THE PATH FORWARD IN UGANDA'S COFFEE SECTOR

PREPARED FOR
THE PRESIDENTIAL CONFERENCE
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EUROPEAN COMMISSION

Executive Summary

Coffee is Uganda's core business. It is estimated that 500,000 households, distributed over two-thirds of the country depend on coffee as an important source of income. For many of these households coffee is the only source of cash income. Historically, the sector has been Uganda's largest generator of export revenues. When world coffee prices were high in 1994 and 1997, the sector earned over 400 million USD annually, however, with the current world price at a 40-year low, it is forecast that 2001/02 export revenues will fall below 100 million USD for the first time since the 1964/65 season.

The big picture trends show world coffee supply growing at a rate of 3.6% and demand increasing at only 1.6%. Warehouse inventories are over 26 million bags - a 4-month supply of world export demand. This supply and demand imbalance has led to the current crisis in the world coffee market. Low world price is not the only challenge facing Uganda's coffee sector, however. The average age of the country's coffee plant population is 40 years. These older trees are suffering from declining productivity and need to be replaced. Moreover, a soil borne fungal pathogen (*Tracheomycosis*, communally known as coffee wilt) is killing about 5% of the Robusta population annually. In 2002 coffee wilt is expected to kill about 15 million of Uganda's 300 million coffee plants.

Time and events have placed the country's coffee sector in a difficult situation. Uganda needs to rebuild its core business at a time when both revenues and productivity are low. This makes the task even more challenging, but it must be done in order to ensure the long-term sustainability of the sector. The international importers have paid a premium for Ugandan Robusta because its neutral taste allows it to be used as a blender with more expensive coffees, thus reducing their manufacturing costs. Historically, Uganda has been considered a first-line suppler to the world's coffee industry, but it risks losing this position if buyers see a trend of declining production and/or falling quality. Buyers need consistent suppliers and if Uganda does not deliver, the business will go elsewhere.

Over the next 5-years Uganda will need to build coffee research capacity that will deliver a continuous stream of new products and cultural practices from its pipeline. Genotypes with wilt tolerance need to be multiplied and provided (sold) to farmers. The replacement of Uganda's ageing and wilt affected plant population is a high priority item but a costly one. It is estimated that between 70-84% of Uganda total coffee plant population needs to be replaced in the next five years. This act alone will cause a doubling in Uganda's coffee output from 3 million bags to over 6 million bags.

In terms of export value Robusta accounts for 85% of earnings and Arabica generates about 15% of the sectors total revenues. Although the overall world coffee market is growing at only 1.6% annually, the Arabica specialty market (premium quality) segment is growing at 20% or more and appears to be far from saturated. Uganda currently produces a limited amount of specialty coffee and this can be expanded in both the main Arabica specialty market and in value-added washed Robusta. Specialty coffee will most likely never become Uganda's primary market, but it can be significantly expanded to the benefit hundreds of thousands of Ugandan household.

To exploit these market opportunities, Uganda needs to focus resources on developing farmer associations that can act as conduits for delivering services and capital to producers. Additionally, the sector needs to create a better link between quality and price. The large exporters that dominate the sector are focused on volume over quality. In the current local market structure, there is no price incentive to produce a quality product. By creating a private-voluntary auction for Uganda's premium coffee segment the sector will put in place the vehicle that provides the price-quality link and give businesses and associations a platform from which they can sell their quality coffee at a premium price.

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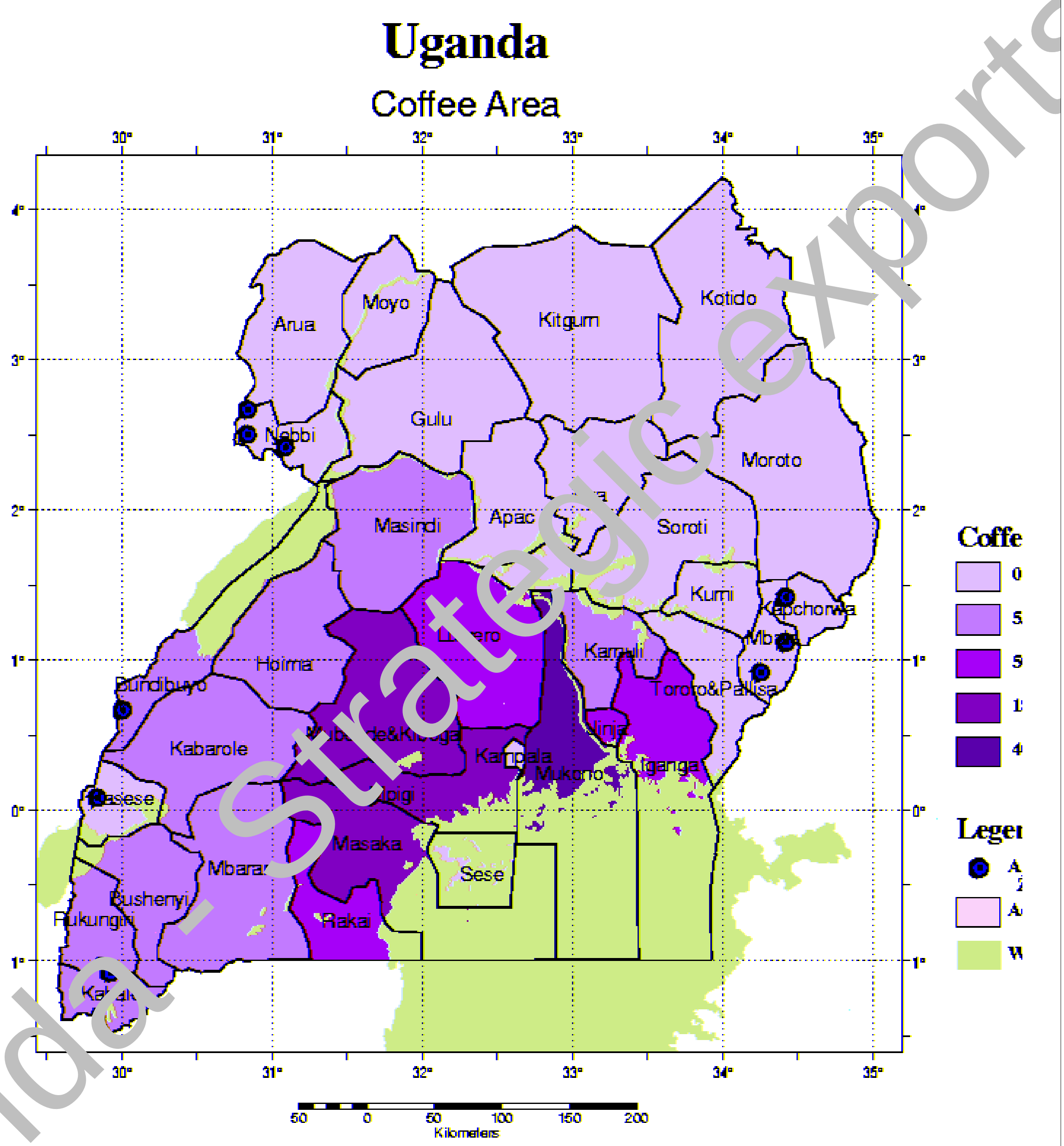
Uganda
Coffee Area
30°
31°
32°
33°
34°
35°
4°
3°
2°
1°
0°
1°
Arua
Moyo
Kitgum
Kotido
Gulu
Nebbi
Moroto
Masindi
Apac
Soroti
Kumi
Kapchorwa
Mbale
Hoima
Kamuli
Bundibuyo
Tororo&Pallisa
Kabarole
Kampala
Mukono
Iganga
Masaka
Sese
Mbarara
Bushenyi
Rukungiri
Rakai
Kabale
Coffe
Legen
Kilometers
50
0
50
100
150
200

The Path Forward In Uganda's Coffee Sector

1.0 Overview

The objective of this report is to examine the current operating environment for Ugandan coffee production and sales and make recommendations as to the best strategy to pursue in the future to maximize sector revenues and reduce income risk to the thousands of small farmers that rely on coffee as their primary source of income.

Coffee is the leading export sector in Uganda's economy, accounting for over 100 million USD in export sales in the 2000/01-market year. Coffee is produced by over 500,000 small farmers across the country with an average farm size of less than one ha. The sector provides income to over 2 million people who live and work on these farms and in the related support and downstream businesses. In the 2000/01 market year Uganda produced 3.3 million bags of Robusta coffee on 261,000 ha and nearly 400,000 bags of Arabica on 45,000 ha.

Although Uganda produces some of the best quality Robusta coffee in the world it has suffered as over-production in the world market has caused prices to drop to 40-year lows. These low prices have caused dramatic decreases in farm incomes and created great hardship in rural areas. With the over supply situation likely to continue into the foreseeable future Uganda needs to identify strategies to shift its production and market focus from that of a bulk commodity producer to a specialty coffee (with a greater emphases on quality Arabica) and value added producer. The following document examines the production and market condition that have lead to the current crisis and explores options available to Uganda in reallocating its resources in the coffee sector to increase incomes and reduce financial risk to its participants and the economy at large.

Simply producing more commodity coffee will not solve the sectors problems. Uganda needs to find ways of increasing the value of the coffee it currently exports and position the industry to capitalize on trends in the market place while rehabilitating its current product base in both Robusta and Arabica coffees.

2.0 Coffee Demand Analysis

Coffee Price Discovery: World coffee prices are determined by two commodity boards - the LIFFE in London, which trades Robustas, and the NY"C" (Commodities) Market which trades Arabica. Simply put, the price offered in these markets is the reality of the situation. They determines price in terms of supply and demand.

Arabica, for example, is traded above or below the "C". The better the coffee is (or the more scarce it is), the higher its differential will be above the "C". The worse it is (or more readily available), the lower its differential below the "C." Although the gap between good and bad can be as wide as +$2.00 to -$.50, most Arabica specialty coffee trades between even with the board and about $.20 over.

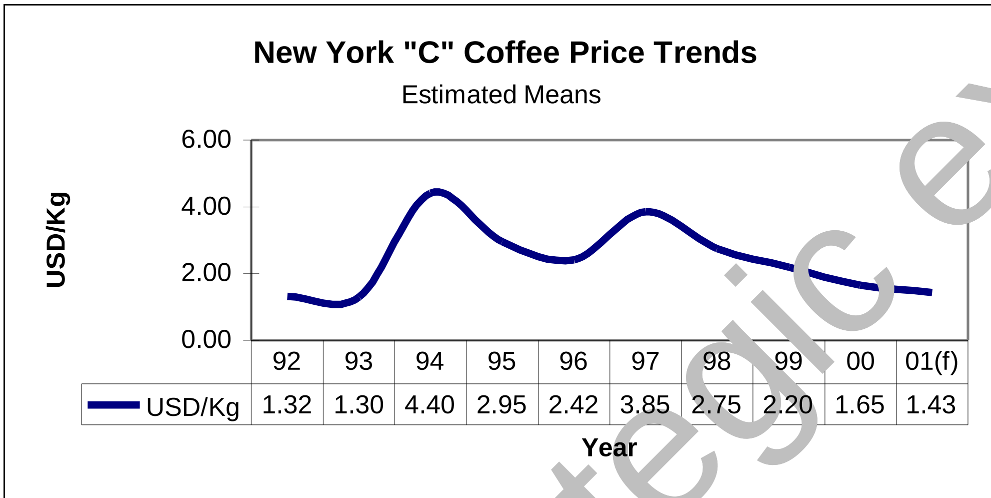

Figure 1, Source: USDA Commodityexpert, Coffee News

> **Conventional Wisdom Among Traders**
>
> *"Transparency is to traders as daylight is to vampires"*
>
> *-Unknown trader*

The Medium Term Market Outlook:
Analysts in the coffee industry are forecasting continued low prices for commodity coffee in the foreseeable future. Forecasts vary with the most optimistic saying that there may be some price recovery in 2004 or 2005. However, others[1] are predicting that commodity coffees, such as Ugandan Robusta, will see a general trend of falling prices (in current dollars) over the next twenty years. This prediction is not good news to Uganda, but with a well thought out sector strategy, it is not necessarily a "*fait accompli*".

German commodities analyst F.O. Licht (one of the industry's more optimistic forecasters) predicts that a world coffee surplus is likely to continue over the next two to three years, driven by Robusta production in the world's top two growers – Brazil and Vietnam. Recently revised figures peg world production for 2001/02 at 112.14 million bags, up from original estimates of 111.06. In light of this surplus, the best avenue for survival in coffee will be in the "value-added" sector; i.e. high-grade specialty, organic, sustainable, Fair Trade, and shade-grown coffees.

According to Licht, consumers should be concerned about the high potential of a significant shortage of top grade coffees over the next few years in spite of overall over-production.

[1] IFPRI, Alternative Growth Scenarios for Ugandan Coffee and Cotton, January 2002

Inasmuch as Uganda is already producing a limited amount of specialty-grade coffee, it could be well placed in the market for future growth. As the market for high quality conventional and organic coffees continues to grow, Uganda's quality Arabica suppliers will prove more and more important to the growing specialty market.

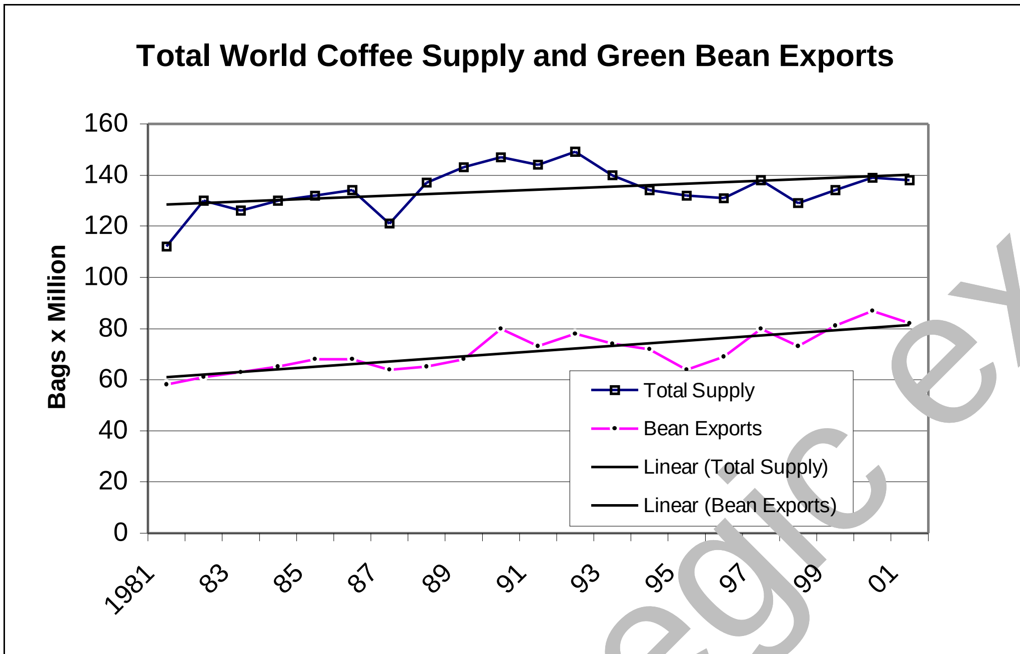

Figure 2, Source: USDA Commodityexpert, Coffee News

Coffee Imports in Selected Country
Millions of Bags

	YR 1999	YR 2000
USA	19.2	18.6
Germany	14.5	14.4
Japan	6.6	7.4
Italy	6.0	6.3
France	6.7	6.5
Spain	4.0	3.8
UK	2.9	3.0
Belgium/Lux.	3.0	3.3

Markets: The EU is Uganda's largest coffee market. In the 1999/2000-market year, 86% of Uganda's coffee was shipped to EU countries. The text box at the left shows the coffee imports by selected EU countries, the US and Japan from all origins.

This aggregated data (all types of coffees are included) shows no clear overall trends over the short term, with some of the larger consuming nations seeing a year-on-year fall in consumption. The greatest growth in coffee markets is in the specialty segment in the US and parts of Europe. In the US, the specialty segment is growing at a rate of 20% annually and is far from saturation. In Europe, similar growth rates can be seen in the organic coffee market, particularly in Northern Europe and Scandinavia. In contrast, the growth rate for Robusta in the US market is 0% to slightly negative. In comparison, the world market increase in demand for Ugandan Robusta is projected at 1.6% by the GOU.

The advent of "specialty" coffee in the late seventies heralded a new market for high-grade Arabica beans as opposed to low-grade Robusta qualities. These specialty beans tend to be high altitude grown, washed coffees with a high premium paid for "cup" quality While the volume of specialty coffees is small, the margins are high. For example, the majority of the world's Robusta might sell at a differential of around US $.40-.50 under the NY"C" FOB (based on historical price levels). The lowest-priced Arabicas, unwashed Brazils, might sell for around $.12 under the NY"C", whereas, specialty Arabicas usually sell for about $.20 over the NY"C".

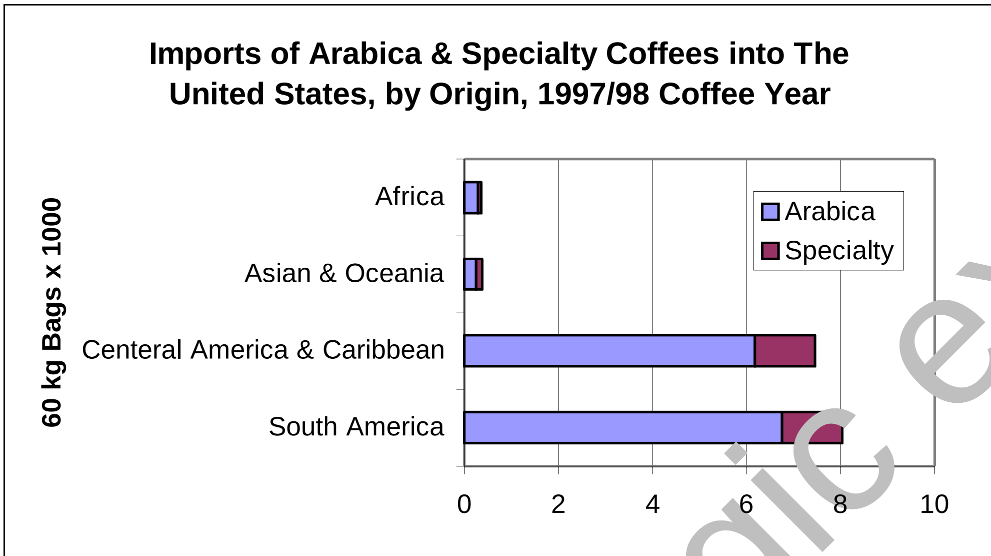

Figure 3, Source: USDA Commodityexpert, Coffee News

Value Added for Name and Quality Recognition
(May 2001,wholesale green bean, San Francisco)

Name	**Landed Price**
Kenya AA Fancy	$4.95/kg
Ethiopian Harrar	$3.12/kg
Estate Java	$2.11/kg
Colombian Excelso	$1.84/kg
Timor Conventional	$1.87/kg
Nicaragua SHG	$1.76/kg
Mexican Prime-Washed	$1.72/kg.
Peru HB	$1.72/kg

The specialty coffee industry is currently in the process of differentiating itself from the commercial coffee business. This is happening in a number of ways, including cup quality, respect for the environment (through organic, shade-grown, Eco-OK and Smithsonian Bird Friendly products), and respect for the labor of growers (witness the Fair Trade movement).

The three largest producers of coffee in the world, Brazil, Vietnam, and Colombia, produce virtually no organic coffee. In addition, the specialty industry is just beginning to demonstrate a willingness to separate from the 'tyranny of the "C" Market' (a New York Commodities Market price for coffee that indicates a price based on supply and demand, but includes the vast glut of low-grade coffees worldwide that have no bearing on the relatively small quantities of high-grade coffees available).

3.0 Coffee Supply Analysis

Although the largest coffee companies continue to import chiefly from the traditional suppliers in Central and South America, the growing specialty segment is thriving on more exotic coffees, creating a potential for growth in Africa coffees. While the volume in top grades is small, it is important to note that for an exporter, profitability is much greater.

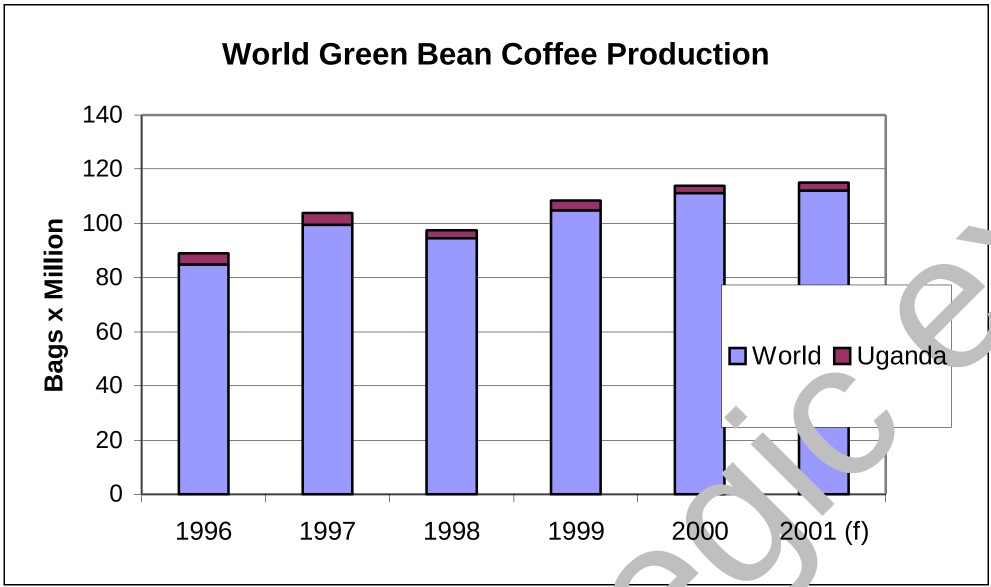

Figure 4, Source: USDA Commodityexpert, Coffee News

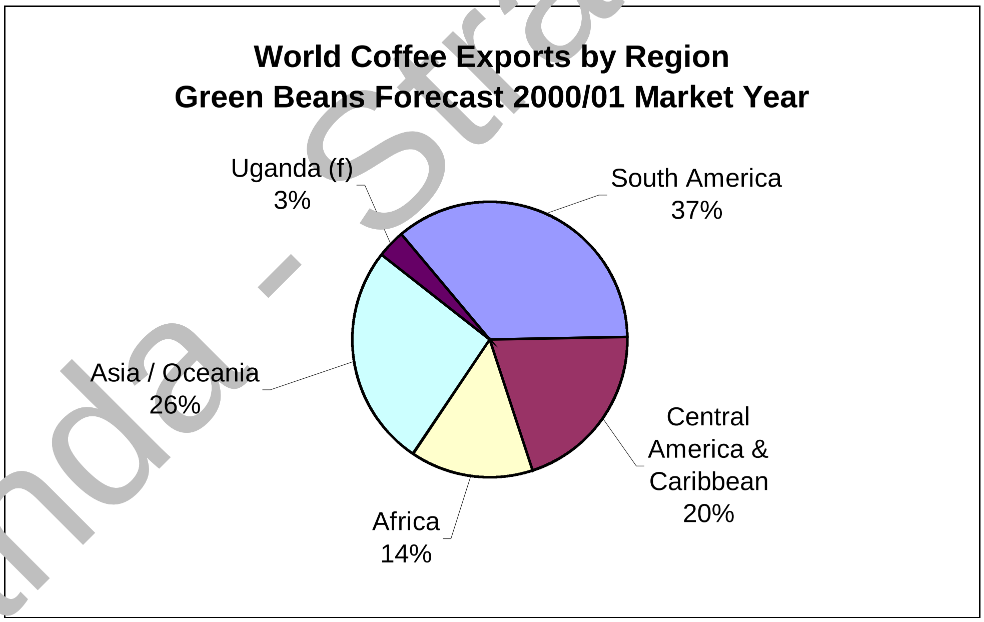

Figure 5, Source: USDA Commodity expert, Coffee News

Of the eight countries noted in Figure 6, Vietnam, Indonesia, Cote d'Ivoire and Uganda are primarily Robusta producers whereas Brazil, Colombia, India and Ethiopia are focused on Arabica production.

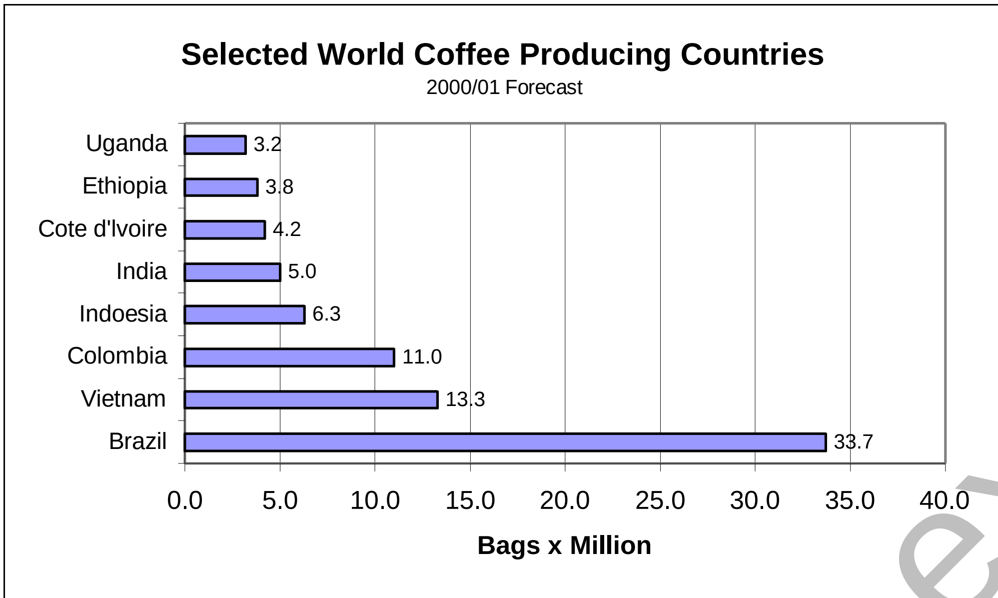

Figure 6, Source: USDA FAS

The USDA FAS Tropical Products Division is forecasting that total world coffee supply in 2001/2002 will be over 141 million bags (which is on the high side of most forecasts). This is not good new for farmers or exporters, as it indicates that the general over-supply in commodity coffee is likely to continue into the foreseeable future.

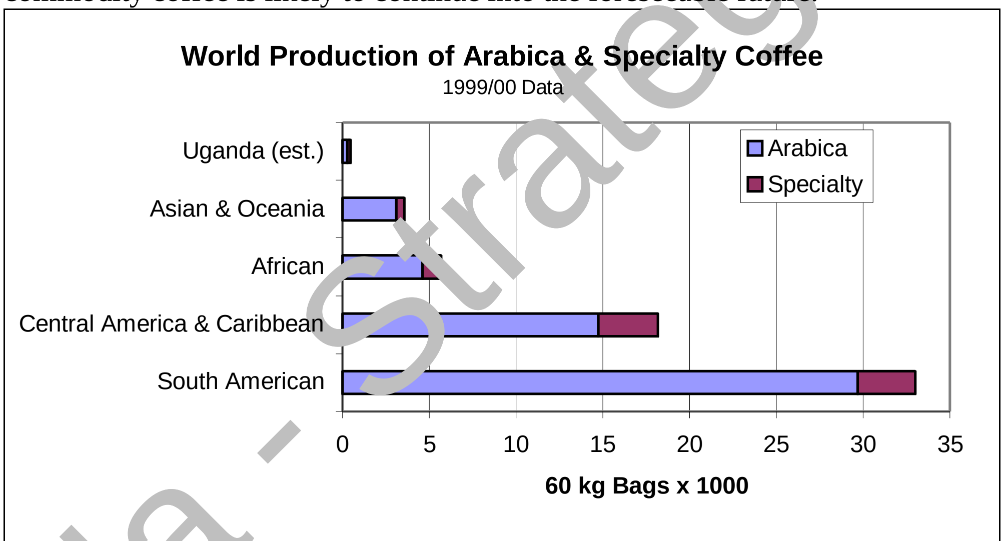

Figure 7, Source: USDA Commodityexpert, Coffee News

As can be noted in the above chart (Figure 7), Africa and in particular Uganda produces a limited amount of high-value specialty coffees. Kenya and Ethiopia are best known in the region for their quality coffees. It should be noted that in the 1999/2000 market year, Uganda exported about 3 million bags of coffee and earned 165 million USD, whereas Kenya exported only one-third that amount, about 1 million bags, but earned over three time more money than Uganda did (Kenya grossed over 500 million USD in sales revenue). This disparity is due to the fact that Kenya is focused on the high quality / high value Arabica market and Uganda is focused on the lower value commodity Robusta market.

4.0 Uganda's Market Position

In the 1999/2000 crop year, Uganda produced about 2.5 million bags of Robusta and 0.5 million bags of Arabica. The national trend between 1998-2000 has been an increase in Arabica output and a decrease in Robusta output. This trend is mostly due to a mixture of weak prices, particularly for Robusta, and a fall in output in Robusta as a result of the coffee wilt pathogen.

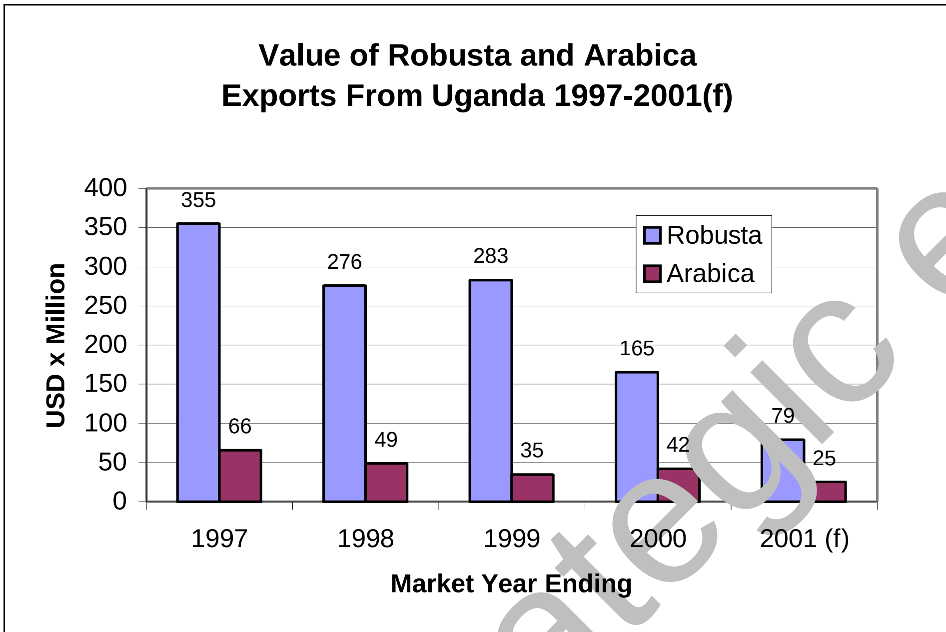

Figure 8, Source: UCDA

Parallels between the coffee and wine industry

Higher-quality products (for both wine and coffee) tend to hold their value (are less price elastic) than lower-quality products, which realize a much greater level of price-elasticity when markets become saturated. In the wine industry, growers of low quality grapes are finding it very difficult to sell their product to anyone, even at a loss, whereas producers of high quality grapes and wine have seen strong market demand. Over-planted varieties, such as Chardonnays (in California), have recently gone unharvested due to over-production. The lessons to the coffee industry are clear – focus on the inelastic quality segment of the market, and cut your losses in the low quality market segment.

The chart above (Figure 8) shows the precipitous fall in sales revenue to Ugandan coffee exporters over the past five years. Robustas have realized a greater percentage drop in revenue, when compared to Arabicas. Over the five-year period examined in Figure 8, Robusta revenues have fallen over 55%, whereas Arabicas have seen a 40% decrease in revenues.

In the 1999/2000-market year, Ugandan farmers produced about 250,000 Ha of Robusta, yielding about 2.5 million bags of green coffee. Robusta coffee is grown in a wide geography throughout Uganda and affects the lives of millions of its citizens.

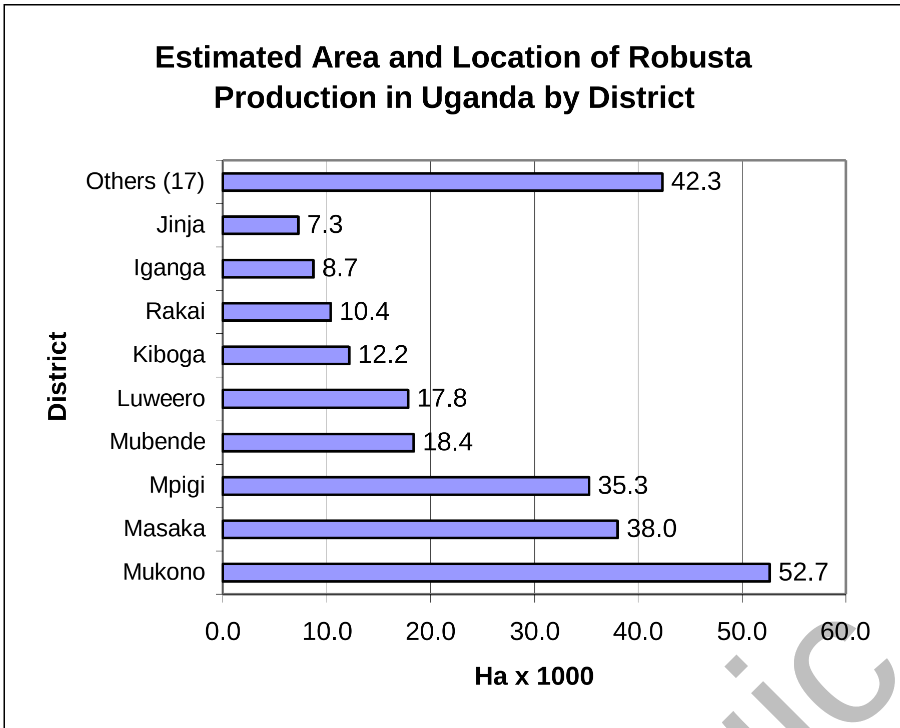

Figure 9, Source: UCDA

The problem with growing more Robusta is that a strategy that emphasizes greater production will simply drive the unit price of the product to further lows – then there will be a continual decrease in benefit with increasing resources focused on maximizing volume. For this reason, resources are better spent in the high quality Arabica sector, which does not have as big a problem with over-production and products can be more easily differentiated.

The Robusta sector can also benefit from value-added processing and improved handling. Resources can be focused on organizing farmer associations that produce semi-washed or fully washed Robustas. These can be sold at premium prices. The markets are small, but there are opportunities in these areas. The key will be providing the training to the associations so that they can be sustainable and run their own businesses. In Uganda, this is not a short-term task.

Figure 9 examines the geography of Arabica production in Uganda. Arabica is produced only in highland areas where temperatures are cool. These conditions exist in the western border area of Uganda with the Congo and Rwanda, as well as in the eastern border area (around Mt. Elgon) on the Kenyan border. From a political sense, it is understandable that Uganda would want to promote Robusta coffee (which has a much wider geography and impacts a greater population). Nevertheless, politicians and development planners need to be realistic about what impact the limited development money will have in any given sector. Resources focused on expanding the production base (area) of the Robusta sector will have minimal positive impact (if not negative impact), whereas resources focused on a development strategy in the Arabica sector and value addition, in all coffees, will have the potential of yielding a significant positive effect.

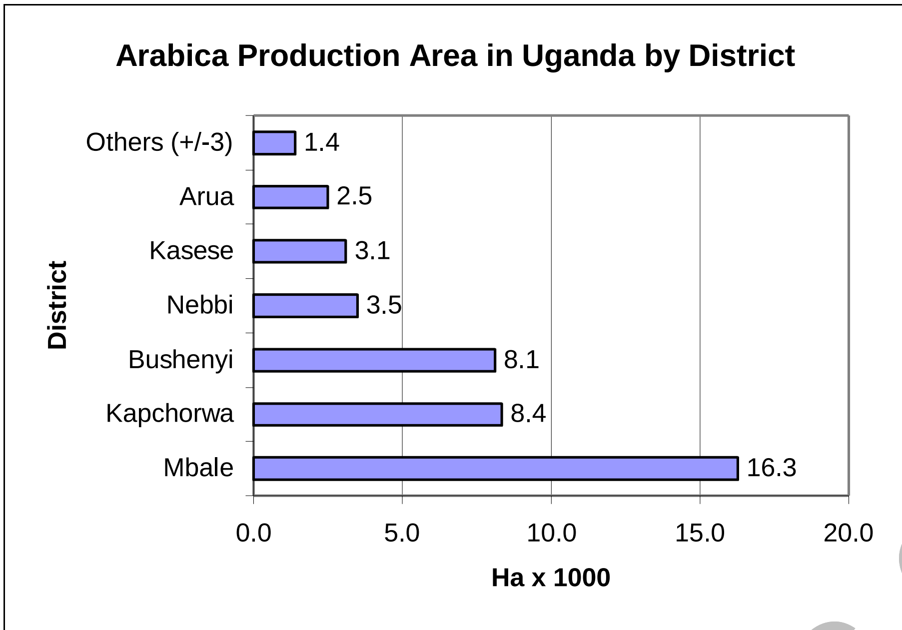

Figure 10, Source: UCDA

Volume vs. Quality

Uganda's coffee export sector is becoming more concentrated over time. Current estimates give multinational exporters a 60% market share and this number could increase as smaller local firms are squeezed out of the business due to the thin margins. The multinationals are focused on moving large volumes of coffee, as their profit per ton is minimal. This strategy does have its risks; as fewer buyers/exporters are left in the sector suppliers can be squeezed for ever-lower prices (a monopsomy can develop). This situation can lead to disaster for the supplier and a loss of diversity for the consumer. While the large multinational exporters provide an important and useful role, they are not necessarily focused on maximizing quality over volume.

It is estimated that Uganda has about 45,000 Ha of Arabica currently in production. According to UCDA statistics, there is a potential for over a half million hectares of Arabica in the country. At the current level of production, Uganda is utilizing less than 9% of its potential production area for Arabicas.

Using 1999/2000 Ugandan market year data, it can be noted that Arabica generates about 33% more revenue per kilo than Robusta. Additionally, the specialty Arabica market is growing by 20% per year, whereas the Robusta market is growing at a rate about 1.6% annually, optimistically (the US Robusta market is flat). Given these trends, it becomes ever more clear why the GOU needs to make a commitment to focusing future resources towards value addition of all coffees, specialty Arabica and market promotion.

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5.0 Institutional and Market Barriers

5.1 Research and Productions Constraints

Ageing and Pathogen Affected Coffee Plants: The coffee wilt fungal pathogen has burned through much of Central and Western Uganda's Robusta producing districts. In some areas, it is estimated that 50% of the Robusta plants are affected by the pathogen. This, together with an aging plant population, has led to a fall in on-farm productivity. See Annex C of this document for additional information on the spread of coffee wilt across Uganda. In 2002 coffee wilt will kills an estimated 16 million Robusta trees in Uganda, the pathogen spreading at rate of about 4-5%.

Uganda produces mostly sun-grown coffee. In this production system plant should be replaced about every 20-25 years. In parts of Latin America where shade-grown coffee is produced, trees can have an economic life of 60 years or more. Producing shade-grown coffee in Uganda would provide farmers with a number of advantages.

Limited Research Capabilities: Coffee wilt is a major problem in the Robusta growing areas of Uganda. The Coffee Research Institute has not yet made available the wilt resistant genotype for distribution on a large scale. Multiplying plant populations and moving these wilt resistant genotypes into the field has been a constraint. Even after wilt resistant plant materials are multiplied, researchers should not stop looking for new genotypes that provide greater levels of protection against pathogens and pests, and provided higher yields to the farmers.

5.2 Organizational, Capital and Infrastructure Constraints

Rural Institutions and Investment: The vast majority of Uganda coffee farmers produce and process their coffee independent of any support from local organizations that could supply access to centralized pulpers (wet mills), training or market information. This lack of sector organization in rural areas has made it difficult to control or improve the quality of parchment and has increased transaction costs of exporters by requiring them to buy parchment from an organizationally fragmented market spread over a broad geographic area.

Limited Access to Long-Term Credit: Long-term credit for investment in processing infrastructure (centralized wet mills) has been nearly non-existent in Uganda. The USAID-funded SPEED project has recently started to address this constraint by identifying investment opportunities in the sector; however more work needs to be done in this area, particularly in building rural institutions (farmer groups) through which investment in infrastructure, such as wet mills, can be made.

Limited Access to Short-Term Credit: Access to credit for small and medium-sized business is almost non-existent through normal commercial channels. Lenders assume a large risk when providing credit to this segment of the population, and the interest rates that need to be charged to offset this risk make the loans themselves unaffordable.

5.3 Markets, Information and Promotional Constraints

> **Information and Coffee Market Behavior in Uganda**
>
> Asymmetric market information in the coffee industry is when a seller knows more about a given lot of coffee than the buyer does. The buyer worries about getting stuck with a bad lot of coffee. The result is that coffee market price for countries that have asymmetric market information tend to be set by the lower quality coffee, which ultimately drives sellers of good coffee out of the market.
>
> Uganda suffers from an asymmetric market information environment and this explains to a large degree why the quality of Ugandan coffee has fallen over time.

Weak Quality and Price Linkage: Since liberalization in the early 1990's, Uganda's coffee marketing system has not been particularly good at segmenting the market and rewarding quality. The focus has been on volume exports of Robusta. This was a logical strategy (when supplies were short) in the Robusta market, but it has not served the Arabica growers well by not allowing them to fully exploit market opportunities in the specialty coffee sector. The result of this market situation has been to decrease the overall quality of coffee exported from Uganda, as most growers did not see better prices paid for better quality product. From importers' viewpoint, any system that rewards quality with a higher price is ideal.

Limited Market Transparency: The structure of the current coffee market in Uganda lacks real-time transparency. Eight firms control 70% of the export market. The result of this level of market concentration is a restricted flow of information from the market to producers. Uganda needs to enhance the flow of market information to small coffee traders and farmers by providing public information on volumes, quality, price, transport costs and market channels in near real-time (same day or weekly). A common complaint of coffee farmers is that they lack market information. It also needs to be stressed that small traders and producers need to be trained on how to interpret and use market information. Simply providing information to someone without the tools and skills to use it is a waste of time and money.

The UCDA does a good job of collecting statistics and distributing this data to the industry on an annual basis. However, there is very limited information available to farmers and small traders in regard to how the international market works, what the day-to-day price fluctuations are, and what the relationship is between price and quality. These constraints, as well as the constraint of asymmetric market information, can be addressed in part through the creation of a private coffee auction in Uganda that provides regular information to the public, (increases transparency).

Market Access: Uganda's export market is not easily available to all individuals, firms and other groups wishing to sell quality coffee. To date, small producer groups and medium-sized entrepreneurs have not had access to information that could allow them to tap into the international market. This has been a contributing factor in the relatively small number of exporters operating in Uganda.

In every coffee production region of Uganda, there are numerous small and medium size businesses that consolidate parchment and sell it to exporters. The GOU needs to assist the sector in providing opportunities to SME's to add value to their product. Currently, SME's are limited to selling lower value parchment to local and international exporters that add value to it by dry-milling and exporting the green beans.

Marketing Coffee & Singapore Airlines

When Singapore Airlines wants to market a seat on one of its airplanes, it does not show economy class passengers being herded onto an airplane. Rather, it shows its highest-value product, a first-class passenger, being tucked in bed with a glass of champagne by an attractive flight attendant. In promoting Ugandan coffee, a similar strategy needs to be developed whereby the industry has a high-value product to generate name recognition around. Then it must consistently deliver this high quality product to the market.

Lack of Promotion: In order to promote coffee, the industry needs to segment itself so as to separate the high value products from lower-value products. This can be done in part through the development of coffee appellations. Additionally, the industry and GOU need to join together to create an effective international marketing strategy and campaign. To date, Uganda is not known by consumers as a coffee origin. Countries that have developed the concept of origin and quality together have proven to be the most financially successful in the industry (case in point; Columbia, Kenya, Jamaica Blue Mountain, etc.).

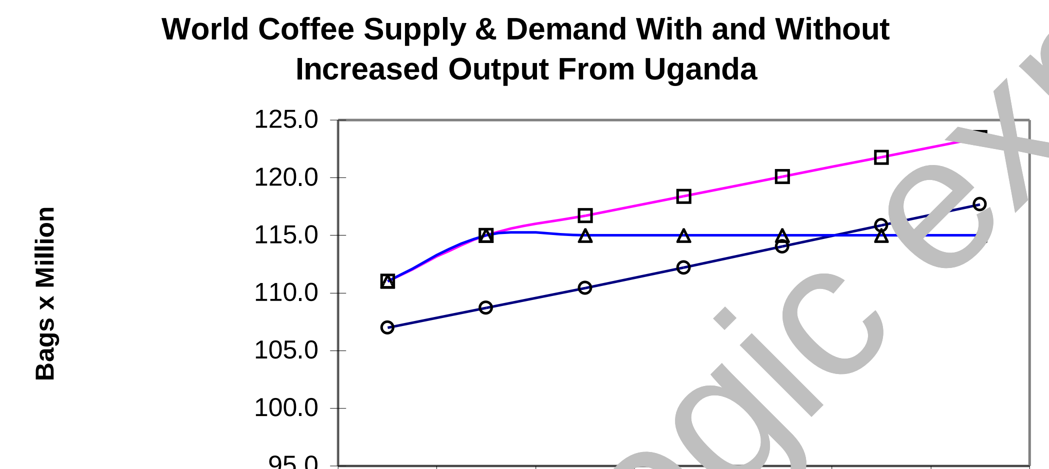
6.0 Poverty Alleviation and the Coffee Sector

In Uganda it is estimated that, two million people, from half a million households, depend on coffee as an important source of income. For many of these households's coffee provide the only source of cash income available. When coffee prices were strong in the world market (in 1997) farmers received a price of about 2,200 UGSH/ kg for FAQ (fair average quality, semi-processed coffee). Today, with the low world price for coffee, farmgate FAQ price is about 475 UGSH/kg. Assuming that the average farm grows about a half ha of coffee that yields 375 kg (year 2000 data, assuming older varieties and low input farming) the annual income from coffee is currently 178,000 UGSH. This compares to an income of over 825,000 UGSH in 1997. Today farmers are receiving only about 21% of their 1997 income from coffee.

If a farmer replanted old coffee varieties with newer ones and increased plant populations to recommended levels as well as pruned and mulched the plants, yields would increase from an average of 750 kg/ ha FAQ to 2,250 kg/ ha for Robusta and from 500 kg/ha to 1000 kg/ha for Arabica (based on year 2000 data). With new varieties and good cultural practices Ugandan coffee farmers can more than double the current output per ha (and income per ha). This would increase coffee income per household from its current mean level of 178,000 to 534,000 UGSH.

7.0 The Path Forward

The world coffee price is currently at 40-year lows as the result of over-production and saturated markets. Lower-value Robustas that are more price elastic than higher quality Arabica have suffered particularly under current market conditions. With a projected growth rate in world coffee supply of 3.6% and a projected increase in world coffee demand of 1.6%, it is unlikely that producers of commodity coffee will see any improvement in the current low price levels over the medium-term.



	2000	2001	2002	2003	2004	2005	2006
World Demand	107.0	108.7	110.5	112.2	114.0	115.8	117.7
A - World Output (w/ Uganda Increases)	111.0	115.0	116.7	118.4	120.1	121.8	123.5
B - World Output (wo/ Uganda Increases)	111.0	115.0	115.0	115.0	115.0	115.0	115.0

Figure 11 Source: GOU, Government Interventions to Promote Production, Processing and Marketing of Selected Strategic Exports

> **Social Conscience**
>
> *"We didn't want to be waddling about in suits while our suppliers were starving to death."*
>
> - Mike Reilly, Buyer
>   Taylor's of Harrogate
>   Coffee Company, UK

The above chart examines what will happen to world coffee supply and demand if Uganda increases its coffee output (line A) as proposed in the GOU document "Government Interventions To Promote Production, Processing and Marketing of Selected Strategic Exports" and what would happen if there was no more growth in coffee output worldwide (line B) over the next five years.

The forgoing (Figure 11) shows that if Uganda expands production to 12 million bags by 2006, the world's over-supply situation will continue and prices will remain low. If, on the other hand, coffee producing nations refrain from continued expansion of coffee production, then supply/demand equilibrium will be realized in about 2004 or 2005 (assuming a 1.6% annual growth in world coffee demand). Once the supply and demand are in balance (having reached equilibrium), then the sector will realize price recovery. This is a simple model, but it does show the need for all countries to refrain from large-scale production expansion. In reality, it is likely that some countries will continue to follow a policy of expanded coffee production and this will have a negative effect on world price. To protect Uganda's coffee sector from the continued downturn in the world market the GOU needs to follow a policy path that focuses on the production of high value coffee. This policy will provide some insulation to the downward press on incomes, while the over-supply situation persists.

Uganda Strategic Options: The five strategic areas that Uganda needs to focus on are: value addition, transparency, promotion and replacement of old and wilt affected plants and the environment. Numerous activities fall under these broad categories, and some of these activities have benefits outside of the target objective. It is imperative that all activities take place nearly simultaneously so the synergistic effect of adding value, developing markets and promoting product can be realized (resulting in greater revenues and profits).

Value addition: Activities such as the Uganda Coffee Auction will allow farmers who produce in a particular appellation to differentiate their coffee based on quality and sell their product at a higher price. Farmers who employ value-added processing (such as wet milling) will also see higher revenues as a result of improved cup quality. In Uganda, value addition is all about improving coffee quality in the mind of the consumer through differentiation. Examples of this value addition include washed, organic, Fair Trade, Gourmet, Appellation, shade-grown and biodiversity coffees.

Transparency and training: By focusing on market transparency, the GOU will assist businesses that (to date) have not had access to relevant daily market information access to this vital data. It will also promote greater trust in the sector and greater trust will promote business. Grower associations and small traders want access to this information but they need training so they can understand and use it.

Promotion: Under the promotion heading, Uganda needs to differentiate its coffee from the rest of the pack in the minds of consumers. To do this, it can use issues like shade-grown, bird-friendly, appellations and Fair Trade. Additionally, by implementing a program that focuses on shade-grown coffee, farmers realize the benefits of improved soil fertility and better soil/water conservation. The shade-grown coffee results in improved cup quality, which consumers are willing to pay for.

Replanting: The objective of a replant program for Uganda's Robusta producers is in part to preserve farm incomes over the long-run and buy time for some of these farmers to identify other income streams that will yield better returns than coffee. There is real risk that per unit gross revenue from Robusta sales worldwide is on a long-term decline and farmers who opt to stay in the coffee business over the long run will need to become more efficient just to keep their real incomes at current levels and/ or learn how to add value to their product.

Environmental: To encourage the development of shade-grown coffee production, the GOU should explore ways of obtaining Carbon Credits in exchange for expanding the area of shade-grown coffee production in Uganda. These credits (payments) are provided to firms that reduce the amount of CO_2 in the atmosphere and are paid by firms that dump carbon (as CO_2 or other C-greenhouse gases) into the atmosphere.

8.0 Priority Interventions

The world's coffee market is flooded with commodity Robusta and Arabica, and this situation will most likely continue over the longer term. As a result, it makes little sense to continue planting more and more of these low value products. The Uganda coffee sector must identify ways of differentiating itself from other producers. Uganda can certainly produce specialty grade Arabica coffee, and this is where it needs to invest significant resources to realize the best possible return on its investment. Additionally, Ugandan producers and exporters can add value by developing central washing/pulping facilities. These centralized primary processing plants allow for better quality control than the current system of using hand-powered individual pulpers.

Ugandan growers need to be educated as to new/ alternative markets available to them and trained in ways so they can utilize them. Some of these new markets include specialty, Fair Trade, organic, shade-grown, eco-friendly coffee, etc. The sizes of these markets differ by product and geography. The one thing all of these new markets have in common is that they are growing rapidly. The Specialty coffee market in the U. S. is growing at a rate of 20% per year and in 1999 was valued at over 7.5 billion USD. Tapping into this market (along with the European and Asian specialty markets) is the best strategy for Uganda to follow in marketing its coffee in the long-term.

The markets will not necessarily come to Uganda – Uganda needs to go to the markets. Resources need to be focused on market development (which emphasizes Uganda as an origin). Columbia has the world's premier marketing campaign in this regard. Over the past 42 years, Columbia has been able to carve out the best-recognized name in the business. This has been done with ongoing promotion campaigns in target consuming countries. Uganda will need to undertake a similar type of activity while simultaneously improving the quality of its Arabicas and increasing their volumes as well as developing its potential in washed Robustas

In terms of capital investment in the coffee sector, Uganda should focus new investments on developing high-quality Arabica at the farm, processing and market level. Arabica should be the focus of the GOU's coffee strategy but there should also be investments in the Robusta sector as well, focusing on the production of high quality washed Robusta and replanting old and pathogen affected trees. For both Arabica and Robusta, the sector should focus on developing an environmentally sustainable production system that fosters biodiversity, habitat preservation, shade-grown coffee production and then link this environmentally sound production policy to a coffee marketing and promotion program that conveys these concerns and stewardship of the environment into a commercial message to consumers.

The GOU should refrain from any program that would encourage the large-scale planting of additional (new) areas to Robusta. Rather, it should refocus it business model to emphasize quality coffee over low-value commodity coffee. To do this, the coffee sector will need to rethink how its resources are allocated and how the sector is organized.

9.0 Recommendations

The following section highlights some of the specific activities that can be employed to increase the competitiveness of Uganda's coffee sector.

9.1 Research

§ Create an ongoing pipeline of new genetic material for the coffee sector:

Coffee research in Uganda needs to be ongoing with new products in the research pipeline at all stages of development and commercialization. Research needs to look beyond it historic role in plant breeding and crop management issues; it should examine and develop recommendations as to how coffee production affects biodiversity, greenhouse gases, wildlife habitat and help identify ways to harmonize the needs of farmers and the needs of the environment while improving cup quality.

The local researchers need to strengthen their links with research institutions outside Uganda and bring additional resources to bear on the problem of long-term sustainable research. Additionally, researchers need to work more closely with marketing staff so that they develop a clear understand of consumer needs in the areas of biodiversity coffees and cupping.

§ In concert with coffee industry, implement commercial field trials to determine how to optimize benefits of shade grown coffee:

Develop large scale, statistically correct commercial field trails to determine the optimum mix of tree species, shade percent, and coffee varieties in a shade grown system. Demonstrate the economic and environmental benefits of shade grown coffee in Uganda.

§ Create an office of coffee promotional research (market research) within UCDA:

This position would study consumer market trends and activities of competitive production countries and report these to UCDA and the industry at large. The market research staff would make recommendations to the industry on market opportunities and would also work with the public relations/ marketing campaign to design a PR program that would make Uganda a recognized origin by consumers.

9.2 Production

§ Plant new Arabica trees (expand area planted to coffee) in geographies that can produce high-value coffees only (appellations, specialty, organic, biodiversity, etc.):

Promote expansion of Arabica plantings only in geographies (appellations) that are known to produce superior quality coffees. If an area does not have the ability to produce a specialty coffee, then expansion in that geography should not be encouraged.

§ Develop farmer associations in both Arabica and Robusta districts:

With a national strategic emphasis to improve coffee quality, the sector will need to address this constraint by developing producer organizations in rural areas through which investments and services (training and information) can be channeled. The focus of these associations will include value addition training in production, processing, biodiversity, business skills, understanding markets, appellations, input sourcing and selling output. Much of this work can be done in concert with donor-funded projects. In many areas, UCDA and local government officials can play key roles in identifying organizational opportunities and assisting in community organizational efforts.

§ In concert with UCDA, create a specialized coffee extension service that will focus on training coffee farmers and SME's in production, processing and markets.

Stakeholders can receive training in markets, processing and production. For example, this training may take place in the village as a short-course (3–5 days) of hands-on training for village-level leaders and association members. This short-course would be designed to educate the participants on subjects such as price discovery, markets, auction operations, quality control and standards, storage, processing (wet and natural), environmental issues, association development and management, as well as financial and banking issues.

§ Support the development of shade grown coffee and biodiversity:

The GOU can create a joint task force and action plan to link the Forestry Department with UCDA in a program to develop large-scale shade tree plantings in existing coffee production areas. Through these agencies, the GOU can develop a campaign to increase the planting of shade-grown coffee. This is sound from a coffee market standpoint, coffee quality standpoint, and production standpoint. This campaign can include technical assistance, training and demonstration plots targeted at coffee farmers. In the long run, shade-grown coffee may be exploited to develop a revenue stream based on Carbon Credits as well as value addition.

§ Develop a more efficient coffee plant multiplication and distribution system:

Work with UCDA to improve the plant multiplication system for wilt resistant varieties and improve logistical systems to move seedling to farmers. The multiplication and distribution of the wilt resistant Robusta genotypes needs to be implemented as soon as possible.

§ Replant old and wilt affected Robusta coffee trees:

To address this issue, the coffee sector needs to invest more time and money in replanting wilt affected plants with resistant genotypes and replacing old plants with newer, more productive varieties. The areas planted to Robusta should not be expanded, but coffee affected by the wilt pathogen and old trees should be replaced. This replant program can be coordinated through local UCDA District officials and newly formed coffee farmer associations. As coffee farms are replaced with new varieties, they can also be brought into a shade-grown production system with assistance from UCDA, the Forestry Department and donor funded activities.

9.3 Capital and Processing

- Assist entrepreneurs, firms and associations in identifying and exploiting business opportunities in value-added coffee processing using increased access to capital and technical assistance:

The USAID-funded SPEED Project is currently operating in this area; however it is a lot to ask of one donor-funded project to provide loan guarantees (financing) to meet the demand for the entire value-added wet-milling sector. To further leverage its resources, the GOU should look for ways to included specialty coffee (high value Arabica and washed Robusta) as a non-traditional export. This would allow processors and exporters working in this sector to have access to the Ugandan Central Bank's credit facility that target non-traditional exports.

In concert with increased access to capital, the GOU should provide (in part through donor-assisted projects) technical assistance to entrepreneurs, firms and associations that receive financial assistance to reduce the risk of business failure.

- Support the expansion of centralized wet-milling:

From a quality control perspective, it is easier to maintain consistent quality at a centralized processing facility rather than at home-level (individual) primary processing facilities. Centralized facilities are more management and capital intensive than hand operated mills, and the government needs to encourage farmer groups and entrepreneurs to invest in centralized processing (on a village or sub-country basis). Part of this sector support will be delivering resources to firms and producer associations in the form of education and training on mill operations, as well as providing credit opportunities through loan guarantees or other financial mechanisms.

- Increasing the availability of short-term credit:

By providing a pre-payment loan (advance on sales) to farmer groups and entrepreneurs selling their coffee at the auction, the auction business will provide needed capital to small and medium-sized businesses operating in the sector. This will encourage rural business people to take part in the auction and increase the flow of revenues derived from coffee sales to rural areas.

The Uganda coffee auction can provide an advance payment to growers based on the value of the coffee delivered to the auction warehouse. This is not a warehouse receipts program, but has some similarities. In this example, the small businessperson or farmer association delivers 100 bags of coffee (cleaned and dried) to the coffee auction warehouse for immediate sale. The auction management estimates the sale value of the coffee to be $6,600 in relation to the current NYC. Once the contract for sale is signed (when the coffee is received at the warehouse), the seller is given a check for 50% of the estimated sales value (about $3,300). This enables the seller to repay the miller and association members promptly. It will also facilitate business by increasing the velocity of capital in the sector. After the final sale is made at the auction, about 10 day after the coffee is received, the buyer has 7 days to pay the balance due or the sale is void.

One other method of increasing access to short-term capital is through the continued role of the current operating warehouse receipts program. This activity is currently funded through UNDP and after a further examination of its effectiveness; the government may want to focus more resources in this area.

§ Support the global project on mycotoxin prevention:

The UCDA is the lead agency charged with monitoring and reducing the levels of mycotoxin in exported coffee. This activity should be continued and supported where applicable by NGO's and donors.

9.4 Markets

§ Support the development of the Uganda Coffee Auction for high quality Arabica and washed Robusta. As part of the support activity, provide TA and training to auction staff as well as buyers and sellers at the auction:

A coffee auction system will provide a vehicle through which quality coffees can be differentiated during the price discovery process. This will lead to higher sales revenue for the sellers and will encourage farmers and entrepreneurs to maximize quality. The government has voiced its support for the auction; however, it needs to rapidly move toward implementing the auction (by signing a long-term lease for the auction warehouse with the private non-profit auction company).

§ Study the costs and benefits of developing a private-voluntary parchment auction in Uganda:

The Uganda Coffee Auction should study the development of a parchment auction after its green bean auction is established. The parchment auction would allow individuals, firms and associations access to the benefits of the auction at a lower cost of entry and reduce transaction cost for buyers while allowing higher quality parchment to be differentiated for lower grades.

§ Support appellation development through TA, training and the development of a stronger UCDA rural extension service:

The GOU can enhance the development of value-added coffee through its continued support of the national coffee appellation development activity currently being implemented by UCDA, EAFCA and COMPETE Project. Uganda's Arabica appellation marketing program will allow the country to sell coffee from five or six individual appellations, as well as bulk Arabica and washed Robusta. The appellation system will help buyers and sellers differentiate the quality of coffee origins within Uganda. The origins that consistently produce high-quality coffee will receive a higher price and this will demonstrate to all producers that quality pays, as well as demonstrating to the international coffee market that Uganda produces quality coffee. Additionally, having quality Ugandan coffee sold in the international market by origin will have a positive effect on all coffees produced in Uganda (Arabica and Robusta) by projecting a positive image through name association.

§ Develop a feasibility study that examines the options in soluble coffee manufacturing and marketing/ sales:

The GOU has expressed an interest in developing a soluble coffee manufacturing plant in Uganda. Before any action takes place to implement this business, a study needs to be conducted that lists all the options available to the coffee sector and the GOU in developing alliances with currently operating soluble plants in East Africa and comparing these costs and benefits to those of building and operating a new soluble plant in Uganda.

§ Expand promotional activity in international and domestic market:

Ugandan coffee has not been well recognized as a stand-alone origin in the world coffee market. The Ugandan coffee industry needs to identify specific target markets in which it feels it can successfully develop name recognition, and focus a promotion campaign in these markets. This campaign needs to be ongoing and long-term and can work in concert with EAFCA's promotional efforts.

To make the promotion successful, Ugandan exporters would need to insure that their coffee was available in the target market in an unblended form (that is, not blended with other origins). This type of coordinated test marketing in a specific market would yield critical information to Ugandan coffee exporters as to the costs and returns of such a strategy. The strategy will require the cooperation of exporters, importers, roasters and retailers.

Developing an Origin Identify

To be successful as an origin label, Ugandan coffee will have to be differentiated from other commodity coffees and the promotion campaign will have to rise above the noise of competing campaigns. German consumers, for example, are some of the most environmentally conscious consumers in the world. A campaign that focused on environmental soundness of Ugandan coffee production and the importance of coffee growing areas to migratory bird species (that spend part of their year in Germany) may have a mass appeal to German consumers.

§ Open EU coffee promotion office:

To develop better customer relations with importers, roasters and consumers, Uganda's coffee industry can open a promotional office in the EU (Ugandan coffee's largest market). This can be done in concert with EAFCA or as a stand-alone Ugandan promotional activity.

§ Develop biodiversity coffee market via promotional activity with EU/ US strategic partners:

The Ugandan coffee industry can form alliances with organizations in consumer countries that support and promote biodiversity coffees. In the US, this includes the Rainforest Alliance Eco-OK label, Smithsonian Bird Friendly label, and the Northwest Shade-Grown Coffee Campaign. In Europe, Uganda can develop promotional alliances with consumer associations and other organizations that support and promote environmental awareness and resource conservation.

- Expand the capacity of the private sector cell-phone network to deliver market information to rural areas on a regular basis using text messaging:

Rural farmers and traders often complain that they have little or no information on local export prices or world market prices of coffee. By using the current cell phone network text messaging capabilities in Uganda, local auction price information (and world market information) can be transmitted across the country to thousands of rural villages. It is not uncommon to find cell phones in rural villages and incoming messages are free of charge. This will greatly enhance the sector's transparency and will provide a more conducive business climate. However, before this activity is implemented, rural farmers and traders will need to be provided with the information and skills on how to use and interpret this data. Without first training the end-users of this information on how to use it, this system would simply increase the level of confusion of the intended consumers.

9.5 Regulation and Policy

- Change The Agricultural Seed and Plant Statute of 1994, Section 8, subsections 1,2,5,6

The Agricultural Seed and Plant Statute states that all plant materials imported into Uganda requires a 3 years testing period and contains other language that will prevent the UCDA from importing resistant coffee seeds or plant tissues for rapid propagation. This law may impose a major bottleneck in the efforts to obtain the needed plant materials to undertake a national replant program.

- Reorganization of UCDA:

The GOU has expressed a strong interest in reviewing and reorganizing the UCDA. This activity should be undertaken as soon as possible. The UCDA has clearly stated that they want to move forward with this exercise, however they require limited financial support from a body outside their organization to share costs with.

- Improve/ strengthen regulatory environments:

In the last year, UCDA, the coffee industry and the COMPETE Project have worked together to review and strengthen the quality control regulations that govern the export of Ugandan coffee. UCDA should be commended in this efforts and this work should continue. In the next several years, the UCDA and GOU will face many new challenges in creating a facilitating regulatory environment. Some of the challenges will include delineating and protecting coffee appellations, developing a system for monitoring shade-grown coffee, improving the quality of exports, researching markets, promoting Uganda coffee and developing novel revenue streams to insure its long-term sustainability.

- Pursue Carbon Credits:

Uganda should seek to be granted carbon credits for the development and expansion of shade-grown coffee. This internationally funded program taxes industries that dump carbon into the environment (such as coal burning power plants) and rewards industries that take (fixes) carbon out of the environment. Shade-Grown coffee fixes carbon and thus may qualify for carbon credit payments.

§ Insure security in board areas:

GOU needs to ensure that the road and lands that border areas near Rwanda, Congo and Sudan are secure. This will encourage entrepreneurs to enter these areas and will provide greater competition (and higher prices paid) for the high value coffees produced in these areas.

9.6 Infrastructure

§ Improve and maintain rural roads:

The GOU needs to ensure that basic infrastructure, such as roads, are well maintained in coffee growing areas so that coffee can be transported at minimal cost. This will encourage entrepreneurs to enter these areas, reduce transaction costs and will provide greater competition for quality coffees, resulting in increased revenues to farmers.

§ Wet millers need clean water:

To make a high value fully washed coffee, millers need a reliable source of clear water. The mountains of eastern and western Uganda have numerous small rivers, streams and springs that can be exploited for the purposes of milling. But residents and mill operators need to be informed on how to maintain water quality, and programs need to be put in place that insure water quality.

§ Electrical power is required by rural wet millers:

Coffee wet mills require electric power. Depending on the process, design and equipment used, the amount of electricity will vary. Some rural wet mills will be able to use generators, particularly when the mill is designed with a gravity feed product stream and gravity feed water. In other cases where gravity feed water is not available, wells (bore-holes) will need to be developed and pumps utilized to lift the process water to the mill. In these cases, greater amounts of power will be required and millers may opt to produce a semi-washed coffee to reduce the amount of process water required. The geography where this is most likely to occur is in the lower elevation Robusta areas where surface water is less available. In these areas, it will be important to insure that a dependable supply of electricity is delivered to the mills at a competitive cost.

§ Develop a Uganda set aside area at the Port of Mombasa

The Port of Mombasa, Kenya is poorly managed and exporters of Ugandan coffee consider it an added risk in moving their coffee to market. Importers buy coffee FOB Port of Mombasa (loaded on the ship) so the risk is shifted to the seller. By negotiating with the Port Authority for a separate port area for Ugandan goods, Uganda could reduce transport risk and improve the level of service to buyers and sellers in Uganda.

Annex

Annex A Trends In The Value Added Market Segment

Future trends in coffee are in the direction first of specialty coffee over commercial/ commodity coffee and second of Organic, Fair Trade, and Sustainable coffees. As consumers become aware of the issues surrounding coffee production, they tend to support Fair Trade practices in the same way that they support fair wages paid to garment workers for The Gap in Mexico, footwear makers for Nike in Indonesia or dolphin-friendly tuna. Whether or not they will support an increase of consumer prices for a pound of coffee remains to be seen.

The Impact of Fair Trade

"Since the Fair Trade seal for coffee was launched in 1988, Fair Trade seals have been established in 19 countries worldwide. In Europe, there are currently 130 Fair Trade coffee brands in the market, sold in over 350,000 supermarkets. Market share for Fair Trade coffees ranges from 1% in Germany (a more recent initiative) to 5% in Switzerland. Consumer recognition of the Fair Trade seal ranges from 58% in Germany to 92% in Holland.

Total 1998 sales of Fair Trade coffees were 25.5 million lbs., with a retail value of over $200 million. This trade benefited over 550,000 small farmers in 17 developing nations worldwide. At a time when overall coffee consumption has leveled off or is shrinking in the European markets, consumption of Fair Trade coffee continues up a slow but steady growth curve (5% overall sales growth in 1998)."[1]

-Paul Rice & Jennifer McLean

The Fair Trade: movement: began in Europe in the 1980's and presently enjoys widespread support and has begun to make inroads in the American market. It is basically a voluntary industry price support system for small farmers that would guarantee them a base price of $1.26/ LB for conventional coffee and $1.41/ LB for organic.

Organic: The organic production of coffee as certified by the OCIA, SKAL, Demeter, Naturland or other International certifying agencies. In some markets, supply is greater than demand but the market is growing at 20% or more per year. Novel origins, such has Uganda can fill demand by importers for coffees from unusual geographies.

Shade Grown: Coffee that is shaded by a high canopy of trees, as opposed to coffee that is grown in full sun. The vast majority of Ugandan coffee is currently sun-grown.

Bird Friendly: The Smithsonian Institute initiated this migratory bird protection program in the early 1990's. As coffee plantations in Central and South America tend to be the winter sanctuary of virtually the entire North American migratory bird population, the importance of this ecology cannot be overstated. Given the strict guidelines required by the Smithsonian for certification of Bird-Friendly coffee production in Latin-America, Uganda's best path forward is to work with either the Smithsonian or a European partner to develop shade-grown, biodiversity coffee guidelines that are appropriate for such a program in Eastern Africa. Given the structural differences between the African coffee industry and the Latin American industry, there is strong justification for developing a new set of guidelines in Africa rather that simply following the Latin American bird-friendly model. It is estimated that about 150 bird species migrate between Europe and Uganda annually – a significant biological resource.

Sustainable (as used in the coffee industry): An umbrella term within the industry for coffee that may or may not be organic but incorporates the philosophies of the foregoing terms. Sustainable coffee espouses the issues above, but does not strictly enforce or certify them. It cannot be stressed enough that all the above-referenced trends contribute to a higher quality coffee. The move toward environmentally friendly or Fair Trade coffee is not fueled by altruism alone; it improves the cup quality. For example, while sun-grown coffee temporarily increases yields, those yields eventually diminish along with the quality of the cup; hence the trend toward shade-grown. Likewise, the shade trees provide habitat for migratory birds and this has a positive effect on the product's image (and price). And a fair price paid to farmers ensures that they will not abandon their trees in times of low prices but will continue to prune, fertilize, etc., as necessary.

The US-based Consumers' Choice Council recently joined the Specialty Coffee Association of America (SCAA), and is adopting certain principles of conservation as its operating goals. Organizations like the Smithsonian Migratory Bird Foundation, Transfair USA, Eco-OK, and various conservation, organic, and shade-grown groups are joining forces under one aegis to produce a working document which will bind coffee buyers (end-users like Dunkin' Donuts or Starbucks) to a commitment to reverse the trend toward sun-grown coffees that was initiated in the nineteen-seventies and to support a higher price for growers

Annex B The US Retail Markets and Consumer Trends

Wholesale / Retail: "During the first half of the twentieth century, most Americans drank coffee roasted by local roasters. In the early 1960's, competition from supermarkets drove many roasters out of business. When the annihilation of the competition was complete, the large supermarket brands (characterized by canned coffee) began to lower quality to improve their bottom lines. When quality reached its absolute nadir in the late seventies, the local roasters re-emerged to fill the quality gap and began to create the phenomenon now known as Specialty coffee, characterized by Figures 12 and 13.

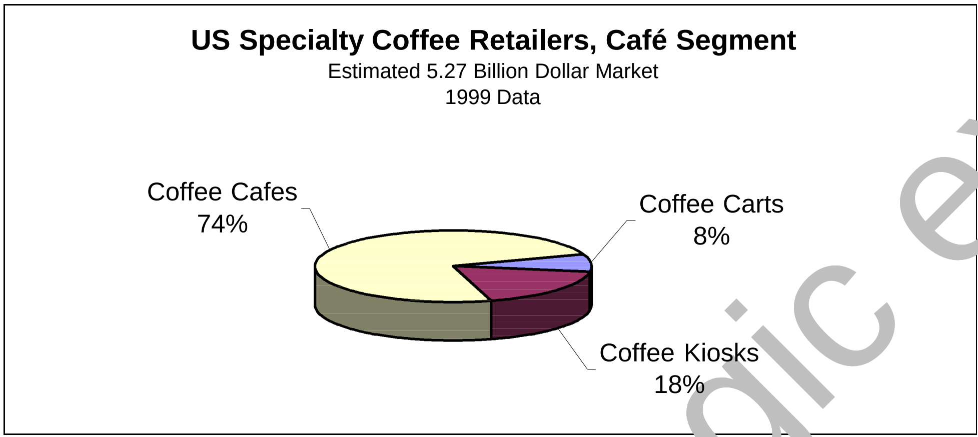


Figure 12, Source: USDA Commodityexpert, Coffee News

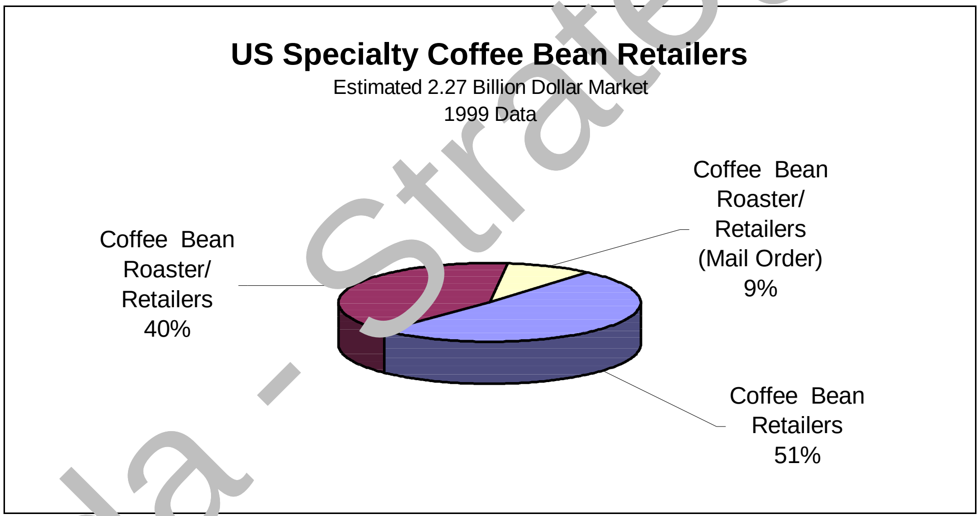


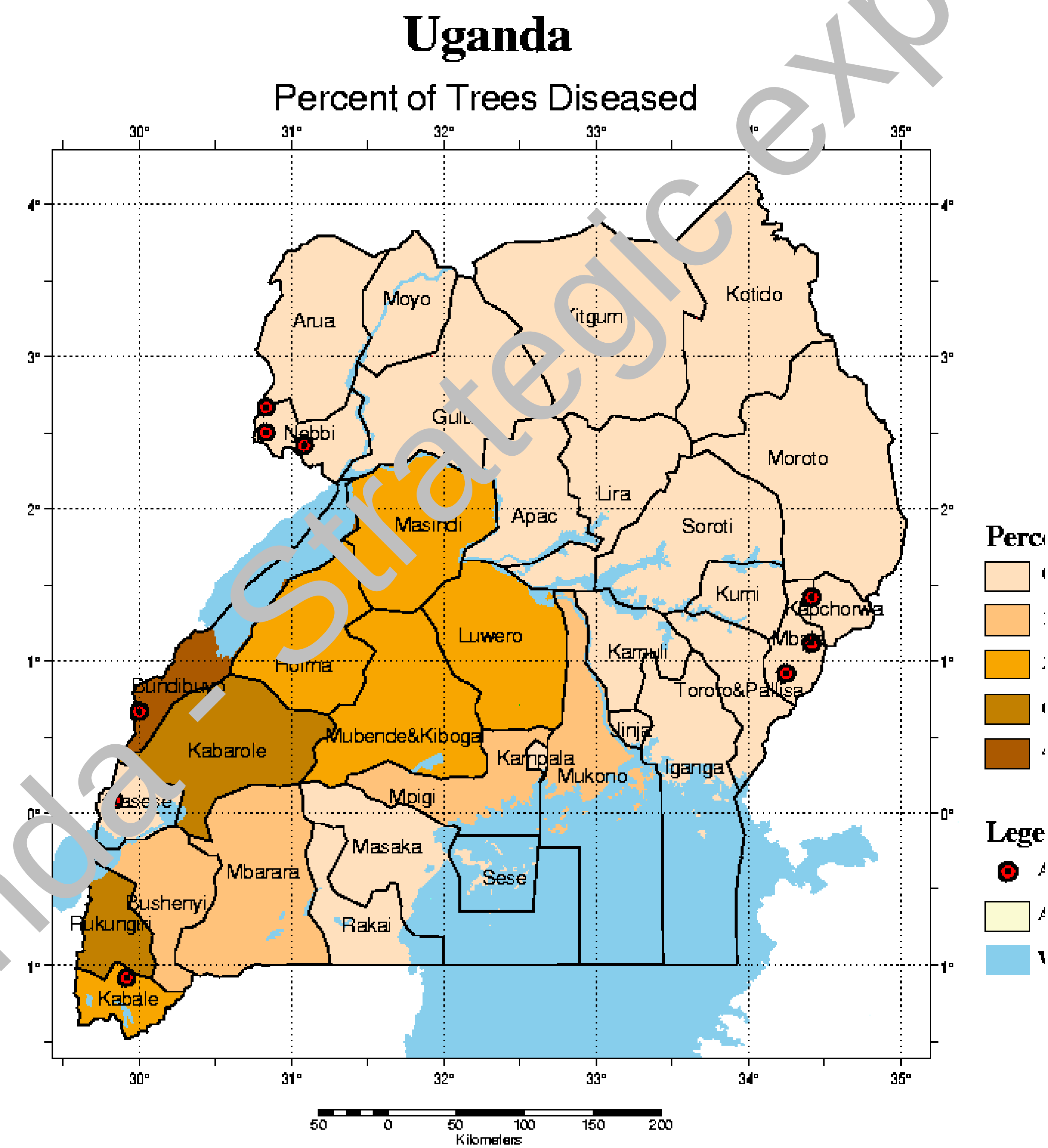
Figure 13, Source: USDA Commodity expert, Coffee News

"While US commercial ground and instant sales have been declining for several years, overall retail coffee sales are expected to remain stable or even increase, due to the dramatic growth in the specialty coffee categories. Most potential specialty markets, other than the West Coast, are far from saturated. Specialty coffee sales continue to expand by an estimated 20-25%/year."[2]

[2] Sustainable Coffee at the Crossroads, A White Paper Prepared for the Consumers Choice Council by: Paul D. Rice and Jennifer McLean

Annex C Coffee Wilt Distribution in Uganda

The following map[3] shows the extent to which the coffee wilt pathogen has affected coffee trees (mainly Robusta) in Uganda. The greatest impact has been in the central, west and southwest production regions. The eastern coffee area has remained free of the disease. UCDA estimates that 3% of the nations coffee trees are lost each year to wilt (8.16 million trees over the past 3 years). The estimated crop loss over the past 3 years was 5712 MT valued at 4.3 million USD.



[3] Prepared by the USGS using UCDA data from 1999/2000

Annex D UCDA Coffee Production Estimates (2000/01)

(a) Robusta Coffee Production Estimates:

District	Area Under Coffee (Ha)	New Area Planted (Ha)	Total Area Under Coffee (Ha)	Actual Production (60 kg Bags)	Potential Production (60 kg Bags)
1. Mukono	49,920	2,980	52,900	682,410	846,400
2. Mpigi	30,400	3,800	34,200	441,180	547,200
3. Masaka	37,240	4,200	41,440	534,576	663,040
4. Sembabule	3,360	580	3,940	50,826	63,040
5. Mubende	19,740	2,300	22,040	284,316	352,640
6. Luwero	15,840	2,100	17,940	231,426	287,040
7. Nakasongola	1,900	120	2,020	26,058	32,320
8. Kiboga	9,200	1,000	10,200	131,580	163,200
9. Rakai	7,900	2,300	10,200	131,580	163,200
10 Kalangala	2,475	296	2,771	35,746	44,336
11. Mbarara	4,800	710	5,510	71,079	88,160
12. Bushenyi	5,760	1,850	7,610	98,169	121,760
13. Ntungamo	3,800	622	4,422	57,044	700,752
14. Rukungiri	1,650	1,100	2,750	35,475	44,000
15. Kabalore	1,125	1,440	2,565	33,089	41,040
16. Bundibugyo	375	330	705	9,095	11,280
17. Kibaale	4,400	524	4,924	63,520	78,784
18. Hoima	3,680	934	4,614	59,521	73,824
19. Masindi	1,974	720	26,940	34,753	43,104
20. Jinja	4,900	635	5,535	71,402	88,560
21. Kamuli	5,820	1,800	7,620	98,298	121,920
22. Iganga	11,640	1,600	13,240	170,796	211,840
23. Lira		367	367		5,872
24. Gulu		356	356		5,696
25. Apac		395	395		6,320
26. Pallisa		254	254		4,064
27. Tororo		175	175		2,800
28. Busia		145	145		2,320
29. Kitgum		235	235		3,760
Sub-Total	**227,899**	**33,868**	**261,767**	**3,351,936**	**4,188,272**

(b) Arabica Coffee Production Estimates:

District	Area Under Coffee (ha)	New Area Planted (Ha)	Total Area Under Coffee (Ha)	Actual Production (60 kg Bags)	Potential Production (60 kg Bags)
1. Mbale	16,000	2,500	18,500	170,385	314,500
2. Kapchorwa	8,000	1,700	9,700	89,337	164,900
3. Nebbi	3,500	1,600	5,100	46,971	86,700
4. Arua	2,500	2,300	4,800	44,208	81,600
5. Kasese	3,108	800	3,908	35,993	66,436
6. Bundibugyo	1,000	100	1,200	6,052	20,400
7. Kabalore	500	100	600	2,526	10,200
8. Kisoro	872	300	1,172	580	19,924
9. Kabale	426	200	626	365	10,642
Sub-Total	**35,906**	**10,600**	**45,334**	**397,417**	**770,678**
Grand Total	**263,805**	**44,468**	**307,101**	**3,749,353**	**4,958,950**

Annex E List of Summary Coffee Sector Recommendations

- Please see the footnote at the end of Annex E for explanation of symbols used in the following table.

Private or Public		Timing			Priority			Recommendations
GOU	Pvt.	Long	Med	Short	High	Mid	Low	
								Research
G	**p**	**L**				**M**		Create an ongoing pipeline of new genetic material for the coffee sector
G	**p**	**L**				**M**		In concert with coffee industry, implement commercial field trials to determine how to optimize benefits of shade coffee
G	**p**	**L**					**L**	Create an office of coffee promotional research (market research) within UCDA
								Production
G	**p**			**S**	**H**			Plant new Arabica trees (expand area planted to coffee) in geographies that can produce high-value coffees only
G			**M**		**H**			Develop farmer associations in both Arabica and Robusta districts
G			**M**			**M**		In concert with UCDA, create a specialized coffee extension service that will focus on training coffee farmers and SME's in production, processing and markets
G	**p**	**L**				**M**		Support the development of shade grown coffee through seedling production of and biodiversity progams.
G				**S**		**M**		Develop a more efficient coffee plant multiplication and distribution system
G	**p**		**M**		**H**			Replant old and wilt affected Robusta coffee trees

Annex E List of Summary Coffee Sector Recommendations – Continued

Private or Public		Timing			Priority			Recommendations
GOU	Pvt.	Long	Med	Short	High	Mid	Low	
								Markets
G			M		H			Support the development of the Uganda Coffee Auction through TA and training to auction staff, buyers and sellers.
G	p			S	H			Support appellation development through TA, training and the development of a stronger UCDA rural extension service
	P			S			L	Study the costs and benefits of developing a private-voluntary parchment auction in Uganda
G				S			L	Develop a feasibility study that examines the options in soluble coffee manufacturing and marketing/ sales
G	p	L				M		Expand promotional activity in international and domestic market
G	p	L					L	Open EU coffee promotion office
G	p	L				M		Develop biodiversity coffee market via promotional activity with EU/ US strategic partners
	P		M			M		Expand the capacity of the WMIS cell-phone network to deliver real-time market information to rural areas through text messaging
								Infrastructure
G		L				M		Improve and maintain rural roads
G	p	L				M		Develop clean water sources for wet millers
G	p	L				M		Expand availability of electrical power for rural wet millers
g	P	L				M		Develop a Uganda set aside area at the Port of Mombasa

Annex E List of Summary Coffee Sector Recommendations – Continued

Private or Public[4]		Timing[5]			Priority[6]			Recommendations
GOU	Pvt.	Long	Med	Short	High	Mid	Low	
								Regulation and Policy
G				**S**	**H**			Reorganization of UCDA
G				**S**	**H**			Change The Agricultural Seed and Plant Statute of 1994, Section 8,
G	**p**			**S**		**M**		Improve/ strengthen regulatory environments
G				**S**		**M**		Pursue Carbon Credits
G		**L**				**M**		Ensure that the road and lands that border areas near Rwanda, Congo and Sudan are secure:
								Capital and Processing
G	**p**		**M**		**H**			Assist entrepreneurs, firms and associations in identifying and exploiting business opportunities in value-added coffee processing using increased access to capital and technical assistance
g	**P**		**M**		**H**			Support the expansion of centralized wet-milling
g	**P**	**L**				**M**		Increasing the availability of short-term credit through warehouse receipt system and loan guarantees, etc.
G		**L**			**H**			Support the global project on mycotoxin prevention

[4] **Private or Public:** A capital letter is used in conjunction with the role of the party with primary responsibly. A lower case letter is used with the party with secondary (supportive) responsibility.

[5] **Timing:** S is used for activities that can be completed the 12 months or less, M is used for activities that will require 2-5 years to complete and L is used for activities that are long term and will take more than 5 years to complete or are ongoing.

[6] **Priority:** H is used for high priority tasks that are part of a critical path and should be done ASAP. M is used for medium priority items that need to be address sometime in the near future and L is used for lower priority items that can be postponed until resources allow (they are not part of a critical path).

Annex F Analysis of Replanting Old Coffee with Improved Varieties

Uganda needs to replant its old and fungal affected trees. Over the past decade or more the nation has not replaced trees at a rate equal to or greater than the loss rate. The nation must maintain a constant level of coffee output to be considered a first-line supplier to the industry. If the industry sees a trend of declining output it will look to other suppliers to source its product from and view Uganda as an inconsistent origin. To insure a reliable supply Uganda needs to start a coffee replacement program as soon as possible. The following figure examines the benefits of replanting with improved varieties. In Robusta yields of new varieties more than double over that of older varieties and in Arabica yields increase by about 50%.

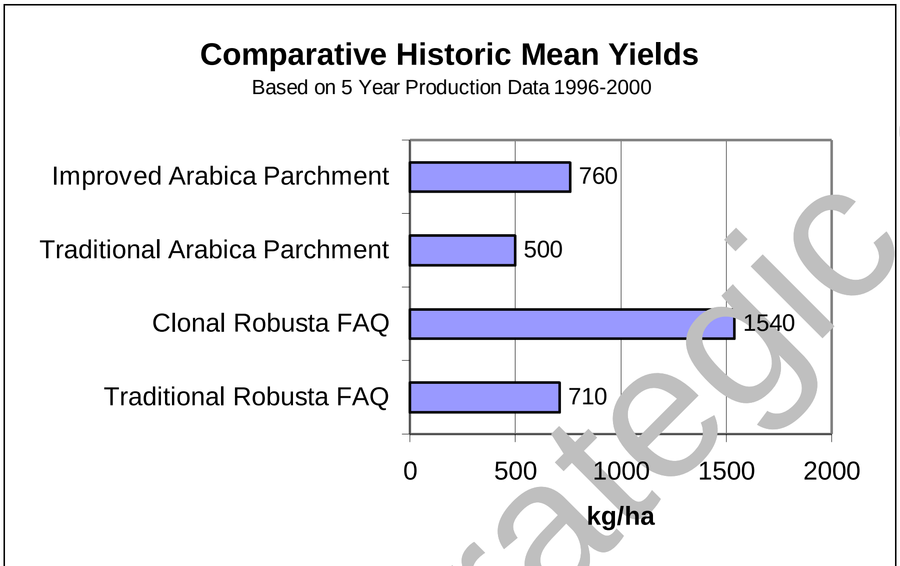


Figure 14, Source: UCDA

In the 1999/00 crop year (most recent data available) Clonal Robusta's mean yield was 2250 kg FAQ/ ha. This is significantly higher than the five-year average of 1540 kg/ha. The five-year FAQ / parchment yield trend shows a continual improvement in both new Robusta and Arabica varieties planted in Uganda.

The coffee seedling production, distribution and replanting program is by far the largest budgetary line item found in the coffee sub-sector of the "Government Interventions To Promote Production, Processing and Marketing of Selected Strategic Exports" document. Other budget line items where not expressed in financial terms but included activities such as coffee wilt disease research, support for the global mycotoxin prevention project, planning and development of a soluble coffee manufacturing plant as well as unspecified language supporting increased sales of value added coffee. In general these are sound strategies, however given the severe over supply situation in the world market, expanding coffee out put to 12 million bags is not advisable. By producing 12 million bags Uganda would be responsible for furthering the current world coffee crisis. Additional, the soluble markets are saturated and there is a large volume of excess soluble processing capacity available in Tanzania. A partnership with Tanzania may be a better option than investing 30 million USD to build a new soluble plant in Uganda at this time.

The following Figure (15) examines the number of plants that will be required to repopulate the coffee sector based on a 70% replacement rate and a 84% replacement rate, over a five year period. It is estimated there is currently about 300 million[7] producing coffee plants in Uganda.

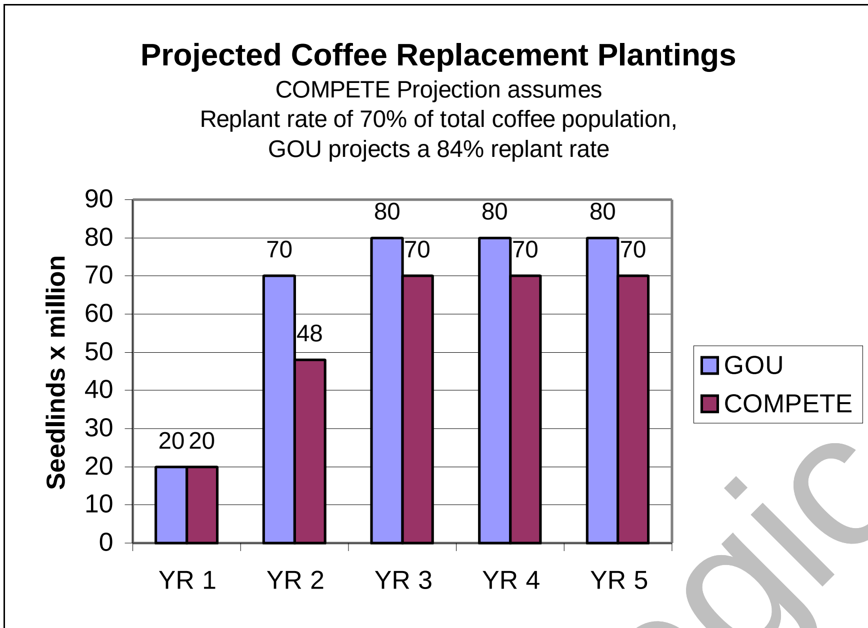


Figure 15, Source GOU and COMPETE Project

The 84% replacement rate is based on GOU projections of a total replant of 300,000 ha of coffee. The per unit cost of a seedling is assumed to be 0.145 USD[8] (250 UGSH/plant[9]). The total cost to replant 84% of Uganda's coffee population is about 61.5 million USD. This figure does not include distribution costs.

The COMPETE Project projections are based on replacement of 70% of plant population (278 million plants). At 0.14 USD per plant total cost before distribution is equal to 53.9 million USD. The actual number (percent) of plants that needs to be replaced has not been independently confirmed by sources outside of the GOU. It is assumed by professionals working in the sector that the actual replant number is 65% to 84% of the total coffee plant population. In financial terms this is a 51 to 61.5 million USD investment over five years.

The replanting activity would increase Uganda's coffee output by over 100% in 7 to 8 years from the start of the replacement activity, from it current output of about 3.2 million bags to over 6.5 million bags. Before a final decision is made on the planned expansion of output, additional research needs to be directed at the question of how will this effect of the world price and what is the best mixture of Robusta, Arabica, specialty, value-added and commodity production. As the new plants come into production older Robusta plants must be pulled and burned. This is to reduce the level of coffee wilt pathogen in Uganda and destroy the fungal host.

[7] Plant population may be as high as 335 million, data varies by source.
[8] Assumes production from cutting. Production from elite seeds is est. at .068 USD / seedling
[9] Includes cost of plant loss at 20% for cutting propagation

Annex G List of Selected Reports on Uganda's Coffee Sector

The following is a short list of reports that were reviewed and considered in the preparation of this document:

- Uganda Coffee Development Authority,
  Annual Report 1999/2000 Market Year
  September 2000

- The Government of the Republic of Uganda,
  Government Interventions To Promote Production, Processing and Markets of Selected Strategic Exports
  September 2001

- Centre For Development Research,
  Coffee Markets in East Africa: Local Responses to Global Change or Global Responses to Local Change?
  September 2001

- The Private Sector Foundation/ World Bank
  Modernization of Coffee Farm To Market Chains – Legal and Regulatory Framework Study For Uganda
  October 2001

- Private Sector Foundation
  Strategic Approaches to the Coffee Markets
  A presentation given at the PSF Coffee Workshop
  October 2001

- International Food Policy Research Institute (IFPRI),
  Alternative Growth Scenarios for Ugandan Coffee and Cotton 2000-2020
  January 2002