant cotton is modified to withstand an herbicide that would kill an ordinary cotton plant.

---

<sup>2</sup> For more general information on cotton and the world market, see ICAC 2005.

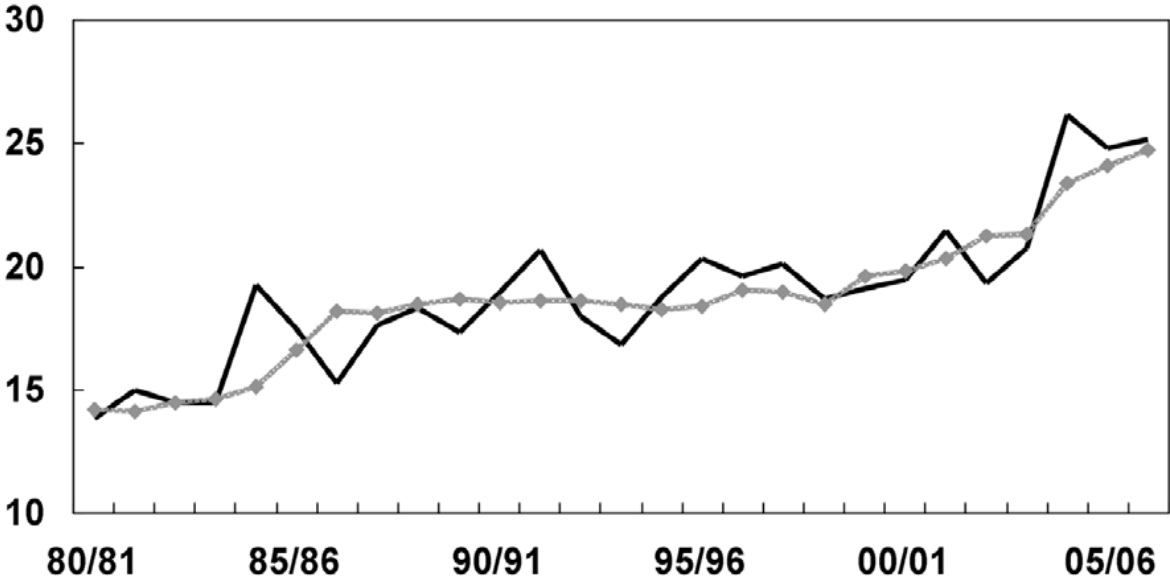
<sup>3</sup> For more information on cotton quality, see Estur 2008.

Countries that have introduced GM cotton are Argentina, Australia, China, Colombia, India, Mexico, South Africa and USA. As of 2005 Brazil, Burkina Faso, Israel, Pakistan and Turkey were still at a trial stage (ICAC 2005).

### 2.2 World Market

Figure 2.1 shows global demand and supply of cotton. The demand is slowly, but steadily rising, while supply tends to fluctuate. This can be an effect of farmers' tendency to base their production decision on the outcome of the previous year. If supply exceeds demand the price of cotton decreases, discouraging farmers from growing cotton the following year. This would reduce production and, all else equal, lead to a higher price. The higher price might attract more farmers to go in to cotton growing and supply would be expected rise once again.

Figure 2.1: World Supply and Use (million tons)



Note: Black line is production, grey dotted line is consumption.

Source: ICAC 2005

### **2.2.1 Production**

The last fifty years have seen a major growth in cotton production, the bulk of which has been in the developing world. Production in China and India grew the most; it has in fact quadrupled since 1960, and the two countries now account for almost 45 percent of world cotton production (ICAC 2005). Other important cotton growing countries are the United States, Pakistan, Brazil and Uzbekistan.

The shift in cotton production to developing countries, primarily in Asia, can be explained by their competitive advantage in the form of cheap labour and the fact that the cotton is handpicked. Furthermore, much of the value adding activities, such as textile industries, has moved to those developing countries for the same reason, making it rational to also grow cotton there. The cotton producing countries in Africa enjoy the same advantage of cheap labour and manual picking, but lag behind regarding productivity and technology.

### **2.2.2 Demand**

The absolute demand for cotton has risen from 7.6 million tons in 1950 to 56 million tons in 2004 (Estur 2008), but in relative terms the situation is quite different. In 1960 cotton accounted for 60 percent of total fibre consumption; in 2005 that figure was down to 40 percent (Tschirley et al. 2009). This decline is an effect of the increasing use of artificial fibres.

The main lint importing countries are Bangladesh, China, Indonesia, Pakistan, Thailand and Turkey. The most important determinant of where the lint ends up is the location of textile factories. Accordingly, when textile production shifted from Europe and USA to low-cost Asian countries, so did cotton imports (Tschirley et al. 2009). The shift was a direct result of the abolition of textile quotas following the end of the Multifibre Agreement that had been present for more than 30 years.

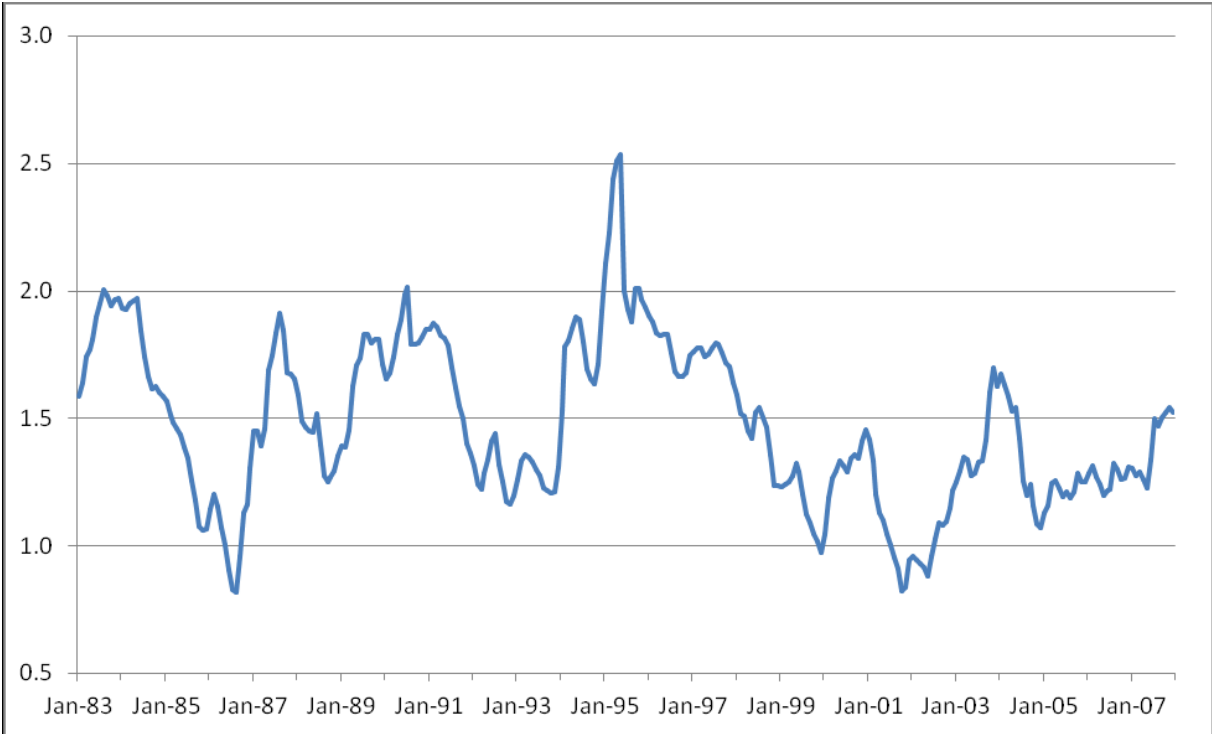
### 2.2.3 Prices

Every week the Cotton Outlook publishes information about the development on the cotton market. A part of this is the Cotlook A Index that shows how the price of standard quality cotton changes. When selling their cotton, exporters can get a premium or a discount relative to the index. Factors that are taken into account are staple length and strength, micronaire and colour, which in turn depend on seed characteristics, farming practices and ginning technology (Estur 2008).

On the world market all individual countries are price takers, meaning that their production decisions cannot affect prices. However, OECD (especially US) and Chinese subsidies affect the world price of cotton lint negatively. To what extent is not easy to establish; conclusions vary between just a few and 30 percent depending on time perspective and method of calculations (Baffes 2005). In 2002 Brazil initiated a process within the World Trade Organization (WTO) claiming losses due to US cotton subsidies. Benin, Burkina Faso, Chad and Mali have also turned to the WTO and are pushing for abolishment of cotton subsidies. As a result the WTO has decided to set up a body called the Cotton Sub Committee to tackle the cotton sector ([www.wto.org](http://www.wto.org)).

Even if they are a curse to other cotton producers, the subsidies are not primarily to blame for the negative trend of cotton lint prices. The continued productivity growth due to improved input, better farming techniques and the use of GM technology has an even bigger impact (ICAC 2005). Figure 2.2 shows the volatility of the world cotton prices.

**Figure 2.2:** Monthly Cotton Prices (A Index, nominal, \$/kilograms)



Source: World Bank, Commodity Price Data (Baffes 2009)

### **3. The Ugandan Cotton Sector**

Most Ugandan cotton farmers are poor. Some 250,000 low income households have cotton as their main source of income. The plots are scattered and small, on average less than 0.5 hectares with an output of 100 kilograms lint cotton per annum (Baffes 2009). The farmers are not organized and almost all farming is individual.

Today the government is responsible for supplying farmers with cotton seeds. It does this through the Cotton Development Organization (CDO), which distributes the cotton seeds to the farmers for free. At this time no GM-technology is used. The cotton variety grown in Uganda is the Bukalasa Pedigree Albar (BPA). Growing only one variety guarantees consistency in quality, but the variety is sensitive to pests and thus requires spraying. It is a high quality, medium staple length variety which is better than the shorter staple length cotton most countries grow. Uganda also has an advantage in soils and climate well suited for growing cotton.

Previously cotton was mainly grown in the central parts of Uganda, but as relative profitability went down other crops took over. Production then moved to the Eastern and Northern parts of the country that today account for about 60 percent of Uganda's total output (Baffes 2009). However, the East is very densely populated and people tend to turn to food crops instead. Northern Uganda was terrorized by the ravages of the Lord's Resistance Army (LRA) for over twenty years. The conflict hampered the region's cotton production as farmers were forced to move to camps and could not cultivate their land. Once they were able to return to their homes, priority was given to growing food crops. It has only been one or two seasons since cotton farming could resume. Since the conflict ended the North probably has had the best potential for producing cotton because it is not crowded and the natural conditions are very good.

The rainy seasons in Uganda are April-May and October-November. Cotton is supposed to be planted in May and harvested in December. If planting is delayed it is likely that the plants do not get enough sun before the rainy season. The weather phenom-



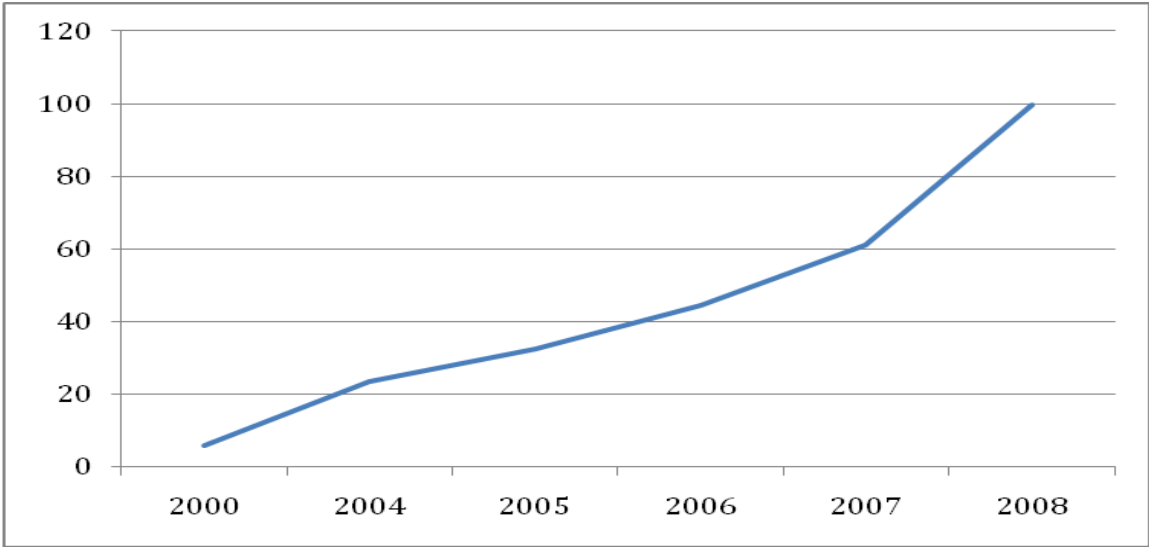
on el Niño causes it to rain heavier than usual every four or five years. The excess rain has an adverse effect on cotton production, which declines during the el Niño years.

The main stakeholders in the Ugandan cotton sector are farmers, ginners, exporters, agents, the government – through the CDO – and the Cotton Research Institute (CRI). There is also the private actor Uganda Ginners and Cotton Exporters Association (UG-CEA). At the ginneries, the lint gets separated from the seeds, cleaned and packed in bales, each weighing about 185 kilograms. The seeds are then sold to the CDO. When the CDO has enough seeds for replanting, the rest is sold to oil mills. More than 90 percent of the Ugandan cotton is exported.

### **3.1 Organic Cotton**

The premium for organic cotton is higher than for conventionally grown, but to get the premium farmers must sell to an authorized dealer of which there are few in Uganda. However, the conditions for growing organic cotton are exceptionally good, so with more certified dealers, Ugandan cotton farmers could benefit from increased organic production. As to the demand for organically grown cotton, the accounts differ. Figure 3.1 shows the Organic Exchange's estimation of global manufacturer demand. Baffes offers a less positive outlook when he concludes that there are too many aspects influencing consumers' decision when buying clothes, other than the production methods of the cotton (2005).

**Figure 3.1:** Global Demand for Organic Cotton (thousand tons)



Note: 2004 actual, 2000 and 2005-2008 estimates

Source: Organic Exchange 2006

### 3.2 History

Cotton was brought by the British to Uganda in 1903. In the 1930s, when cotton production in Uganda flourished, the government involvement was limited to quality control and extension services (information, training in farming techniques etcetera). Post farm gate activities were handled by private actors (Baffes 2009). Though this probably accounted for much of the prosperity of the sector at this time, it is also important to remember that labour was coerced during the colonial rule.

#### 3.2.1 After Independence

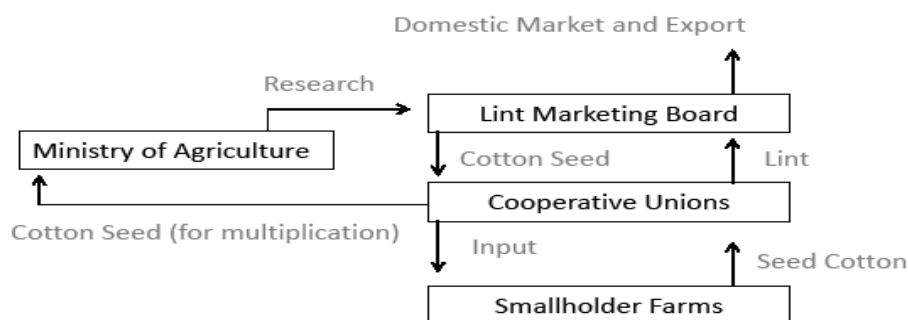
With independence in the early 1960's, Ugandan politics was characterized by patronage – a system that requires the leaders in society (politicians, businessmen etcetera) to offer their “subjects” wealth or power in return for loyalty (Gordon & Gordon 2001). A way of doing this was to create government controlled monopolies. These monopolies took the lion's share of the revenues and to work for them meant power and wealth. Both the coffee and cotton sectors in Uganda were controlled by such parastatal companies. As a consequence, the cotton sector prior to the reforms was heavily regulated

without room for market forces or competition. However, the areas of input supply, extension services and research were functioning rather well, at least initially.

The parastatal controlling the cotton market was the Lint Marketing Board (LMB). It had monopsony and regulatory power in the sense that even though ginneries (the plants where the seeds are separated from the seed cotton) were allowed to sell lint to local mills, they needed a license from the LMB in order to do so. The Ministry of Agriculture was responsible for research and seed multiplication, while the LMB controlled the oil mills. The government of Uganda (GoU) declared in 1970 that the LMB would have monopoly in buying cotton from farmers and selling it to local buyers, exporters or directly abroad and that among its functions would be to control quality, stabilize prices and give incentives to producers (L/3177/Add.13 1970).

As can be seen in figure 3.2 there was another channel between the LMB and the farmers in the pre-reform market set up. During the colonial rule, purchasing and ginning of cotton were handled mainly by Asian businessmen. After independence cooperative unions of indigenous farmers took over more and more. A parallel process was the increasing influence over these cooperatives by government officials and politicians (Baffes 2009). In effect the cooperatives were controlled by the LMB.

**Figure 3.2:** Ugandan Cotton Sector Prior to Reforms



The first years following independence saw an increase in production, which was rather a result of more land being cultivated than improved productivity (Baffes 2009). In 1971 Idi Amin seized power and a dark political era began in Uganda. Around the same time, the cooperatives began mismanaging the ginneries and failed to pay farmers on time; research was no longer given priority. Consequently the cotton production plummeted during the 1970s and the low levels persisted through the 1980s when world market prices were also low.

In the mid-1980s the producer cooperatives were highly indebted and producers' share of revenue was small and payments were often delayed. Together with the fact that cotton growing is labour intensive, this caused many farmers to turn to other crops. In 1987 some reforms were initiated, but it was not until 1994 that the market was liberalized and the ginneries privatized. The delay was probably a consequence of the strong political interests that controlled the sector, who had a lot to lose if it was liberalized.

### 3.3 Reforms

The reforms affecting the cotton sector following the chaos of the 1970s and 1980s were intended to increase the degree of competition in the Ugandan cotton sector; the rationale being that increased competition would be beneficial to the sector's performance. At the time of the reforms, the LMB controlled the entire production chain and could set the price offered to farmers. By dismantling the board and restructuring the ginneries the price setting process was moved to the market. The reforms were in line with the Structural Adjustment Programs (SAP:s) of the IMF and the World Bank that were implemented in developing countries all over the world with the goal of liberalizing and privatizing struggling economies.

In order to improve the performance of the cotton sector, and thereby increase tax revenues and export earnings and ultimately reduce poverty, changes needed to be made regarding its institutional structure. These changes were intended to cut costs, raise productivity and improve quality. The aim was to make the Ugandan cotton more competitive on the world market. The reforms can be divided into those concerning the entire agricultural sector and those specific to the cotton sector.

The first category entails the Policy Agenda for the Agricultural Sector (referred to as the Policy Agenda) that was part of the Economic Recovery Program initiated in 1987. The Policy Agenda recognized that agricultural pricing and incentives needed to be improved, trade should be liberalized and promoted, the marketing boards restructured, processing capacity should be rationalized, the cooperatives should be financially rehabilitated and the research and extension services strengthened.

A more recent initiative is the Plan for Modernization of Agriculture (PMA) that is part of the Poverty Eradication Action Plan (PEAP) launched in 1997. The aim was to reduce poverty by export led growth driven by the private sector. An important part of this plan encompassed the agricultural sector and aimed at creating a liberal marketing system for cash crops such as cotton. Another reform initiative was the National Agricultural Advisory Services (NAADS) that took over the responsibility for extension

services after the Ministry of Agriculture. Farmers decide among themselves which enterprises are to be under the NAADS. Where the NAADS are not yet operating the local government is supposed to offer extension services to cotton farmers.

The second category contains the Cotton Sub-sector Development Project (CSDP) that was part of the reforms initiated in 1994. It was an expansion of the project Smallholders Cotton Rehabilitation Project (SCRIP) launched in 1992, which aimed at improving input and the environmental conditions. The focus of the 1994 reforms was more on the institutional structure. Specifically their goal was to reform the regulatory and policy framework for cotton pricing, processing and marketing, including the rehabilitation of ginneries and improved handling of cotton. Support services such as research and other extensions were also to be improved and credit offered to farmers. As part of the reformation all research activities were transferred to the Cotton Research Institute (CRI) where seeds are also delinted and treated for replanting. The project was financed by the International Fund for Agricultural Development (IFAD), the International Development Association (IDA) and the government of Uganda (IFAD 1999).

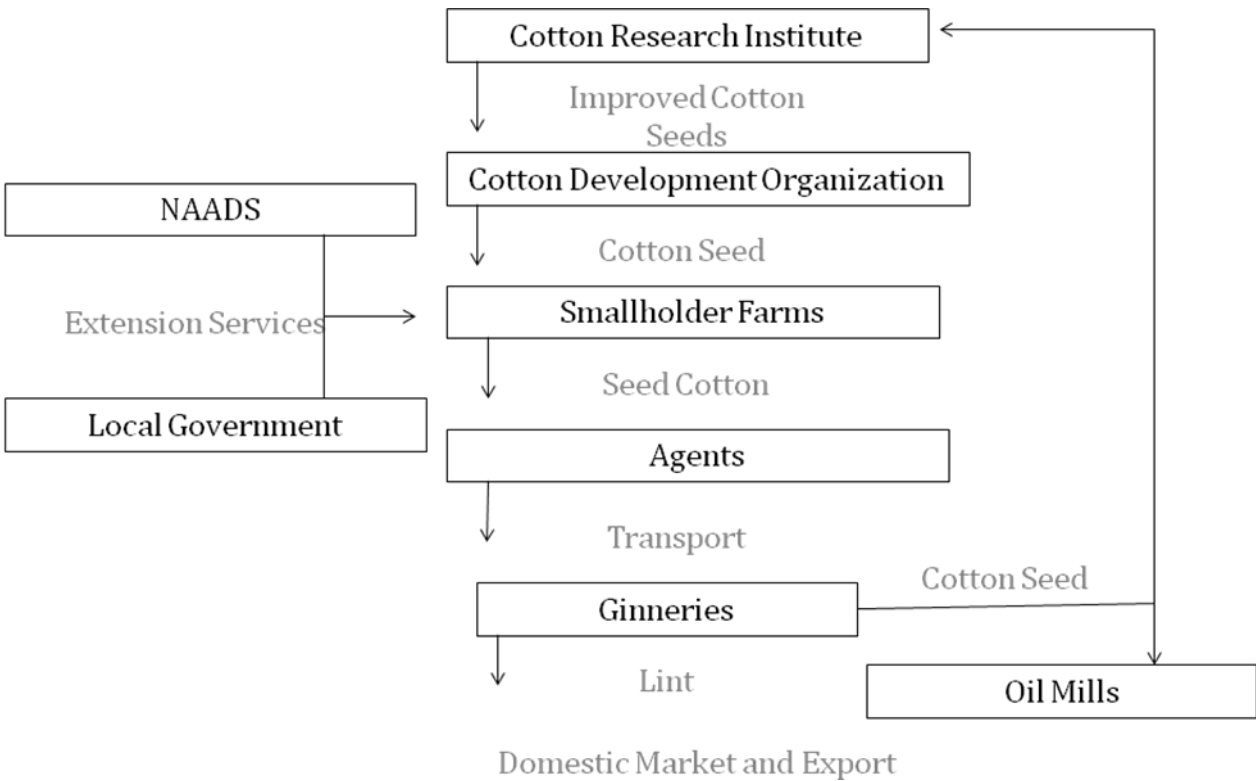
### **3.3.1 Liberalization**

A great amount of money was invested in the Ugandan cotton sector from the mid 80s and a decade to come. However, the returns were not satisfactory; the value of cotton production from 1984 to 1994 was about the same as had been given to the sector by donors (Baffes 2009). As it became apparent that aid without institutional change did not make much of a difference, reforms were made and the economy was liberalized. The monopoly of the LMB was fully dismantled by 1994 and the CDO was created to take over matters of regulation, promotion and coordination. The mission of the CDO was to supervise the liberalized market. The business side of the cotton sector – buying, selling and marketing – was to be left to the free market.

The CDO supplied the farmers with free seeds and subsidized pesticides, but farmers could not afford the necessary inputs even at the reduced cost. As a result, insufficient pest control had a negative effect on productivity. To remedy this, different credit

schemes were launched, all of which failed because farmers were unable to repay. To come to terms with this, the zoning system was introduced. It lasted between 2003 and 2006 and divided Uganda into nine zones. In short the zoning system meant that the ginners within each zone were responsible for supplying farmers with inputs and extension services. In return they were guaranteed the exclusive right to buy cotton and deduct the cost of the inputs from the price paid to farmers. More precisely, the ginners paid a sum of money depending on previous ginning quantities. The money went to a fund that was handled by the UGCEA and it was used to distribute free seeds and subsidized pesticides to farmers. When the time came to harvest, the seed cotton could only be bought within the respective zones and once the ginners had filled their quota they were not allowed to buy any more (Baffes 2009). The system broke down in 2007 after internal quarrels and coordination problems among the ginners (Lubwama 2009). The last couple of years the CDO has resumed the responsibility for input supply, but much of the input is still distributed with the assistance of the ginners. Figure 3.3 illustrates the basic linkages of the Ugandan cotton sector at present.

**Figure 3.3:** Ugandan Cotton Sector after Reforms



**3.3.2 Ginnery Restructuring**

Coupled with the liberalization scheme was the restructuring and privatization of the ginneries, previously owned by the cooperative unions. The aim of the restructuring was to make the ginneries more effective and credit-worthy. Up until the time of the reforms the cooperative unions had problems with debts and poor management. The most apparent symptom was their inability to make timely payments to farmers.

The restructuring of the ginneries is sometimes referred to as privatization, but that is a simplified description, since other arrangements were made in some cases. Through the 1997 Ginnery Restructuring Program, initiated and carried out as a part of CSDP, 27 ginneries were sold to private actors. Other measures included joint venture, leasing and in four cases ginneries were kept by rehabilitated cooperative unions. In total, arrangements were made for 36 ginneries by October 1997 (Shepherd & Farolfi 1999). Today there are approximately 30 ginneries operating in Uganda.



#### **4. Evaluating Reforms of the Cotton Sector**

Competition is generally considered to be positive in the sense that it promotes efficiency. Companies that compete with one another are forced to constantly increase productivity in order to offer a competitive price. In a monopoly situation the company can charge a higher price than it otherwise would.

Just like the imagined scale with different market structures being positioned based on their degree of competition, the above description is extremely simplified. In reality there is no such easy answer or correct solution to problems such as those hampering the Ugandan cotton sector prior to reforms. Failures can be observed and problems identified, but it is seldom obvious what should be done to rectify the situation. Changing one thing in a market structure, like increasing competition, can have unexpected consequences due to the complexity of markets. Many different actors deal with many different goods over great distances, both in time and space and there are many different aspects to these transactions. The linkages are not always clear and one factor can have different effects depending on the specific circumstances.

Evaluation of the reforms is also made difficult by the obscure causality between the implemented reforms and the changes in the indicators. Looking at poverty for example, liberalization might have a positive effect on producer price, but negatively affect input supply which can reduce production. The effect of liberalization on poverty is therefore hard to establish. In addition, there are external factors, like the fluctuating world market price, which also have a decisive effect that cannot be neglected, but is hard to differentiate from the effect of the structural changes.

Liberalization meant that more actors entered the market competing for the cotton. This increased producer prices and promptness of payments, but lessened incentives for the ginners to provide extension services. It is in essence a collective action problem where the party who carries the expenses is not necessarily the one reaping the benefits. The main issue is that the LMB:s responsibilities regarding input and exten-

sion provision, credit recovery and quality control were not assumed by functioning institutions.

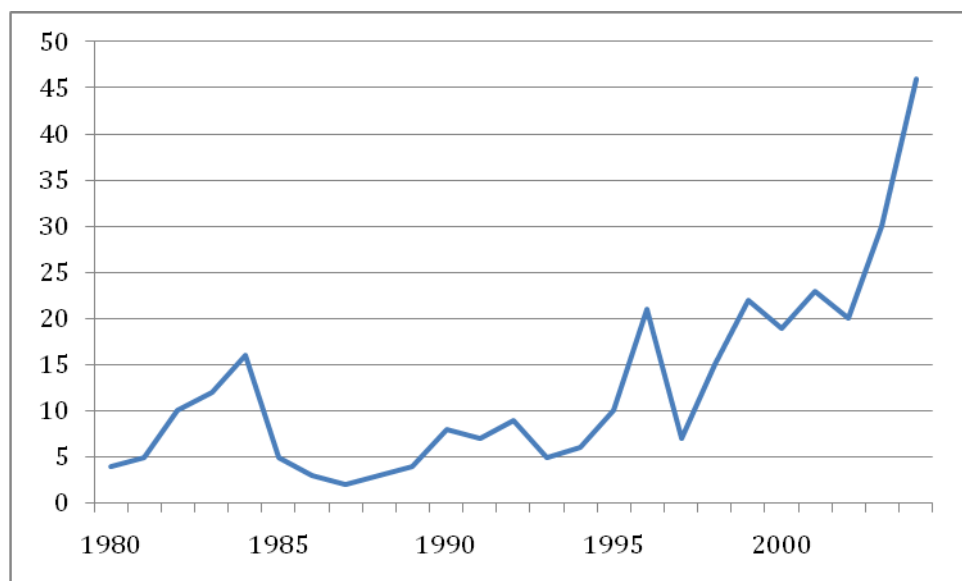
Fifteen years have passed since the Ugandan cotton market was reformed and the outcome is still debated. Most often it is described as a success story, but not everyone agrees, and seeing the financial situation that the cotton farmers are in, it is obvious that there are still problems to be dealt with. This chapter goes on to review the different indicators of the sector's performance.

#### **4.1 Production**

In the 1960s Uganda was the largest cotton producer in SSA; today it is not even in the top ten (ICAC 2005). Even though part of this failure is ascribed to political instability and a negative trend in world market prices, there is no denying that there are institutional and economic improvements to be made in the set up of the market. Some progress has been made, but absolute production is still less than a third of what it was before 1970 (Baffes 2009).

Figure 4.1 shows the Ugandan cotton production over the last 25 years. The macro reforms of 1987 together with higher lint prices during the mid-1990s affected supply favourably. In 1996 output was tenfold compared to the record low of 2,000 tons in 1987. During the zoning system production increased, but to what extent this rise was a direct effect of the new market set up is debatable. A matter of fact is that the surge in supply coincided with a rise in world market prices. Lately, output levels seem to have stabilized at about 20,000 tons.

**Figure 4.1:** Cotton Production in Uganda (thousand tons)



Note: 2004/05 is estimated production

Source: ICAC 2005

A distinct feature of the Ugandan cotton sector is the variability in the number of cotton growers. Production decisions are primarily based on the price paid to farmers in the previous year. If production is low one year, that will prompt ginners to pay a higher price. This will attract more farmers and supply will go up, making it harder for the farmers, all else equal, to bargain for a better price. The following season discouraged farmers will turn to other crops and production will fall again. However understandable, it is an unfortunate phenomenon as it prevents the sector from growing at the stable pace that would help it become more profitable.

A poor household is likely to avoid risk as much as possible, especially in a context such as the Ugandan, where an effective social security system is lacking. In the case of the farmers, this can lead to a more diverse production; to grow several crops limits the impact if one crop were to fail. This can make sense to the individual farmer, but hampers the development of economies of scale. Based on the above stated assumptions about competition, the expected outcome of the reforms was that more competition would lead to a higher income for cotton farmers, which would induce farmers to

increase production – even at the expense of the other crops. The analysis shows, however, that this has not happened.

#### **4.1.1 Input and Extensions**

Because cotton production requires inputs, coordination is very important to make sure farmers get credit, cotton seeds, fertilizers and pesticides. This need for coordination creates incentive to integrate vertically or even to limit competition. Therefore, in a very competitive market like the Ugandan cotton sector after reforms, the areas of inputs, extension services and quality control are likely to be problematic. This has also proven to be the case. In the field of input and extensions, the reforms did more harm than good. The CDO that shouldered those responsibilities did not have as strong incentives as the cooperative unions or the ginneries to make sure the sector performed well. The CRI was put in charge of seed multiplication, delinting and treatment; it has made great headway, but its failure to introduce GM technology is a major restraint on the market.

It is imperative that the CDO manages to distribute a sufficient quantity of seeds in time for planting. Funding comes from the government and thus its budget restraints also apply to the CDO; when the government is financially burdened it also affects the CDO. Today seeds are given to farmers free of charge, but the quantity is not always enough and sometimes they are distributed too late. Other inputs such as pesticides and spray pumps pose even bigger problems. The idea is that pesticides and pumps also should be supplied by the government via the ginneries. However, there has been some suspicion that farmers use them on other, more profitable crops, which has created some reluctance to distribute the pesticides.

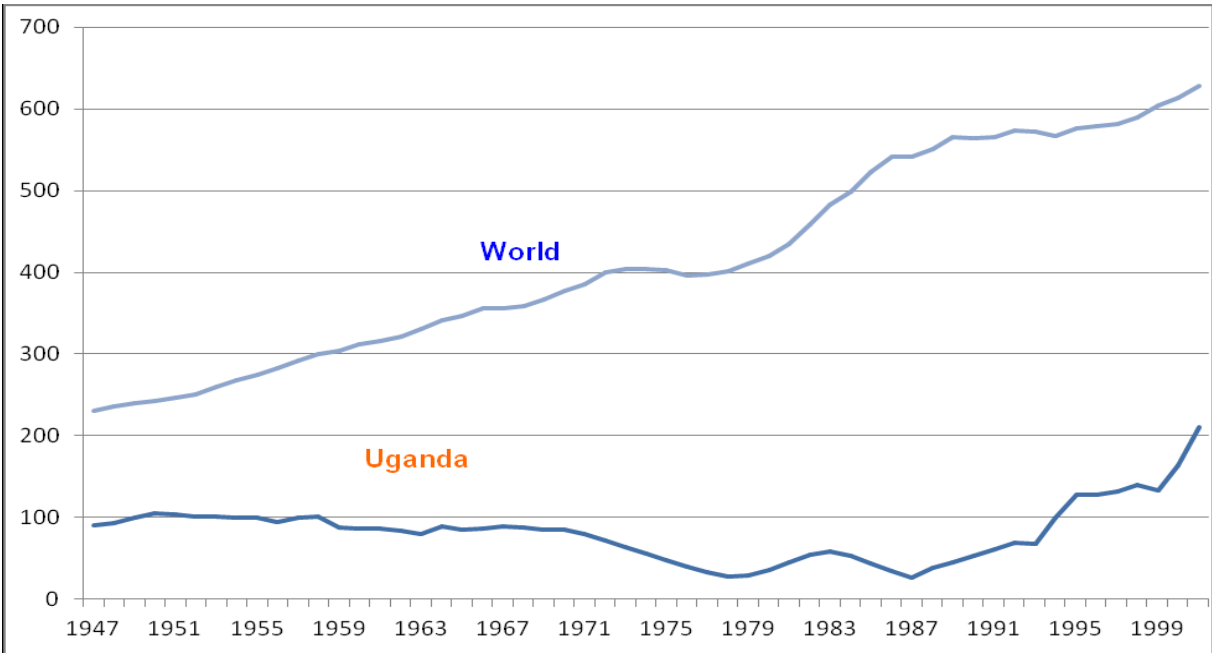
There is a connection between input supply and provision of extension services, since better farming practices improve productivity. However, the results are not always immediate, causality is not obvious and the economic actor that made the investment is not guaranteed to reap the benefits. Thus the link is not so strong that it automatically convinces private actors to take on the cost of providing extension services to farmers.

Therefore producers do not generally get sufficient training in good farming practices. Most often it is just one person responsible for all enterprises. Since crops to be handled by the NAADS are chosen by majority vote and since cotton farmers are not that numerous, it is not very often chosen. Where NAADS are not operating, the responsibility for extension services lies with the local governments, but they are usually not concerned with cotton since it is not profitable enough. As an effect there is room for improvement when it comes to planting, weeding and spraying. In this context the zoning system is sometimes pointed out as a solution. It arguably has the perk that it is sustainable, due to the fact that ginners have something to gain by helping farmers produce more. The problem is that it automatically limits competition by dictating who can and, more importantly, who cannot buy the cotton.

#### 4.1.2 Yields

Productivity is a crucial factor when analyzing performance. Figure 4.2 depicts how Uganda keeps up with the rest of the world regarding productivity, measured in yields.

**Figure 4.2:** Cotton Yields (5-year moving average, kilograms/hectare) 1947-1999



Source: ICAC (Baffes 2009)

There is a global increase in productivity, due to improved inputs and farming practices. This enhanced productivity is one of the major reasons for the low world market price. In order to be competitive on the world market, cotton producing countries need to improve productivity. However, African countries lag behind. The West and Central African countries have been stagnant for 20 years and even though Eastern and Southern African countries are increasing productivity, they are still only half as productive as their West and Central African neighbors (Labaste 2008).

Figure 4.2 shows that cotton yields in Uganda have gone up since liberalization, doubled in fact. Factors that affect productivity are the quality and quantity of inputs and farming techniques. Larger scale cotton farming is typically associated with higher yields as it permits farmers to use tractors or at least ox-drawn plows. In Uganda, larger units also have easier access to inputs because cotton seed rations are based on previous production (Lubwama 2009). Liberalization did not increase farm sizes, which indicates that scale is not the decisive factor. Since the areas of input supply and extension services still are troublesome, it is most likely the creation of the CRI at the time of the reforms that accounts for most of the positive trend. Without getting too far ahead, increased producer prices could also play a part.

#### **4.1.3 Value Adding Activities**

Cotton can be used to make fabric and textiles, among many other things. However, more than 90 percent of the Ugandan cotton is exported as lint, while clothes are imported from Asia. The reason is that it is too expensive to have the production in Uganda. Apart from textiles, cotton can be utilized to make cotton wool and the seeds can be processed to extract cotton seed oil. The oil is used to produce cooking oil, soap and animal feed. However, there are only a few oil mills in Uganda and usually seeds are only replanted. It is cheaper to import oil than to make it domestically since there is a zero tax on crude oil and domestic production is expensive (Lubwama 2009).

Data on value adding activities before and after liberalization have been searched for, but not found. The evaluation will therefore take its starting point in the situation today

and reason along the lines of the theoretical assumptions regarding competition and coordination. With the turmoil of the 70s and 80s the entire sector crumbled, which probably included the value adding activities. Given those circumstances the reforms were likely to improve the situation. However, the assumption that the reforms increased competition and lessened coordination implies that the degree of value addition would decrease. The motivation is that when the sector was protected the LMB had more maneuvering space, both regarding regulatory and financial issues, to initiate value adding activities. With liberalization farmers got a bigger share of the revenues, but they are not likely to get involved in value addition, due to limited means and faulty infrastructure.

Production also affects value addition; when production is high there is much incentive to instigate value adding activities and vice versa. Thus the increased production following reforms should, all else equal, increase the degree of value addition. There are, however, serious structural and institutional problems that obstruct such a development. Among the limitations are high cost and unreliability of utilities such as electricity, the lack of funding and investments and poor technology. External factors are cheap imports, like clothes from China and second hand clothes from developed countries.

## 4.2 Quality

There are different aspects of quality; on the one hand seed variety and farming practices play a part and on the other hand there is post harvest handling. Ugandan cotton has an advantage in its high inherent quality and the fact that it is handpicked. However, there have been problems with contamination from foreign matter, also connected to the manual picking. The reputation of high levels of contamination is detrimental and hard to get rid of, but improved handling in order to lessen contamination could potentially increase the price of lint substantially (Estur 2008).

Quality control has been problematic since liberalization for two main reasons: overcapacity and lacking coordination. The ginnery restructuring increased the performan-

ce of the affected enterprises and ginning capacity increased. Parallel to this, liberalization amplified competition. Those two processes created a scramble for cotton that made it possible for farmers to sell cotton that before would have been rejected due to poor quality. At the same time there was no functioning institution that could take over quality control when the LMB disappeared.

The cooperative unions, and to some extent ginneries during the zoning system, had more control over the entire production chain, which facilitates quality control. The reason for this is that once the cotton reaches the ginneries, quality can only be maintained, not enhanced. The observations made in this study suggest that there are important improvements to be made regarding farming practices and handling in order for the exporters to get a higher premium when selling Ugandan cotton. The premium obtained for Ugandan cotton went down from four US cents per pound to three US cents from the time of liberalization until the 2006/2007 season (Estur 2008), supporting the hypothesis that the increased competition deteriorated quality control. It is not difficult or costly to avoid contamination; it is basically only a matter of improved farming techniques, but few ginneries are willing to provide the training as they are not guaranteed to reap the benefits of it.

### **4.3 Transport**

Before the Ugandan cotton sector was liberalized, cooperative unions were responsible for transporting the cotton. A logical outcome of the reforms should have been that the increased competition would induce buyers to be more attentive to farmers, but in the case of transport, the opposite seems to have happened. The reason might be the lack of coordination that also accompanied the reforms. When the time comes for the cotton to be harvested, the ginneries pay agents in advance to go to farmers and buy their cotton. Farmers use bicycles for transport if they have access to one. Otherwise they go on foot, carrying the cotton on their heads. They leave the cotton in stores where agents buy it. The agents are then responsible for transporting it to the ginneries.



The part of the agents is a bit of a puzzle. There is not much information on the subject in previous research and they were not available for interviews during the time of this study. However, other interviews and observations indicate that their role is redundant. Farmers or ginners could manage transport and thereby cut the cost of payments to middlemen. This might seem like a paradox when increasing the number of actors has been highlighted as an advantage, but the agents do not represent any extra competition. They are simply an extension of the ginnery that is using their services, which results in a bigger distance between buyer and producer. This is likely to further obstruct communication and coordination.

Corruption is a big problem in Uganda; the money intended for improvements in infrastructure gets lost on the way. To really fight corruption and seriously work on improving electricity supply and the quality of the roads would benefit the cotton sector as well as society at large. To repair the railway, making it possible to transport cotton on trains, would also be a helpful governmental action. Steps are being taken in this direction and hopefully the railway will be in use shortly.

#### **4.4 Poverty**

The available data suggest that poverty was reduced after the reforms; the national headcount poverty index fell from 56 percent in 1992 to 34 percent in 2000, but rose again to 38 percent in 2003 (Kwesiga 2007). The liberalized agricultural market contributed in a big way to the initial positive effect. The poverty trend supports the hypothesis that the reforms were favourable, but needed to be accomplished by further improvements. How the financial situation of the cotton farmers in particular was affected by the reforms is hard to say because of the diverse impacts of different factors. As the analysis has shown the sector as a whole is still struggling and therefore the full positive effect on poverty has not been realized. There was a misconception at the time of the reforms, that if farmers only got cash for crops they would be able to purchase inputs and make investments. However, cotton is an annual crop that yields cash only once a year and not much of it is left when it is time for weeding, spraying

and harvesting. The expected positive effect of the farmers getting cash for crops was thus disappointing.

The volatile world market price is another pressing issue. Since it is external it does not affect the evaluation of the reforms, but it should be kept in mind that even if structural improvements are made, their impact can be partially offset by a low world market price. It also means that farmers, at times, would be better off if they could wait and sell their cotton at a more lucrative price. However, they need the money immediately. To address this, a warehouse receipt system has been initiated where farmers can deposit their output at the stores and get a receipt that they use as means of payment until they decide to sell the cotton and get ready cash. The system is not functioning well at the moment and few farmers have access to it or are even aware that it exists.

#### **4.4.1 Producer Price**

Before reforms, the LMB set a uniform price each season that the farmers had to adjust to. Now the Ugandan government, in collaboration with ginners, sets a national baseline price depending on the price on the world market. This price is announced over the radio and is supposed to be the starting point for negotiations. The price should under no circumstances be lower than this indicative level, but farmers say that they often get paid less in the end; ginners claim that they even pay more. Since documentation is poor there is no telling what happens to the difference; maybe farmers get more than they claim to, maybe ginneries offer less, maybe the agents take advantage of their position as middlemen. Regardless of which, profitability is arguably still one of the most crucial problems of the Ugandan cotton sector; about one out of four Ugandan cotton farmers gets paid enough for cotton to make a profit after deducting all costs, including labour. Thus the majority would be better off hiring out their labour force instead (Tschirley et al. 2009).

An important indicator is the producer (or farm gate) price in relation to the border price. In 2006, producers got 60 percent of market value as opposed to a mere twelve

percent in 1983 (CDO 2009). This suggests that reforms had a major positive impact, but the fact remains that the world market price is an external factor that cannot be influenced. Thus, even if the producers' share is getting bigger, their income is still dependent on a volatile market outside their control. Another indicator is given by dividing the price ginner pay farmers for the seed cotton by the price ginner receive when selling the lint. As can be seen in table 4.1, that ratio has not changed much in Uganda since the mid 90's, which is unexpected since competition was limited during the zoning system. However, the drop of four percentage points from the 95-99 to 00-05 period indicates that the degree of competition has an effect.

**Table 4.1:** Producer Share of FOT Lint Price (percent)

1990-1994	1995-1999	2000-2005	Post reform (1995-2005)	Entire period (1990-2005)
-	72	68	70	70

Note: - = not available. FOT = free-on-truck

Source: Tschirley et al. 2009

#### 4.4.2 Credit Accessibility

In theory, farmers could apply to private investors, but the terms are hard and farmers generally do not have any collateral. Since it is practically impossible for farmers to get credit, there probably has not been any significant improvement in this regard since the reforms. During the zoning system there was some credit accessibility in the sense that the ginner provided farmers with inputs, the cost of which was deducted from the selling price. Another attempt to provide farmers with credit is the warehouse receipt system, but so far it has not shown much result.

Since it is not possible to get inputs on credit, apart from for seeds that are free, the only thing attracting farmers to the cotton growing business are expectations of what

the price of cotton will be; expectations founded on the price paid the previous season. This causes farmers to move in and out of cotton growing, preventing the sector from expanding at a steady pace that would be beneficial for productivity and profitability.

#### **4.4.3 Producer Organization**

One of the objectives of the CDO is to improve farmer organization through mobilization and encouragement (CDO 2009). The rationale behind that ambition is that a group of farmers has better chances of making their voice heard, influencing policies and attracting the attention of the NAADS. The coordination also facilitates mechanization, credit accessibility, input supply and provision of extension services.

There are some farmer's cooperatives, like Nyakatonze in Kasese, Lango in Lira and West Acholi in Gulu, but even there a lot of work remains to be done in getting the farmers organized. Cotton growing in Uganda today is often carried out on a small plot of land, possibly mixed with other crops like millet or ground nuts. If the farming was coordinated, the crops could be grown in bigger fields. That would in turn make it possible to use oxen or even tractors when it is time for plowing and planting. Farmers are already helping each other out with other activities, such as weeding and spraying, but mostly by going from one field to another; all cotton farmers in one area work on one field at a time. This might be more effective than everyone tending to only their own field, but it might be even better to increase coordination further.

In this regard the reforms seem to have made little difference. If anything, liberalization decreased the degree of coordination, not only on a structural level, but among farmers as well. During the zoning system, the situation seems to have improved as ginners had stronger incentives to encourage farmer organization in order to make it easier for them to supply inputs, provide extension services and deal with the producers.

## 4.5 Concluding Remarks

The reforms increased competition, which improved producer's share of revenue and promptness of payments. However, more competing actors also meant less coordination, which had a detrimental effect on input supply and extension services, quality control and transport. Research has received more attention and the improved seeds, introduced by the CRI, are most likely responsible for the increase in productivity that the Ugandan cotton sector has shown since the reforms. Despite this increase in yields, Uganda lags behind the rest of the world. To further increase productivity, GM-technology needs to be introduced. On a higher structural level, corruption and infrastructure need to be dealt with by the Ugandan government. This would lessen transaction costs and improve the performance of the Ugandan cotton sector, as well as benefit the society at large. Conditions are very good for growing organic cotton in Uganda, but the market for it is somewhat unpredictable. Furthermore, there needs to be more licensed buyers in order for the farmers to get the premium.

This concludes the analysis. The next section will be an account of the stakeholders' views and opinions. It will also touch upon problems that have occurred during this study and suggestions as to what can be done in order to improve the performance of the Ugandan cotton sector. The rationale behind this design is much like the division in newspapers between news and views.

## **5. Views, Issues and Suggestions**

The following sections discuss aspects that for different reasons do not belong in the analysis: stakeholders' views, suggested actions to be taken and problems that have arisen during the study.

### **5.1 Perception of the Actors**

Concerning the question of whether reforms were successful, the answers differ a little. Some think it was better before because there was more quality control and because the government was more concerned with the farmers' well-being than the private actors are. In a way the privatization was controversial, since many of the private actors are foreigners while the cooperative unions that lost their enterprises were Ugandans. This is still an issue in Uganda where prejudice against foreign investors, especially Indian, is common. However, most interviewees seem to agree that the reforms were beneficial, but that there are still challenges.

#### **5.1.1 IFAD and the CDO**

In its own evaluation IFAD declares that the outcome of the Cotton Sub-sector Development Program was “generally satisfactory” (IFAD 1999). According to the same source, by 1999 the sector had attracted both local and foreign investment, the CDO was up and running and 94 percent of the ginneries had healthy management. Among the achievements pointed out by the CDO is the fact that farmers now get cash for crops, that the quality of cotton has improved, that “an organized seed distribution system has evolved”, a surge in production, improved seed varieties and treating and finally increased ginning capacity and the formation of UGCEA.

#### **5.1.2 Producers**

The typical Ugandan cotton farmer is poor with a small plot of land where he or she continues to grow cotton despite the low profitability because it makes the soil fertile, because the cotton needs work when other crops do not and because what little money

is earned comes at a time when school fees are due. The low prices are pointed out by the farmers as the main problem of the Ugandan cotton sector. As one of the farmers said:

“We have grown cotton for many years and still cannot afford to buy a bicycle to transport our cotton.”

Another problem is that the information concerning prices is inadequate and too late. To make an informed production decision, the farmers wish to know before the planting season what price they can expect to get for their output at the time of harvest. Some of the farmers said they wanted more stores closer to where they live, where they can get seeds, pesticides and spray pumps. To have a store close by would also lessen the distance they need to carry their output once it is time to sell.

The lack of organization of cotton farmers together with the fact that cotton is not edible make the farmers vulnerable, because the buyers know that the farmers have to sell their output and that they are in no position to bargain. There seems to be a consensus that more active and powerful farmer organization would be beneficial for the sector, though some farmers question the cooperatives and assert that they collaborate more closely with the buyers than with the farmers.

### **5.1.3 Ginneries**

The ginneries are concerned with competition. They agree that competition has become fiercer with liberalization and that they are struggling to get by. This is not reflected by the farmers, who tend to say that there is only one buyer in the region. Some ginneries advocate the return of the zoning system, where they were guaranteed to buy the cotton produced in their area. They claim that this would also benefit the farmers since it would give the ginneries incentives to help in improving production.

Both CDO representatives and ginneries talk about setting up a Cotton Development Fund to lessen dependency on government funding. One of the most important objec-

tives of the Cotton Development Fund would be to offer better cotton targeted extension services. In a way this would be a step towards the old zoning system, but with the important difference that there would not be the same limitations of competition. Increasing investments in value adding activities is also mentioned.

#### **5.1.4 Other stakeholders**

There are voices calling for governmental help in facilitating domestic production. Requests entail everything from better roads and improved infrastructure to a high tariff on imports (textile, fabric and crude oil). This is problematic for several reasons. Protectionism is seldom a good thing and especially not in a country like Uganda. Much of this was discussed at the Presidential Investors Roundtable Forum (PIRT), where President Yoweri Museveni, prime minister Apollo Nsibambi, advisors from IMF and the World Bank, ministers and officials from the private and public sectors met to discuss how the country's investment climate can be improved. Two days before the meeting, Uganda Investment Authority executive director Dr Maggie Kigozi said:

“...cotton is one of the priority sectors that the private sector has fronted for rescue by the government through the PIRT” (Nakaweesi 2009).

At the meeting recommendations were formulated about how to improve competitiveness. Among the most important was transformation of the agricultural sector; more mechanization and expanded irrigation. Improved institutional framework and the fight against corruption were also mentioned, as was the need of better infrastructure regarding water, electricity and transportation by road and railroad.

#### **5.2 A Way Forward**

The most important development would be to increase coordination without limiting competition – indeed a delicate balance. Some possible improvements are listed in the following subsections.



### **5.2.1 Eliminating Middlemen**

Agents seem to be a cause of disagreement. The discrepancy between what farmers say they get paid and what the ginners claim to be paying is not easy to account for. Irrespective of what the case might be, it would most likely be simpler if farmers dealt directly with ginners. The elimination of middlemen would serve a double purpose; firstly, their share of the profit could instead be paid to the farmers which would encourage them to grow more cotton. Secondly, it would lessen the distance between the producers and the ginners, making it easier to communicate and coordinate.

### **5.2.2 The Cotton Development Fund**

Input supply needs to be improved; a sufficient quantity of seeds should be distributed in a timely manner. Some actors, especially ginners, suggest a return to the zoning system as a solution, but that means risking yet again hampering competition and decreasing farm gate prices. The proposed Cotton Development Fund where ginners and the CDO work together without changing the regulatory set up might be a solution. The fund could also improve the availability of extension services.

### **5.2.3 Farmer Organization**

Farmers would be less vulnerable if they were organized. Firstly it would enable them to coordinate their farming, making it more efficient and productive with larger adjacent plots. Even if much of the cotton farming needs to be done manually, tractors can be used for plowing. If the use of tractors is not possible, at least ox-drawn plows are more efficient than manual ones. Secondly it would improve farmers' bargaining power, since a group is more influential than its individual members. Thirdly it would make it easier for the government and the private actors to supply input and extension services.

#### **5.2.4 Advances in Technology and Infrastructure**

A more frequent use of GM technology would be an important productivity booster; the CRI needs to speed up the introduction. Whether organic cotton is the future is debatable; maybe consumers are not willing to pay. However conditions are so favourable in Uganda that the cost is not that much higher compared to conventionally grown cotton. More buyers and ginners need to be certified to handle organic cotton, in order to make sure that the farmers who grow organic cotton also get the premium for it. Another key issue is value adding and here the government has a delicate balance to uphold. It needs to make investments in infrastructure and institutional improvements, but it should steer clear of protectionism and too much interference.

#### **5.3 Issues That Occurred During the Study**

In this study no agents were available for interviews, but the analysis indicates that communication and coordination would improve without them. It would be interesting to further investigate the role played by agents.

When comparing the actual numbers, the ratio of Ugandan cotton exports to production sometimes exceeds one. This is problematic and suggests faulty statistics, but the data is from ICAC and should be reliable. A possible explanation could be that exporters also sold some of the production from the previous year. Otherwise the Ugandan exporters must somehow import cotton in order to sell it at a profit. This is not a likely scenario since the world market price applies to all. If that is the case, it implies that there is an unofficial cotton market.

In interviews, there is a risk that the farmers gave answers they thought would benefit them, describing their situation worse than it actually is. Statistics and interviews with other stakeholders such as ginners, NGO workers and employees at the CDO pose the same problems of reliability since all stakeholders have their own agenda and poor infrastructure makes it hard to collect reliable data and information. To balance this, the statements were scrutinized and the discrepancies analyzed. The results presented in this study are also to a large extent supported by previous research on the subject.

## **6. Summary and Conclusions**

Uganda offers good conditions for cotton production; it can be grown across the entire country and there is a ready market for it. Prior to reforms the Ugandan cotton sector was integrated vertically with extremely limited competition. With the reforms, more actors entered the market and competition increased. When the Lint Marketing Board controlled the whole process of cotton production there was, at least initially, well functioning coordination. With the dismantling of the marketing board there was suddenly competition, which increased farm gate prices and promptness of payments, but new problems arose with the issue of coordination. There was no authority that successfully could shoulder responsibility for input, extension services and quality control; hence the sector performed unsatisfactorily in those areas. The reforms were beneficial in many ways, especially in societal terms, but the farmers are still very poor and that is a major failure.

### **6.1 Sector Performance**

Even though seeds are distributed for free, there are problems with quantity and timing. Extension services, that have great potential for improving yields and quality, are often lacking. Though yields have gone up since liberalization, Uganda still lags behind due to problems in input supply and extension services, the small scale, individual farming and the failure to introduce GM-technology. Because of more contamination, due to deteriorated quality control, Ugandan cotton receives a lower premium today than before reforms. Because of the obscure causality and complex linkages it is hard to give an unambiguous answer to whether the reforms improved the performance of the Ugandan cotton sector. The reforms were necessary and had some positive impact, but need to be accomplished by further improvements.

### **6.2 Cotton Farmers' Financial Situation**

Even though producers' share of revenue has improved, profitability is still low and credit very hard to obtain. The problems with input and extension services, quality control and value addition hamper productivity and profitability, which counteracts the

improvement in producer's share of revenue. Furthermore the farm gate price is directly linked to the fluctuating world market price, which prevents the farmers from getting adequate and timely information to base their production decisions on. The solution to these issues of low profitability and uncertainty are fundamental to improve the overall performance of the Ugandan cotton sector and the financial situation of the cotton farmers.

### **6.3 Issues that Remain to Be Addressed**

Credit accessibility, input supply and extension services are pivotal issues when trying to increase productivity, which is a major determinant of sector performance. These areas need more attention and funding. In order to improve exporter prices, quality control and value adding activities are essential. Better infrastructure should therefore be a priority. To ensure that the improvements ultimately benefit farmers, it is essential to also consider producers' share of revenue and promptness of payments. Farmer organization and co-ordination arguably facilitates all of the above and should thus be a main concern. Better communication between stakeholders could be a key in finding solutions to the many issues currently limiting the sector.

## References

Baffes, John (2005) “The Cotton Problem”, *The World Bank Research Observer* 20 (1): 109-44, World Bank.

Baffes, John (2009) “The Cotton Sector of Uganda”, Africa Region Working Paper Series No. 123, World Bank.

Estur, Gérald (2008) “Quality and Marketing of Cotton Lint in Africa”, Africa Region Working Paper Series No. 121, World Bank.

Gordon, April A & Gordon Donald L (2001) *Understanding Contemporary Africa*, Lynne Rienner Publishers, Colorado.

Government of Uganda (1970) *L/3177/Add.13*.

International Cotton Advisory Committee (2005) *The Outlook for Cotton Supply*.

International Fund for Agricultural Development (1999) *Use Of Savings For The Cotton Sub-Sector Development Project*, EB 99/66/R.17.

Kazooba, Charles (2008-02-11) “Uganda’s Agoa exports fall by \$3m”, *The East African*.

Kwesiga, Jassy B (2007) *Opportunities and Challenges in the Cotton Sector and Poverty Reduction in Kasese District*, Deniva, Kampala.

Labaste, Patrick (2008) *The Competitiveness of African Cotton: Does Sector Structure Matter?* 67th Plenary Meeting of the International Cotton Advisory Committee, Ouagadougou.

Nakaweesi, Dorothy (2009-10-13) “Doomsday for Once Nation's Main Export”, *The Monitor*, (<http://allafrica.com/stories/200910130613.html>), 2009-11-20)

Opolot, Jacob & Kuteesa, Rose (2006) “Impact of Policy Reforms on Agriculture and Poverty in Uganda”, IIS Discussion Paper No. 158, Institute for International Integration Studies.

Organic Cotton Exchange (2006) *An In-Depth Look at a Growing Global Market*, Organic Cotton Market Report.

Shepherd, Andrew W & Farolfi, Stefano (1999) “Export crop Liberalization in Africa”, FAO Agricultural Services Bulletin 135.

Tulip, Alan and Peter Ton (2002) Organic Cotton Study: Uganda Case. Paper prepared for PAN UK’s Pesticides and Poverty project, Kampala and Amsterdam.

Tschirley et al. (2009) *Organization and performance of cotton sectors in Africa*, The World Bank, Washington DC.

Uganda Investment Authority (2009) *Investment Potentials in Cotton Sector*, (<http://www.ugandainvest.com/admin/docs/Cotton%203.pdf>), 2010-01-05)

## Internet sources

CDO, [www.cdouga.org](http://www.cdouga.org)

1. *Ugandan Cotton Sector Tempts Investors Globally*, 2009-11-23

[http://cdouga.org/index.php?option=com\\_content&task=view&id=9&Itemid=9](http://cdouga.org/index.php?option=com_content&task=view&id=9&Itemid=9)

2. *Background of CDO*, 2009-11-30

[http://cdouga.org/index.php?option=com\\_content&task=view&id=1&Itemid=6](http://cdouga.org/index.php?option=com_content&task=view&id=1&Itemid=6)

WTO, [www.wto.org](http://www.wto.org)

1. *The Cotton Initiative*, 2009-12-05

[http://www.wto.org/english/tratop\\_e/agric\\_e/negs\\_bkgrnd20\\_cotton\\_e.htm](http://www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm)

## Interviews

Lubwama, Damalie (2009-10-14) Agronomist at the Cotton Development Organization, Kampala.