



Kingdom of the Netherlands

## THE AGRI-BUSINESS MARKET SCAN FOR UGANDA



DRAFT II

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## THE EXECUTIVE SUMMARY

The Dutch government has designated Uganda as a transitional country where the focus is on promoting aid and aid to trade programmes. Under the Multi Annual Strategic Plan (MASP 2014-17) for the Embassy of the Kingdom of the Netherlands (EKN), EKN intends to deepen its support to food security and economic cooperation activities. It is envisaged that Dutch Agri-business activities need to be deepened in the Ugandan economy to boost the economic cooperation agenda. This Agri-business Market Scan aimed at generating reliable and updated Agri-business information to facilitate Trade and Investments in Uganda, in the East African Community, and between Uganda and the Netherlands.

This agribusiness market scan was commissioned with the intent of acting as a market intelligence tool to inform Dutch businesses of the existing opportunities and challenges in agriculture and agribusiness in Uganda. This was to be achieved through providing an agri-trade and investment opportunity and constraint analysis for entry, growth and survival in Uganda's Agri-business sector. The information documented here was generated through indepth review of available literature and stakeholder consultations in the respective sectors, sub-sectors, institutions, farmer organisations/co-operatives as well as individual investors.

The agribusiness sector includes the whole chain of activities from production, processing, transportation and marketing (local, regional and international) of the different crop and livestock products. The sector accounted for about 26 percent of the rebased GDP data for 2013/14, employs roughly 60 percent of the labour force and has continued to greatly contribute to the national exports (formal and informal) with a total contributions rising from 48.7 percent in 2010 to 54.1 percent in 2015. Coffee has continued as the major export, followed by Fish (and its products), Tobacco, Maize and Tea. The extent of value addition and agro-processing in the sector varies for the different products but with significant levels of activity in the traditional cash crops especially coffee and tea. Coffee is by far the biggest crop value chain with the biggest share of the crop subsector.

With regards to marketing, Uganda enjoys access to regional (EAC, COMESA, South-Sudan) and international markets, mainly the EU and Asia. Generally, the agribusiness sector is facilitated by several factors including the conducive business environment enhanced by supportive policy and legal frameworks (at national, regional and international level), institutional support in the areas of registration, licencing and regulation, improved access to agri-inputs and agri-finance, as well as the general infrastructural development. On the other hand, the sector is mainly constrained by several trade and non-trade barriers, insufficient marketing logistics, lack of access to modern production technology, high transaction costs due to poor road infrastructure, lack of adequate processing capacity, prohibitively high costs of capital, high levels of corruption, inefficient agricultural input markets and lack of proper quality control and regulation.

However, agribusiness has gained prominence due to the Government's initiative to pursue private sector led growth with deliberate efforts to improving the business environment as evident in the National Development Plan-II (NDP-II) and other development agendas. This

has resulted into growth in both domestic and cross border trade, with the potential benefits likely to be realised depending on the ability of the agri-food chain actors to penetrate new markets and take advantage of opportunities for expansion through mergers and acquisitions, new joint ventures and strategic alliances. One of the key strategic alliances is the Dutch Agri-business sector, whose investment opportunities have been cited in various enterprises with the top ranking including coffee, Tea, Oil seed crops (Sunflower and Soya bean), Potatoes, horticultural crops (vegetables), Dairy, Poultry and Fish; while the medium ranking enterprises include Cassava, Rice, Maize and Beef. For each of these specific enterprises, there are varying investment opportunities including agri-services especially agri-inputs (quality seed, fertilisers, pesticides), logistics ( warehouses and silos for grains and coffee on one hand and cold chains for horticulture, dairy and fish products) and agro-processing machinery.

## The Glossary

Agriculture	This term is used to describe crops, livestock, poultry and fishing activities
Constant prices	Refers to the prices of a commodity corrected for changes in relation to a base year
Current Prices	Refers to the price of a stock, currency or a commodity indicated at a given moment in time
Formal Exports	Exports that are formally recorded at the customs borders
Formal Trade	Refers to trade that is officially recorded at the customs borders
Informal Exports	Exports that are not formally recorded at the custom borders
Informal Trade	Refers to trade that goes unrecorded at the borders
Market Prices	Refers to the price of a commodity when sold in a given market
Non-traditional exports	Refers to commodities other than traditional exports (Coffee, Cotton, Tea, and Tobacco) that have recently featured in Uganda's export trade
Traditional Exports	Long-term export cash crops introduced to Uganda long time ago. That is Coffee, Cotton, Tea and Tobacco

## ACRONYMS

ACF	Agricultural Credit Facility
ACP/EU	African, Caribbean and Pacific-European Union
AEATREC	Agricultural Engineering and Appropriate Technology Research Centre
AGOA	African Growth and Opportunity Act
ASYCUDA	Automated System for Customs Data
AU	African Union
BCI	Business Climate Index
BoU	Bank of Uganda
CAIIP	Community Agricultural Infrastructure Improvement Programme
CBA	Commodity Based Approach
CBR	Central Bank Rate
CDO	Cotton Development Organisation
COMESA	Common Market for Eastern and Southern Africa
DDA	Dairy Development Authority
DRC	Democratic Republic of Congo
EAC	East African Community
EAC-CU	East African Community Customs Union
EBA	Everything But Arms
EKN	Embassy of the Kingdom of the Netherlands
EIB	European Investment Bank
EU	European Union
FAO	Food and Agricultural Organisation
FFB	Fresh Fruit Bunches
FOT	Free on Truck
FY	Financial Year
GDP	Gross Domestic Product
GoU	Government of Uganda
GSP	Generalised System of Preferences
HQCF	High Quality Cassava Flour
HORTEXA	Horticultural Exporters Association of Uganda
HMO	Health Membership Organisation
ICSID	International Center for Settlement of Investment Disputes
IFAD	International Fund for Agricultural Development
IPPC	International Plant Protection Convention
IRA	Insurance Regulatory Authority
ISO	International Standards Organisation
KOPGT	Kalangala Oil Palm Growers Trust
LDCs	Low Developing Countries
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MATIP	Markets and Agriculture Trade Improvement Project

MIGA	Multilateral Investment Guarantee Agency
MLHUD	Ministry of Lands, Housing and Urban Development
MSCL	Microfinance Support Centre Limited
MTIC	Ministry of Trade, Industry and Cooperatives
MWA	Mobile Weather Alerts
NAGRIC	National Animal Genetics Resources Centre
NAADS	
NARO	National Agriculture Research Organisation
NDA	National Drug Authority
NDP	National Development Plan
NSQP	National Standards and Quality Policy
NSSF	National Social Security Fund
NTBs	Non Tax Barriers
OPIC	Overseas Private Investment Corporation
OPUL	Oil Palm Uganda Limited
OWC	Operation Wealth Creation
PROFIRA	Project for Financial Inclusion in Rural Areas
PVoC	Pre-Export Verification of Conformity
QSIP	Quality Infrastructure and Standards Programme
RVO	Netherlands Enterprise Agency
SACCOs	Savings and Credit Cooperatives
SADC	South African Development Community
SPS	Sanitary and Phytosanitary
UAE	United Arab Emirate
UBOS	Uganda Bureau Of Statistics
UEPB	Uganda Export Promotion Board
UFEA	Uganda Flowers and Exporters Association
UIA	Uganda Investment Authority
UIRI	Uganda Industrial Research Institute
UNBS	Uganda National Bureau of Standards
UNCST	Uganda National Council for Science and Technology
UNDP	United Nations Development Programme
UOSPA	Uganda Oil Seed Processors Association
URA	Uganda Revenue Authority
URSB	Uganda Registration Services Bureau
USAID	United States Agency for International Development
UWRSA	Uganda Warehouse Receipt System Authority
VODP	Vegetable Oil Development Project
WFP	World Food Programme
WTO	World Trade Organisation

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## 1.0 INTRODUCTION

### 1.1. Overview

Africa is largely agrarian, with an economy that is underpinned by resource-driven growth with a large and expanding informal sector. For the past 15 years, Africa has posted average economic growth rates of over 5 percent with rapid population growth rates of 2.5 percent, offering a promise of a large emerging consumer market as well as an unprecedented labour force that—if leveraged—can provide significant growth opportunities. Unfortunately, the consistently high growth economic rates have not translated into improved welfare for the population. Nearly one out of two Africans continue to live in extreme poverty, and income inequality on the continent remains among the highest in the world. In addition, productivity levels across sectors—from agriculture to manufacturing and services—productivity levels remain low. It is therefore necessary to raise productivity across all sectors of the economy to achieve higher growth and create quality employment, and turn observed progress into sustainable and inclusive growth. Agriculture and agribusiness remain key viable pathways to attaining the much sought but elusive sustainable economic transformation. Whereas rural to urban migration is a growing challenge, 70 per cent of the African population is still rural and depends on agriculture for daily sustenance. Therefore, growth in this sector is necessary for long-term sustainable development as well as critical for meeting growing global demand for food. Indeed, the World Bank estimates that by 2030 agriculture and agribusiness together could develop into a US\$ 1 trillion industry in Sub-Saharan Africa (IFC, 2013).

Within the East African Community (EAC), the contribution of agriculture and agribusiness to food security is increasingly becoming important as the population increases. With a total EAC population estimated at 120 million, all governments are grappling with implementation of sustainable and inclusive economic growth. The region, diverse in terms of agro-ecological conditions presents several opportunities and challenges for agriculture and agribusiness. Uganda has a comparative advantage in food production with a potential of becoming the food basket of the region. It is therefore not surprising that East Africa is seen by many as a one of the emerging frontiers of agriculture and agribusiness evidenced by the increasing number of global companies and investors seeking to set up operations in the region. Additionally, a fast tracked Common Market Protocol under the EAC has guaranteed investors of a large market comprising of over 500 million consumers<sup>1</sup>, with free movement products and services, and integration of factors of production

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<sup>1</sup> Including consumers in Non EAC countries located in the great Lakes region

Majority of Uganda's trade activities are agro-based. Uganda's trade policy is liberal and facilitates several interventions which seek to transform the Country into a dynamic and competitive trade actor in the regional and international markets. Further, Uganda has several commodity-specific policies that enhance production, productivity, agro-processing, agro-input markets and agribusiness in general. Increased access to local, regional and global markets has created a pull factor on local agricultural production, thus causing a shift from subsistence to market-oriented production. However, this is constrained by limitations in technology, capital, knowledge and skills among others. The Embassy of the Kingdom of Netherlands (EKN) Uganda implements a four year Multi-Annual Strategic Plan (2014-17) that seeks to address some of the limitations through linking Uganda to Dutch businesses.

### **1.2. Strategic Priorities for EKN Food Security and Agribusiness Development in Uganda**

The Netherlands government designated Uganda a transitional country where the focus is to promote "aid and aid to trade". The food security programme acts as an entry point for Dutch agribusinesses to provide the much needed agro-transformational technology, expertise and know-how, agro-finance, sustainable energy solutions, agro-processing and agro-logistics, that are necessary for transforming Uganda's agriculture and agribusiness. In order to achieve the desired goal, EKN has set out three strategic priorities namely;

- **Promote Dutch Agribusiness Investments** in Uganda: From 2015, EKN has been focusing on fairly commercialised agricultural clusters with a high potential for business. The clusters are expected to contribute to reducing poverty, stimulate inclusive agricultural transformation and agribusiness with the Netherlands.
- **Support Business Enabling services:** The Dutch embassy, Kampala supports initiatives that directly help to improve the business enabling environment
- **Enhancing bilateral business facilitation** for more trade and investments from the Netherlands to Uganda in agro: technology, logistics, machinery and sustainable energy.

To achieve the strategic priorities, the Netherlands Enterprise Agency (RVO) and the EKN Kampala commissioned an agribusiness market scan to generate updated and reliable agri-business information to facilitate Trade and Investments between Uganda and the Netherlands. This scan builds on the agribusiness market scan for Uganda published in 2012 (Ref!!!!). It provides an agri-trade and investment opportunity and constraint analysis for entry, growth and survival in Uganda's Agri-business sector. The specific tasks articulated include; (1) Providing an overview of the status of Agri-business in Uganda; (2) Highlighting Uganda's key Agri-business trade partners

(global and regional) and the volumes of trade; (3) Showing the impact of the regional EAC Integration on Agri-business in Uganda; (4) Highlighting the factors that influence Uganda's Agri-business potential on the local, regional and international markets; and (5) Identifying the strategic priorities for Agri-business in Uganda clearly indicating Uganda's value chains that offer a good fit with the Dutch market.

## **2.0 OVERVIEW OF THE AGRIBUSINESS SECTOR**

The agribusiness sector includes the whole chain of activities from production, processing, transportation and marketing of the different produce. The agricultural products are categorised into the crop and livestock subsectors, where the crop subsector is further subdivided into cash and food crops. The importance of the agribusiness sector has grown significantly as agricultural development strategies have shifted from a pure production-oriented approach to a broader based systems approach involving agro-food chain coordination, value creation and institutional setting under which chains operate (FAO, 2013). This is confirmed by the rebased GDP data for 2013/14 using 2009/10 as a base year which indicates that Uganda's agricultural sector grew fastest by sector contribution to GDP at 26 percent up from 24 percent on the back of increasing value addition (UBOS, 2015). This growth among other factors confirms a consistently growing agribusiness subsector catalysed by growing demand driven by the private sector.

This section provides a national outlook on the sector with specific emphasis on production, agro-processing, marketing, the institutional and legal frameworks, strategic position for the country and the future of the sector.

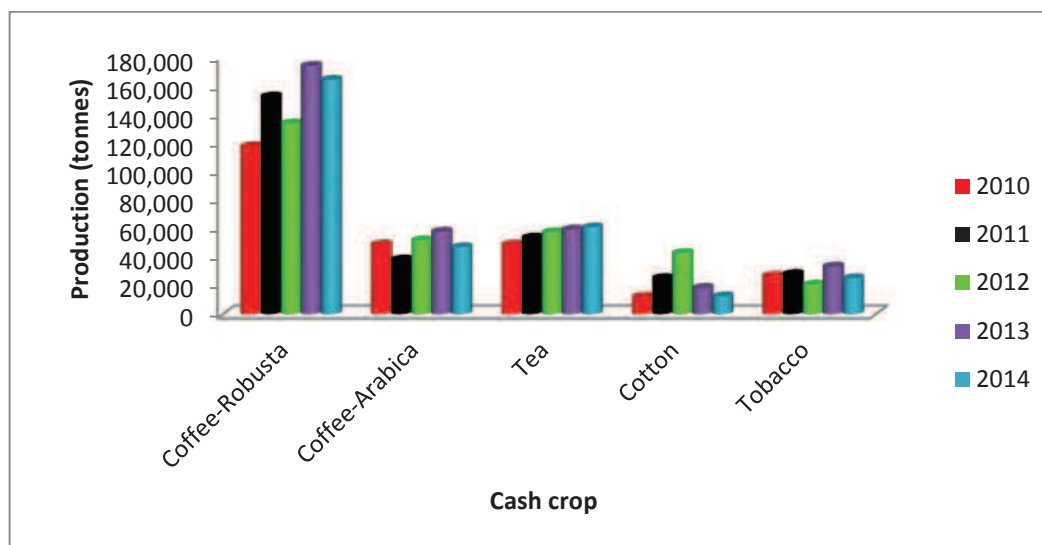
### **2.1. The National Outlook on Agricultural Production**

Uganda's agricultural subsectors include crops and livestock with the crop subsector further categorised into cash and food crops. Cash crop growing activities include coffee, cotton, tea, tobacco (as traditional cash crops) and the non-traditional cash crops include; cocoa, vanilla, sugarcane, oil palm and horticultural products such as flowers. Cash crops contributed 1.7 percent to total GDP at current prices in 2014/15 compared to 1.6 percent in 2013/14 (UBOS, 2015a). Coffee is by far the biggest crop value chain with the biggest share of the crop subsector.

The cash crop sub-sector, although very important for export revenues relies heavily on old production methods with minimal intensified production. However, due to ample rains, relatively fertile soils and cheap labour, production is still relatively high although productivity has been declining over the years. Yields at farm level are well below those at the research stations implying that farm level productivity is far below

the attainable potential and that there is much room for improvement. Figure 1 provides the production trends for the traditional cash crops are provided for the period 2010-2014.

**Figure 1: Production trends for traditional cash crops (2010-2014)**

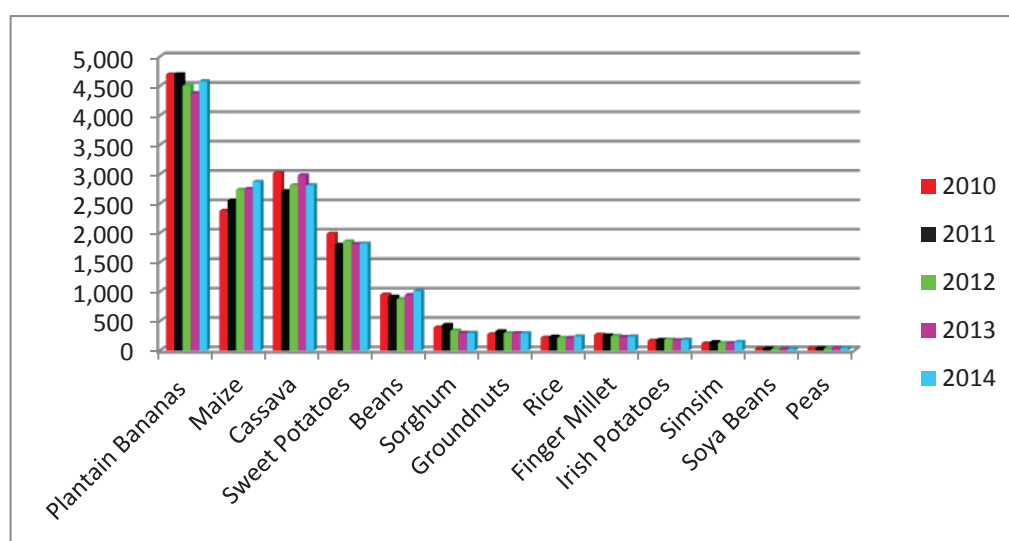


*Source: UBOS, 2015*

Some of the non-traditional cash crops include vanilla, cocoa beans, sunflower, sugarcane, flowers and other horticultural crops. In addition to the cash crops, there are other crops that serve as both food and cash crops. These crops were reported to have contributed 11.5 percent to total GDP at current prices in FY 2014/15 compared to 12.7 percent in FY 2013/14 (UBOS, 2015a). Bananas, maize, cassava, sweet potatoes and beans recorded the highest volumes produced over time. The production trends for the different crops for the period 2010-2014 are presented in Figure 2. Uganda's agricultural production is more diversified when compared to other countries in the EAC region. The country has capacity to grow many food crops including cereals, legumes, horticultural and tubers such as potatoes, yams and cassava. This gives an opportunity to farmers to produce a variety of crops for both home consumption and sale.



**Figure 2: Trends for production of other major other crops (2010-2014)**



*Source: UBOS 2015*

In the livestock sub-sector, the major animals include cattle, goats, sheep, pigs, fish and poultry (UBOS, 2015a). For the cattle, there are three major breeds, the indigenous, exotic and cross breeds. The indigenous constitutes 93 percent of the national herd and is by far the least productive. Exotic breeds account for 7 percent of the national herd and 52 percent of the total milk recorded in the country.

Uganda has two main sources of fish; natural fresh water bodies and fish farms (Aquaculture). Fish catch from water bodies has continued to rise overtime increasing from 408,066 to 461,726 tonnes in 2010 and 2014 respectively. Lakes, Victoria and Albert take the largest share of the national fish catch contributing about 86% of the total catch. A significant amount of fish is reared by fish farmers; unfortunately statistics were not readily available. Fish farming is increasing due to high demand and declining fish levels in natural water bodies.

The poultry value chain in Uganda comprises a number of different types of birds including chicken, turkeys, ducks, geese, ostriches and pigeons. In 2014, the total poultry population in Uganda was estimated at 45 million, with indigenous breeds accounting for 88 percent of the total population (UBOS, 2015). According to the livestock market scan, chicken account for 95 percent of all poultry reared in Uganda (EKN, 2012), and therefore have the most significant economic impact. The chicken population is categorized into two distinct breeds: the 'local' indigenous and exotic.

## 2.2. Agro-processing and Marketing

The structure and conduct of Uganda's agricultural sector reflects the dominance of subsistence farming and prevalence of small and medium scale cottage industries



based on use of out-dated production and processing technologies. The extent of commercialisation for any agricultural value chain is strongly linked to existing demand, processing capacity and quality standards. For most of the crops produced, the products are traded predominantly in primary form with minimal value addition. Consequently, agribusiness is predominantly in raw or dry low quality unprocessed products. There are a few medium and large scale agro-industries focusing on internal, regional and international markets. The reported economic growth 6-7 percent over the past decade (MFPED, 2014) has resulted in increased demand for both processed and non-processed food products.

### 2.3. The National Outlook on Exports

The value of Uganda exports over the period 2010-2015 indicated that the agricultural sector had continued to greatly contribute to the formal and informal exports, with a proportionate share rising from 48.7 percent in 2010 to 54.1 percent in 2015 (Table 1). Within the agricultural sector, coffee has continued to stand out as the major export, followed by fish (and its products), tobacco, maize and tea (Appendix 1).

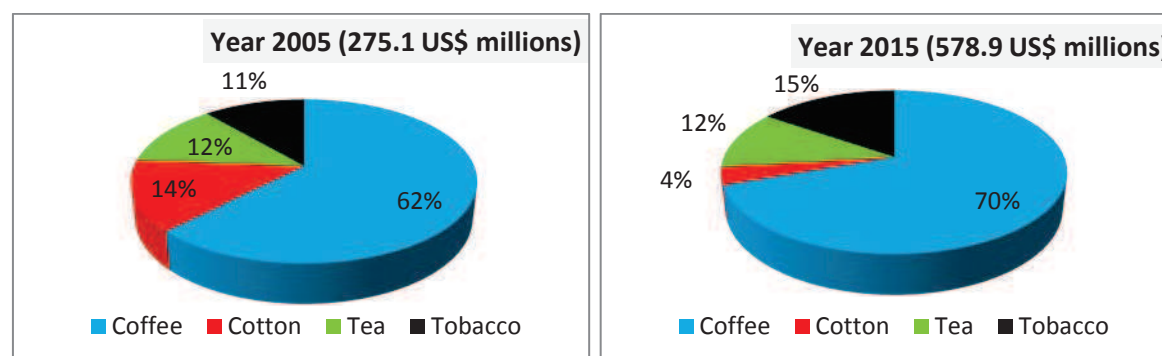
**Table 1: Uganda's Exports for the period 2010-2014 (in percentages)**

	2010	2011	2012	2013	2014	2015
<b>Total Uganda Exports (in US\$ million)</b>	<b>2,163.9</b>	<b>2,519.1</b>	<b>2,810.5</b>	<b>2,828.7</b>	<b>2,724.8</b>	<b>2,650.9</b>
Formal Exports ( %Share)	75.6	85.9	83.9	85.1	84.8	84.7
Informal Cross Border Trade ( percent Share)	24.4	14.1	16.1	14.9	15.2	15.3
<b>Agricultural Sector ( percent Share)</b>	<b>48.7</b>	<b>54.6</b>	<b>49.6</b>	<b>51.7</b>	<b>53.6</b>	<b>54.1</b>
Formal Exports	40.9	49.6	42.9	45.7	47.0	48.3
Informal Cross Border Trade	7.8	5.0	6.7	6.0	6.6	5.8
<b>Agricultural Sub-components ( percent Share)</b>						
Traditional Cash Crops	20.4	27.5	20.5	23.2	21.3	21.7
Non-Traditional Cash crops	9.6	9.0	11.1	11.5	13.3	15.3
Fish and its products	8.1	6.8	5.7	5.0	6.3	6.1
Edible Fats and Oil	2.3	2.6	2.2	2.3	2.7	2.3
Sugar	2.9	3.3	4.5	3.1	2.7	2.4
Hides and Skins	0.8	1.3	1.5	2.3	2.7	2.4
Flowers	2.2	2.1	1.9	2.0	2.1	1.9
Other agricultural commodities	2.6	1.9	2.4	2.3	2.6	2.0

**Source: BoU, 2016**

With specific consideration of the traditional cash crops (coffee, tea, tobacco and cotton), coffee's contribution to agricultural exports has continued to rise while the percentage contribution of cotton greatly reduced by the year 2015 (Figure 3).

**Figure 3: Percentage share (of total value exports) of the Traditional Cash Crops 2005 & 2015**



BoU (2016a)

The most outstanding pitfall of Uganda's export sector is the primary form of her export commodities. The lack of dynamism in processing has resulted in Uganda's export basket being dominated by primary products (around 85 percent), which has made the export sector vulnerable to fluctuations in world market prices and the vagaries of weather. This undermines any potential gains that Uganda's export sector stands to benefit from the results of the 10<sup>th</sup> WTO Ministerial Conference (held in Nairobi towards the end 2015), that eliminated all forms of export subsidies for farm exports, an outcome which all developing countries with a potential future in agrobusiness should embrace.

#### 2.4. The Institutional and Legal frameworks

The Government of Uganda recognises the potential benefits of supporting agricultural and agribusiness and has put in place several policies geared at improving production, productivity and competitiveness of the sector. The overall goal is to capitalise on Uganda's comparative advantage in food production in the region. For example, in order to facilitate the emergence and growth of enterprise agriculture, Government, through the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) adopted the Commodity Based Approach (CBA) to increase agricultural production and productivity MoFPED (2014). Under this approach, investments are channelled to the development of value chains of 12 prioritized commodities namely: maize, beans, rice, bananas, cassava, cattle, meat, fish, coffee, tea, fruits and vegetables.

#### 2.5. The Comparative Advantage for Uganda in Agribusiness

Uganda has a comparative advantage in food production. With the EAC, Uganda has the biggest size of arable land standing at 68 percent, while Kenya has 9.1 percent, Burundi 3.6 percent, Rwanda 48.4 percent and Tanzania 10.2 percent. Three-quarters

of the land in Kenya is semi-arid, and not suitable for agricultural production due to frequent droughts. Although endowed with many high production zones, Tanzania's land is predominantly semi-arid. Additionally, Uganda is endowed with water resources (rivers and lakes) that can be utilized for irrigation. Further, flexibility in production is facilitated by favourable rainfall patterns compared to other countries in the region.

Uganda's location at the centre of the Great Lakes region and in the EAC offers access to a vast regional market. According to the Diagnostic Trade Integration Study (WorldBank, 2006), Uganda has the potential to expand her production and export of staple foods to the region. Exploiting this potential will increase employment opportunities along several value chains and help reduce poverty within the country (Joughin, 2014). In the 2016 World Bank Doing Business report, Uganda ranks 122<sup>nd</sup> out of 189 countries (up from 135<sup>th</sup> rank in 2015).

## **2.6. The Future of the sector**

To-date, GoU emphasises improving the business environment to facilitate easy flow of goods and services in both internal and external markets. Uganda's Vision 2040<sup>2</sup> aspires to transform Uganda's agricultural sector and make it more productive, profitable and competitive. Further, the National Development Plan-II (NDP-II)<sup>3</sup> aims at increasing sustainable production, productivity and value addition in key growth opportunities; increasing the stock and quality of strategic infrastructure to accelerate the country's competitiveness; enhancing human capital development; and strengthening mechanisms for quality, effective and efficient service delivery. The plan proposes government support and investments in twelve agricultural value chains with specific emphasis on strengthening agricultural research, promoting extension services, technology adoption at the farm level, increasing access to and effective use of critical farm inputs, promoting sustainable land use and soil management, increasing access to agricultural finance with specific options for women farmers, and strengthening agricultural institutions for effective coordination and service delivery. Furthermore, the plan is keen on promoting potential leverage points for entry of various players and key stakeholders to do business.

It is anticipated that Uganda's agribusiness sector will continue to grow as both internal and external markets expand. Targeted actions by both the Government of Uganda and the private sector at rectifying existing market and policy failures will stimulate more business. The GoU continues to demonstrate commitment to pursuing a private sector-led strategy that addresses constraints that slow down investment in

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<sup>2</sup><http://english.rvo.nl/home/about-rvo>

agriculture. GoU continues to pursue and support public private partnerships in areas of high opportunity with quick gains, but where the private sector on its own lacks adequate capacity (MAAIF, 2010).

However, the growth of agribusiness in Uganda is largely constrained by over reliance on comparative advantage rather than competitiveness. The productivity of the sector is still low due to lack of economies of scale and several market and policy constraints. The other factors affecting agribusiness in Uganda include; limited access to modern production technology, high transaction costs due to poor road infrastructure, inadequate processing capacity, poor logistical management, prohibitively high costs of capital, high levels of corruption, inefficient agricultural input markets and inefficient implementation and enforcement of quality control and regulatory frameworks.

The above challenges notwithstanding, agribusiness has gained prominence since the Government of Uganda (GoU) started pursuing export led growth policies<sup>4</sup> under structural adjustment programmes that included trade liberalisation, privatisation, introduction of incentive regimes, abolition of export taxes, investment guarantees, externalisation of funds and setting up of an autonomous Investment Authority. Investments in agribusiness receive special incentives including: duty-free tax import of plant and machinery; training, research and development expenditures are tax exempt; and capital allowance on plant and machinery of up to 50-70percent (UIA, 2015).

Despite several policy provisions, Government of Uganda's spending on agriculture has continued to decline despite the sector being a key pillar of the economy. Between financial years 2006/07 -2012/13, agricultural sector funding declined by 15% and the trend has not changed to-date which is contrary to the 2003 Maputo declaration that recommended a 10 per cent annual spending on agriculture which Uganda has never met. Low public expenditure on agriculture has a negative effect on agricultural research, formulation and implementation of quality control and regulation standards, and dampens the environment among others for agribusiness in the country.

The Government of Uganda (GoU) continues to demonstrate commitment to pursuing a private sector-led strategy that addresses constraints that slow down investment in agriculture. This is timely given the expanding internal and external markets as a result of increasing population and incomes. Rectifying existing market and policy failures is more important now than ever before. Combined interventions by government and the private sector are implemented with a major goal of maximising agribusiness engagements.

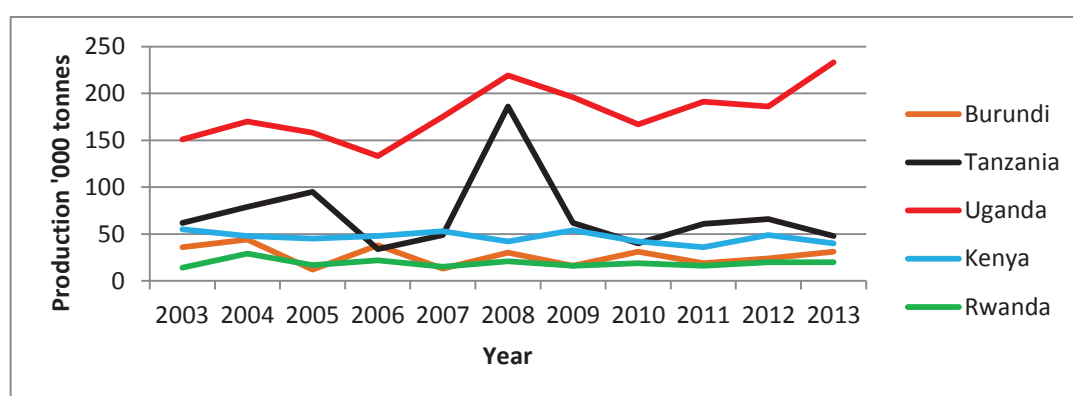
### 3.0 PRODUCTION AND MARKETING OF AGRICULTURAL PRODUCTS

#### 3.3 The Traditional Cash Crops

##### 3.3.1 Coffee

Coffee is Uganda's leading agricultural export and major foreign exchange earner providing income for over 1.5 million households. In the East African Community, Uganda is the biggest coffee producer accounting for 63 percent of the total regional coffee production (Figure 4).

**Figure 4: Coffee Production trends in the EAC region (2003-2013)**



*Source: EAC Secretariat, 2014*

Over half a million Ugandans are engaged in coffee production (Nandudu, 2014). Robusta and Arabica coffee are the varieties of coffee grown in Uganda, with the former grown mainly in low lands and the latter grown mainly in mountainous areas. The regional coffee production levels for the period 2008/9 (Table 2) depicted that In order to overcome the cotton wilt disease, which is among the greatest factors affecting coffee production in the country, new and resistant varieties of Arabica coffee have been introduced by the National Coffee Research Institute (NaCORI). However, these are still at the multiplication stage in a number of nurseries.

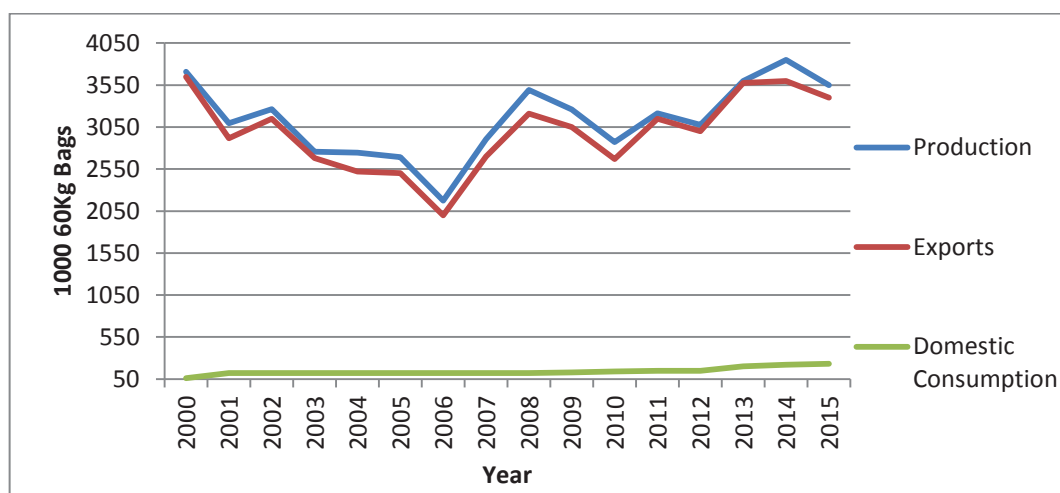
**Table 2: Regional Coffee acreage by variety by end 2014**

Region	Arabica	Robusta
Central		136,247
Eastern	51,292	26,417
Northern	9,097	10,789
Western	21,222	58,551
South-West	9,015	31,277

*Source: UCDA,*

The production, consumption and export of coffee for the last 15 years has been increasing with intermittent drops (Figure 5). Over 98 percent of Uganda's coffee is exported. The level of domestic consumption is low partly due to the lack of a coffee-drinking culture.

**Figure 5: Uganda Coffee Production, Export and Local Consumption (2000-2015)**



*Source: USDA, 2015*

The competitiveness of this sub-sector as evidenced by the growing production, productivity, exports and high numbers of actors in the value chain. For example, by the end of 2015, the sub-sector had 14 coffee roasters, 41 major coffee exporting companies (Appendix 3), 32 export grading plants and 395 primary processors (e.g. Caption 1 and Caption 2) (UCDA, 2015b).



**Caption 1: Kyagalanyi Coffee Processing Plant, Namanve**



**Caption 2: Coffee ready for export at Banyankole Kweterena Growers' Union, Mbarara**

The major destinations for Uganda coffee exports include the European Union and Sudan among others (Table 4 and Appendix 2)

**Table 3: Major destinations for Uganda coffee exports**

<b>Destination</b>	<b>60 Kilo Bags</b>	<b>Percent Market Share by Feb 2015</b>	<b>Destination Position held in January, 2015</b>
European Union	208,051	71.6	1
Sudan	36,250	12.5	2
USA	9,645	3.3	3
Switzerland	7,812	2.7	8
Singapore	4,868	1.7	4
Korea	4,676	1.6	10
Israel	3,520	1.2	
Japan	2,770	1.0	5

*Source: UCDA (2015a)*

The global demand for coffee continues to grow as indicated by global consumption statistics which indicated an increase to 149.8 million bags in 2014, an annual growth rate of 2.4 percent over the last 4 years on account of a higher than expected demand from the European Union estimated at 42.4 million bags.

High demand for Uganda's coffee has increased returns to actors in this value chain and increased competitiveness within this subsector. Due to its social and economic importance, Coffee production, processing and marketing is guided by a well laid out National Coffee Policy<sup>5</sup>. It defines clear-cut interventions required for scaling up performance and development of the coffee value chain. It has provided a solid foundation for enactment of supportive legal and regulatory frameworks desirable for a suitable enabling environment for growth of the coffee sub-sector.

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<sup>5</sup> It defines clear-cut interventions required for scaling up performance and development of the coffee value chain. It has provided a solid foundation for enactment of supportive legal and regulatory frameworks desirable for a suitable enabling environment for growth of the coffee sub-sector. See [www.agriculture.go.ug/Regulations/258](http://www.agriculture.go.ug/Regulations/258)



Despite the several positive achievements in the coffee subsector various challenges and unexploited opportunities do exist as revealed in the SWOT analysis (Figure 6).

**Figure 6: A SWOT Analysis: Coffee Value Chain**

<b>Strengths:</b>	<b>Weaknesses:</b>
<ul style="list-style-type: none"> <li>• Two coffee types; Arabica and Robusta coffee with high premiums on international market because of the sweet aroma capable of a variety of products including cappuccino</li> <li>• Coffee grows in most of the agro-ecological zones in Uganda</li> <li>• Favorable weather conditions with bimodal rainfall patterns</li> <li>• Continuous research on coffee</li> </ul>	<ul style="list-style-type: none"> <li>• Limited secondary processing in country thus reducing profitability</li> <li>• Limited value addition to coffee</li> <li>• Inefficient quality control and inadequate enforcement of regulations</li> <li>• Expensive transportation/logistics from farmers to bulking centers/markets</li> <li>• Recycling/mixing of black beans by traders and middlemen</li> <li>• High coffee disease burden (bacterial wilt, coffee leaf rust and Coffee Berry Borer) capable of destroying plantations</li> <li>• Limited access to affordable quality equipment</li> <li>• Poor agronomic practice; post-harvest handling (drying) and mixing of black beans lowers the quality of coffee</li> </ul>
<b>Opportunities:</b>	<b>Threats:</b>
<ul style="list-style-type: none"> <li>• Two production seasons a year which guarantees continuous supply</li> <li>• Uganda coffee Arabica has very good intrinsic quality due to high altitude, soils and farming systems.</li> <li>• The coffee sector is fully liberalized giving more economic opportunities e.g. investment in value addition (roasting, instant coffee)</li> <li>• Large regional/international markets</li> <li>• Existence of the coffee strategy 2040 which guides investments in the subsector</li> </ul>	<ul style="list-style-type: none"> <li>• Fluctuations in coffee prices on international markets</li> <li>• Poor packaging and storage facilities, harvested coffee kept inside houses where people/animals sleep and its prone to foreign odours</li> <li>• High costs for organic and fair trade certification</li> <li>• Declining soil fertility and expensive inputs including: seedlings, fertilizers, packaging materials, reduce yields.</li> <li>• Climate variations</li> <li>• Large volumes of black beans with no export value</li> </ul>



### 3.2.2 Cotton

Cotton is an annual crop that is produced commercially in over 80 countries located in both the tropics and temperate climate zones (Lundbaek, 2002). Its main commercial uses are in manufacture of textile and garment, edible oil, soap and livestock feeds. In Uganda, cotton is predominantly produced in the Eastern, Northern, Lower West Nile and South Western regions. By the year 2000, the sector had recorded approximately 300, 000- 400, 000 producers (Ann and Andrew, 2000). However due to a number of constraints such as low returns, the number of cotton farmers reduced to about 250,000 households by the year 2014. Currently farmers grow only one cotton variety<sup>6</sup> that is unique to the country with good (finer) fibre properties that are extremely favorable to spinners and have staple length of approximately 30 mm.

Cotton is a labour intensive crop especially at weeding, pesticide application and harvesting stages. Animal traction introduced into the country in the early 1900's is widely used by cotton farmers in the main cotton producing areas for land opening. The use of tractors by small-scale farmers in general remains very limited, mainly because farmers cannot afford the technology (EKN, 2015).

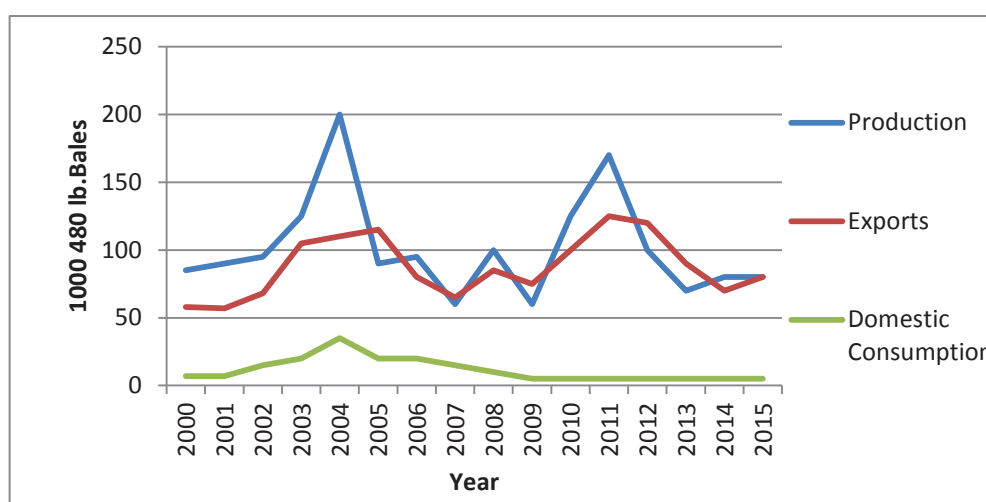
Cotton was Uganda's major export until the 1950's when it was surpassed by coffee (Serunjogi et al., 2001). At its peak production of 465,000 bales of lint in 1969/70, cotton contributed to about 40 percent of foreign exchange earnings. The industry experienced a dramatic decline in terms of both acreage and yield from the mid 70's to the late 80s due to political turmoil. By 1987/88, production had hit an all-time low of 11,000 bales. The textile and garment industry and other value addition industries also suffered a similar fate. The causes of decline of farm level production included lack of credit and farming inputs, lack of extension services, a poor marketing system and a run down and inefficient ginning system (LMC, 2002; Serunjogi et al., 2001).

Currently, the subsector has several actors including ginneries, processors and exporters (Appendix 4). The levels for production, export and domestic consumption for coffee are presented in Figure 7. The period 2004 and 2009 experienced a continuous fall in production. The marketing system of cotton is still a major drawback for farmers. After harvesting, the farmers either transport their seed cotton to seed buying posts operated by ginners, who buy the produce at a market price determined by the buyers who then transfer the cotton to their respective ginneries. Alternatively, transactions between farmers and the buyers are executed through agents that act as intermediaries (Caption 3) and depress the profit margins for farmers.

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<sup>6</sup> They grow a variety called Uganda Bukalasa Pedigree Albar

**Figure 7: Trends of Cotton Production, Export and Domestic Consumption (2000-2015)**



*Source:* USDA, 2015



**Caption 3: Marketing of Cotton in Kasese**

The greatest proportion of cotton produced is exported with only about 5 percent of the produce consumed locally by three textile factories<sup>7</sup> and a cotton wool producing factory. The most preferred form of exporting is indirect exporting in which baled cotton is either delivered on Ex-Gin or on Free on Truck (FOT) basis to the exporting company, which then assumes ownership of the goods, completes the export formalities and physically exports the cotton. The cotton is mainly exported to India, China, Thailand, Malaysia, Indonesia and South Korea/Singapore, Switzerland and UK, where international merchants that mainly buy cotton on FOT or Free on Board basis for onward sale in major global consumer markets.

Despite the poor performance, there are several justifications for supporting the cotton and textile sub sector in Uganda guided by the existing National Textile Policy and Strategy formulated in 2008. This subsector is in dire need of retention and attraction of new investments, developing human resources with skills in clothing and textile technology, technological up-gradation and addressing market distortions

<sup>7</sup> Southern Range Nyanza Factory, Phoenix Logistics and Fine Spinners

present in the value chain. Therefore opportunities for expanding capacity of existing firms and attraction of new investment into production on a large scale do exist. Below is a SWOT analysis of the cotton subsector (Figure 8).

**Figure 8: A SWOT Analysis: Cotton Value Chain**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Homogeneous cotton production which makes monitoring easy</li> <li>• All seed cotton is handpicked, which better preserves the intrinsic quality of the lint</li> <li>• Availability of idle infrastructure/installed processing capacity e.g. Lira Spinning Mill, African Textile Mill, Mulco, and LAP Textiles Limited</li> <li>• There are several institutions<sup>8</sup> supporting production of cotton in the country</li> </ul>	<ul style="list-style-type: none"> <li>• High transport/freight costs from production to market centres</li> <li>• Lack of functional local textile industries exposes farmers to fluctuations in international market prices</li> <li>• Weak cooperative movement and minimal economies of scale</li> <li>• High production costs (expensive inputs; e.g fertilizers, transport etc.)</li> <li>• Poor post-harvest quality control e.g. contamination with foreign matter</li> <li>• Low profitability of cotton relative to other competing crops</li> <li>• Underutilized and technologically aging ginneries and manufacturing plants</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Availability of land suitable for cotton production as only 1/3 of this land has so far been cultivated</li> <li>• Growing one variety of cotton eases quality control in the production phase of the crop</li> <li>• New opportunities for export of apparels made in Uganda to USA markets under AGOA</li> <li>• Uganda has 43 ginneries operated by 25 ginning companies.</li> </ul>	<ul style="list-style-type: none"> <li>• High cost of capital and risk of crop failure</li> <li>• Prolonged dry spells which affect harvest.</li> <li>• Fluctuation in international cotton prices</li> <li>• Abandonment of cotton growing due to low and unreliable returns to farmers</li> <li>• Export of unprocessed cotton</li> <li>• Competition with Genetically Modified (GM) cotton embraced by some of the cotton producing countries like India.</li> </ul>

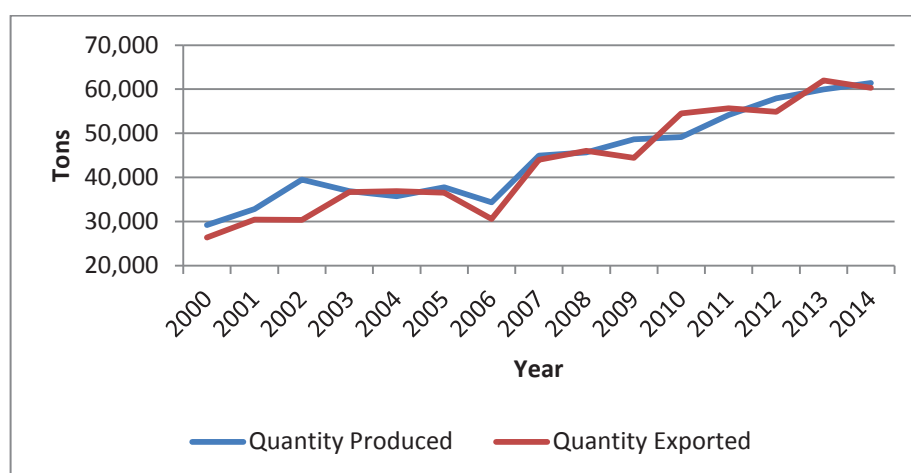
### 3.2.3 Tea

Tea is grown in the Lake Victoria Crescent and lower slopes of the Rwenzori Mountains as well as above the Western Rift Valley. The major tea growing districts in Uganda are Kabarole, Bushenyi, Kanungu, Rukungiri, Mityana, Kibaale, Hoima, Kisoro, Wakiso, Mukono, Buikwe, Mbarara, and Zombo. Large tea estates are responsible for 72 percent of the tea produced in the country, while the rest of the tea is produced by out-growers. The number of out-growers has been increasing. According to Oxfam (2002), the increase in out growers is because tea is a source of income all year round, requires little investment, has a low risk of crop and there is a deliberate government effort to provide free plantlets to farmers under the NAADS and OWC.

<sup>8</sup> Cotton Development Organisation (CDO), the National Seed Certification Service (NSCS) and Busitema University

Uganda's tea sector is competitive as evidenced by the number of actors (Appendix 5). The production and export trends for tea since 2000 indicate continuously increasing values, especially between 2006 and 2014 (Figure 9). This is partly attributed to the growing internal, regional and international demands.

**Figure 9: Tea Production and Exports (2000-2014)**



*Source: UBOS Statistical Abstracts*

Uganda earned US\$ 72 Million from exporting 63,456 tonnes of tea, cultivated on 35,194 Ha, in 2012/13 (MFPED, 2013). Tea was Uganda's third largest agricultural export commodity by export value in 2014 contributing 3.1 percent of the total exports. By 2015, tea had dropped to the 5<sup>th</sup> position contributing 2.5 percent of total export value and overtaken by Tobacco and Maize (BoU, 2016b). The decrease in export earnings from tea is explained by falling prices for Ugandan tea on the world market as a result of decline in quality and competition from other tea producing countries. The tea produced in the country is mainly of medium quality and used to blend premium quality tea produced in Kenya. About 70 per cent of Uganda's tea is sold through auction in Mombasa where it is often exported as Kenyan tea, and 20 per cent through direct sales, while the remainder is sold locally. The use of Kenyan middle men in export of the produce is reported among the reasons the tea is bought at a low price (Kiwanuka and Ahmed, 2012).

There are several opportunities and challenges in this subsector as presented in the SWOT analysis (Figure 10).

**Figure 10: A SWOT Analysis: Tea Value Chain**

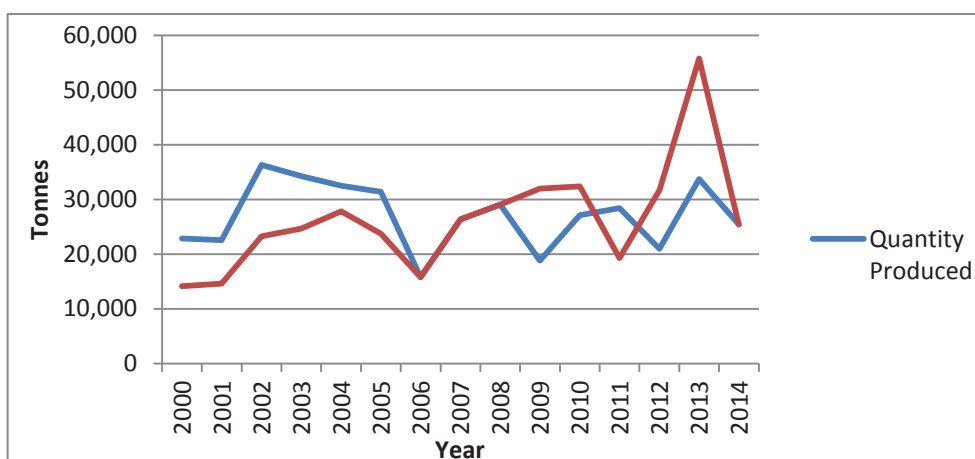
<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Uganda has no tea export taxes, charges or levies</li> <li>• The diverse agro-climatic conditions prevailing in the tea growing areas of Uganda allow production of a wide range of teas</li> <li>• Strong production base with 75 per cent of the production being accounted for by organized tea estates and outgrowers</li> </ul>	<ul style="list-style-type: none"> <li>• High cost of production mainly due to low productivity and high energy cost</li> <li>• Unproductive tea seedling clones being planted due to inadequate tea research in the Country.</li> <li>• Remote location of the plantations increase transaction costs for growers <ul style="list-style-type: none"> <li>◦ Transportation of tea over long distances to processing facilities</li> <li>◦ Poor road infrastructure especially the access roads to the tea plantations</li> </ul> </li> <li>• Difficulties in introduction of mechanization of field operations due to topographical factors</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Availability of arable land</li> <li>• Increasing awareness world over as to the health attributes of tea leading to growing demand for good quality tea and specialty tea such as organic and green tea</li> <li>• Positive response by Uganda's tea industry to improving the management of tea factories</li> <li>• Increasing impact of smallholder growers</li> </ul>	<ul style="list-style-type: none"> <li>• Fluctuation in international tea prices</li> <li>• Technology used in withering tea requires firewood due to unreliable electricity supply</li> <li>• Lack of effective regulation and coordination of tea activities</li> <li>• Round-the-year production in countries such as Sri Lanka and Vietnam.</li> <li>• Low cost of production of tea from Kenya, Vietnam and Indonesia compared to Uganda</li> </ul>

### 3.2.3 Tobacco

Tobacco production and processing in Uganda was until 2013 dominated by British American Tobacco (BAT) Uganda, which used to control about 93 percent of the activities, employing about 28,000 persons and purchasing tobacco from 65,000 contract farmers. In 2013, BAT closed its tobacco-processing plant in Kampala and relocated its manufacturing operations to Kenya. In 2014, a total of 25,500 Mt of Tobacco were procured registering a reduction of about 25 percent from that procured in 2013 (Figure 11).

Due to the risks tobacco production has on the producers and users of the product, tobacco is a controversial crop. Nevertheless, consumption of the crop is projected to increase over the years. Currently, Uganda Leaf Tobacco and Mastermind Uganda Limited are the major Tobacco buyers and processors.

**Figure 11: Production and Export Volumes for Tobacco (2000-2015)**



*Source: UBOS Statistical Abstracts*

### 3.3 Non-Traditional Cash Crops

Uganda is able to produce a range of non-traditional agricultural commodities for export at competitive prices due to its comparative advantage based on favourable climate, rich natural resources and available rural labour. Uganda's non-traditional agricultural exports are instrumental in stabilising the country's balance of payments by increasing total export earnings and reducing fluctuations in revenues from traditional exports. Over the years, producers have diversified their crop portfolio from traditional crops such as coffee to non-traditional crops like vanilla, cocoa, maize, simsim, sunflower, beans, rice, potatoes, flowers and horticultural products (chillies, tomatoes & leafy vegetables).

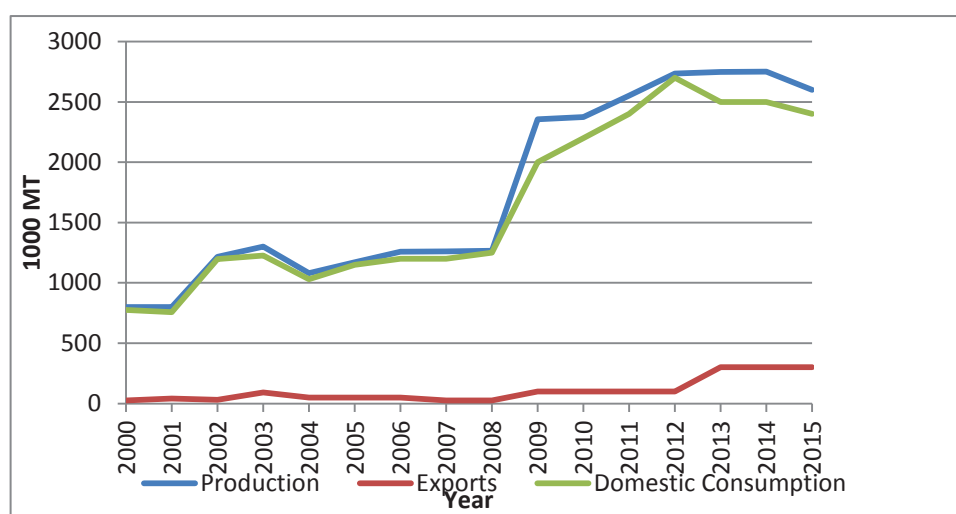
#### 3.3.1 Maize

Commercial maize farming takes place in over 20 districts<sup>9</sup> in Uganda. Maize is a staple food among the rural poor and highly depended on by institutions such as schools, military, police and prisons, as well as relief providing bodies such as the United Nations World Food Programme. By 2010, maize was estimated to be a direct source of livelihood to over two million households, 1,000 traders/agents and over 600 millers (UNDP, 2010). Maize production has been steadily increasing over the years with most of the production consumed locally, leaving minimal quantities for export (Figure 12). Maize is also a raw material for industrial products such as alcohol and starch.

<sup>9</sup> Iganga, Kasese, Masindi, Kapchorwa, Mbale, Masindi, Mubende and Kasese. Mubende, Kiboga, Lira, Apac, Mbarara, Masaka, Rakai, Kyenjojo, Kabarole, Kamwenge and Hoima



**Figure 12: Trends of Maize Production, Exports and Domestic Consumption (2000-2015)**



*Source: USDA, 2015*

The majority of maize farmers operate on a small scale and produce about 95 percent of the national maize output contributing 75 percent of the marketable surplus. Maize maize is grown under rain-fed conditions with volatile production from year to year. Use of improved seed and fertilizer is modest, but greater than for other staple food crops. Maize prices exhibit substantial intra-year seasonality, are low when the markets are flooded with maize during harvest-time and prices are high prior to the next harvest. The maize milling industry consists of hundreds of small-scale mills serving rural areas and handful of large-scale mills serving urban consumers. The maize value chain has complex marketing channels including many small-scale under-capitalized traders, minimal storage capacity, and few large trading enterprises with national and regional operations.

The growing demand for maize has created a new class of emerging medium scale commercial farmers with 0.8-2.0 ha (UNDP, 2010) but productivity remains a major challenge. Maize production is characterized by low yields and low returns to farmers mainly due to price instability. According to MAAIF (2009), the maize production potential per hectare is 6.0 Mt. However, the average production on small holder farms is 1.54 Mt/ha which is still very low. This is attributed to poor agri-input dealer networks that are unable to deliver quality and affordable seeds, inorganic fertilisers and pesticides to farmers. In addition, lack of storage is a major constraint as farmers sell off most of their surplus maize immediately after harvest which results in very low maize prices at harvest time. Further, a report by UNDP (2010) indicated that about 15 percent of the national maize output is lost due to poor post-harvest handling. An additional situation analysis of the maize subsector is presented in Figure 16.

On the regional front, Uganda remains a key supplier of maize through both formal and informal trade channels to South Sudan, the EAC and the Eastern Democratic Republic of Congo. Although Uganda's export capacity is estimated at between 100,000-150,000 Mt per year, only about 50 percent of this capacity is utilised due to poor penetration caused by poor market quality and unreliability of maize supply. In recognition of its poverty reduction impact as well as food security role, the Government of Uganda selected maize as one of the 10 priority crops.

**Figure 13: The situation analysis for the Maize Enterprise**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>Government and Development Partners (e.g. USAID) support the development of the maize Value chain</li> <li>Maize by-products used to produce livestock feed</li> <li>Ongoing research on maize by NARO</li> </ul>	<ul style="list-style-type: none"> <li>Farm productivity is exceedingly low</li> <li>Farmers lack cost-effective means of transporting maize</li> <li>Poor post-harvest handling processes resulting into high levels of aflatoxins</li> <li>Weak enforcement of the maize standards</li> <li>Production is mainly on a small scale with low economies of scale</li> <li>Limited of storage facilities</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Availability of improved varieties that are early maturing, high yielding, disease and drought resistant</li> <li>Maize is a key ingredient for a variety products including human food, animal feeds, ethanol and starch</li> <li>Maize is one of the priority crops in the NDP-II</li> </ul>	<ul style="list-style-type: none"> <li>Limited availability of electricity in the rural areas to facilitate the local processing facilities</li> <li>Lack of storage facilities</li> <li>Sharp seasonal fluctuations in maize prices (particularly in remote areas) significantly reduce margins for farmers</li> </ul>

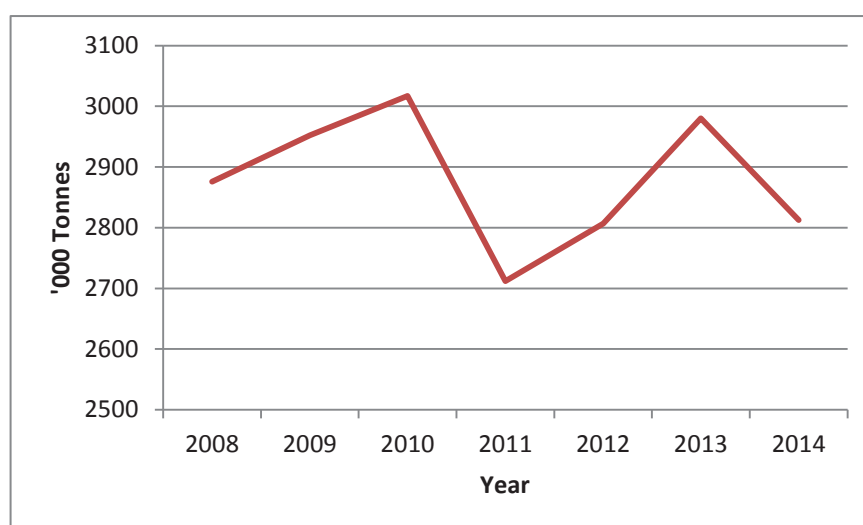
### 3.3.2 Cassava

Africa's consolidated production of cassava was estimated at 53 percent of the world production in 2010 produced by Nigeria, DRC, Angola, Ghana, Mozambique and Uganda. In Uganda, cassava is the second most important staple crop after bananas, with an annual crop with a maturity period of 6–8 months. The main cassava growing regions based on production volumes of 2008/2009<sup>10</sup> were; the eastern region (37 percent), followed by the northern region (34 percent), western (15 percent) and lastly central (14 percent). The national average cassava yield is 12.5MT/ha. Over the period 2008-2014, the cassava production trends reveal a staggering trend as shown in Figure 14.

<sup>10</sup> Based on season two of 2008 and season one of 2009



**Figure 14: Cassava Production (2008-2014)**



*Source: UBOS (2014 and 2015)<sup>11</sup>*

Cassava trading flow can be categorized according to its major products, i.e. fresh cassava (Caption 4), dried cassava pellets/chips and cassava flour (Caption 5). In Uganda, cassava flour<sup>12</sup> constitutes about 50 percent, dried pellets/chips (45 percent) and raw cassava (5 percent) (Afrii, 2013). The mapping of cassava and cassava products reported by UIA (year??) indicated the cassava growing areas, the markets, trading routes and areas which are famous for processing. This mapping clearly indicated the development of market linkages that connect supply to demand and support services (Appendix 4). The major regional destinations for cassava and its products include the DRC, Kenya and Rwanda.

Two of the major constraints to the development of cassava post-harvest systems are (a) the perishability of the fresh roots and (b) the presence of gynogenic compounds in cassava. Raw cassava is very bulky, perishable and only suitable for local markets. Cassava is susceptible to physiological deterioration after the roots are harvested. This means that roots greater than 48 hours old have little market value which limits the range over which fresh roots can be marketed. Deterioration can be delayed by waxing or storage in plastic bags following a fungicidal treatment.

<sup>11</sup> The values reported in MAAIF (2010) and UBOS (2010) indicated production values for the period 2004-2010 ranging between 5.5 – 5.2 million MT. It however indicated in the Statistical Abstract that the value for 2009 was an estimate while that of 2010 was a projection. The values used here relate very well with the estimates derived during the 2008/9 Agricultural census

<sup>12</sup> About 200,000 tonnes of cassava flour are consumed per annum in Uganda; most is traded in informal markets and negligible quantities in supermarkets.



**Caption 4: Harvested cassava bulked at a road side ready for transportation to urban centres**



**Caption 5: Cassava flour on sale in local Supermarkets**

Processing cassava is important because of the perishability of the crop and constrained marketing as a result. Often cassava is chopped, dried and processed into flour to increase shelf life and facilitate longer distance marketing. Fresh cassava contains cynogenic glucosides, which creates a potential health hazard if cassava is inadequately processed. Effective processing, essentially involving root disintegration and removal of the gynogenic compounds with the water, ensures the safety of products.

One of the major challenges for cassava producers and processors is accessing markets and developing new marketable products such as High Quality Cassava Flour (HQCF); improved and more convenient versions of traditional processed products; starch, sugar syrups; livestock feed rations; bio-ethanol production; and energy drinks. HQCF is of particular interest to Uganda because it is a substitute for wheat flour in pastries and has some industrial applications (Ndossi quoted in Gwera, 2009). Incorporation of HQCF in Uganda's baking industry can significantly boost the demand for cassava and reduce the price of bread and other cassava-based products. The industrial potential of HQCF is significant as it is the basis for extenders plywood adhesives and serves as a primary ingredient paperboard adhesives. Cassava flour is also commonly converted into sugar syrups used to produce ethyl alcohol. HQCF has the potential to completely replace imported, starch-based adhesives. Beyond these industrial uses, processed cassava holds other potential uses including sweeteners, mosquito coils, livestock feed, and brewing ingredients. Livestock feeds rely primarily on dried cassava pellets and can be used domestically or exported.

Use of processed cassava in these products, however, is highly dependent on quality and price, which relates significantly to processing efficiency and on farm yields. If cassava can be processed in a more efficient manner, domestic and regional demand can grow continuously. However, several weaknesses and threats as highlighted in the situational analysis (Figure...) threatens this transition. It is important to highlight the

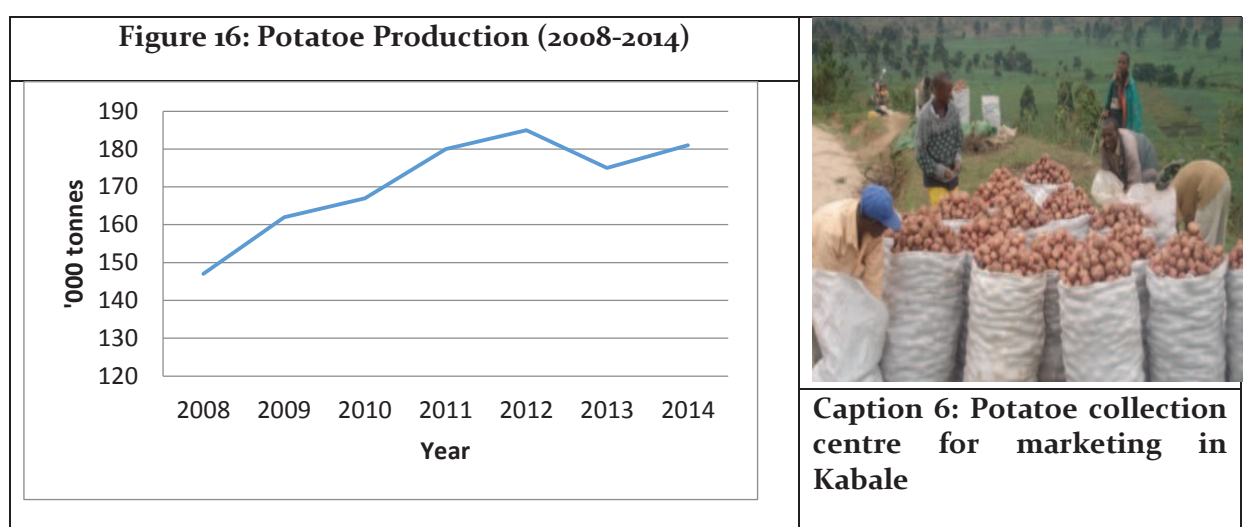
Government's investment in improving the value of cassava products. This has been through the triple helix approach where Uganda Investment Authority (UIA) interested NARO to develop high-yielding varieties that are adaptable in various agro-ecological zones. There are also recent initiatives to improve the beta-carotene and protein content of cassava as well as delaying its physiological deterioration. In addition, there are UIA interventions in the areas of farmer level productivity, Agro-inputs, Cluster<sup>13</sup> development and support, development of business linkages along the cassava value chain, entrepreneurship skills, technical skills and training for value addition.

**Figure 15: A situation analysis for the Cassava value chain**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Cultivation of cassava is less labor intensive as compared to other crops</li> <li>• Government's investment in improving the value of cassava chain</li> </ul>	<p><b><u>Production level</u></b></p> <ul style="list-style-type: none"> <li>• Inadequate and poor quality (for some varieties) planting material</li> <li>• Unattractive economies of scale (production for processing due to competing uses for cassava)</li> <li>• Prevalence of diseases especially the Cassava Brown Streak Disease (CBSD)</li> <li>• Post-harvest handling challenges ( shortage of tarpaulins for drying, limited access to storage facilities, storage pests)</li> <li>• Few processors to handle large quantities of raw produce</li> </ul> <p><b><u>Marketing:</u></b></p> <ul style="list-style-type: none"> <li>• Transport and logistical problems (road infrastructure) often leading to delay in delivery of produce</li> <li>• Price fluctuations for cassava and related products</li> </ul> <p><b><u>Processing:</u></b></p> <ul style="list-style-type: none"> <li>• Small-holder level and scattered farmers making location of agro-processing units challenging</li> <li>• Low quality standards of cassava products with respect to quality demanded by the market – ethanol and flour for industrial use (breweries)</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• High demand for cassava and its products in both Uganda and the regional markets</li> <li>• Processing of cassava into 'more hygienic' chips and flour to capture for use in confectionaries</li> <li>• Identified Markets for HQCF including Rural bakeries; Paperboard Industry; Animal feed industry, Breweries and the Starch-based adhesives</li> <li>• Established Centre of excellence for cassava research in East &amp; Central Africa</li> </ul>	<ul style="list-style-type: none"> <li>• Importation of starch and ethanol which may cripple investment opportunities</li> <li>• Diseases outbreaks (brown streak virus and cassava mosaic disease)</li> <li>• Continued importation of brewing raw materials e.g. barley</li> </ul>

### 3.3.3 Potatoes

In Uganda, 60 percent of Potatoe production is in the highland areas of South Western Uganda (Kabale and Kisoro districts) and Eastern Uganda (Mbale and Sironko districts). Potatoe growing has recently extended in the areas of Kyenjonjo, Kyegegwa, Kamwenge and Mubende. In some instances, the farmers are organised into producers and/or marketing groups who engage with buyers on a contractual arrangement. The contractual farmers are expected to sort, grade, pack, and transport the potatoes to one strategic point convenient for the buyer. The contractual farmers are generally resource and information constrained which results in failure to meet the quality and production standards set by the buyers (Kyomugisha et al., 2012). The non-contractual farmers produce and sell potato to any available traders (middle men) or consumers. They however continue to complain of limited market access/ limited outlets and low prices which are also compounded by the inefficiencies along the value chain (Africa 2000 Network, 2007). The production trends showed a steady increase for the period 2008-2012, which then dropped in 2013 followed by an increase in 2014 (Figure 16). Most of the potatoe produced is marketed in raw form (Caption 6) with minimal levels of processing.



The country has one potatoe processing factory known as Kisoro Potatoe Processing Industries Ltd (KPPIL) which was constructed in 2011 targeting to improve cold storage chain and thus contribute to enhanced marketing of the crop. The factory has a production line for potatoe chips (French fries) with a capacity of 20 Mt daily and , the tubers are (in the initial phases) supplied by a cooperative union of more than 4,500 farmers in the Kigezi sub-region. This is expected to make significant contribution to incomes of the rural farm communities in the districts of Kisoro and Kabale and in the region beyond. The target products are a range of French fries and specialty items for the regional upscale restaurant trade and the Arab market.

There is another intervention by the Uganda Industrial Research Institute (UIRI<sup>14</sup>) which is operating a virtual incubation facility for potato processing in Kabale. This facility has a tremendous impact on grassroot farmers and small-scale entrepreneurs who are not otherwise able to set up own processing units by providing physical facilities, trained staff, technical training, business development services and marketing of finished products.

The potato subsector has several challenges and opportunities.

### **Challenges**

- The chain actors generally lack sufficient knowledge, information and enough resources to help them meet quality standards and formal market specifications
- Majority of the farmers do not use high yielding seed varieties and fertilizers thus leading to low yields
- Farmers face great difficulty accessing seed in terms of quantity and quality due to high prices and limited availability. Seed used is usually home saved seeds from previous harvest, most of which is made up of local varieties
- Farmers have limited agronomic knowledge
- High incidences of pests, diseases and vermin
- Many areas are prone to soil exhaustion and erosion largely because of the high terrain
- Lack of storage facilities. The most common on-farm forms of storage facilities are rooms in residential houses. Retailers and wholesale traders rent stores predominantly in trading centers where they store produce, suggesting that there are no permanent storage facilities at these levels.

### **Opportunities**

- NARO intends to produce and make available more than 20 different varieties of potatoes to farmers seeking to diversify their crops
- Existence of KPPIL that aims at producing a distinctive brand of potato fries to capture a sustainable niche market while empowering the primary producers and, small holder farmers, to achieve higher production and improved post-harvest handling.

#### **3.3.4 Rice**

Rice production in Uganda is by different categories of farmers of which the small scale farmers (with less than 2 ha) are the majority constituting about 80 percent. The small and medium scale farmers undertake low scale production operations including

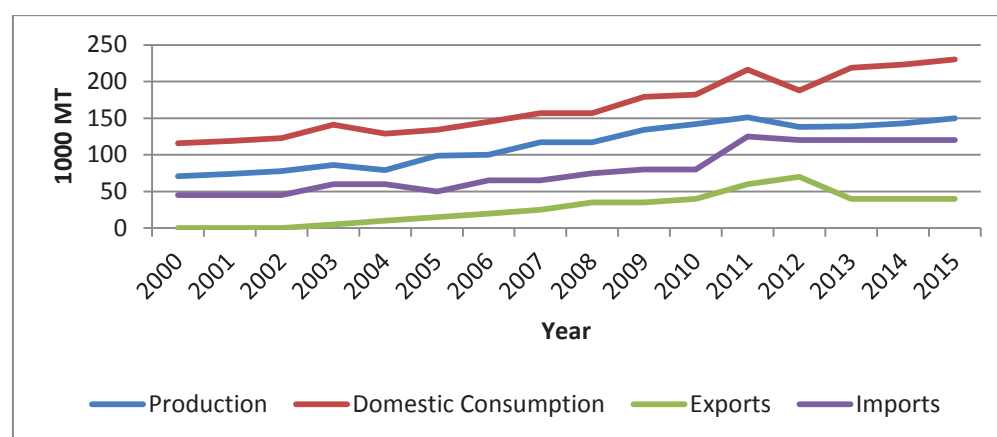
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<sup>14</sup> UIRI is one of the organizations spearheading the government's overall strategy of developing public-private partnerships (PPP), specifically in terms of enabling the industrial sector to become more vibrant, viable and competitive

limited use of fertilisers and the use of poor quality and mixed seed varieties (EPRC 2015 and MAAIF, 2009). Both upland and paddy rice varieties are grown in the country with about 70 percent of the total land suitable for rice production cultivated with upland rice. Rice has become both a major security crop as well as a cash crop in several districts in Uganda. However, unlike most crops important for food security, rice is consumed more in urban areas.

The available figures for rice production, domestic consumption, exports and imports (Figure 17) indicate that domestic consumption has overtime been way above the production levels, thus a supply demand continued to be satisfied by imports.

**Figure 17: Trends of Rice Production, Domestic Consumption, Exports and Imports (2000-2015)**



*Source: USDA, 2015*

The increase in rice production between 2005 and 2010 was mainly attributed to wide scale cultivation of upland rice, particularly the NERICA variety coupled with the lucrative prices received by the farmers (EPRC, 2015). On the consumption side, the demand for rice in Uganda (since the year 2000) has grown at an average rate of about 9.5 percent per year. This increasing demand has continued to be partially satisfied by rice imports. On the contrary, there is some level of rice exports recorded as well with the major destinations including DRC, Kenya and South Sudan.

The Uganda rice sub-sector is spearheaded by the Uganda National Rice Development Strategy 2009/10 -2017/18, which seeks to increase un-milled rice production from about 177,800 Mt in 2008 to 680,000 Mt by 2018. The strategy also seeks to increase household food production and ensure export of rice surpluses through promoting practices that increase production of high quality rice. Recent interventions by government in the rice sub-sector include construction and rehabilitation of irrigation schemes like Doho, Agoro, Mubuku, Olweny and Kiige. The East African Community's



Common External Tariff (CET) is the most important policy affecting rice markets in Uganda, with the CET on rice imported from outside the region set at 75 percent ad-valorem or US\$200 per tonne.

The situation analysis for the rice sub-sector is presented in Figure 18.

**Figure 18: SWOT analysis of the Rice sub-sector**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Adoption of both paddy rice and upland rice production systems</li> <li>• Increased tangible benefits to farmers leading to expansion of acreage under production</li> <li>• Presence of a National Rice Development strategy/framework</li> <li>• Presence of 5 irrigation schemes and the potential for more irrigation schemes</li> </ul>	<ul style="list-style-type: none"> <li>• No clear policy on rice seed production, quality assurance and marketing</li> <li>• Growing of mixed rice varieties</li> <li>• Poor post-harvest handling practices which affect the quality of rice (Lack of drying facilities like tarpaulins or drying yards, some farmers dry and thresh the rice on the ground)</li> <li>• High cost of labour in rice farming</li> <li>• Inadequate knowledge in rice farming especially for upland rice</li> <li>• Inadequate exploitation of rice by-products</li> <li>• Low grading capacity of the millers: Most of the rice milling machines do not have the capacity to grade the rice</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• The increasing local and regional demand for rice</li> <li>• Presence of sufficient water for paddy rice production due to presence of the several streams, rivers and lakes</li> <li>• The common External Tariff (CET) which provides significant price incentives to rice producers</li> <li>• Promoting the use of rice by-products</li> </ul>	<ul style="list-style-type: none"> <li>• Poor road infrastructure especially in areas of paddy rice growing thus affecting marketing</li> <li>• High cost of rice mills with high Technical performance</li> <li>• Improved seed multiplication is thin on the ground</li> <li>• Expensive rice seed</li> </ul>

### 3.3.5 Cocoa

Cocoa is another high value crop produced in Uganda. The major cocoa producing districts are Bundibugyo (67 percent), Mukono and Mayuge and over 17 other districts are engaged in the production. Anecdotal information on cocoa subsector estimates a total of 16,000 farmers engaged in the enterprise with average landholdings of 2ha, each producing on average 1,000 Kg of dry fermented beans per ha. Maximum yields from cocoa plantations are expected after 4 years though picking starts after 2 years of plantation establishment.

The Cocoa value chain has benefited from government interventions starting with certification of the nursery operators. There are two varieties being promoted by government (Upper Amazon and Trinitario) although the Amelanando variety (less yielding) is still widely grown. The government buys the seedlings from the private nursery operators and through the Operation Wealth Creation (OWC) programme

distributes them freely to the farmers. The government plan in the next 5 years is to attain a production of 50,000 Mt/year by increasing the planted acreage by 25,000 ha under the OWC. The potential area for cocoa production in Uganda is 92,000 ha (only 25,000 ha currently planted) though some of it is intercropped with other crops. Further, there is a lot of sensitisation and mobilisation for increased production, support to inter-district exchange visits and mobilisation and sensitisation on primary processing. In case of disease and pest outbreaks (which are rare) the government assists farmers to carry out mass spraying.

The total production over time has depicted an increasing trend (Table 4 and Figure 19). According to MAAIF records, the total production of cocoa in 2015 was 24,000MT which earned Uganda foreign exchange of \$67.2 million with the European Union (UK, Netherlands and German) being the major destinations. Some of the actors in this value chain include ESCO, OLAM and ICUM who generally export dry beans. ICUM chocolates (an Italian entity) established facilities for primary processing in the cocoa bean producing areas and has raised the platform for quality drying. Currently, cocoa ranks 8<sup>th</sup> in terms of agricultural export earnings, contributing 2.2 percent (Appendix 1).

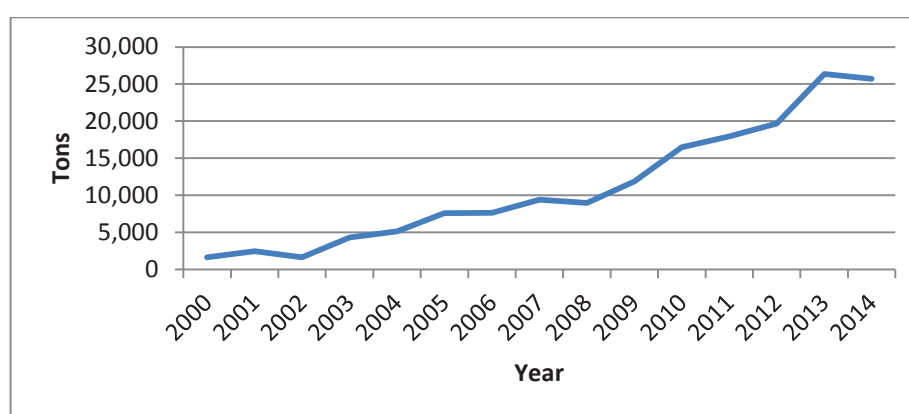
**Table 4: Cocoa seedlings planted, Production/Exports and earnings in US\$**

Cocoa year*	Cocoa seedlings distributed/planted	Cocoa production/ Exports (Mts)	Value (US\$ Million)
2010/11	500,000	16,478	52.72
2011/12	601,000	17,935	43.04
2012/13	1,230,471	19,430	46.60
2013/14	1,739,000	22,010	58.08
		24,000	67.2

\*Cocoa year ends on 31<sup>st</sup>/September

Source: MAAIF (2015)

**Figure 19: Cocoa production/Exports (2000-2014)**



UBOS (2012/13/14/15)



Uganda's Cocoa subsector is very competitive when compared to other producers. In terms of suitability of altitude, West African producing countries lie between 0-300m above sea level and Uganda lies between 1000-1,500 m above sea level. High humidity foments conditions for disease and pest multiplication leading to high levels of agro-chemical use. Consequently, Uganda's cocoa is organically produced although the lack of certification standards in the country makes the farmers to miss out on the organic premium prices. The situation analysis for the Cocoa subsector reveals several positives and negatives (Figure 20).

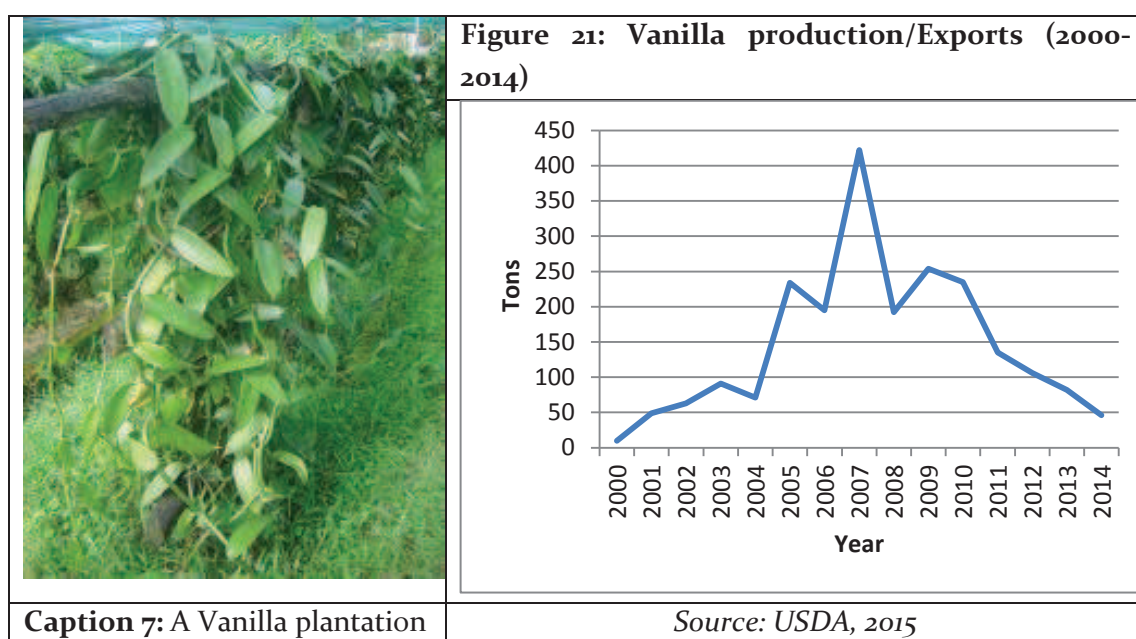
**Figure 20: A situation analysis for Cocoa**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Cocoa has two harvesting seasons that ensure continued supply</li> <li>• Uganda's mild climate is conducive for cocoa growing because such conditions are less suitable for pest and disease multiplication unlike in West Africa</li> <li>• Minimal use of crop protection chemicals on Ugandan cocoa establishments</li> <li>• Maximum yields of 1000Kg of dry beans per Ha attained only after 4 years of establishment</li> <li>• Cocoa plant is "self -weeding" implying limited labour costs for weeding</li> <li>• High yielding varieties being grown ( Upper Amazon and Trinitarion)</li> <li>• High level of government involvement in the cocoa value chain through the cocoa support project under MAAIF</li> <li>• Availability of certified nursery operators for seedlings</li> </ul>	<ul style="list-style-type: none"> <li>• High labour costs at harvesting</li> <li>• Poor post -harvest practices</li> <li>• Poor field agronomic management practices by farmers</li> <li>• Existence of plantations with low yielding Amelanado variety</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• The perceived health benefits of cocoa and cocoa products, thus increasing demand</li> <li>• Ugandan cocoa can easily qualify for organic certification due to the limited use of crop protection chemicals</li> <li>• Price and quality competitiveness of Ugandan cocoa on international market</li> <li>• Few actors in various segments of the value chain from production to exportation</li> </ul>	<ul style="list-style-type: none"> <li>• Coffee which is highly grown in cocoa producing areas is an alternative host for the Verticilium wilt disease, a major disease of cocoa</li> <li>• Lack of a cocoa policy constrains potential developments in this subsector.</li> </ul>

### 3.3.6 Vanilla

Vanilla is a high value crop (Caption 7) grown mainly in the Lake Victoria crescent with a warm humid climate that favours good yields and excellent quality beans. Vanilla in Uganda is organically grown which accounts for the high vanillin content and aroma that makes it one of the most preferred on the world market. Uganda is among the top 10 Vanilla producing countries in the world and the top ranked in East Africa (Appendix 5).

The number of participating farmers and total acreage has continued to stagnate despite the reported increasing prices of Vanilla. “The prices of vanilla have been going up in the past five years, but low output worries importers” *The Monitor Newspaper*, 27<sup>th</sup> January 2016. This has resulted in decreasing production/export trends (Figure 21).



The crop has intermediary institutions such as Uganda National Vanilla Association (UNVA), Uganda Vanilla Growers Associations (UVGA) and trading companies such as UVAN Limited. The trading companies buy the vanilla, undertakes primary processing and then export. Vanilla exports from Uganda are majorly (50 percent) destined for the USA market followed by Canada, the UK, France and Germany (Gabre-Madhin and Vette, 2004). UVAN Ltd is also encouraging farmers to revive vanilla growing by offering incentives such as farm inputs and implements, and also organising vanilla farmer’s competition to ensure increased productivity and quality.

### 3.3.7 Oilseed Crops

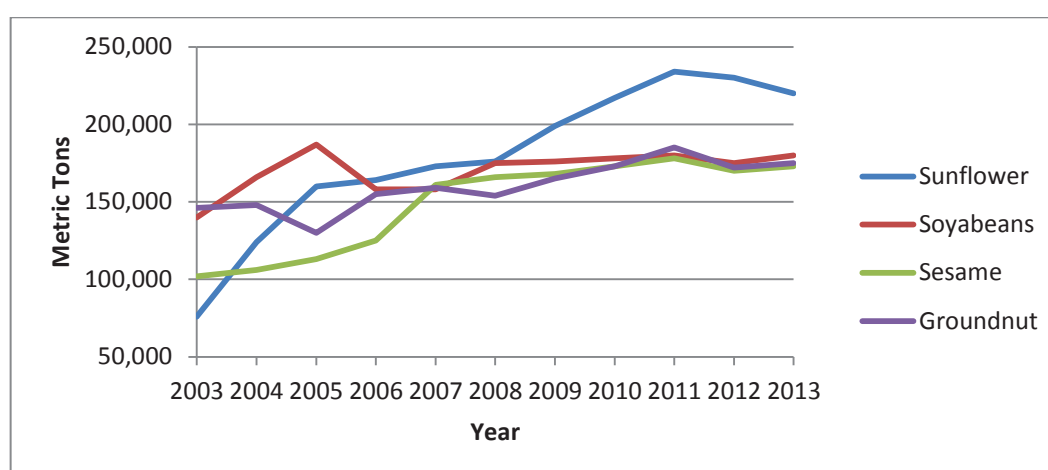
Vegetable oil is one of the major commodities being traded regionally, thus a source of foreign exchange for the country. The subsector accumulated an export value of US\$ 34.62 millions in 2015 making a contribution of about 1.4 percent of the agricultural exports in 2015 (BoU, 2016b). The demand for edible oil in Uganda was reported at 216,000 Mt/year, while the national production on average is estimated at 58,000 Mt/year with a consumption of 6.4Kg/person/year. Uganda is the second producer of edible oil in the region after Tanzania. There is available market in Rwanda and Kenya mainly for the seed cake for the developed livestock sub-sector.

The major oil seed crops in the country are soybean, palm, sunflower, sesame and groundnuts. By 2008, oilseed crops were contributing 30-35 percent of the total edible oils consumed in Uganda and 10 percent of total vegetable oils export from the country (UOSPA, 2008).

### **Oil Seed Crops excluding Palm Oil**

Growing of oilseed crops is a source of livelihood to over 4.8 million Ugandans and provides food security to over 830,000 households (VODP, 2009). Major producing areas in Uganda for oilseed crops are Lira, Gulu and the Eastern Hub comprising of Bukedea, Mbale, Tororo, etc. The processing component/industries employ over 2.7 million Ugandans. The production trends for the oil seed crops (excl. palm) indicate an increasing trend over the years (Figure 22).

**Figure 22: Production trends for Oilseed Crops (2003-2013)**



*Source: UOSPA, 2011*

The major products traded include sunflower oil and sunflower cake. Most of the sesame and groundnuts are exported as grain due to lack of processing facilities and appropriate technology. The major destinations for sunflower oil and cake and volumes traded are presented in Table 6 and Table 7. The export values for sunflower oil and cake reveal lucrative markets in the region and beyond.

**Table 5: Export of sunflower oil by quantity and country of destination (2012-2013)**

DESTINATION	Export quantities and proportions			
	2012		2013	
	Quantity (Kg)	% of Total	Quantity (Kg)	% of Total
Rwanda	2,381,330	48.3	700,780	17.7
Kenya	1,668,364	33.8	2,535,412	64.0
Tanzania	643,837	13.0		0.0
Burundi	55,479	1.1	65,815	1.7

D.R. Congo	62,684	1.3	88,059	2.2
Sudan	97,278	2.0	162,264	4.1
Kuwait	25,758	0.5		0.0
Tanzania	386	0.0	7,828	0.2
Saudi Arabia			10	0.0
Switzerland			403,580	10.2
<b>Total</b>	<b>4,935,116</b>		<b>3,963,748</b>	

*Source: UBOS (2013)- **Danny, provide full reference***

**Table 6: Export of sunflower cake by quantity and country of destination (2012-2013)**

Destination	Quantity Exported (Kg)	
	2012	2013
Kenya	10,239,390	4,043,710
Thailand	5,099,600	30,000
India		2,513,500
Switzerland		2,070,350
Tanzania	405,760	
Rwanda	49,800	100,000
South Africa	99,334	
Sudan	4,000	
United States		1,395
<b>Total</b>	<b>15,897,884</b>	<b>8,758,955</b>

*Source: UBOS (2013)*

The production and processing of oilseed crops encourages rural development through enterprise diversification; cake used by fish and livestock farmers as feeds (good protein source), bees benefit from the nectar in apiary farming, soap stock use by industries for soap making, residues used as mulch and humus in citrus production, oil use as food and to some extent used as bio-diesel to run industrial machines.

The key strengths for sunflower enterprise include a bi-seasonal production which guarantees an all year round supply and encourages product diversification. With regards to Sesame, there is ongoing research pioneered by NARO and APEP aimed at obtaining high yielding varieties of sesame (I and II). Further, Sesame is increasingly used for commercial purposes such as in oil extraction, confectionaries and animal feeds, with the Netherlands as the major market for this product.

However, the sunflower enterprise experiences several challenges including;

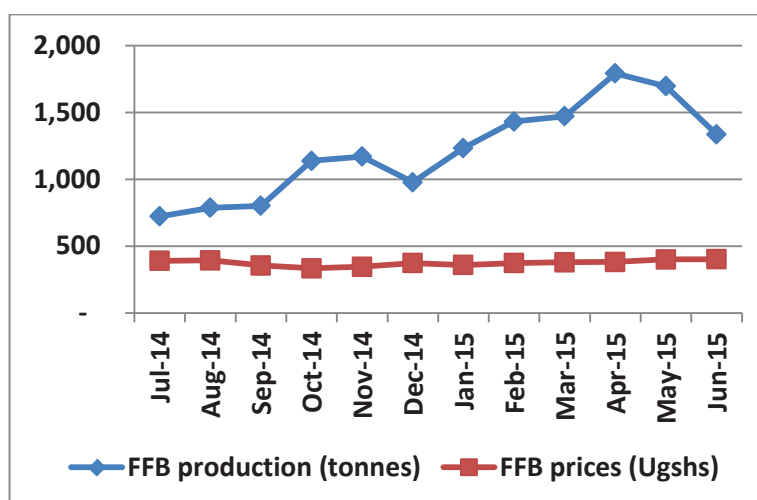
- Small-holder and scattered farmers making aggregation of the product costly for the processors
- Insufficient raw materials (grain) to saturate the market
- Cultivation of a low yielding variety
- Poor post –harvest handling practices leading to high losses of about 30 percent

- Low fertilizer usage<sup>15</sup> attributed to lack of fertilizer source, the high fertilizer cost, and poor distribution of fertilizer stockists in the oilseed growing hubs
- Uganda has only one oilseed breeder based in Serere
- Low Processing capacity: The current total installed capacity is 1000 Mt/day but actual operational capacity is 400Mt/day due to;
  - low production (mismatch between production and processing capacity)
  - inefficiency in machine operation
  - Irregular power supply
  - Low yielding variety – 800-900/hectare
  - High postharvest losses at 30 percent
- The lack of a stand-alone policy and guidelines for the oilseed sub-sector

### **Palm Oil Trees**

Palm production in the country is mainly in the Lake Victoria islands of Kalangala and Buvuma districts<sup>16</sup>, with a high level participation from the outgrowers. The farmers sell their produce to the aggregators, that is, Kalangala Oil Palm Growers Trust (KOPGT) and Oil Palm Uganda Limited (OPUL). The annual target for farmers in FY 2014/15 was to produce and sell 13,309 Mt of Fresh Fruit Bunches (FFB) to OPUL. By 30th June 2015, a total of 14,559 tonnes of FFB were produced and sold to OPUL at a gross value of Ug shs 5.4 billions (US\$ 1.6 million). However, whereas production of FFB was generally on an increasing trend and performed above target, the price of the fruits declined in the first half of the year and rose modestly by the end of the FY (Figure 23), which negatively affected the returns to farmers (MFPED, 2015a)

**Figure 23: VODP FFB production and prices by 30th June 2015**



Source: MFPED (2015)

<sup>15</sup> Sunflower requires high levels of fertiliser use and yet only 1 percent are currently using the right type and amounts of fertilisers

<sup>16</sup> The crop was introduced in Buvuma in 2012 and the trees are yet to fruit

### **Crude oil production**

The crude oil is transported using a hired vessel to Jinja for refinement into fortune cooking oil where about 22 percent is realized from the fruit and the waste is used as fiber fertilizers for the oil palm plantations. Given the observed increasing trend of FFB, there was an increasing trend of crude oil production from the year 2010 to 2013, with the production rising from 4,692 metric tonnes in 2010 to an output of 19,000 metric tonnes in 2013.

The major constraints to oil palm are:

- ✓ Low price of FFB associated with the outdated pricing formula and inadequate voice of farmers on the pricing committee
- ✓ High costs of transporting the FFB to the mill, due to higher prices of fuel compared to the prices in Kampala
- ✓ Wastage of FFB associated with the poor road network resulting in failure of KOPGT to collect the fruits from the farms. “During the rainy season when the roads are impassable, the KOPGT vehicles that are loaded with fruits get stuck for more than a day. By the time the FFB are delivered to OPUL for processing, the quality of fruits is poor resulting in high volumes of rejects” *said the KOPGT General Manager*
- ✓ Inadequate extension services given to farmers to control pests and diseases and improve agronomy
- ✓ Interrupted implementation of project due to land wrangles between the investor, landlords and Local governments

### **Opportunities**

- ✓ Newly mobilised land for production in Kalangala and Buvuma districts
- ✓ A lot of palm oil is imported into the country from Indonesia and Malaysia which is an opportunity for increasing local production

### **3.3.8 Flowers**

Commercial floriculture farming in Uganda started around 1992 as one of the non-traditional cash crops. Gabre-Madhin and Vette (2004) reported that floriculture was introduced in Uganda after the decline in volume and value of some traditional cash crops i.e. tea and cotton. According to USAID (2006), by mid-2004, Uganda’s commercial flower industry was making significant economic contribution to the country and one of the fastest growing businesses in the country. The good climatic conditions and the abundant “cheap” labour had favoured the growth of the industry. By the year 2012, about 178 hectares of land had been put under operation by the flower industry, of which 145.5 hectares was under roses, 30.5 devoted to chrysanthemums, and 2.1 hectares producing potted plants and foliage (NAPE, 2012).



Anecdotal information from the Uganda Flowers and Exporters Association (UFEA) indicated that there were 19 registered companies involved in flower growing and export activities. While three of these companies were wholly-owned subsidiaries of Dutch multinationals (Fiduga<sup>17</sup>, Wagagai, Royal Van Zanten Ltd), five of them were joint ventures by Ugandans with various foreign interests. The rest of companies were wholly owned by Ugandans. Most flower firms were located near Lake Victoria due to the favourable micro-climatic conditions, as well as in close proximity to the Entebbe International airport. The furthest flower firm from the airport is located in Ntungamo district about 300 Km southwest of Kampala.

Uganda's floriculture exports were targeting two segments of the market: cut flowers and cuttings with emphasis on Roses and Chrysanthemums (Caption 8). The volumes exported between 2007 and 2014 have to some extent reduced for the Roses, while a slight increase is observed for the cuttings (Table 7).



**Caption 8: The Flower Farms**

**Table 7: Performance statistics of flower exports**

Year	Volume of roses (tons)	Volume of cuttings (tons)	Total Value of flower exports (US\$ million)
2007	5167	1392	32.05
2008	5547	1252	34.15
2009	5058	1410	30.39
2010	3947	1414	28.24
2011	4214	1550	28.41
2012	4440	2000	36.30
2013	4988	2646	46.01
2014	4759	2051	38.70

**Source: UFEA**

<sup>17</sup> Fiduga is further divided into two trading subsidiaries



The Netherlands is the major destination for Uganda's flower exports taking a share of about 85 percent of the total exports (Table 8). Other destinations include the UK, Germany, South Africa and Italy.

**Table 8: Proportionate share of the total flower export values**

Destination	Proportionate share (%)				
	2010	2011	2012	2013	2014
Netherlands	83.8	82.7	84.0	85.8	85.2
UK	4.5	4.8	3.8	3.5	3.1
Germany	3.4	2.7	3.0	2.8	2.4
South Africa	3.7	4.0	3.2	2.3	2.1
Italy	0.5	1.2	0.8	1.5	1.7

Source: UEPB

Comparing the global market share, Uganda's flower exports are reducing over time (Table 9), which has been attributed to:

- The highly competitive market with existing regional giants like Ethiopia and Kenya who diversified in other high value flowers
- The high unit cost of production (low profit margins) partially attributed to high energy costs and transport/freight costs
  - Whereas flower production is heavily dependent on electricity, the electric tariff in Uganda is at US eighteen cents per kWh as compared to US six cents per kWh in Ethiopia
  - Since Uganda does not have its own airlines, it has to depend on Kenya, Ethiopia, Emirates and other airlines, yet some of them have to make stop overs in some countries which affects the flowers in transit. This often leads to low prices for the Ugandan products
- Uganda has limited incentives for investors in the sector. For example, Ethiopia gazetted a very large area specifically for flower production, thus attracting investment in flowers as compared to Uganda
- Expensive inputs such as fertilizers and chemicals
- Limited national/government interest and support to the flower industry
- Multiple, expensive and continuously changing standards and quality requirements
- Limited investment in market research as well as trials in new varieties

**Table 9: The Global Flower Exports 2001-2012**

	Proportionate Global exports				
	2000	2001	2005	2011	2012
% share for Sub-Saharan Africa	4.7%	6.1%	8.5%	9.7%	13.3%
Of which :					
Kenya	75.0%	71.1%	61.1%	67.4%	48.4%

Ethiopia	0.1%	3.6%	22.2%	18.8%	43.2%
Uganda	6.0%	0.6%	0.01%	0.01%	0.01%

The above challenges are likely to affect the future of Uganda's floriculture industry through:

- More flower firms especially the Rose firms are likely to close. In 2006, there were 22 farms of which, only 13 farms were reported to exist in 2015. Of these, 3 farms are growing roses but are also considering closing if the market situation does not improve
- Loss of foreign exchange earnings
- Loss of jobs for almost 8500 employees

However, some critical areas of improvement were cited by the stakeholders including among others;

- ✓ Uganda flower farmers should concentrate on flower varieties that perform well in the tropics to reduce on the competition and increase profit margins.
- ✓ Government and the private partners should invest in a flower industrial park with the required infrastructure
- ✓ Set up a distress fund to investigate global market changes that are beyond the control of farms but affect the industry
- ✓ Pay attention to and include the industry in all agricultural programs
- ✓ Investment in diversifying into foliage and expanding cuttings production

Fortunately, there are several institutions that are providing support to the sub sector (Appendix 6). The support includes finances, research information, supply of chemicals, advocacy, licencing, regulation and monitoring.

### 3.3.9 Horticultural Crops

The horticultural subsector includes fresh vegetables and fruits, as well as flowers. The specific crops (excluding flowers) include hot pepper, white garden eggs, chillies, avocados, pineapples and okra. Production of fresh vegetables and fruits used to be in proximity to the major airport (Entebbe International Airport) but has now extended to other places far away from the airport. The key commodities exported are the Capscums (Hot pepper *Habanero Capscum*, chillies, e.t.c.) and the white garden eggs. This market scan was however unable to obtain the production and/export statistics for the different crops.

The major destinations for horticultural exports include the Netherlands, Belgium, France, UAE, Sweden and the UK. The exporters formed an association known as Horticulture Exporters Association (HorTexA), which was later joined by the farmers to make it easier to address safety and quality concerns of the export markets. For sustainability of the HorTexA operations and the fresh vegetables and fruits sub-

sector, the association has registered a company (Farmex) to handle the business operations.

The Ministry of Trade, Industry and Cooperatives (MTIC) together with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) are in charge of ensuring compliance to the sanitary and phytosanitary requirements in this subsector. While there are many challenges in ensuring compliancy to the SPS requirements and achieving the set standards for export, the responsible agents have in some instances registered some milestones. For example, in 2015, MTIC and MAIIF a two weeks self-ban (suspension) on the export of hot pepper (*Habanero Capsicum*). This was mainly due to the presence the False Coding Moth, a pest that greatly damages the product. The purpose of the suspension was to allow re-assessment of exporters (and producers) to establish on the level of compliance and to institute measures for quality, pest and disease control at the packing house and farm-level. The self-imposed ban was also to prevent a total ban from the EU market on the export of hot pepper which would lead to a suspension for about 4 years. The self-ban brought about a reduction in export levels, which in turn led to loss of income at all levels of the value chain. However, whereas some exporters were affected, this gave them an opportunity to abide by the set standards which in turn would increase their market base and demand.

#### **Challenges in subsector;**

- The demand for Ugandan fresh vegetables and fruits is increasing but the subsector is currently unable to meet the volumes due to poor production methods
- The False coding Moth (FCM) is still a big problem for the producers
- The government has failed to regulate the quality of inputs (seed, fertilizers, pesticides and herbicides) either produced within the country or imported
- The prices for the genuine inputs are exorbitant
- There is lack of a quality management system within the fresh fruit and vegetable chain
- Pack house standards are basic, with limited phytosanitary protocols for the commodities during production and packaging
- Limited market research (on trends) to identify standards required by the export markets

### **3.4 The Cross-cutting Challenges and Opportunities in the crop sector**

While the above sections present crop/enterprise-specific challenges and opportunities, there are several cross-cutting issues. The cross cutting opportunities include;

- The conducive business environment and good political will evidenced by the government economic policy that encourages value addition to agricultural commodities
- The expanding local, regional and international markets for the different products. The growing internal demand is partially attributed to the growing populations and increasing purchasing power.
- Government's support to value addition initiatives
- Tax-free imports for agro-processing equipment
- The presence of trainable labour force
- Availability of arable land

The cross cutting challenges include:

- Production level
  - High dependence on rain-fed agriculture amidst unpredictable and unfavourable weather conditions (prolonged droughts and floods)
  - Inability of farmers to access finances/credit due to high lending rates (23 to 30 percent per annum). This has to a great extent constrained their access to improved planting materials, fertilisers, pesticides and farm equipment
  - High production costs (expensive inputs and transport) leading to low returns to the farmers
  - Limited crop-specific extension services
  - Pests and diseases leading to high crop losses
- Post-harvest
  - Poor/ Lack of storage facilities
- Processing, Transporting and Marketing
  - High cost of electricity and diesel thus increasing cost of operation and limits the adoption of small-scale processing facilities
  - Inefficient marketing system as reflected by low farm gate and fluctuating commodity prices
  - Poor road infrastructure (especially in the rural areas/key production centers) which curtails access to markets
  - Lack of farmer organisations (cooperatives) limits collective sales or transportation
  - Limited access to reliable markets as well as market information especially for the non-traditional cash crops

### **3.4 The Livestock Sub-sector**

The livestock sub-sector is composed of cattle, goats, sheep, pigs, fish and poultry. The Government of Uganda has several enabling policies to guide the development and transformation of the sub-sector. The policies include The Dairy Master Plan (1993); The Dairy Industry Act (1998); The Dairy (Marketing and Processing of Milk and Milk products) Regulations (2003); The Public Health Act (1935); The Animal Diseases Act (1964), the Hides and Skins Act (1964); The Veterinary Surgeons Act (1970); The

Animal Straying Act (1964); The Animal (Prevention of Cruelty) Act (1957); The Animal Breeding Act (2000); The Cattle Grazing Act (1964); The Public Health Act (Meat and Milk Rules) (1964) and the Code of Meat inspection Uganda (1973). Other relevant laws include the Food and Drug Act (1964), the National Drug Authority Policy and Statute (1994) and the National Bureau of Standards (1993 and 1998), as well as Uganda's international obligations (GoU, 2000).

The transformation of the sector is driven by an increasing consumer population, growing production, driven by increased productivity, growing processing capacity, growing incomes and increasing urbanization. The Dutch Embassy and Agriterria implemented a livestock market scan<sup>18</sup> which highlighted opportunities in Uganda's livestock sector in 2013. This agribusiness market scan reiterates the major findings including currents and emerging trends.

The total cattle population is estimated at 13.6million of which 12.7million (93.3 percent) are indigenous and 914,000 (6.7 percent) are exotic (Caption 9). The total annual milk production was 1.549billion litres in 2014 of which 745 million (48 percent) litres were from indigenous breeds and 804 million (52 percent) litres were from exotic breeds. Beef production on the other hand, increased from 180,300 Mt in 2010 to 202,929 Mt in 2014. The beef subsector is dominated by low productive indigenous breeds raised under extensive management systems. The inherent features of indigenous livestock are survival rather than productivity, hence their small body size. Factors such as disease, inadequate nutrition and water scarcity coupled with low body size and low milk yield means that indigenous animals grow slowly and often attain market weights at 5 years of age or more. Most slaughtered animals are culled animals. Following the privatisation of government ranches, the population of improved cattle breeds diminished. Few farmers rear improved beef animals (Boran, Bonsmara, Brahman and crosses) on small scale and medium sized farms. There is need for introduction of animal breeds that mature fast and also give quality meat but all this must be accompanied by improved animal health and feeding practices.

Production for sheep, goat and pigs exhibits a slow growth rate (UBOS, 2015). Table 10 shows the population and production of meat from the selected livestock categories.

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<sup>18</sup> Reported downloaded from <https://www.agriterra.org/en/stories/58053/opportunities-in-the-livestock-sector-in-uganda?page=6>

**Table 10: Number of other Livestock and their Products, 2010-2014**

Year	Livestock Numbers (Thousands)			Meat production (Mt)	
	Sheep	Goats	Pigs	Goat/Mutton	Pork
2010	3621	13208	3378	33,619	19,669
2011	3730	13604	3480	34,627	20,259
2012	3842	14012	3584	35,666	20,867
2013	3937	14614	3692	36,736	21,493
2014	3842	14011	3584	37,838	22,138

*Source: UBOS, 2015*



**Caption 9: The Indigenous and exotic cattle breeds**

### **3.4.1 Export of Live Animals and Meat Products**

The livestock market scan commissioned by EKN in 2012 established that export of beef to regional markets was still very low, due to failure to meet sanitary and phytosanitary standards in external markets. The number and quality of modern abattoirs is still very low, with only two operational abattoirs-Uganda Meat Industries and City Abattoirs. In rural areas, slaughter slabs are often used as abattoirs and thus compromise beef quality. Uganda lacks basic abattoirs that can be upgraded to meet international standards and requirements, a situation that has led to fewer exports of beef and beef products. Uganda's major Beef processors, Fresh Cuts Uganda Limited used to supply regional markets in DRC, South Sudan and Somalia but lost the market due to failure to meet safety and quality requirements.

Consequently Uganda's livestock export opportunities are related to sales of live animals and selected meat products such as loin, minced meat, and sausages and boneless. In general, the prevalence of diseases, sub-standard abattoirs and high local demand limits beef exports. Beef exports to developed markets remain unfeasible for the foreseeable future but potential for export exists to regional markets due to low production costs and competitiveness. Southern Sudan is emerging as a major destination for Uganda's meat products. Consultations with beef sector stakeholders reveal a need for investments in appropriate infrastructure and enactment of



appropriate export legislation to facilitate access to European Union and Middle Eastern markets.

### 3.4.2 Dairy Production

Uganda has four major dairy production systems namely free range grazing system, paddocked system, communal grazing system and zero grazing system. Milk is predominantly produced in five milk sheds (regions). Based on differences in number of cattle, milk production capacity, market conditions, dairy infrastructure and climatic conditions, the Western region is the leading producer and has the highest number of exotic cows. Liberalisation of Uganda's economy allowed the entry of new dairy operators in the sector replacing the old state owned Dairy Corporation. The competitiveness of the sector has grown immensely and boasts of 38 milk processing plants (Appendix 7). The daily installed milk processing capacity for 2013 was estimated at 1.518 million litres per day by the 16 major processors (DDA, 2013).

As confirmed by the EKN 2012 livestock scan, the dairy sector continues to grow at a very fast rate as reflected by the increasing animal population, milk production, processing capacity and differentiation of dairy products. The growing competitiveness of this sector is highlighted by the downward trend of imports of Kenyan dairy products into Uganda (EAC, 2013). This growth is even faster within the processed milk category, estimated at about 11 percent per annum. Growth is driven by a robust and unfulfilled level of demand for milk products in the country and the region. The per capita consumption of milk products is a mere 58 litres/person/year, far lower than the 100 litres/person/year in neighbouring Kenya or the 200 litres/person/year recommended by the United Nations' Food and Agriculture Organisation (FAO). Therefore, the Ugandan and regional market has potential to consume more milk.

Overall in the EAC area, there is a gap between supply and demand for dairy products that is met by imports from outside the region. Imports come from Europe, Australia, New Zealand, South Africa and the USA. However, there is evidence of movement of dairy products from surplus-producing areas to deficit areas within Eastern Africa. Uganda exports casein to the United States of America and UHT milk, yogurts, cheese and butter to the regional market including Kenya, South Sudan and DRC (Table 11).

**Table 11: Value of Uganda's dairy exports to selected countries (2011-13)**

Destination	Value in thousand US\$		
	2011	2012	2013
Kenya	13,146	13,989	19,674
South Sudan	1,017	2,300	2,617
DRC	2,161	2,440	1,467
Rwanda	79	237	259



Tanzania	457	434	527
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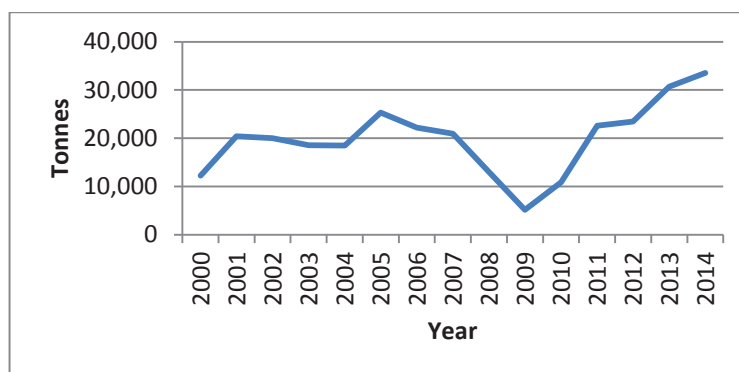
Source: UEPB, 2014

It is evident that Uganda now has excess processing capacity which requires more investment in production systems to step up raw milk supplies. However, there are constraints relating to; Low productivity at farm level; The dairy breeds are of low genetic potential coupled with poor feeding and animal health management practices; Seasonality of milk production; Poor quality milk; Infrastructural inadequacies such as poor road access to most of the high producing areas; intermittent and inadequate electricity supply, absence of cooling facilities and cold chain transportation trucks; poor quality water critical in preserving milk quality at the farm; big informal dairy trade (80 percent); and subsistence methods of dairy production.

### 3.4.3 Hides and Skins

The other key product for export is hides and skins, which are among the top 6 agricultural exports contributing 2.4 percent of the agricultural export value. The trend for volumes exported since 2000 indicate rapidly increasing volumes since 2009 (Figure 24) with Switzerland and China as some of the lead destinations (Table 12).

**Figure 24: Volumes of Hides Exported (2000-2010)**



Source: UBOS Statistical Abstracts

**Table 12: Proportionate share of Export values for Hides and Skins**

	2010	2011	2012	2013	2014
Total value of Exports (Mill US\$)	17	33	41	64	73
<b>Lead Destinations</b>					
Switzerland	10%	18%	37%	40%	37%
China	59%	39%	38%	28%	29%
Italy	7%	15%	10%	9%	17%
UAE	0%	0%	0%	9%	12%
India	3%	6%	2%	1%	3%

### 3.4.4 Inputs for the Livestock sector

- Animal feeds: The quality of imported feeds is being controlled through the Public Health Act, the Veterinary Department, UNBS and the National Drug Authority (NDA) through the relevant acts and regulatory frameworks as the country waits for enactment of a law to enforce the Policy
- Semen: imported semen must be free from any diseases and infections. The semen is mainly for upgrading purposes of the local stock. The semen mostly comes from South Africa, Kenya and other places. There are no restrictions on where the semen comes, as long as it is free from diseases.
- Veterinary medicines: anyone can import veterinary medicines, provided, that person has suitable and registered premises for storing the drugs as well as a veterinary doctor and a pharmacist to prescribe the medicines. The Commissioner responsible for veterinary services in MAAIF is the importing Authority who writes to the NDA to certify the drugs at the cost of the importer.

### 3.4.4 Poultry

The poultry composition estimated in the country consisted of 88 percent (of the estimated 44.6 million birds in 2014) indigenous birds (Table 13). Increasing demand for poultry products has resulted in rearing of more exotic breeds by poultry farmers due to their high productivity.

**Table 13: Poultry numbers in millions by breed (2010-2014)**

Year	No. Birds ('000)		Egg production	
	Indigenous	Exotic	Indigenous	Exotic
2010	40,350	2,850	34,834	4,879
2011	35,879	5,025	35,879	5,026
2012	36,955	5,176	36,956	5,177
2013	38,064	5,331	38,064	5,332
2014	39,206	5,492	39,206	5,492

*Source: UBOS, 2015*

The poultry subsector has small, medium and large-scale operators engaging in production of both the stock (birds) as well as the poultry feed. An example is the Biyinzika Poultry international (Caption 10 and Caption 11) which is a large scale enterprise. A situation analysis earlier presented in the livestock market scan is presented (Figure 25).



**Caption 10: Animal feed mill at Biyinzika Poultry International**



**Caption 11: Pelleted chicken feed at Biyinzika Poultry International**

**Figure 25: A SWOT Analysis for the Poultry sub-sector**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Poultry requires less land than crop agriculture and other livestock enterprises.</li> <li>• Poultry requires relatively smaller capital investment in comparison to other livestock</li> <li>• Poultry has short generation intervals and, therefore, quicker returns on investment.</li> <li>• High potential demand for poultry and poultry products</li> </ul>	<ul style="list-style-type: none"> <li>• Constrained supply and quality of day old chicks</li> <li>• Costly Feeds with seasonal fluctuations in availability and quality</li> <li>• Costly veterinary drugs with constraints in quality</li> <li>• Rampant outbreaks for poultry diseases</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Government support to poultry sector as poultry is considered strategic commodity in DISP</li> </ul>	<ul style="list-style-type: none"> <li>• Human competition for inputs for the feeds</li> <li>• Possible outbreaks of incurable diseases like avian influenza</li> <li>• Failure by authorities to enforce quality standards in feeds production</li> <li>• Protectionist laws in neighboring countries hindering export</li> </ul>

**Source: EKN, 2012**

### 3.5 Fish and Fish Products

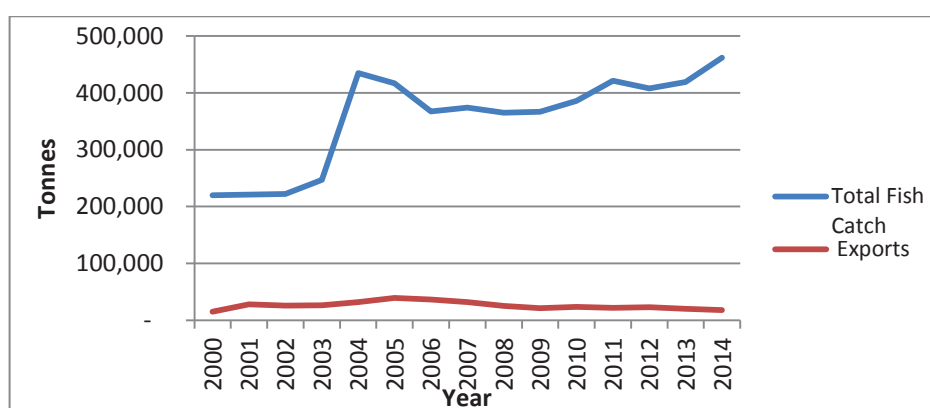
The water bodies in Uganda are known for different types of fish with Tilapia, Nile Perch and Silver fish as the most commonly traded (**Caption 12**). Fish in the country is majorly from Lakes Victoria and Albert with the largest share of the catch contributing to about 86 percent of the total catch. The increase in fish catch in L.Victoria is attributed to increase in the catch of silver fish while a decrease in catch in Lakes Kyoga and Albert were attributed to the use of illegal equipment and methods of fishing (UBOS, 2015). The total fish catch has continued to rise since 2006 at 367,200 tonnes up to 461,726 tonnes by 2014 (Figure 26). L. Victoria has the highest and increasing fish catch over the years. The main export destinations include Hong Kong,

Belgium and the Netherlands (Table 14), and DRC within the African continent (Table 15).



**Caption 12: Some of the Fish and fish products**

**Figure 26: The Production and Export of Fish and Fish Products (2000-2010)**



**Table 14: Values of fish exported to the major destinations (2010 to 2015)**

Country	Year				
	2010	2011	2012	2013	2014
Total export Values (in millions (US \$))	133.82	142.47	121.3	106.99	134.09
Export Values for 5 lead destinations (in millions (US \$))	64	82	80	86	98
Proportionate share of the 5 lead destinations	47%	58%	66%	80%	73%
<b>Individual Country Share (%)</b>					
Hong Kong China	25%	33%	29%	26%	35%
Belgium	36%	35%	39%	38%	26%
Netherlands	28%	18%	18%	21%	23%
UAE	4%	5%	5%	12%	9%
Israel	8%	8%	8%	4%	7%

*Source: BoU (2016) and UEPB*

**Table 15: Proportionate share of the Value of Fish exports to EAC<sup>19</sup>**

Country	Proportionate share			
	2010	2011	2013	2014
DRC	0%	67%	15%	48%
Kenya	71%	0%	44%	33%
Sudan	1%	31%	42%	19%
Tanzania	28%	1%	0%	0%

*Source: UEPB***Fish Farming**

Fish farming in the country is currently practiced mainly in the districts of Wakiso, Kalangala, Buikwe and Jinja under two methods, i.e. cages and ponds. Production in cages is more than in ponds, due to the ease in operations and management. The activities of fish farming are guided by the Department of Aquaculture which is responsible for guiding, promoting and supporting the aquaculture sector (fish farming) along the entire value chain from inputs to supporting market linkages as well as establishing standards/regulations. There are deliberate efforts to promote producers and/or guide investors in complying with production procedures, standards and linking with source of inputs (feed and fingerlings). The sector is however still young with about 25,000 fish farmers of whom, about 20-30 percent are large scale farmers. The average area per farmer is 1000 Sq.Metres.

Fish farming requires inputs such as fingerlings, and there are about 10 private hatcheries that operate fulltime in addition to other smaller ones. The government through MAAIF is in the process of operationalizing 4 regional hatcheries (Kajansi, Mbale, Bushenyi and Gulu). While reliable and good quality fish feed is a pre-requisite for sustaining the aquaculture industry in Uganda, fish feed is still very expensive. The major sources of fish feed protein (silver fish and soybean) have become expensive. Fish feed producers in Uganda include Ugachick Poultry Breeders, National Fisheries Research Institute Kajansi (Under NARO), IG Invest in Jinja and Ferdisult in Lugazi.

A situation analysis for the fish subsector reveals several strengths, weaknesses, opportunities and threats. While the key strengths are the presence of diverse species for export as compared to other EA countries and the looming regional and international market for fish and its products, the key threat is that there is informal trade of fish in the regional markets.

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<sup>19</sup> Most of the fish exported to the EA region is not captured because it is under informal trade



## **Weaknesses**

- Fish catch as several fish landings are not recorded and therefore there is no reliable fish statistics in the country
- There is a limit to the quantity of fish that should be exported stipulated by the national policy to 60,000 Mt (raw material equivalent) per year. However, there is no legal instrument to enforce the policy

### ***Fish farming***

- The supplied fish seed is sub-standard /poor quality and inadequate
- Factory formulated feeds are expensive accounting for 60 percent of the total costs of production
- Lack of market infrastructure and market information system. There is no platform for producers, buyers and other stakeholders to interface
- There is no proper marketing channels for the fish fingerlings
- The quality of fingerlings is poor due to overuse of the brood stock and concerns of inbreeding
- The feed quality for young fish is poor and expensive
- High operating costs for hatcheries
- The lack of investments in water harvesting exposes the fish under breeding programs to stress especially during prolonged droughts

## **Opportunities**

- Presence of the Uganda Fish Processors and Exporters Association (UFPEA), that ensures fish quality control and modern standards of hygiene before export
- Concessions offered for cage farming: An environmental impact assessment is carried out for the investor by the National Environment Management Authority (NEMA) in collaboration with Aquaculture department
- There are several water bodies including Lakes Victoria, Albert, Kyoga, Edward and any of the demarcated 165 minor lakes with adequate depth
- In the EU, there are 10 main importers of Nile perch, and the main importers are Fiorital (Italy), Caladero (Spain), Nieterlof (Holland), Anova (Holland), and Icemark (Belgium) of which the last two have operations in Uganda
- The government's interest in promoting aquaculture from which fish can be obtained to maintain and boost fish exports
  - The aquaculture department has mapped out areas (within water bodies) that are suitable for cage farming and can be availed to investors who are able to obtain an agreement with user communities
  - An average of 20sq Miles (in designated aqua parks) to be allocated to new entrants who would like to engage in commercial fish production

## 4.0 FACTORS INFLUENCING UGANDA'S AGRIBUSINESS POTENTIAL

This section provides an in depth review of different factors that have enabled/have a potential to enable or constrained/have a potential to constrain agribusiness development.

### 4.1 The Business Environment

Uganda improved at the ease of doing business ranking by World Bank from 135 (in 2015) to 122 (in 2016) out of 189 economies. The quantum leap was explained by an improvement in getting credit which moved by 86 positions from 128 to 42; and improvements in dealing with construction permits, getting electricity and resolving insolvency. Rwanda ranked best within the East African region at 62, Kenya at 108, Tanzania at 139 while Burundi was ranked 152. Table 16 provides the doing business indicators in Uganda compared to the East African countries.

**Table 16: Doing Business Indicators for Uganda compared to other East African countries**

	Uganda			Burundi	Kenya	Rwanda	Tanzania
Indicator	2016	2015	2014	2016	2016	2016	2016
Starting a Business	168	168	162	19	151	111	129
Dealing with construction permits	161	166	162	165	149	37	126
Getting Electricity	167	172	181	185	127	118	83
Registering Property	120	125	120	94	28	12	133
Getting credit	42	128	125	174	28	2	152
Protecting minority investors	99	98	108	115	115	88	122
Paying taxes	105	101	101	111	101	48	150
Trading across borders	128	126	163	154	131	156	180
Enforcing contracts	78	78	79	146	102	127	64
Resolving insolvency	104	106	126	145	144	72	99

**Source: World Bank, 2016**

Uganda made starting a business easier by introducing an online system for obtaining a trading license and by reducing business incorporation fees. In terms of access to credit, the credit bureau expanded the borrower coverage, thus improving access to credit information. On getting electricity, Uganda reduced delays for new electricity connections by deploying more customer service engineers and reducing the time needed for the inspection and meter installation.

Trading across borders was made easier by implementing the Automated System for Customs Data (ASYCUDA) World electronic system for the submission of export and



import documents. In 2015, Uganda made resolving insolvency easier by consolidating all provisions related to corporate insolvency in one law, establishing provisions on the administration of companies (reorganization), clarifying standards on the professional qualifications of insolvency practitioners and introducing provisions allowing the avoidance of undervalued transactions.

However, the country slightly declined in paying taxes, registering property and protecting minority investors. It was noted that Uganda made transferring property easier by eliminating the need to have instruments of land transfer physically embossed to certify payment of the stamp duty. The decline on this indicator was therefore a result of major improvements by other economies (WorldBank, 2016).

Besides providing infrastructure and a stable macroeconomic environment, Government through the Uganda Investment Authority (UIA), Uganda Registration Services Bureau (URSB), Uganda Revenue Authority (URA), Ministry of Lands, Housing and Urban Development (MLHUD), and Ministry of Internal Affairs provide a range of other public services in support of trade and agribusiness. These include: business registration; trade and investment licensing; trade and investment facilitation; trade and investment finance; immigration services; and industrial research and innovation support.

The major constraints affecting doing business in Uganda include; poor access to finance, corruption, high tax rates, inadequate supply of infrastructure, poor work ethic and Government bureaucracy. These constraints have hindered the growth of Uganda's private sector. As of 2010, it was estimated that nearly 90 percent of the private sector were micro and small enterprises yet employing over 80 percent of the total workforce (GoU, 2013).

## **4.2 Development plans, Policies and Legal Frameworks**

### **4.2.1 The National Development Plans and Legal frameworks**

**The Agricultural Sector Development Strategy and Investment Plan:** This has been under implementation for the period 2010/11-2015/16, with a focus on four programmes; (i) Enhancing production and productivity, aiming at supporting Ugandans to engage in productive and profitable agricultural and agribusiness activities to ensure food security and increase household income; (ii) Significant improvements in market performance through facilitating access to high quality inputs, participation in value addition activities, expanded rural network infrastructure, improved capacity for regulation and enforcement of standards among others; (iii) providing an enabling environment involving a body of statutes, regulations and standards to remove critical constraints to private sector growth; supporting opportunities that improve market efficiency, and; improving the incentive

environment facing the private sector in the key market chains; and (iv) Development of institutions to deal with structural challenges faced under MAAIF since most of the agriculture sector challenges were compounded by institutional challenges. Support structures that were expected included the restructuring MAAIF to create an Agribusiness, and Regulatory Services Departments in each of the three ‘commodity’ directorates of Crop Resources, Animal Resources and Fisheries (MAAIF, 2010).

**The National Development Plan-II:** The National Development Plan-II is expected to be implemented through 2015/16 to 2019/20 financial years, seeking to leverage opportunities and honour obligations presented by emerging developments at the national, regional, and the Continental levels, as well as the global level (the Post 2015 Development Agenda). Within the agricultural sector, the plan proposes government support and investments in 12 agricultural value chains namely Cotton, Coffee, Tea, Maize, Rice, Cassava, Beans, Fish, Beef, Milk, Citrus and Bananas. The areas of particular attention will be strengthening agricultural research, implementing a single spine extension system, technology adoption at the farm level, increasing access to and effective use of critical farm inputs, promoting sustainable land use and soil management, increasing access to agricultural finance with specific options for women farmers, and strengthening agricultural institutions for effective coordination and service delivery. This is expected to lay the foundation for establishment and expansion of agro-processing in the country. The plan recognises stages along the value chains of the selected enterprises where interventions will be focused, as well as offering potential leverage points for entry of various players and key stakeholders to do business.

#### **4.2.2 The National Legal and regulatory frameworks**

Uganda has a number of policies and legislations that are directly or indirectly contributing to the development of the agribusiness sector. These include those that govern the sectors and the sub sectors such as the National Agricultural policy (2011) aimed at promoting a competitive, profitable and sustainable agricultural sector; Trade and Investment policy, National Industrial Policy (2008) with a principle focus of transforming Uganda into a modern and industrial country through adding value by processing to reduce post-harvest losses and by increasing exports of higher value products, especially from agricultural and mineral resources; Trade policy (2007) with an objective of developing and nurturing private sector competitiveness, and to support the productive sectors of the economy to trade at both domestic and international levels; National Land Policy (2013) whose third vision attribute is to shift an estimated 65 percent of peasants from subsistence to commercial agriculture to move out of poverty and attain food security using land as the major resource input. There is a multitude of sector-related legal and regulatory frameworks under implementation (Appendix 8).

Uganda has regulations managing financial flow within the country and the major ones include Bank of Uganda Act (2000); Financial institutions Act (2004); Micro Deposit taking Institutions Act (2003) and Foreign Exchange Act (2004). Uganda is also part of the International Financial system under the Basel Accord framework which implies that Uganda has a fully-fledged Financial Stability Section at Bank of Uganda, a regular Financial Stability Report about the economy and Financial sector in particular which keeps individuals in the business sector well informed about financial matters in the country. During the amendment of the Financial Institution Act (2015), the Government of Uganda introduced Islamic Banking system that follows the Islamic Shari'ah (law) which is guided by Islamic economics (Mugerwa, 2016).

#### **4.2.3 The regional frameworks**

Uganda is a member of some key regional trade groupings including the COMESA in which Uganda is among the countries in the Free Trade Area where member countries trade on duty-free and quota free terms subject to the Rules of Origin; and the EAC. The avenues have enabled the member countries to take part in an economic integration that involves increasing Trade Corporation. Through the EAC, tariffs and customs regimes have been harmonized and free movement facilitated with a common external tariff. The EAC Customs Union (EAC-CU) liberalized intra-regional trade in goods with exemption of tariff and non-tariff barriers among the three (Kenya, Uganda and Tanzania) states and enhanced domestic, cross border and foreign investment in the Community.

#### **4.2.4 Global trade and trade related agreements**

Uganda is a signatory to a number of global trade and trade-related agreements including the African, Caribbean and Pacific- European Union (ACP/EU) Partnership Agreement (Cotonou Agreement); the World Trade Organization (WTO); and the African Union (AU). Uganda is also a beneficiary of non-reciprocal unilateral trade preferences such as Everything But Arms (EBA) by the European Union; the African Growth and Opportunity Act (AGOA) of the United States in which Uganda has duty and quota free access to both United States of America and Europe; and offers by Canada, Japan and China under the Generalized System of Preferences (GSP), all of which have offered the country improved market access opportunities into the respective markets.

Uganda is a signatory to the Convention on the Multilateral Investment Guarantee Agency (MIGA) and the International Center for Settlement of Investment Disputes (ICSID); A party to the Convention on Recognition and Enforcement of Foreign Arbitration Awards, and the Convention on the Settlement of Investment Disputes

between States and Nationals of Other States; has signed an agreement with the United States' Overseas Private Investment Corporation (OPIC). Furthermore, the Cotonou Agreement that Uganda signed in 2000 contains a continuation of the principles embodied in the Lomé Convention between the ACP States and the European Union to protect European investments in the ACP countries (Articles 75, 76, 77, and 78). Therefore Uganda is not only a favorable state for investment from the EU countries, but also offers the private sector an opportunity to access two credit lines from the European Investment Bank (EIB) under risk capital resources, and from EIB's own resources. Uganda has signed investment treaties and double taxation treaties with a number of countries such as Belgium and Luxemburg, China, Cuba, Denmark, Kenya and the Netherlands (WTO, 2006).

Uganda and other developing countries with a potential future in agri-business achieved a new positive outcome from the 10<sup>th</sup> WTO Ministerial Conference held in Nairobi at the last quarter of 2015: the elimination of all form of export subsidies for farm exports. This package offers equal opportunities for all agricultural exporters and opens up opportunities for developing countries such as Uganda, to better compete in the global market. Uganda will also benefit from the specific measures agreed in favour of LDCs. For instance Cotton originating from least developed countries, such as Uganda, is given more favourable market access by WTO members. The certification of origin for exporters from LDCs will also be simplified. Access of services and service suppliers from LDCs is given preferential treatment by WTO members until 2030 (EU, 2015).

### **4.3 Existence of Internal and External Markets**

#### **4.3.1 The Internal Markets**

Uganda has posted impressive economic growth rates averaging 6-7 percent over the past decade way above Africa's average of 5.1 percent since 2010. This strong economic growth resulted in increased demand for both processed and non-processed food products. Further, a rapid decline in poverty rates has ensured an expanding middle class with high purchasing power. The national poverty rate declined from 24.5 to 19.7 percent in 2009/10 and 2012/2013 respectively. Even with a fast growing population, the total number of Ugandans living below the poverty line declined from 7.5 to 6.7 million over the same period. There are now almost twice as many Ugandans in the middle class (MFPED, 2014). Consequently, a dynamic agri-food sector is gradually emerging with several business growth opportunities for both local and foreign enterprises, specifically SMEs. The biggest beneficiaries of the emerging agribusiness markets are smallholder farmers (suppliers), agri-processors and consumers.

#### 4.3.2 The Regional Market Integration

Uganda's location at the centre of the Great Lakes region and in the EAC offers Ugandan farmers access to a regional market with over 500 million consumers. Uganda enjoys pivotal trade partnerships and a viable market with other partner states in the EAC, Southern Sudan and the COMESA. The EAC presents a common market with a population of over 150 million consumers whereas COMESA, made up of 19 member states, has a population of about 470 million consumers as part of the Free Trade Area. Recent export growth has been stimulated by demand in neighbouring countries such as South Sudan which has emerged as an important trading partner demanding food and other manufactured materials.

Although each partner country faces unique challenges, a common expanded market offers the much needed trigger effect for economic growth. For example, although EAC states suffer uneven levels of competitiveness and productivity, coupled with varying policy and market inefficiencies, the level of appetite for regional integration remains high. The partner states are already implementing an integration programme premised on the objective of deepening economic, social and political cooperation, thus seeking to achieve balanced economic growth and development in the long term. The EAC integration process is on-going with achievements of the Customs Union<sup>20</sup>, Common Market<sup>21</sup> and the signing of the Monetary Union Protocol. EAC Partner states reached an agreement on the policy and institutional framework for a Single Customs Territory, which was launched in January, 2014. The Single Customs Territory framework has three pillars of free circulation of goods, revenue management system and legal and institutional frameworks, each with guiding principles and respective pre-conditions for implementation.

Agriculture and agribusiness sectors are pivotal to fuelling the EAC integration since all partners states are agrarian-based economies with other upcoming sectors such as services, energy and tourism. The observed growing volumes of freer flow of capital, goods, services, skilled labour and technology are an indication that indeed market integration has the necessary catalytic effect on trade.

Overall intra-EAC businesses are enjoying many benefits as a result of the economic integration. For instance there has been implementation of a single window environment that provides one "entrance" either physical or electronic, for the submission and handling of all data, and documents related to the release and clearance of international transactions. This has enhanced trade by cutting costs through reducing delays; faster clearance and release; predictable applications and

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<sup>20</sup> Charging the same import duties to allow free flow of trade, launched in January 2014

<sup>21</sup> Imposing few or no duties on trade with one another and a common tariff on trade with other countries

explanation of rules as well as more effective and efficient deployment of resources (EAC, 2014).

### 4.3.3 The Global markets

Uganda's commitment to the various international trade agreements and protocols has greatly enhanced its trade with international partners. In general, the EU remains Uganda's third largest trading partner after Asia and COMESA, with a trade volume standing at USD 823 million in the 1st three quarters of 2015. Uganda's exports to EU account for 20 percent of the total Uganda exports. Trading in Uganda provides the opportunity for duty and quota free access into China (quota free access for over 650 products), as well as access to the USA (AGOA), Generalized System of Preferences (GSP) scheme and EU (EBA) markets.

## 4.4 Trade and Investment Licensing, and Regulations

Government has devoted effort to the development and promotion of a competitive and export-oriented industrial sector, and thus a range of routine public services are provided by Government in this regard. These services are aimed at promoting improved product competitiveness through strengthening quality assurance and standards development.

**Uganda Investment Authority:** The Uganda Investment Authority (UIA) was established under the Investment Code law of 1991 with the overall objective of attracting Local and foreign investments in Uganda by providing more favorable conditions for investment, and to provide for other related matters. The UIA therefore is responsible for providing regulations of investments including licensing investments, acquisitions of land, provision of incentives for investments (for example land for investment in particular for agro-processing) and revocation of investment licenses among others. In 2014, UIA instituted a One-Stop-Centre where investors can register their businesses and get all relevant licenses related to their business at one point. Government is also developing an integrated on line system (electronic one stop centre) that will link all the government agencies that deal with licensing business in Uganda to reduce transaction costs. In the interim, the Investment License as well as other investment needs like industrial land can be applied for online via the UIA website [www.ugandainvest.go.ug](http://www.ugandainvest.go.ug).

**Uganda Registration Services Bureau:** The Uganda Registration Services Bureau (URSB) is mandated to among others register business names, companies, business documents, intellectual property like trademarks, patents, copyrights, utility models and designs. The activities of the agency are guided by the Trade Mark Act 2010 and Trade Mark Regulations 2012; the Trade Secrets Protection Act 2009; the Patents Act



as amended in 2002 and Patents regulations; and the Copyrights and Neighboring Act 2006.

**Uganda National Bureau of Standards:** The Uganda National Bureau of Standards (UNBS) is a statutory body under the Ministry of Trade, Industry and Co-operatives that is responsible for the standardization of commodities and for matters incidental and ancillary thereto, including but not limited to: formulation and promotion of the use of standards; enforcing standards in protection of public health and safety and the environment against dangerous and sub-standard products; ensuring fairness in trade and precision in industry through reliable measurement systems; and strengthening the economy of Uganda by assuring the quality of locally manufactured products to enhance the competitiveness of exports in regional and international markets. The bureau participates in harmonization of the national standards with regional bodies including the EAC, COMESA, South African Development Community (SADC) and it is accredited to the International Standards Organisation (ISO). The body carries out certification of the products using Q and S marks with the appropriate laboratories for testing the products to ensure compliance. Further, the body provides training and consultancy services which are paid for by the companies seeking for them. These trainings are usually offered to all the workers of a company so that they can know what is required of them and the company.

However, product certification by UNBS is designed as a voluntary scheme since the respective sector bodies are mandated to carry out product certification. Certification of agro-products is therefore mainly carried out by the different departments under MAAIF. The UNBS only verifies products on request especially for those who are seeking for a Q or S mark.

## **4.5 Agri-inputs**

### ***4.5.1 Planting Materials, Fertilisers and Pesticides***

There has been a deliberate effort by government to improve agricultural productivity through the promotion of increasing use of inputs. Most of the agro-inputs are imported from United Arab Emirates (UAE), China and India. The UNBS partners with three companies (Bureau Veritas, Intertek and SGS) to carry out a Pre-export Verification to Conformity (PVoC) of standards in the countries of origin before goods are transported to Uganda (PVoC guidelines, 2015).

Nonetheless, quality, a key parameter of agricultural inputs cannot be guaranteed in existing retail supply systems of Uganda. Low quality of agricultural inputs in general is often due to a multitude of factors, including adulteration, poor storage and inappropriate handling procedures. Moreover, quality deterioration could manifest at different points in the supply chain. Evidence suggests that adulteration, by bulking



fertilizer or dyeing simple grain to look like hybrid seeds, is common. The reason smallholder farmers do not adopt fertilizer and hybrid seed is because the technologies available in local markets are simply not profitable, which ultimately hampers agricultural productivity (Bold et al., 2015). The major underlying causes of low external agriculture input use in Uganda are high transaction costs of input marketing, limited availability of breeder and foundation seeds, low participation of private traders in the input distribution system, and the high cost of financial services. The high transaction cost of input trade is due to the low volume of purchases, high transport costs and high interest rates (IFDC, 1999). The agricultural input market is therefore largely characterized by a low-quality, low-trust, and low-adoption behaviour.

In addition, agricultural research institutions have not satisfactorily maintained the breeder and foundation seed purity, and to produce enough seed to meet the demand for the public and private sectors, thus exhibiting a poor linkage between research, extension and the private sector (MAAIF and MFEPD, 2000). Breeding programs in many cases are not responsive to the farmer needs as they overplay the yield potential (Louwaars and Marrewijk, 1996; MAAIF and MFEPD, 2000). Traditionally, the private seed companies avoid marketing self-pollinated crop seeds like beans due to competition from farm-saved seeds. Private seed companies also avoid marketing seeds in remote areas because farmers in such areas cannot afford improved certified seeds (David and Kasozi, 1999). This situation has called for development of an informal seed sector that has not yet been integrated in the breeding and extension systems.

#### 4.5.2 Land

Land is a key factor of production particularly for agribusiness. Land tenure in Uganda has evolved tremendously over the past century, resulting into four types of land tenure systems. The tenure systems include mailo, customary, leasehold and freehold. In FY 2014/15, MLHUD gazetted and launched the National Land Policy. Through the 10 year national industrial parks development program, government planned to set up 22 industrial parks in the different regions of Uganda with effect from FY2008/09 to FY 2017/18<sup>22</sup>. The purpose of establishing the parks is to provide serviced areas (with roads, water, electricity and ICTs) for manufacturing and value addition to Ugandan made goods. Industrial parks would strengthen the Ugandan private sector to enable it play its expected role as the engine of the country's economic growth and development as well as create employment.

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<sup>22</sup> UIA project profile – Development of Industrial Parks.

### 4.5.3 Agro-Machinery

In order to harness the use of machinery by the small holder farmers, there is an increased tendency in formulation of organized farmer groups and cooperatives which collectively purchase input and processing equipment such as tractors. These are preferred due to their efficiency and cost effectiveness as compared to the use of manual labour and ox-ploughs. The increase in large scale commercial farming being driven by the local and joint venture businesses created opportunities for increased use of machinery.

According to the Agri-machinery scan Uganda, 2015 (Netherlands, 2015), demand for both local and imported machinery is increasing with the client's preference depending on the appropriateness of technology to suit local needs, durability, convenience (fit into the client's specific requirement) and proximity to the source/manufacturers. The local fabrication industry is limited to the manufacture of simple machines; mainly at the processing level particularly for the grain milling, animal feeds and bakery sectors. One local fabricator (Munyegeera Agro-Machinery Fabricator) in Mayuge district in Eastern Uganda supplies the Feed the future USAID funded Commodity Production Activity beneficiaries with maize shelling machinery to improve the quality of maize grains. These have low efficiency and performance; poorly designed due to lack of in-depth expertise; not energy efficient and highly prone to breakdowns. The more complex machinery that is beyond the capacity of local manufacturers is imported mainly from China, India, United Arab Emirates, Denmark, USA and the Netherlands.

## 4.6 Agri-Financing

The importance of financial services to the economy and the need to foster trust among providers and consumers are among the reasons governments oversee the provision of many financial services. This oversight involves licensing, regulation, monitoring and supervision of the financial institutions. Uganda's agri-financing is largely in the hands of commercial banks, microfinance institutions and to a less extent insurance companies.

### 4.6.1 The Banking Services

Bank of Uganda (BoU) is the Central Bank of the Republic of Uganda whose primary purpose is to foster price stability and a sound financial system. Together with other institutions, it also plays a pivotal role as a centre of excellence in upholding macroeconomic stability. By September 2015, Uganda had a total of 25 licensed commercial banks, two Development banks, three Credit Institutions and four Microfinance Deposit taking Institutions with a network of about 600 branches and 5.5 million accounts. Commercial banks hold about 80 percent of the total assets of the financial system and the National Social Security Fund (NSSF) holds the remaining

20 percent (GoU, 2015). The Savings culture in the country is still low given the big informal sector, however, mobilization of people to form savings groups, and the advent of mobile phone technology enabled banking (locally referred to as *mobile money*), and legal frameworks to operationalise the schemes through SACCOs and financial literacy projects is steadily increasing the level of savings and financial inclusion.

Loans to the agricultural sector (in local currency) increased by 32.4 percent from 295.0 billion shillings in June 2013 to 390.6 billion shillings in June 2014. Of the 390.6 billion shillings given out in June 2014, 61.3 percent went into agriculture processing and marketing (Crop Finance) (UBOS, 2015a). The agriculture sector benefits from both private and public funding sources. As of December 2013, private sector credit to the agriculture sector amounted to Ushs 837 billion, accounting for 11 per cent of total bank lending. Most of the agriculture lending is destined for production (42 percent) and marketing (43 percent) activities, followed by processing (14 percent) and leasing (1 percent).

However, commercial bank interest rates are high, averaging at 24 percent in June 2015 and increasing to 26 percent in the second half of 2015 partly due to the volatility of the Ugandan Shilling against the United States dollar, which necessitated an increase in the Central Bank Rate (CBR) from 14 percent in April 2015 to 17 percent during November and December 2015. The high interest rates make borrowing for agriculture very difficult.

#### **4.6.2 The Agricultural Credit Facility (ACF)**

The Agricultural Credit Facility (ACF) is managed by Bank of Uganda in partnership with Stanbic bank, Centenary bank, DFCU bank and Uganda Development Bank represents one of the Public Private Partnerships benefiting the agricultural sector with a maximum interest rate of 10 percent. The number of beneficiaries accessing the ACF increased by about 52 percent between June 2012 and June 2015 (from 154 to 318 beneficiaries) (MFPED, 2015a). More than a half of the investments (59 per cent) were in agro-processing machinery for handling tea, maize, cotton and wheat; followed by infrastructure for farm expansion (17 per cent) such as poultry and piggery units and purchase of tractors (14 percent).

#### **4.6.3 The Microfinance Support Centre**

In addition to driving the financial inclusion and financial deepening agenda within the financial sector, Government is also involved in the direct delivery of financial services through its Rural Financial Services Strategy. This is undertaken through

Microfinance Support Centre (MSCL) through its 12 zonal offices across the country; Post Bank through its 35 branches supported by 9 mobile banking vans, and Pride microfinance (MFPED, 2015b). Interest rates for agriculture loans from MSCL are capped at 14 percent.

#### **4.6.4 The Project for Financial Inclusion in Rural Areas**

In order to improve financial accessibility in the country, government of Uganda and the International Fund for Agricultural Development (IFAD) signed a US\$29 million loan agreement to finance the Project for Financial Inclusion in Rural Areas (PROFIRA) in FY 2014/15 (MFPED, 2014). Loanable Funds are disbursed through the existing MSCL structures and Savings and Credit Cooperatives (SACCOs) network in rural areas during the seven year project period.

#### **4.6.5 Agriculture Insurance**

The insurance sector is still dominated by non-life (57 percent) and life insurance (22 percent) segments with significant growth of health membership organization schemes (19 percent). With the changing market dynamics, insurance companies must respond to the consumer demands if they are to remain relevant. Uganda's entire agricultural insurance potential is estimated at an excess of \$150m but many players have eluded it because of the risks involved and its unpredictability. In 2013, a group of eight (8) companies launched agricultural insurance products aimed at providing risk solutions to the agriculture sector. The agricultural products introduced in the market included weather index insurance; multi-peril insurance; greenhouse insurance; crop insurance; and single animal livestock insurance (IRA, 2013). Generally, agriculture insurance covers production and revenue risks for all commercial field crops including wheat, maize, barley, rice, tea, coffee, sugar cane, tobacco, all horticultural, floriculture, tree crops and livestock. Also, it covers farm assets and equipment including green houses and irrigation facilities against various perils such as losses due to adverse weather conditions (floods, hailstorms, drought among others), barn fire, uncontrollable pests, and theft. The sum insured can be the farmers input costs, output (expected yield) or both. However, the uptake of these insurance products is still low.

### **4.7 Infrastructural Development**

One of the objectives highlighted in the NDP-II is to increase and improve the quality of strategic infrastructure to accelerate the countries competitiveness. The planning framework further emphasizes the continued need to reduce costs of doing business through investing in infrastructure.

*Road infrastructure:* The government is heavily investing in expanding and maintaining the existing road network with special emphasis on roads in agricultural

areas to ease access to markets for agricultural produce and to reduce on the costs incurred during transportation of produce by traders. Other infrastructural investments include the standard gauge railway and upgrade of strategic major national roads.

*Energy infrastructure:* Government investments in the energy sector include exploitation of the abundant sources of renewable energy like hydropower and geothermal power to increase on the power generation capacity. The government has also intensified on its rural electrification programme to increase access to energy by constructing various hydropower plants and extending and improving transmission lines. The total installed capacity of electricity power plants increased by 15.2 percent from 718.4 MW in 2012 to 827.5 MW in 2013 (UBOS, 2014). It is anticipated that by 2020 the power generation capacity will be 2,500 MW.

*Water for production infrastructure:* This intends to boost commercial agriculture and agro-industry activities. Under the Ministry of Water and Environment, the rehabilitation of irrigation schemes project 2013-2017 is a priority investment area by government which will also provide water harvesting technologies to increase water supply for irrigation purposes.

#### **4.8 The Trade and Non-Trade Barriers**

Trade barriers include any restriction imposed on the free flow of trade. However, the EAC defines the Non Tax Barriers (NTBs) as quantitative restrictions and specific limitations that act as obstacles to trade. There are several forms of NTBs including but not limited to: Import policy barriers; Standards, testing, labeling and certification requirements; Anti-dumping and countervailing measures; Export subsidies, domestic support and others. The specific trade barriers in Uganda and the East African region include Customs and administrative documentation procedures; Immigration procedures; Cumbersome inspection requirements; police road blocks; varying trade regulations among the EAC countries; varying, cumbersome and costly transiting procedures in the EAC countries; duplicated functions of agencies involved in verifying quality, quantity and dutiable value of imports and exports; and business registration and licensing.

The Business Climate Index Survey (BCI) conducted in 2008 among the EAC member states identified corruption (characterized by bribes at weighing bridges, road blocks, business registration and immigration) as the main non tax impediment to trade. The study found Burundi to have been the most corrupt; followed by Kenya, Uganda, Tanzania and Rwanda in that order. The survey however, found Uganda to have the most favorable conditions for trade; then Kenya, Rwanda, Tanzania and Burundi respectively. The signing and implementation of the EAC-CU has greatly attempted to

reduce trade barriers within the region, however, the barriers with member states and other partners still exist. The country and region at large still grapple with physical infrastructure challenges including poor road network, lack of a functioning railway system, inadequate electricity supply, poor air transport system, and informal trade.

#### **4.9 Sanitary and Phytosanitary Services**

Government of Uganda has over the past years formulated policies<sup>23</sup> aimed at protecting the lives and health of humans, animals and plants; and improving the competitiveness of Uganda's products. Uganda is a member of a number of international organizations such as the WTO, International Plant Protection Convention (IPPC), and the World Animal Health Organization, FAO/WHO Codex Alimentarius Commission for Food Safety; whose activities relate to SPS.

Uganda is mainly engaged in trade of agricultural products, which are directly affected by SPS requirements. These requirements mainly affect the non-traditional exports (such as fish and fish products, horticultural products, flowers, cereals, fruits, et cetera), which have been growing rapidly over the last ten years as a result of Government's policy of export diversification. The policy interventions have seen the contribution of non-traditional exports to total exports increase from 28.7 percent in 1999 to 73.2 percent in 2009. However, this growth is potentially threatened unless SPS requirements are urgently addressed. Generally, SPS enforcement is still weak due to limitations in human, technical and financial resources.

The responsibility for SPS enforcement is under the mandate of the Department of Crop Protection (in the Directorate of Crop Resources) in MAAIF. The Department has been designated a national competent authority for Phytosanitary inspection services in Uganda. All matters related to plant health, issuing of import and export phytosanitary certificates for live plant material and horticultural crops, plant pest prevention and eradication programmes. Ensuring compliance with phytosanitary requirements within specific agricultural commodity exports is done by regulatory bodies established by Statutes of Parliament. The UCDA and CDO are the statutory bodies within the coffee and cotton sub-sector respectively, while the DDA authority handles compliance within the dairy sub-sector. In the fisheries sub-sector, the mandate was transferred from UNBS and handed over to the Department of Fisheries since 2000. In other exporting sectors with no statutory bodies, compliance depends on codes of good practice enforced under appropriate producers' or exporters' apex associations like UFEA, HORTEXA, UVA, UTA, e.t.c. However, most of these apex

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<sup>23</sup> Such policies include the Food and Nutrition Policy(2003), National Animal Feeds Policy (2005) National Meat Policy 2003 National Trade Policy(2008), National Industrial Policy( February 2008), National Health Policy, (2009) National Drug Policy and Act (1993), and the National Agricultural Research System (NARS) among others



associations were formed primarily to lobby government for interests of their members and compliance with Phytosanitary requirements was not among their prime objectives. Further, these associations are member based (voluntary rather than mandatory) and this partly explains the weaknesses in compliance with SPS requirements.

#### ***4.9.1 Food safety, quality standards and associated infrastructure***

The government of Uganda through the MTIC under the Quality Infrastructure and Standards Programme (QUISP) in collaboration with other stakeholders developed the National Standards and Quality Policy (NSQP) in 2012 with a mission “to improve Uganda’s competitiveness in the domestic, regional and international markets through production, trade and consumption of quality goods and services” (MTIC, 2012). This policy has been seen as an important step in the future of Uganda’s National Quality Infrastructure and the Technical Regulations Framework both of which are important parameters for the development of Uganda’s Agricultural, Industrial and Service sectors and facilitating access to foreign markets whilst at the same time ensuring that the safety of consumers, fauna, flora and the environment are not compromised.

#### **4.10 Logistics**

Logistics in agriculture is gaining more importance as it deals mainly with the smooth supply of food and other agricultural products from the producer to the final consumer. Wang Shufeng et al. (2010) asserted that modern agriculture logistics should have 12 functional elements of: procurement, supply, storage, transportation, loading and unloading, sorting, packaging, distribution, distribution processing, marketing, recycling, and information control.

Recent evidence indicates that grains (cereals, pulses, oil crops etc) constitute the bulk of agricultural commodities produced and delivered to markets by smallholder farmers (The Grain Council of Uganda 2015) . It also reveals that the National capacity for grain processing (drying, cleaning and grading) is presently as low as 12 percent and the grain storage capacity at only 25 percent of national cereal production output. To address this situation, a range of measures were initiated by government and development partners, and were at varying stages of implementation by June 2015 (MFPED, 2015b). These include:

- ✓ The Warehouse Receipting System and regulations through the Uganda Warehouse Receipt System Authority (UWRSA), the lead agency for the development of standardised and certified storage facilities of commodities and promotion of structured financing for commodities;

- ✓ Construction of 7 urban markets under the Markets and Agriculture Trade Improvement Project (MATIP I) supported with funding from African Development Bank;
- ✓ Construction of mini-storage facilities;
- ✓ Provision of five units of first level value addition equipment for cleaning, grading/sorting and de-stoning;
- ✓ Establishment of quality control, management, grading and standardization systems;
- ✓ Providing two high level processing facilities for maize;
- ✓ Facilitating linkage of produce to agro-processing facilities under the Community Agricultural Infrastructure Improvement Programme (CAIIP); and
- ✓ Establishing and promoting the use of market information systems to facilitate trade

In spite of the government efforts, standard agro-storage and transport facilities are still very few and located in major towns instead of production centres. Given the increasing production and productivity, and the on-going programme on rural electrification, there is a good opportunity in provision of storage facilities particularly warehouses and silos for grains and coffee on one hand and cold chains for horticulture, dairy and fish products.

## **Freight Logistics**

Freight and shipping of goods and cargo takes place to, from and within Uganda via air, land and water. Uganda's imports come mainly from EU and Kenya, they are typically petroleum products, machinery and transportation equipment. Its exports on the other hand consist mainly of agricultural products such as coffee and tea to the EU, Middle East, Asia, Americas and neighboring countries.

The country is landlocked and relies on the port of Mombasa, Kenya, for its sea transportation needs. The country has a small port with a harbour on Lake Victoria (Port Bell) near Kampala which has immigration and customs facilities; in addition, there are ports at Entebbe (Air) and Jinja. Port Bell is used for international traffic across Lake Victoria. Cargo ships owned by Uganda Railways, though currently on a declining trend, use Port Bell to cross the lake; the ships carry railway goods wagons to Mwanza Port in Tanzania. There are 1,244km of railway in Uganda and 70,746 km of road running throughout the country. The railway network is dilapidated although arrangements for Government to invest in Standard Gauge Railway (SGR) are in advanced stages. Therefore, freight services are generally road based and costly.

There are numerous freight and shipping companies in Uganda, including global firms such as TNT, UPS, Fedex and DHL, which provide a range of clearing, forwarding and cargo-handling services. The Uganda Freight Forwarders Association (UFFA) is the leading private sector apex body with a total of 89 local and international members handling about 90% of imports and exports in the country<sup>24</sup>. Logistics management in the country is in its development stage, the sector is faced with challenges of limited skilled work force especially at strategic and tactical levels, unreliable timeliness of shipments reaching destinations on schedule, low technology usage especially tracking and tracing of consignments, and inadequate specialized logistics management equipment and systems.

#### **4.11 Meteorological Services**

Many farmers in the Country solely rely on rains for their agriculture given that the share of households practicing irrigation was as low as 0.54 percent in 2013/14, up from 0.42 percent in 2011/12 (UBOS, 2015b). Access to quality and timely weather and climate services is therefore critical for farm production and productivity.

Besides, on-going efforts to expand the acreage of land under irrigation, Government has also been implementing measures to strengthening meteorological services, products and use in the agriculture and water sectors. In FY 2014/15, some of the public services provided by the Uganda National Metrology Authority included: i) Provision of daily national and city weather forecast as well as Mobile Weather Alerts (MWA); ii) Provision of seasonal climate forecast; and iii) Provision of disaster warnings as a way of protecting life and property.

#### **4.12 Science, Technology and Innovations**

Uganda Industrial Research Institute (UIRI) and Uganda National Council for Science and Technology (UNCST) have been at the centre of national efforts to facilitate the integration of Science, Technology and Innovation within the country's industrialization drive. Between 2010 and 2014, a total of 160 research projects were undertaken to add value to locally produced products, more especially fruits, potatoes, peanuts, banana, honey, millet, soya, mushrooms and dairy products. Further, there is increasing collaboration between agricultural research universities and national research institutes with the private sector in the area of dissemination of new innovations and technologies. However, funding for research undertakings by government is still a limiting factor for development of new innovations.

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<sup>24</sup> <http://www.ugandafreightforwarders.com/>

## **5.0 THE AGRI-BUSINESS OPTIONS FOR TRADE AND INVESTMENT WITH THE DUTCH**

This agribusiness market scan should among other objectives guide Dutch businesses in selecting a specific value chain to invest in. This report has provided an overview of the major agricultural value chains with an attempt of their situation analyses/SWOT analyses. In order to recommend particular value chains for Dutch investment, the different enterprises are compared using selected criteria (Table 17). The assessment of the enterprise is inherently subjective, but to a great extent informed by the information presented in the previous sections.

### **Criteria used**

1. National priorities-NDP II: The strategic priorities for agribusiness in Uganda are clearly indicated in the National Development Plan-II to be implemented through 2015/16 to 2019/20 financial years. The plan proposes government support and investments in 12 agricultural value chains namely Cotton, Coffee, Tea, Maize, Rice, Cassava, Beans, Fish, Beef, Milk, Citrus and Bananas
2. Growth Potential and competitiveness: Ability of value chain to grow in terms of production and productivity; quality and standards and satisfy existing and emerging demand
3. Domestic and regional Demand: Considers existing consumption of a selected value chain product in internal markets and by markets in neighbouring states such as EAC, COMESA and SADC.
4. International Demand: Refers to high potential or demand for a locally produced agri-product in global markets such as EU, Asia and USA
5. Economic impact- Employment: Meaningful employment opportunities created for communities by selected value chain
6. Economic impact- Income: Increased ability of selected value chain actors to earn
7. Fit with Dutch Agro-foods: The ability to create linkages with renown Dutch agro-foods sector to enhance value chain efficiency
8. Matching with Dutch Technology: The potential to link with Dutch agri-businesses or Dutch top sectors that have the complementary know-how and expertise to add value and create the much needed economy-wide catalytic growth effects
9. Link with EKN Food Security Program: This program focuses on increasing agricultural productivity, income generation, regional trade and investments
10. Existence of Dutch interventions along the value chain: There are Dutch interventions in the agribusiness sector characterized as level 1 (Diary, Rice, Beans and Potatoes) and level 2 (cassava and oil seed crops).

Based on these criteria, the high and medium potential enterprises were selected and the investment opportunities or business entry points highlighted for each (Table 18). Further, the potential areas for investment in the agro-machinery as presented in the Agro-machinery scan are presented as well (Table 19).

**Table 17: Scoring of the Agricultural Enterprises for Dutch Investment opportunities**

Agricultural Enterprise	Criteria scored										
	National priorities-NDP II	Growth Potential & competitiveness	Domestic & regional Demand	International Demand	Economic impact-Employment	Economic impact- Income	Fit with Dutch Agro-foods	Fit with Dutch Technology	Link with EKN FSP	Existence of Dutch interventions	Total
<b>Traditional Cash crops</b>											
Coffee	3	3	1	3	2	3	0	3	0	0	15
Cotton	3	1	1	3	1	1	0	1	0	0	8
Tea	3	3	2	3	2	3	0	2	0	0	15
Tobacco	0	1	1	3	1	2	0	0	0	0	8
<b>Non- Traditional Cash crops</b>											
Maize	3	3	3	1	2	2	3	3	0	1	18
Cassava	3	2	3	0	2	2	3	3	1	3	19
Vanilla	2	2	1	3	1	3	2	2	0	0	14
Cocoa	2	2	1	3	1	3	3	3	0	0	16
Rice	3	3	1	3	2	3	1	3	3	0	19
Oil seed (Soya bean & Sunflower)	1	3	3	3	2	3	3	3	3	3	24
Flowers	1	3	2	3	1	3	0	0	0	2	14
Horticulture (Vegetables)	1	1	1	3	2	3	3	3	2	3	20
Potatoe	1	3	3	1	2	2	3	3	3	3	23
<b>Livestock Sector</b>											
Diary	3	3	3	2	2	3	3	3	3	3	25
Beef	3	1	3	3	2	2	2	2	1	0	16
Hides and Skins	0	3	1	3	1	1	1	1	0	0	11
Poultry	1	3	3	3	2	3	3	3	3	3	24
Fish and products	3	3	3	3	3	3	3	3	2	0	23

Scores: 0= Not relevant/No focus

1= Low

2= Medium

3= High

Color Schemes: Green= High Potential enterprises

Orange= Medium potential enterprises

**Table 18: Investment opportunities for the priority Agribusiness**

Enterprise	Investment Opportunities
Coffee	<ul style="list-style-type: none"> <li>• Primary Processing: Involves Hulling, pre-cleaning, de-stoning, size grading, gravimetric sorting (weight and color), and bagging in jute bags of 60kgs.</li> <li>• Secondary Processing: Roasting, grinding, and making of instant coffee, extraction of soluble coffee solids for domestic and international markets</li> <li>• Investment in wet mills to add value</li> </ul>
Cassava	<ul style="list-style-type: none"> <li>• Seed multiplication as a business</li> <li>• Investment in mobile processing units (.Negotiations with Dutch company DATCO already underway)</li> <li>• Processing of cassava into cassava products (flour and dried chips) for to export to the regional market</li> <li>• Investment in commercial processing of cassava into beer and flour ( similar projects already running in Nigeria and Mozambique)</li> <li>• Potential investment in starch and ethanol production<sup>25</sup>.</li> </ul>
Seed oil crops (Sesame and Groundnuts)	<ul style="list-style-type: none"> <li>• Processing facilities for vegetable oil</li> <li>• high yielding seed multiplication which also has good oil content ( about 48 percent) <ul style="list-style-type: none"> <li>◦ Research and seed production of high yielding and climate resistant varieties. 95 percent of hybrid seed is imported from South Africa</li> </ul> </li> <li>• Provision of storage facilities particularly warehouses and silos for grains (cereals and pulses) cereal</li> </ul>
Horticultural crops	<ul style="list-style-type: none"> <li>• Construction of cold chain warehouses and cold chain transportation facilities</li> <li>• Pack houses distributed in production areas to facilitate sorting, grading and transportation in bulk for export</li> <li>• Trading in inputs</li> </ul>
Fish Farming	<ul style="list-style-type: none"> <li>• Factory for feeds: NAADS and OWC giving feeds and fish seed to farmers free of charge which it buys from the private sector</li> <li>• Hatcheries for supply of quality fish seed</li> <li>• Trade opportunities in provision of fish cage frames, nets and other fittings (locally fabricated frames are also being used)</li> </ul>
Diary	<ul style="list-style-type: none"> <li>• Joint ventures with the small and medium dairy processors who want to expand their operations but are limited by financial capital, equipment, technology and expertise</li> <li>• Animal breeding and supply of stock to improve milk productivity</li> <li>• Animal feeds processing and establishment of regional feed outlets</li> <li>• Investment in Milk Collection Centres and /or distribution facilities/milk supply tankers to improve milk quality</li> <li>• Investment in unpackaged pasteurized milk distribution system</li> <li>• Investment in Integrated dairy farming/processing dairy business</li> </ul>
Beef	<ul style="list-style-type: none"> <li>• Improving the beef breeds for improved offtake rates and productivity</li> <li>• Service abattoirs and processing facilities that meet demands of export markets</li> <li>• Supply of cold chain vehicles for supply and distribution of beef products locally and regionally</li> <li>• Partnership opportunities for ranching (existing ranches are characterised by low productivity but with potential for increased stock density)</li> <li>• Commercial cattle fattening/feedlot system to meet existing demand locally and regionally</li> </ul>

<sup>25</sup> Total national demand for ethanol for the year 2010 was 16,435MT (valued at USD 17M) and was consumed by school laboratories, hospitals and distillers. The main users of starch are the pharmaceuticals industry (53.6 percent), paperboard industries (32.5 percent), processed food (13.5 percent) and laundry (0.4 percent)



	<ul style="list-style-type: none"> <li>• Supply of butcher equipment</li> <li>• Cattle vaccines and medicines</li> </ul>
Poultry	<ul style="list-style-type: none"> <li>• Commercial hatcheries for the export of day old chicks to regional markets (e.g. Rwanda) and supply to the local market where demand is higher than supply</li> <li>• Commercial poultry farms</li> <li>• Chicken slaughter and processing facilities , animal feeds production facilities</li> <li>• Cold chain trucks for supply and distribution of poultry meats</li> <li>• Poultry vaccines and medicines</li> <li>• Poultry feeds, machinery, chicks, pre-mix, and technical expertise</li> </ul>
Cocoa	<ul style="list-style-type: none"> <li>• Trade in cocoa pods</li> <li>• Primary processing and exporting of dry beans.</li> <li>• Processing into intermediate products: setting up a mini processing plant, buy fresh beans, ferment and dry, carryout roasting and grinding and sell the products as cocoa paste, butter or powder</li> <li>• Processing into final products like chocolates</li> </ul>
Rice	<ul style="list-style-type: none"> <li>• Rice processing infrastructure or technology</li> <li>• Supply of Agri- machinery for land cultivation, harvesting, processing &amp; fertilizer applicators</li> <li>• Supply of Agro-inputs: fertilizers and certified/improved rice seed varieties</li> <li>• Promoting the use of rice by-products like husks for briquettes raw materials, use of rice bran in animal feed production, broken rice as noodles and instant snack and processing of broken rice into rice flour and starch</li> </ul>
Potatoe	<ul style="list-style-type: none"> <li>• Seed multiplication for high yielding varieties</li> <li>• Supply of Agro-inputs: Fertilisers and pesticides</li> </ul>

**Table 19: Major agro-machinery trade opportunities in Uganda**

Sub-sector	Agri Machinery Opportunity	Rating
Dairy	Processing machinery of Mini Dairies	High
Dairy	Milk Cooling tanks and centres (MCC's)	High
Land Cultivation	Tractors	High
Poultry	Battery Cage	High
Poultry	Hatcheries	Medium
Dairy	Dairy-Dispensing Machines	Medium
Dairy	Dairy-Milking Machinery	Medium
Horticulture	Greenhouse for Vegetable	Medium

*Source: Agri-machinery scan Uganda, 2015*

## 6.6 THE SYNTHESIS

The Dutch government has designated Uganda as a transitional country where the focus is on promoting aid and aid to trade programmes. Under the Multi Annual Strategic Plan (MASP 2014-17) for the Embassy of the Kingdom of the Netherlands (EKN), EKN intends to deepen its support to food security and economic cooperation activities. It is envisaged that Dutch Agri-business activities need to be deepened in the Ugandan economy to boost the economic cooperation agenda. This Agri-business Market Scan aimed at generating reliable and updated Agri-business information to facilitate Trade and Investments in Uganda, in the East African Community, and between Uganda and the Netherlands.

The agribusiness sector includes the whole chain of activities from production, processing, transportation and marketing of the different produce. The agricultural products can be categorised into the crop and livestock subsectors, where the crop subsector can further be categorised into cash and food crops. The extent of value addition and agro-processing in the sector varies for the different products but with significant levels of activity in the traditional cash crops especially coffee and tea. Coffee is by far the biggest crop value chain with the biggest share of the crop subsector. Under the livestock sector, fish and its products dominate the export share although the poultry subsector has high level of engagement by the small, medium and large scale operators.

With regards to marketing, Uganda enjoys access to regional (EAC, COMESA, South-Sudan) and international markets mainly the EU and Asia. Generally, the agribusiness sector is facilitated by several factors including the conducive business environment enhanced by supportive policy and legal frameworks (at national, regional and international level), institutional support in the areas of registration, licencing and regulation, improved access to agri-inputs and agri-finance, as well as the general infrastructural development. On the other hand, the sector is mainly constrained by several trade and non-trade barriers, insufficient marketing logistics, lack of access to modern production technology, high transaction costs due to poor road infrastructure, lack of adequate processing capacity, prohibitively high costs of capital, high levels of corruption, inefficient agricultural input markets and lack of proper quality control and regulation.

Nonetheless, over the last decade, agribusiness has gained prominence due to the Government's initiative to pursue private sector led growth with deliberate efforts to improving the business environment as evident in the National Development Plan-II (NDP-II) and other development agendas. Consequently, there is growth in both

domestic and cross border trade. As both internal and external markets for agro-based products expand in Africa, the potential benefits of agribusinesses will increase with time depending on the ability of the agri-food chain actors to penetrate new markets and take advantage of opportunities for expansion through mergers and acquisitions, new joint ventures and strategic alliances.

In order to facilitate deepening of the Dutch Agri-business activities in the Ugandan economy and to boost the economic cooperation agenda, the different enterprises were evaluated and scored based on specific criteria. The agribusiness options for trade and investment that are of interest to the Dutch could be categorised into top and medium priority/ranking. The top ranking include coffee, Tea, Oil seed crops (Sunflower and Soya bean), Potatoes, horticultural crops (vegetables), Dairy, Poultry and Fish. The medium ranking enterprises include Cassava, Rice, Maize and Beef. For each of these specific enterprises, the entry points for investments were clearly articulated. In addition, there are investment opportunities in agri-services especially agri-inputs and logistics, that is, warehouses and silos for grains and coffee on one hand and cold chains for horticulture, dairy and fish products, freight and handling services, packaging, marketing, and logistics information flow systems.

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## APPENDICES

### Appendix 1: Exports of Agricultural products by percentage share, 2010-2014

Agricultural produce/product	2010	2011	2012	2013	2014	2015
<b>Formal</b>						
Coffee	13%	19%	13%	15%	15%	15%
Fish & its prod. (excl. regional)	6.2%	5.7%	4.3%	3.8%	4.9%	4.4%
Tobacco	3.2%	2.2%	2.2%	4.1%	2.4%	3.4%
Maize	1.6%	1.1%	2.1%	1.5%	1.7%	3.3%
Tea	3.2%	2.9%	2.6%	3.0%	3.1%	2.5%
Hides & skins	0.8%	1.3%	1.5%	2.3%	2.7%	2.4%
Sugar	2.7%	3.2%	4.4%	3.0%	2.5%	2.3%
Cocoa Beans	1.5%	1.8%	1.4%	1.9%	2.2%	2.2%
Simsim	0.6%	0.7%	0.4%	1.0%	2.0%	2.0%
Flowers	2.2%	2.1%	1.9%	2.0%	2.1%	1.9%
Beans	0.4%	0.7%	0.5%	0.6%	0.9%	1.7%
Other Pulses *	0.1%	0.1%	0.1%	0.9%	1.3%	1.6%
Crude oil **	0.9%	1.8%	2.2%	1.8%	1.5%	1.4%
Fruits & Vegetables	0.6%	0.5%	0.4%	0.6%	0.7%	1.2%
Edible Fats and Oils	1.7%	2.2%	1.7%	1.7%	2.0%	1.1%
Rice	0.7%	0.7%	1.4%	1.3%	1.1%	0.8%
Cotton	1.0%	3.4%	2.7%	1.1%	0.8%	0.8%
Groundnuts	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Vanilla	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%
Cotton Liners	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%
<b>Informal Cross Border Trade</b>						
Fish	1.90%	1.09%	1.35%	1.20%	1.37%	1.65%
Maize	1.30%	0.62%	1.57%	1.30%	1.20%	1.16%
Beans	0.99%	0.84%	0.78%	0.79%	0.89%	0.56%
Bananas	0.37%	0.18%	0.22%	0.17%	0.18%	0.16%
Other grains	0.57%	0.30%	0.30%	0.22%	0.20%	0.15%
Sugar	0.16%	0.12%	0.13%	0.09%	0.14%	0.14%
Other agricultural commodities	2.55%	1.85%	2.35%	2.27%	2.58%	1.97%

Source: BoU, 2016

\* Soya beans are captured under Other Pulses

\*\* Includes crude from simsim, sunflower, palm, etc, and excludes petroleum products

## Appendix 2: Major destinations for Uganda coffee exports

Destination	60 Kilo Bags	% Market Share	Destination Position held in January
European Union	208,051	71.6	1
Sudan	36,250	12.5	2
USA	9,645	3.3	3
Switzerland	7,812	2.7	8
Singapore	4,868	1.7	4
Korea	4,676	1.6	10
Israel	3,520	1.2	
Japan	2,770	1.0	5
China	2,604	0.9	13
India	2,595	0.9	9
South Africa	1,900	0.7	6
Russia	1,304	0.4	11
Mexico	1,280	0.4	
Australia	960	0.3	12
Morocco	960	0.3	7
Canada	640	0.2	
Ukraine	640	0.2	15

*Source: UCDA Monthly Report, February 2015*

### Appendix 3: Coffee Export Performance by Individual Companies in December 2015

Bags		Position	Quantity 60kg Bags	% - age Market Share	
				Individual	Cumulativ e
1	Ugacof (U) Ltd	1	49,330	14.41	14.41
2	Kyagalanyi Coffee Ltd	2	39,908	11.65	26.06
3	Ideal Commodities	4	38,716	11.31	37.37
4	Olam (U) Ltd	3	31,474	9.19	46.56
5	Ibero (U) Ltd	5	27,124	7.92	54.48
6	Kampala Domestic Store	8	25,707	7.51	61.99
7	Export Trading Company Ltd	7	16,520	4.82	66.81
8	Kawacom (U) Ltd	6	14,650	4.28	71.09
9	Ishaka Commodities Ltd	15	14,140	4.13	75.22
10	Savannah Commodities	9	14,000	4.09	79.31
11	Great Lakes Coffee Ltd	10	10,910	3.19	82.49
12	Coffee World	14	10,546	3.08	85.57
13	Besmark Coffee Ltd	11	7,324	2.14	87.71
14	Commodity Solutions	13	5,902	1.72	89.43
15	Nakana Coffee Factory	20	5,602	1.64	91.07
16	LD Commodities	19	4,259	1.24	92.31
17	Ankole Coffee Processors	17	3,958	1.16	93.47
18	Karaz Coffee Factory	26	3,945	1.15	94.62
19	Sena Indo (U) Ltd	25	3,360	0.98	95.60
20	Touton (U) Ltd	-	2,520	0.74	96.34
21	Banyankole Kweterana Coop	21	2,250	0.66	97.00
22	Risala (U) Ltd	12	2,250	0.66	97.65
23	Ankole Coffee Producers	16	1,920	0.56	98.21
24	Mbale Importers and Exporters	24	1,310	0.38	98.60
25	Bakhisons Trading Co. Ltd	-	1,050	0.31	98.90
26	Fairlop Global Commodities	22	994	0.29	99.19
27	NUCAFE Ltd	29	640	0.19	99.38
28	Pearl Crops Ltd	-	640	0.19	99.57
29	Nihacofa (U) Ltd	-	520	0.15	99.72
30	Bukonzo Joint Coop Union	27	320	0.09	99.81
31	Gumutindo Coffee Cooperative	30	320	0.09	99.91
32	Kaweri Coffee Plantation	18	320	0.09	100.00

**Source: UCDA 2015.**

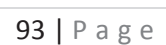
#### Appendix 4: Actors in the Uganda Cotton Value Chain

COTTON GINNERIES IN UGANDA			
Name	LOCATION	Name	LOCATION
Aboke Rafiki Cotton Industries	Apac	Kasese Nyakatonzi Growers	Kasese
Aduku	Apac	Kibuku	
AJAY		Kitgum East Acholi Co-Operation Union	Kitgum
Arapi Teso Co-Operation Union	Soroti	Kiyunga	
Balawoli Cotton Ginnery Ltd	Kamuli	Ladoto Minar Trading Company	Pallisa
Bamunanika Ginnery Ltd	Luwero	Lukhonge Masaaba Cotton Co	Mbale
Bugema North Bukedi Cotton Company	Mbale	Masindi Growers	Masindi
Bulumba Busoga Co-Operation Union	Kamuli	Mukongoro Teso Agri Base Ltd	Kumi
Bulumba A Busoga Growers Co-Operation	Kamuli	Nakivumbi Bon Holding	Iganga
Bulumba Busonga Growers Co-Operation	kamuli	Ngetta	
Busembatia Pramukh Agro Industries	Iganga	Nyakatonzi	Kasese
Busolwe South Base Agro Industries	Tororo	Nyakesi South Bukedi Co-Op Ltd	Tororo
Dunavant	Nakasongola	Olam	
Global Cotton Ltd	Tororo	Parombo	
Gulu Agricultural Development Company (GADC)		Pakwach South West Nile Co-Operation	Nebbi
Clark Cotton(Uganda)Ltd	Soroti	Rhino Camp Central West Nile Union	Pakwach
Co-orom West Acholi Co-Operation Union	Gulu	Rwenzori Cotton Ginners	Kasese
Dabani Minar Trading Company	Busia	UNACOFF	
Hoima Magnetic Enterprises	Hoima	Iki Iki	Pallisa
Iceme Located In Apac	Apac	Jaber	
Kabole North Bukedi Union	Pallisa		
COMPANIES INVOLVED IN COTTON PROCESSING		EXPORTERS AND IMPORTERS OF COTTON PRODUCTS	
Phoenix Logistics (U) Ltd	5th Street Industrial Area	Dunavant-lint	Head Quarters in Kampala 6th Street Industrial Area
Southern Range Nyanza	Plot1 Yusuf Lule Road Jinja	Plexus-lint	Ntinda Industrial Area
African Textile Mill	Pallisa Road Mbale District	Olam international-lint	Mapeera Road in Nalukolongo Industrial Area
Pearl Blankets	Nakawa Industrial Area Kampala-Nakawa		

## Appendix 5: The Tea Processors/Exporters

Name	Location
Toeo and Mityana Tea Co.Ltd	Mityana
Toro and Mityana Tea Co. Ltd(TAMTECO)ityana Tea Co.Ltd	Mityana
Rusekere Growers Tea Factory Ltd	Fortportal
Rwenzori Commodities Ltd .Mukwano Tea	Kampala
Namayaiba Ted Estate Ltd.	Kampala
Mwera Tea (Madhvani Group of Companies)	Kampala
Mpanga Tea Growers Tea Factory Ltd.	Fortportal
Mabale Grower Tea Factory Ltd.	Fortportal
Kijula Tea Estate	Fortportal
Kayonza Growers Tea Factory	Kanungu
Eagle Holdings Ltd (EHL)	Kampala
Rwenzori Highlands Tea Co. Ltd.	Kampala
Dayalbhai Mandanji and Co. Ltd	Fortportal
Eagle Investments Ltd	Jinja
James Finlay (U) Ltd.	Fortportal
Igara Growers Tea Factory	Igara
Uganda Tea Development Agency Ltd (U.T.D.A.L)	Kampala
Uganda Tea Cooperation Ltd.	Kampala
Uganda Tea Association (U.T.A)	Kampala
Rwenzori Tangawizi Tea	Fortportal

**Source: UIA (2015)**





## Appendix 7: The Top 10 Vanilla producing countries for the year 2015

	Country	Vanilla Production (MT)
1	Madagascar	3,500
2	Indonesia	3,400
3	China	1,350
4	Mexico	463
5	Papua New Guinea	433
5	China	335
6	Turkey	290
7	Tonga	202
8	Uganda	170
9	French Polynesia	60
10	Comoros	42

Sources: FAOSTAT data, 2015

## Appendix 8: Institutions that Support the Flower Industry in Uganda

Institution	Form/Nature of Support	Details
USAID	Financial support	Supports capacity building and research programmes to UFEA members
World Bank	Financial support	Supporting research on increasing exports of high value agricultural commodities; the support mainly comes from the department of Environmentally and Socially Sustainable Development Department of the World Bank Africa Region (ESSD-Africa)
Makerere university, Kawand and Kabanyolo Research institute	Research	Carries out research and trials on various plant species and trains students, communities and other interested groups on carrying out new innovations and technologies
UFEA	Advocacy, Quality, inputs	Umbrella organization for large scale flower farmers and exporters, it provides business development services to members and influences government policies
Uganda Horticulture & allied workers union	Advocacy, pressure group	Advocates for the safety and rights of workers in the horticulture industry
Local government	Licences and monitoring	Give flower farmers licenses to operate in their areas and also get taxes and monitors their activities if they are complying with NEMA
Chemical Companies	Chemicals supply	These sell chemicals and fertilizers that are used in the flower firms
MAIAF	Regulating and monitoring	Regulates importation and use of chemicals that are used in agriculture through the department of crop protection and inspection
Local communities	Host the farms	Host the flower farms and provide labour to the flower farmers
Civil Society Organisations	Advocacy/suggests alternatives	suggest alternative views to sustainable development of the industry
URA	Revenue collection	Collects taxes/revenue from flower farmers

Source: NAPE, 2011

## Appendix 9: Major Dairy Processors in Uganda

Name of company	Location	Installed capacity Litres/day	Capacity utilisation Litres /day	Product range
Sameer Agriculture & Livestock Ltd. (SALL)	Kampala	550,000	375,000	Pasteurised milk, UHT, yoghurt, butter, ghee, powdered milk
G.B.K Dairy products (U) Ltd	Mbarara	96,000	50,000	Pasteurised milk, UHT, ghee
Jesa Dairy Farm	Busunju	100,000	30,000	Pasteurised milk, yoghurt, butter, cream
Hillside Dairy & Agriculture Ltd.	Mbarara	40,000	3,000	Pasteurised milk, yoghurt
Birunga Dairy	Kisoro	15,000	8,000	UHT
Maama Omulungi Dairy	Kampala	8,000	8,000	Pasteurised milk
West Nile Dairies	Jinja	6,000	3,000	Pasteurised milk, yoghurt, cream, ghee
NIRMA Dairy & Foods Ltd.	Entebbe	5,000	2,200	Pasteurised milk, yoghurt, cheese
Toro Dairy Cooperative	Fort portal	4,000	2,000	Pasteurised milk, yoghurt
MADDO Dairies Ltd.	Masaka	4,000	2,500	Pasteurised, yoghurt
Paramount Dairies	Mbarara	3,000	2,500	cheese
Family Choice	Mbarara	2,000	1,200	Pasteurised milk, yoghurt, ghee, sour butter
Seasons Dairy	Kayunga	5,000	4,000	Cheese
Rainbow Industries	Mukono	20,000	20,000	UHT, ice cream, yoghurt
Pearl Dairy	Mbarara	240,000	-	Casein, UHT, Yoghurt, pasteurised milk
Holland Dairy	Kampala	10,000	10,000	Cheese (Gouda cheese)
Amos Dairies	Kiruhura	400,000 ( to be increased to 2,000,000)	400,000	Anhydrous milk fat, ghee, casein and whey
Kookee Enterprises	Kampala	-	-	Cheese, cream

**Source: DDA 2013**

## Appendix 10: Sector specific policies and legislations

Coffee	The National Coffee policy, 2013
Cotton	<a href="#">The Cotton Regulations, 2005</a>
	<a href="#">The Cotton Development Instrument, 2004</a>
Fisheries	The National Fisheries Policy, 2004
	The Draft National Policy on Fisheries Management and Development of small Fishes
	<a href="#">Fish act Chapter 197</a>
	<a href="#">The Fish (Aquaculture) Rules, 2003</a>
	The Fish (Beach Management) Rules, 2003
Livestock	The National Meat policy, 2003
	The National Policy for Delivery of Veterinary Services
	The National Animal Feeds Policy
	<a href="#">The Dairy Regulations 2003</a>
	Diary Development Policy
	Animal Disease Control Policy
	Animal Breeding Policy
	The national Veterinary Drug Policy
	Delivery of Veterinary Services Policy
	Range Land Policy
	<a href="#">The Cattle Traders Rules</a>
	Hides ,Skins and Leather Industry
	<a href="#">Hide and skin export duty act Chapter 339</a>
	<a href="#">Hide and skin trade act Chapter 89</a>