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Ayoki, Milton

Institute of Policy Research and Analysis

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Milton Ayoki
Institute of Policy Research and Analysis

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Contents

Summary of key findings

This report is the outcome of a survey, which covered a sample of 345 traders in 22 districts of Uganda chosen on a regionally representative basis.[1] The overall purpose of the study was to contribute to improvement of food security assessments and to guide WFP programming and humanitarian interventions. Specifically, the study examined the structure and functioning of the food market in Uganda; the role of past reforms with regard to food security; the trend in food production and consumption; market linkages; seasonality as well as recurrent crisis (shocks) that have affected the market; among other things. The study found that:

Agricultural liberalisation led to rise in producer prices of cash crops, but increased price vulnerability among food crops and cotton farmers due to collapse of the system of collective marketing through cooperatives. Meanwhile, the increase in food export and imports underline the challenges of improving food security increasing agricultural productivity and food aid programme. Liberalisation of agricultural trade such as the removal of monopoly powers of state enterprises led to a rise in producer prices received by farmers especially for cash crops e.g. coffee and increase in food exports and import. For example, after liberalizing the coffee sub-sector in 1991, farmers' share of the export price rose to 82 percent in 1996/97 (from 45 percent in 1991/92). Yet prices of food grew slower than that of non-food commodities. For instance, the ratio of the prices of food crops to other consumer goods in the *consumer price index* (CPI) declined by 19 percent between 1999/2000 and 2002/03. This explains why households in the food sub-sector experienced only modest rates of poverty reduction compared to those who produced cash crops. Moreover, food consumption per capita fell by 3 percent in nominal terms during the same period.

The rise in food exports has contributed in part, to general rise in food prices in the country (contributing to inflationary tendencies). It has made it more costly for food aid agencies particularly WFP to source locally from Uganda. The rise in food exports to Southern Sudan

[1] The 22 districts are: Moroto, Nakapiripirit, Abim, and Kotido; Jinja, Mbale, Busia and Kapchorwa; Luwero, Mubende, Kiboga and Rakai; Kasese, Mbarara, Kabale, Hoima and Masindi; Gulu, Lira, Nebbi, Arua and Moyo.

poses potential challenge for maintaining food security and may aggravate food insecurity situation especially in northern Uganda. Yet, the increase in cross-boarder trade activities especially with Southern Sudan has considerable influence on commodity prices in Uganda. The rise in food imports has a negative impact on local agricultural production by exerting pressure on producer prices – thereby discouraging production and increasing vulnerability to food insecurity. Increase in the price of tradable goods relative to the price of food following the reform means that those farmers who depend on selling food gain relatively less from the reform.

Although at aggregate level, food production increased significantly, between 1987 and 2005, per capita food production and consumption decreased. At aggregate level, food production increased significantly between 1987 and 2005. However, since growth in food production lagged behind population growth, per capita food production particularly in the case of cereals (e.g. sorghum and finger millet), pulses and oilseeds has declined. Food consumption per capita fell by 3 percent between 1999/2000 and 20003, with per capita of home-produced food declining by about 20 percent. This is attributed in part by decline in per capita food production, rise in poverty levels and inequality.

While low production and consumption persist in areas (such as the north) that have suffered the 20-year long conflicts (including frequent droughts), limited gains were recorded in areas that experienced relative peace.
In Mid-western Uganda (Bunyoro), and parts of eastern Uganda where information is available, aggregate production of maize has remained nearly the same for the last one and half decade. In part of western (e.g. Mbarara), improvement in market and growing needs for cash has caused a shift in food consumption from banana to maize and Irish potato.

Vulnerability to price shocks is perceived to be increasing. Vulnerability to price shocks is perceived to be increasing due to decline in output and rising poverty perpetuated by erratic weather and conflicts in some regions e.g. Karamoja and northern Uganda. Extreme increases in output prices occur every year between March and May for all the regions, but in Karamoja and the Acholi sub-region, and some parts of Lango (Lira District), there are challenges of dealing with the exceptional shortage in food supply due to problems created by the LRA

war. Most of the affected individuals are the vulnerable groups particularly the orphans, widows and elderly people who have not been able to cultivate. This could increase the number of people that might be in need of emergency food assistance including those who are returning to their villages as security situation improves.

Poverty reduction in areas experiencing transitory shocks can be achieved by improving current policies and interventions to deal with shocks. At the moment, households have devised various coping mechanisms including crop diversification (especially those without livestock assets to buffer against shocks) and non-farm activities to earn extra income in response to shocks.

Marketing Uganda's staple foodstuffs and food distribution are constrained by poor market infrastructure, high transaction costs and inefficient price information transmission channels. Agricultural markets are underdeveloped, roads networks are poor and knowledgeable private sector capable of trading competitively is lacking. Institutions that would facilitate market exchange are still lacking. There is an overall lack of information on both the demand and supply side, and no proper system of agricultural price information exists. Associations of agricultural producers or traders that could intervene in shaping the market conditions and to advocate for interest of their members in the value chain, and disseminate market and price information are underdeveloped (non-functional).

Market information system is underdeveloped; the major source of day-to-day price and market information is speaking with other traders. The use of news papers, internet and radio as daily (day-to-day) sources of information is still very limited in all areas visited. However, there is wide use of mobile phones, and public telephones, amongst people in rural and urban areas.

Conclusions

The study has reached the conclusion that liberalization of agricultural reform has contributed to inequality in rural areas – as share of benefits (share in export prices) is disproportionately skewed towards cash crop farmers (food crop farmers – comprise the

poor majority). This means that poverty among food crop farmers is less likely to reduce is spite of liberalized market. A fall in food production and consumption per capita and increase in food exports signifies a vulnerable situation that could degenerate into worsening food insecurity problem if no appropriate action is taken.

Another conclusion that can be drawn from this study is that localized supply shortages in many parts of the country (despite adequate food in the aggregate - at national level) and debilitating seasonal shortages are caused by poor functioning of the market. The poor state of the market infrastructure and high transportation costs, coupled with underdeveloped price information transmission channels, tend to limit the geographical coverage that can be reached by each trader in the food markets. As such, food distribution continues to be a problem.

Finally, the results from the study of price relationship between markets (Kampala-Mbale examples) indicate that food markets across regions could be in the same market boundary as a result of arbitrage as evidenced by the existence of co-integration between them.

Recommendations – Uganda government and development partners

There are several policy implications from these findings. First, since food production may be adversely affected if prices of food continue to lag behind prices of other commodities and if domestically produced foodstuffs are substituted for imported food stuffs. Policy options should be adopted that promotes not only export-driven production, but that gives priority to food sustainability. Measures may have to be taken to save food producers from collapse and to increase agricultural productivity.

Given the poor state of the infrastructure and high transportation costs, which limits equitable distribution of food across different parts of the country, food insecurity can be reduced by interventions to improve redistribution through increased public investment in infrastructure particularly rural roads networks. Increasing the productivity of small holder agriculture to raise rural incomes as a strategy to reduce poverty will not be achieved without first improving the necessary infrastructure.

General financial interventions and alternative credit sources can help improve market integration by enhancing ability of farmers and traders to keep stocks of staple foodstuffs for many more months after harvest. Policy interventions for improvement of market integration in the long-run may take the form of improvement of market infrastructure, price information channels, roads networks in rural areas and transportation facilities, which may help to reduce the high transport cost and enhance inter-regional trade. This is likely to lead to expansion of the market boundary within which each trader dealing in foodstuffs operates and to increase accessibility to market by those in food deficit areas.

Specific recommendations - for WFP

If the price dichotomy is a result of differences in quantity of food supplied in different markets, producers in the low price areas may be able to take advantage of higher prices in the deficit areas by moving their foodstuffs from food surplus areas to food deficit areas. This will redistribute food equitably and reduce income inequality (between cash crop producers and between producers in different regions). To this end, special efforts are needed to ensure that market and trade information systems are strengthened and tailored to help improve market opportunities for farmers especially in low price areas and the vulnerable communities, and to strengthen institutions (e.g. district commercial office) mandated to facilitate market exchange.

In line with improving market information system, building capacity of market agency in use of price and market information is needed. This includes strengthening monitoring system (e.g. WFP need to monitor carefully volatility of agricultural prices and development in cross-border trade especially with Southern Sudan; monitor supply in key market outlets and changes in prices; production dependant indicators such as rainfall patterns, security situation, etc).

Providing targeted food aid programs and market-based support, including development related component and incorporating weather prediction in its overall planning.

1 Introduction

Political instability, inadequate growth in food production, lack of organized marketing arrangements, poverty, and income inequality pose serious challenge to food security in sub-Saharan Africa. Although the food situation is less severe in Uganda (except in regions that have constantly suffered from civil wars, droughts and cattle raids), many areas which have adequate food in the aggregate suffer from debilitating seasonal and regional shortages which urgently need to be addressed.

Food security prospects are further complicated by uncertain trends in food prices across the year, natural disasters and conflicts that drive people out of their communities into internally displaced peoples' camp (IDP), the multiple impacts of HIV/AIDS and malaria, changes in neighbouring countries, and inadequate national policy responses. While food prices have been fairly staple in the past few years, they could start moving upwards if demand in neighhbouring countries particularly Southern Sudan (as recorded in recent years) continues rising, and if major producing regions continue being affected by conflicts and natural disaster (the worst floods in history has been experienced in Teso and the northern Uganda in 2007). How all these trends will interact in unclear, but one cannot exclude the possibility that food output and prices may worsen in future, thus aggravating food security and vulnerability.

The study therefore focused on food security by looking at food production, consumption and distribution in Uganda as well as the linkages between markets across the regions and policies and programs that have been applied to promote food security.

1.2 Objectives

The study set out to examine, based on the trader survey and review of available materials, the structure and functioning of the food market in Uganda and the role of the past reforms on food security, aimed at contributing to improvement of food security assessments and to guide WFP programming and humanitarian interventions. It outlines the trend in food production and

consumption; market situation in different regions of the country; seasonality and any recurrent crisis (shocks) that have affected the market; and market linkages especially between relatively food surplus areas and the food deficit areas.

The study dealt with two main levels of research. The first level explored the food security situation in the country and the past macroeconomic reforms particularly focusing on agricultural reform – and its influence on food security. These issues are expanded on in chapters 2 and 3. The second level of research (chapters 3-6) delves on production and consumption trend, seasonality and shocks, and integration of markets.

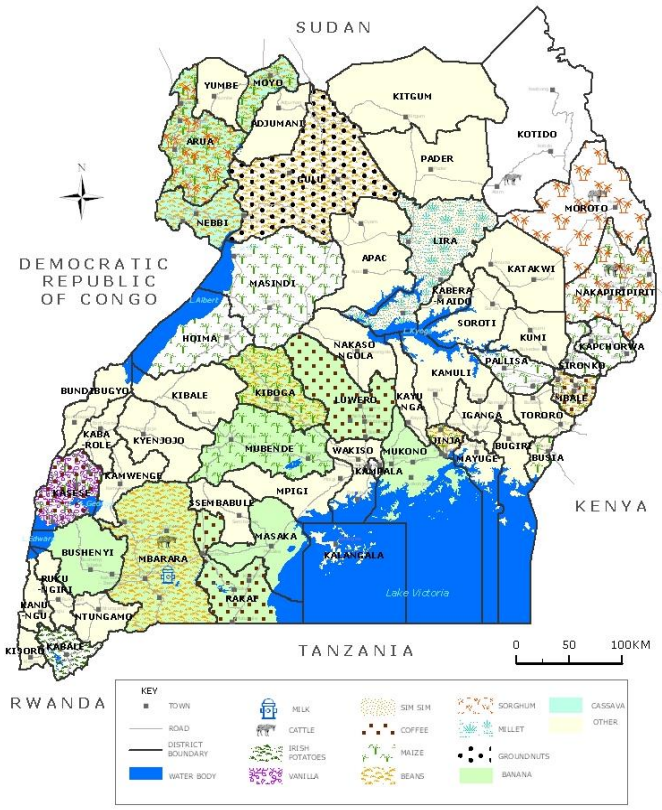
1.3 Methodology

The study used primarily data/information from a trader survey (in agricultural commodity markets) in different parts of country. The survey which was conducted in May and June 2007 covered a sample of 345 traders in 22 districts chosen on a regionally representative basis. Out of 20-30 traders (wholesalers and retailers) whom the district commercial officers in the respective districts had identified, 15 were selected randomly and interviewed. The areas and commodities covered by the survey are provided in Table 1.[2]

Interviews were conducted using trader questionnaire (Appendix 4), by enumerators who resided in the survey areas. Further consultations were made with the 23 communities in the respective sampled areas (using the check list in Appendix 3). National and international institutions involved in food marketing and food aid delivery were also consulted. The purpose of these consultations was to obtain their perspective on trend in food production, consumption and prices; the role of traders; any collaboration between farmers, traders and other actors in the commodity chain; market information and network; and food intervention, among other issues.

[2] The same districts were covered by the WFP's Comprehensive Food Security and Vulnerability Analysis (2005).

Table 1. Surveyed area/districts (markets), 2007



Region/district	Principal commodity	No of respondents
Karamoja		
Moroto	Sorghum	15
Nakapiripirit		
►Amudat	Maize	15
►Namalu	Sorghum	15
Abim	Sorghum	15
Kotido	Sorghum	15
Eastern		
Jinja	Beans, maize	15
Mbale	Maize	15
Busia	Maize	15
Kapchorwa	Maize	15
Central		
Luwero	Banana	15
Mubende	Banana	15
Kiboga	Banana	15
Rakai	Banana	15
West		
Kasese	Maize, coffee	15
Mbarara	Banana	15
Kabale	Irish potato	15
Hoima	Maize	15
Masindi	Maize	15
North		
Gulu	Sim sim, millet	15
Lira	Sim sim, millet	15
Nebbi	Millet, cassava	15
Arua	Millet, cassava	15
Moyo	Millet, cassava	15
TOTAL		345

Note: Number of traders (per district) - means whole sale traders buying the identified commodity and selling (to other districts or to buyers that come from other districts). They also include traders importing any of the commodities in the list (selling commodity imported from other region). In Nakapiripirit, two principal markets were covered (Amudat and Namalu).

In addition to the survey data, the study also used export and import data and monthly time series data – on rural and urban composite food price indexes for the period 1989-2006 collected by the Uganda Bureau of Statistics (UBOS). This information has been used in analyzing trends in food exports and imports (presented in Chapter 2) and in co-integration analysis (presented in chapter 5). Price indexes, other than nominal prices were used because nominal prices may lead to the conclusion that co-integration exists between two time-series, even though there is no actual market relationship between them. Secondary sources were also used for information on poverty and population (UBOS, 2000; 2003; 2006), exchange rate and inflation (Bank of Uganda). The nature of data in such cases was beyond the scope of this survey. The section on policy reforms was based on a desk review and institutional level consultations.

Out of the 15 traders who were interviewed per district/area, at least two were engage in commodities that were not locally produced in the district (imported from other regions), and 13 traders were trading in commodities locally produced in the respective district/region. Wholesalers and a few retailers were interviewed, with wholesalers being the majority.

Data limitations

The main challenge was to identify the districts (out of the 23) for which length of the time series data was long enough to be able to implement some of our methodology especially, co-integration analysis. The CPI time series data in the UBOS is available for only 5 districts, out of the 23 districts we needed (including Kampala). Even for the five districts, the data for especially Kampala is discontinuous with large number of missing values from 1989 to 1997. Nevertheless, we found the data series (1998-2006) to be long enough to carry out the analysis in 5 districts that include: Jinja, Mbale, Mbarara, Masaka and Kampala (in the report we have presented results for Kampala and Mbale).

The rest of the paper is organized as follows: section two discusses the food security situation in the context of major reforms in agricultural sector. Section three delves on functioning of agricultural markets based on survey data. In section four, the extent of integration of the food markets is discussed; and section five concludes with recommendations.

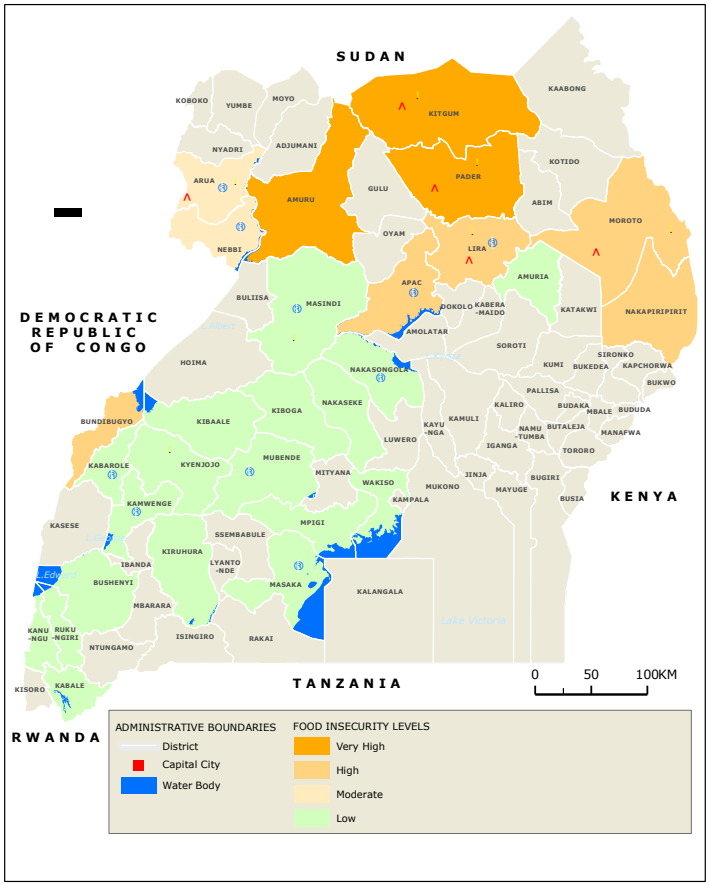
Food insecurity is most severe in northern region. The region also has the highest incidence of poverty (64% percent of the population lives below the poverty line). Agricultural production in the north has been interrupted by the prolonged (20-years) armed conflict of Joseph Kony, droughts and cattle raids.

2 Overview of the food security situation and poverty in Uganda

While decades of interventions by international community, particularly, WFP have helped to avert growing food crisis in some parts of the country particularly Karamoja, the food security situation especially in northern Uganda is very worrisome, requiring more efforts. There are also a number of trouble spots in other parts of the country where crop outputs fell below expectation, for various reasons.

2.1 Food-insecure areas

The districts of Kitgum, Pader, Gulu and Amuru are currently the highest food insecure in the country (Figure 4). Another twelve districts (Abim, Kaabong, Kotido, Moroto, Nakapiripirit, Lira, Apac, Oyam, Moyo, Adjumani, and Bundibugyo districts are regarded to be highly food insecure and vulnerable.



Most of the districts with high vulnerability to food insecurity have had their communities displaced from their homes by the same conflicts and insecurity mentioned above. In the western, Bundibugyo District has been hard hit by problem of banana wilt that made many farmers to cut down their banana plantation. Districts with moderate condition of food insecurity and vulnerability, but could degenerate into worst conditions are Yumbe, Nyadri, Arua and Koboko and Nebbi. Production in these areas is

decreasing with increase in labour migration to Southern Sudan. This a serious concern, particularly in Moyo. The surge in flow of food commodity into Southern Sudan could aggravate food insecurity situation in the region.

Figure 1 . Uganda: Food insecurity situation, 2002

2.2 Food surplus and deficit areas

Localized supply shortages are common in all the regions as evidenced by inflows of the same commodities from other regions, but they are less severe in any of the regions than in Karamoja.

Although most of the areas are generally food secure, very few can be considered to be in food surplus (i.e. Bushenyi, Mbarara, Kapchorwa, and Mbale). About a half of the country is typically in food deficits most part of the year, and greatly depends on supply from other regions. Some areas which have adequate food in the aggregate suffer from debilitating seasonal shortages which urgently need to be addressed.

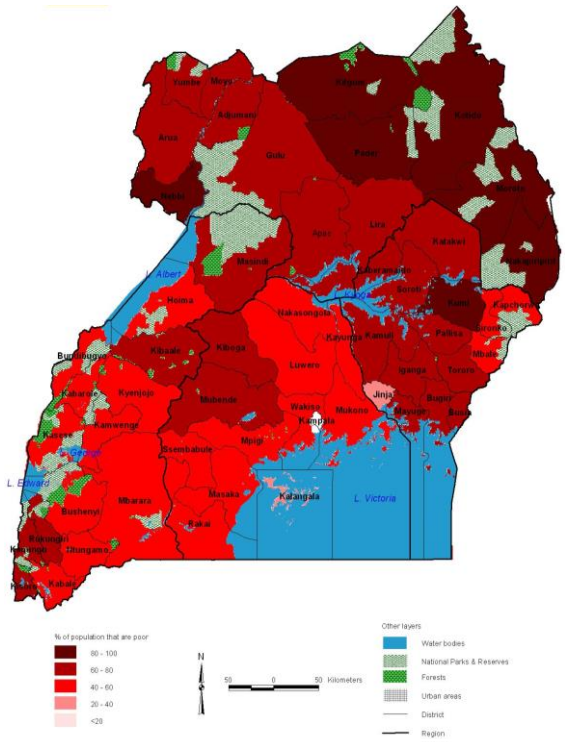
A study by WFP in 2005 (CFSVA) found that 5 percent of the rural households in Uganda were food insecure, but 31 percent were highly vulnerable and 19 percent moderately vulnerable. Only areas around Lake Victoria did not have a case of food insecure households, but vulnerable households still represented a substantial 19 percent of the population in that area. The Acholi sub-region had the highest number of food insecure households (33 percent), and 38 percent vulnerable. The Karamoja sub-region follows with 18 percent of households that were food insecure and 46 percent vulnerable. The Lango sub-region had 12 percent of the households that are food insecure and 37 percent of them, vulnerable. In Teso region 3 percent of the households were food insecure and 53 percent vulnerable, compared to Kabale with only 1 percent food insure, but 60 percent vulnerable. Food insecurity situation and vulnerability in these regions is rooted in low agricultural productivity and poverty.

2.3 Poverty situation

The findings from the 1992-1995 household monitoring survey (HMS) and the 1999/2000 and 2002/03 national household surveys (UBOS) show that, in 1992, about 56 per cent of the

population was below the minimum level of consumption expenditure necessary to meet basic needs.

Figure 2. 1992 District Level Poverty Incidence



The percentage of those who are poor or living below the poverty line declined from 56 percent in 1992 to 44 percent in 1997, and 35 percent in 1999/2000. The fall in the incidence of poverty has particularly been marked in households engaged in trade, cash crop farming and the manufacturing sectors compared to households in the food sub-sector (Table 2).

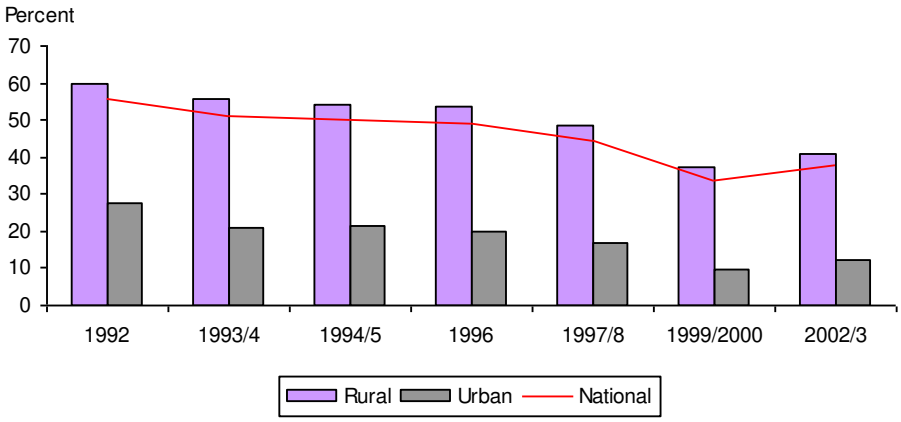
Table 2. Proportion of people below the poverty line by occupational group (%)

	1992	1996	1999/2000	2002/2003
Occupation of household head				
Food crop	64	62	45	
Cash crop	63	46	34	
Crop farmers		39	50	
Non-crop agriculture	55	40	42	34
Manufacturing	44	34	23	28
Construction	37	35	20	23
Trade	26	21	13	17
Government services	37	32	15	13
Not working	59	60	43	38

Source: Uganda Bureau of Statistics

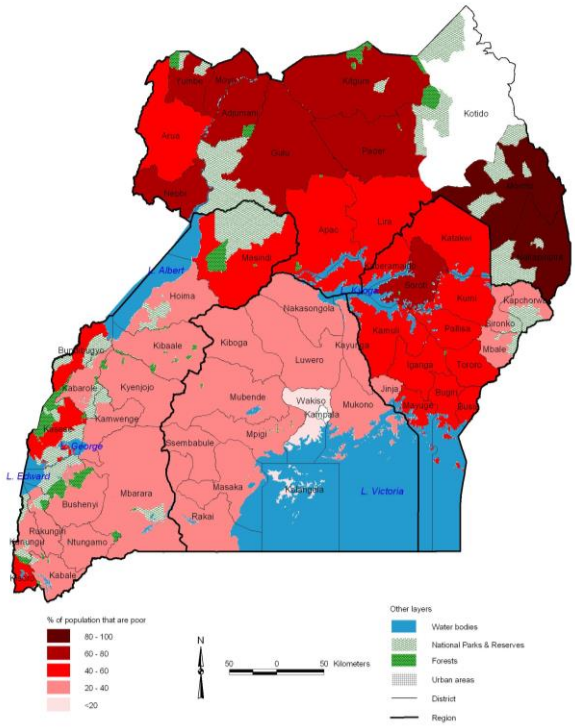
Between 1992/93 and 2003 the urban areas witnessed a greater reduction in poverty than in rural areas. The rural-urban disparity is attributed partly to market access opportunities.

Figure 4. Uganda: Proportion of the population below the poverty line



Source: Appeleton (1999), Uganda Bureau of Statistics (2003).

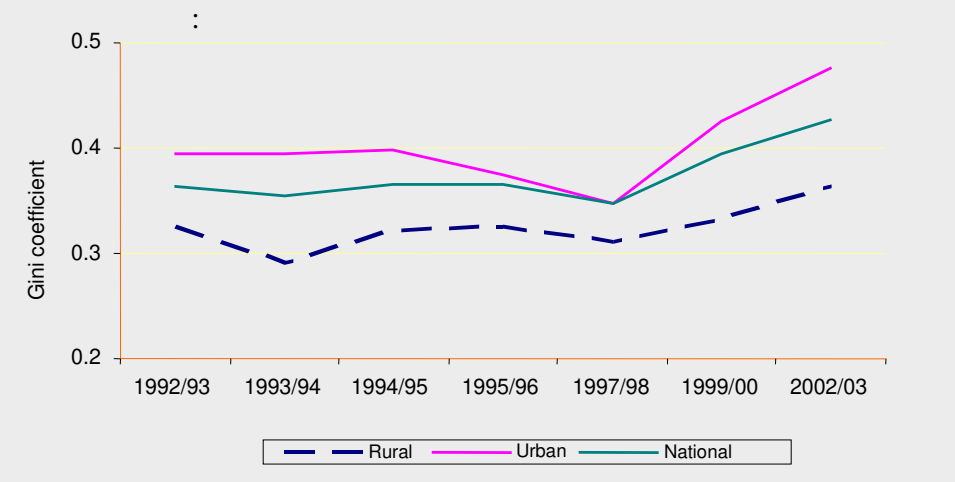
Figure 3. 2002/2003 District Level Poverty Incidence



In 2002/03, the poverty index rose to 38%. Figure 7 reveals considerable variation in poverty distribution across the country in 2002/2003. Poverty is worse in Northern Uganda (with average of 64 percent of the population living below the poverty line) – due to dislocations of normal economic activity caused by the widespread civil disturbances that has occurred during the two decades of civil strife. Percentage of the population that is poor in Eastern is estimated at 46 percent, Western 32.9 percent and the Central region 22.3 percent (UBOS, 2003).

Income inequality has steadily increased over this period as Gini Coefficient climbed from 0.39 in 1999/2000 to 0.43 in 2002/03, and has continued to increase both in rural and urban areas – though it appears to be more pronounced in urban areas (Figure 8). Income inequality increased by 23 percent between 1997 and 2003 (and by18 percent between 1999/2000 and 2002/2003).

Figure 4. Uganda: trends in income inequality



Source: Data from UBOS (Uganda National Household Survey – several years)

The depth of poverty has equally worsened as indicated by the poverty gap index – the ratio of the average extra consumption required to bring all poor people up to the poverty line. Extrapolating the poverty gap of the survey population to the national level, the total poverty gap (for 2002/03) was about Ush 1,200 billions (€571 million: approx. 10% of GDP). It was about Ushs 581,907 million (€290 m) in 1996 and Ushs 711,592 million (€355 m) in 1992. The poorest 20% account for less than 10% of total daily consumption while the richest 20 percent consume more than 40 percent (UBOS, 2003).[3]

3 Policy reforms and macroeconomic trends

[3] Poverty, as discussed is caused by lack of incomes and assets to meet basic needs such as food, shelter, clothing, and acceptable levels of health and education. However, given that poverty is a multi-dimensional phenomenon and varies from place to place, and across society, investigating the causes of poverty necessitates examining the dimensions highlighted by the poor themselves (World Bank, 2000). These dimensions include *voicelessness*, *isolation* and *vulnerability* (among others). The eradication of poverty therefore requires more than just increase in income, but multi-faceted approach that embraces these non-income dimensions as well.

Current policy objective and goal of government is to eradicate poverty by increasing people's incomes, mainly through agricultural modernization. While the focus on agricultural modernization is rather new, Uganda's agricultural policy objectives since independence have always centered on increasing agricultural production with a view to achieving self-sufficiency in food and raw materials for industries, and to improving the socio economic welfare of the rural population.

3.1 Major reforms in agricultural sector and implications for food security

Until 1987, Uganda's economic policy was inward-looking and emphasized the role of the state. Active government's involvement in economic management was perceived to be the only way to address problem of underdevelopment and to eradicate poverty. Interventionist policies were implemented, making sure that strategic sectors of the economy were under national control. Government invested heavily in economic sectors that it saw were of particular strategic importance (such as agriculture) by establishing state corporations to boost trade, including setting producer prices and offering subsidized agricultural credit.

Initially, state enterprises including Produce Marketing Board (PMB), Lint Marketing Board (LMB), and Coffee Marketing Board (CMB) could not be left to free market during their tender period. Tariffs and non-tariff barriers and import substitution were used extensively in the 1960s to early-1980s to protect these enterprises from 'unfair' competition and infant industries from cheap imports. This way, PMB, LMB, and CMB enjoyed monopoly power in agricultural marketing and input distribution.[4] Price control and subsidies were used to protect agricultural sector and promote trade in export-oriented commodities such as coffee, cotton, tea, and tobacco.

However, most state enterprises did not meet the expectations of the public. As elsewhere in poor countries, this strategy resulted in a large and inefficient state-owned enterprise sector which posed a heavy burden on the Ugandan budget.

[4] Some examples in transport industry include Uganda Railways, Uganda Airlines, Uganda Transporters Corporation.

Therefore, reforms that followed the adoption of a structural adjustment programme (SAP) in the late 1980s had to change the operation of government to adopt a liberalized approach that encourages competition and privatization. Consequently, domestic price controls and state control of marketing arrangements were abolished. Monopoly powers of Coffee Marketing Board (CMB), Lint Marketing Board (LMB) and Produce Marketing Board (PMB) were removed. The preferential treatments or trade privileges enjoyed by these state enterprises and co-operatives were removed. Likewise, taxes on agricultural exports and the restrictive tariff and non tariff barriers, particularly those for agricultural inputs were removed. Reforms further focused on rehabilitation of the infrastructure for traditional exports (coffee, cotton, tea and tobacco) and development of non-traditional exports. Alongside liberalization were institutional reforms resulting in privatisation and divestiture of public enterprises.

Yet, reforms were being implemented at a time when private sector investment was very weak. Most cooperative societies (used to be involved in marketing of cotton, coffee and other agricultural commodities) have collapsed in the wake of competition arising from liberalisation and privatisation. This has adversely affected, especially cotton farmers – as cotton market has since collapsed. The reforms were supposed to bring about increased competition and farmers' share in international prices and favorable overall terms of trade for traditional and non-traditional export crops. Whether this has been achieved is debatable, though some proponents of liberalization claim that these have improved significantly and suggest further that the decline in absolute poverty recorded between 1992/93 and 1999/2000 might be attributed to this development.

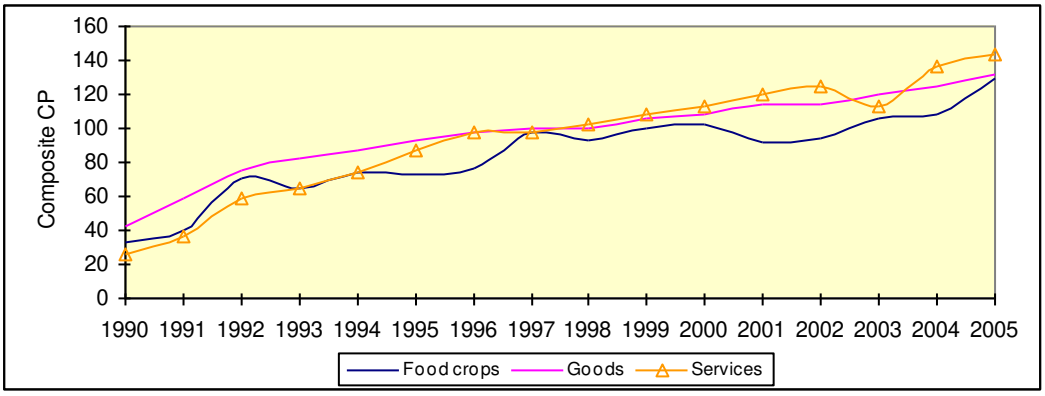
Some have argued that the group of farmers who benefited most from liberalisation are those who produce cash crops. This group was about as poor as the average farmer in 1992, but is now better off. Available statistics indicate that the farm gate price for coffee are now about 80 percent of the realized world price compared to 20 percent prior to the liberalization of the sector in late-1980s. Besides, farmers are paid in time. However, further evidence shows that agricultural output particularly the food sector stagnated during economic reform. This explains why households in the food sub-sector experienced only modest rates of poverty reduction compared to those who produced cash crops (see Table 2).

3.1.1 To what extent has reform affected producer prices?

Liberalisation of agricultural trade such as the removal of monopoly powers of state enterprises led to rise in producer prices received by farmers especially for cash crops. For example, at the time when the Coffee Marketing Board was solely responsible for exporting Uganda's coffee, farmers' share of the export price was less than 30 percent. After liberalizing the coffee sub-sector in 1991, farmers' share of the export price rose to 82 percent in 1996/97 (from 45% in 1991/92). This was further supported by increase in the world price of coffee. The unit export price for Ugandan coffee increased 3-fold, from US$ 0.82/kg in 1992 to US$ 2.55/kg in 1994/95 – improving incomes among cash crop farmers. This means that the food security situation especially for households engaged in cash crops production could have improved.

However, prices of food grew slower than that of non-food commodities (Figure 6). For instance, the ratio of the prices of food crops to other consumer goods in the *consumer price index* (CPI) declined by 14.9 percent between 1991 and 2002. Food consumption per capita fell by 3 percent in nominal terms during the same period.

Figure 5. Composite CPI, 1990-2005



Source: Bank of Uganda

Furthermore, devaluation of Uganda shillings contributed to the increase in the price of tradable goods relative to the price of food. Consequently, those farmers who depended on selling food have gained relatively less from the reform due to deteriorating terms of terms for food crops. They had to sell more food than before to be able to acquire other consumer goods and services (e.g. clothes, healthcare and education).

These results underline the key challenges of increasing agricultural output (particularly food crop) and non-farm productivity and incomes. They also underline the challenges of regional sourcing and delivering food aid to Uganda as it is relatively more expensive in domestic currency to supply food to Uganda (from neighbouring countries).

3.1.2 Rise in food exports and imports

Reforms of agricultural trade led to increase in non-traditional exports as shown, in part, in Table 3.[5] The trends in Table 3 indicate a general rise in food exports over the past few years. For example, export of maize increased from 60,000 metric tones in 2002/2003 to 115,000 metric tones in 2006 (92% increase). Increase in exports of beans and other legumes have also been reported – for the last three years (since the 2001 decline). Fish exports increased over 4 fold between 1994 and 2006. Export of groundnut rose by 32 percent in volume between 1994 and 2004 (a recovery from 3 years decline). These rises in food exports have two implications. First, it has contributed to general rise in food prices in the country. The rise in food prices has contributed to inflationary tendencies (as discussed earlier) and made access to food more difficult for poor households that depend on the market (food purchase). Second, it has made it more costly for food aid agencies particularly WFP to source locally from Uganda – putting considerable strain on the agency budget if it is to meet the local requirement from domestic source.

Table 3. Trends in food exports (quantity), 1994-2006

Description	Unit	1994	2000	2001	2002	2003	2004	2006
Maize	Tonne	99,511	8,741	61,603	59,642	60,298	90,576	115,259
Beans and other legumes	Tonne	37,477	25,013	6,756	10,753	18,070	25,028	27,087
Fish and fish products	Tonne	6,564	14,894	28,119	25,525	26,422	31,808	36,343
Soya beans	Tonne	1,690	42	960	499	592	468	--
Live animals	Number	64,000	27	130	24	8	37	--
Fruits	Tonne	169	1,637	92	708	425	1,296	--
Ground nuts	Tonne	415	15	40	45	4	549	--
Banana	Tonne	2,535	1,622	1,336	1,561	1,646		--

Source: Uganda bureau of Statistics, Uganda Revenue Authority and GoU (1996, 2007)

[5] Uganda's traditional export commodities include coffee, cotton, tea and tobacco while the non– traditional exports comprise mainly food exports (including fish).

The continued rise in food imports has a negative impact on local agricultural production by exerting pressure on producer prices. Depressed prices can affect farm earnings, discourage production thus aggravate household food security situation in future.

Recent data by the Uganda Bureau of Statistics suggests that per capita consumption of home-produced food decreased by about 20 percent (between 1999 and 2005), while the median income from crop farming was higher in 1999/2000 than in 2005 – which obviously discourages production.

During 2005, for example, cereals top on the list of food imports and ranked third in total imports, accounting for 9.4 percent of imports; or US$ 141.2 million, in 2005 as compared to US$ 106.7 million, in 2003 (Table A2.2). Among food imports, animal or vegetable fats and oils ranks second to cereal, followed by sugar, sugar preparations and honey.

How has the traditional export fared? Uganda is still too dependent on primary commodity exports (coffee, cotton, tea, and fish products) - the country has not been able to move into new dynamic and less vulnerable areas of trade. The trade balance remains highly vulnerable to fluctuations in world commodity prices. Export receipt variability continues to affect the economy and posed challenges for economic management. Coffee, which in the 1990s accounted for up to 60 percent of total exports earnings, has since 1999 experienced a fall in its international price and its share in total export proceeds.

The share of coffee in total exports declined from 20.7 percent in 2002 to 18.7 percent in 2003 (Table A2.1, Appendix 2). It increased slightly to 21.3 percent in 2005, reflected in increase in export earnings from US$ 124.2 million in 2004 to US$ 172.9 million in the 2005 due to improvements in the international coffee prices. Fish (second to coffee in export earnings) accounted for US$ 88.1 million in 2003 and US $ 142.7 million in 2005 representing a 16.5 percent and 17.6 percent share of the total export value, respectively.

Tea has been the third export earner followed by tobacco (tea recently took the place of tobacco), then cotton and flowers. However, the export earning from tea declined from US$ 38.3 million in

2003 to US$ 37.3 million in 2004 and US$ 34.3 in 2005 due to a fall in the world market prices. The share of cotton to total export earning also declined from 6.5 percent in 2004 to 3.5 percent in 2005, while the share of flowers declined form 4.0 percent in 2004 to 3.0 percent in 2005. The decline in cotton exports led to a fall in cotton export revenues from US$ 42.7 million in 2004 to US $ 28.8 million in 2005. Likewise, flowers export revenues declined from US$ 26.4 million to US$ 24.1 million during the same period.

3.3 Markets/trade in the regional context (EAC/COMESA)

Trade liberalisation has been given a further boost with restructuring of trade relations with the members of East African Community (EAC) through the customs union and the Common Market for Eastern and Southern Africa (COMESA). Implementation of the EAC Customs Union entered its third year in January 2007, having come into force on 1st January 2005. The admission of Burundi and Rwanda to the Community on 30 November 2006 brought the number of the Member States to five (5). [6] Burundi and Rwanda are expected to start implementing the EAC Common External Tariff by July 2007.

In addition to EAC, Uganda is committed to other regional initiatives such as the Cross-Border Initiative (CBI), Common Market for Eastern and Southern Africa (COMESA). Most of the COMESA countries have liberalized and simplified many bureaucratic procedures that previously hindered movement of goods and services among its member states.

Under EAC cooperation, strong emphasis has been placed on facilitating movement of goods and services among EAC member states. Table 7 indicates that EAC market accounts for about 20% of Uganda's total exports, and over 70% exports is to the rest of the world mainly EU. The influence of regional integration food security situation depends on the importance of the foodstuffs in the domestic food baskets, their share of exports in total exports to EAC and COMESA as well as their exports share in total exports to rest of the world (ROW). Available data is not very clear on this, but Uganda being a net exporter of food to Kenya and neighbouring countries seems to be equally in a vulnerable position in the event of production shortfalls. The

[6] EAC Member States: Burundi, Kenya, Rwanda, Tanzania, Uganda. Under the EAC customs union, Kenya being the richest of the three member states continues to pay duty on its goods entering Uganda and Tanzania until 2010.

price interdependencies means that a crisis met in a particular country could become a problem for the whole region – hence having a community that is more vulnerable in the end.

Table 4. Uganda's exports to EAC, COMESA and ROW as share of total exports (%)

	2000	2001	2002	2003	2004
EAC	**19.69**	**19.29**	**18.48**	**21.56**	**19.82**
Rwanda	2.24	3.68	2.75	3.89	3.71
Kenya	15.67	13.07	13.15	14.68	11.56
Burundi	0.41	1.06	1.34	1.89	2.72
Tanzania	1.37	1.48	1.23	1.09	1.83
COMESA (incl. EAC)	23.34	27.01	22.99	27.67	26.76
COMESA (excl. EAC)	**3.65**	**7.72**	**4.51**	**6.11**	**6.94**
ROW	**76.66**	**72.99**	**77.01**	**72.33**	**73.24**
TOTAL	100.00	100.00	100.00	100.00	100.00

Source: Uganda Revenue Authority and Uganda Bureau of Statistics
Note: ROW = Rest of the world (transaction outside EAC borders and COMESA)

In terms of imports, so far, EAC has accounted for decreasing share of total imports to Uganda since 2000 (from 33% in 2000 to 25% in 2004). Instead, imports from the rest of the world are gaining share (Table 8). This trend signifies increasing extent of trade diversion, but also distorting effects, which cheap imports e.g. food from EU may inflict on domestic production (European countries accounted for 19.9 percent of Uganda's total import bills in 2005). Out of total expenditure on import from Africa, Kenya alone accounted for 70.1% of the share, and 92.2% for imports form COMESA.

Table 5. Uganda's imports from EAC, COMESA and ROW as share (%) of total imports

	2000	**2001**	**2002**	**2003**	**2004**
EAC	**32.54**	**29.34**	**30.75**	**27.46**	**24.62**
Kenya	30.89	27.96	29.14	25.99	23.12
Tanzania	1.52	1.29	1.43	1.38	1.41
Rwanda	0.07	0.03	0.13	0.04	0.04
Burundi	0.05	0.05	0.05	0.05	0.05
COMESA (excl. EAC)	**0.04**	**0.03**	**0.70**	**0.88**	**0.53**
COMESA (incl. EAC)	32.58	29.38	31.45	28.33	25.15
Rest of the World	**67.42**	**70.62**	**68.55**	**71.67**	**74.85**
TOTAL	100.00	100.00	100.00	100.00	100.00

Source: Uganda Revenue Authority and Uganda Bureau of Statistics

While the terms of trade worsens for Uganda, it has over the recent years seen its oil bill increase by about 24 percent and its external current account deficit peak at 4 percent of GDP. The continued deterioration in the terms of trade continues to pose a challenge to maintaining macroeconomic stability.

3.2 General macroeconomic trends and influence on food markets

After decades of political and economic crises, in 1987 Uganda embarked on a wide-ranging Economic Recovery Program (ERP) under the auspices of the World Bank and the IMF. These reforms have, over the last 15 years, led to the restoration of macroeconomic stability and high economic growth of 5-7% p.a. in the 1990s and an average of 5% p.a. since 2000. The high economic growth and the successful implementation of the Poverty Eradication Action Plan (PEAP) have contributed to a decline in the population's income poverty from over 55% in the beginning of the 1990s to 35% in 2002.

Access to water in rural areas has also increased from 20 percent in 1991 to about 60 percent in 2006. Through the Universal Primary Education (UPE), over 80 percent of primary school age children are enrolled in school compared to 65 percent in 1992. Besides, Uganda is recognized internationally for the remarkable success in the fight against HIV/AIDS pandemic that led to a significant drop in the prevalence rates from 25% in the early 1990s to 6.7 % in 2005.

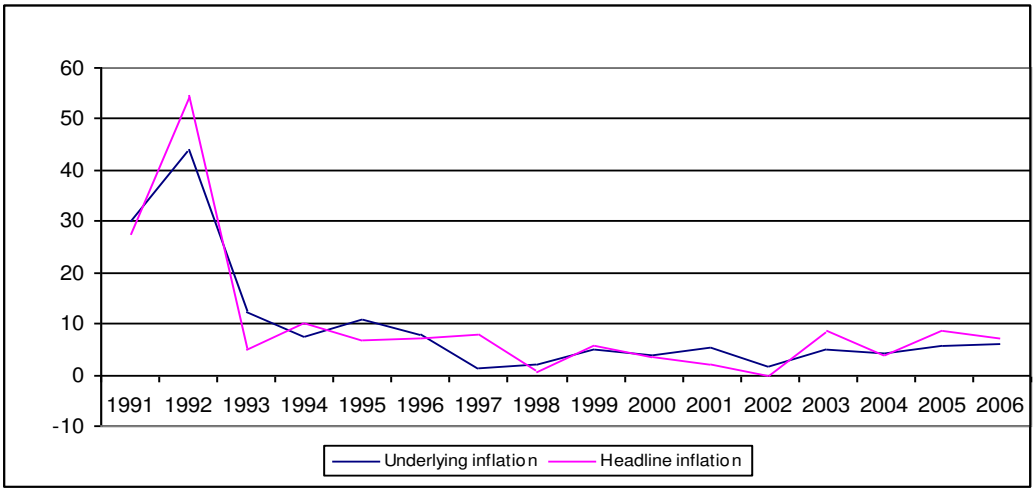
The macroeconomic stability has contributed to business confidence and a relatively favorable investment climate. These recent developments coupled with improvement in living conditions of the population through the implementation of the Poverty Eradication Action Plan (PEAP) signaled to the International Monetary Fund (IMF) that Uganda was ready to graduate to the Policy Support Instrument (PSI) facility in 2006.[7]

Bank of Uganda has been successful in maintaining single-digit inflation for over five years (Figure 7). Intermittent rises in inflation rates have either been a result of the rise in food prices due to

[7] The PSI facility has been devised to address the needs of low-income member countries that no longer require financial assistance from the IMF but still need its advice, monitoring and endorsement of their economic policies.

weather effect or a result of the rise in international oil prices coupled with high electricity prices and depreciation of the shilling.

Figure 6. General trend in inflation in Uganda, 1991-2006

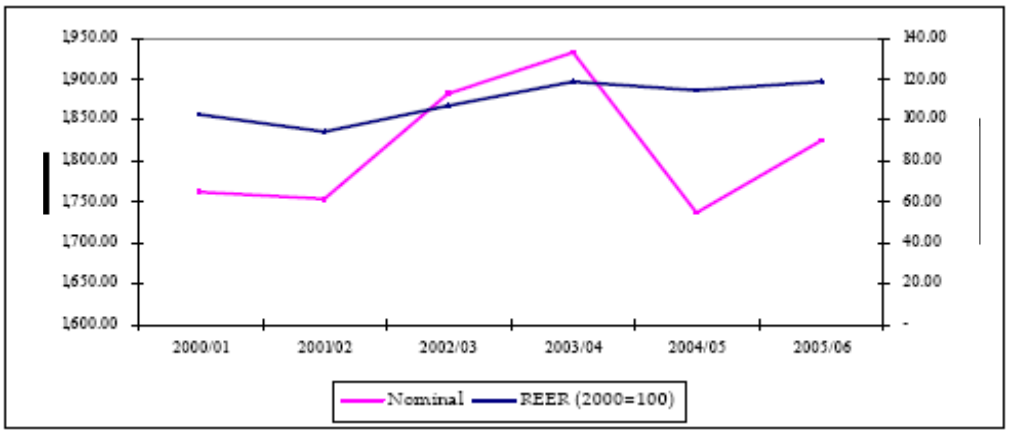


Source: Uganda Bureau of Statistics

The exchange rates have been very unstable in the last five years, with fluctuation in bureau (middle) rates from shillings 1,034.24 per US $ in January 1996 to 1,504.39 in December 1999 reaching over 1,800 per US $ by October 2000. Depreciating trend in shilling in recent years is mainly due to political instability in the Great Lakes Region and the Bwindi incidence[8], which discouraged tourism. Decline in the exports volume, rise in the international oil prices, unfavorable terms of trade for agricultural commodities in the world market and fluctuations of donor funds also contributed to the weakening of the shilling. The liberalization of the capital account in the 1990s could have possibly contributed to substantial capital flight hence keeping the stock of foreign exchange low.

Figure 7. Nominal and Real Effective Exchange Rates

[8] In 1999 two British and American nationals were killed on the way to Bwindi forests in southern Uganda.



Source: Bank of Uganda

The shilling has strengthened to unprecedented levels. In the last one year (from beginning of 2006), the monthly average value of the shilling improved against the US dollar but deteriorated against the euro. The shilling depreciated against a resilient euro by 9.3% in 2006. This strong appreciation of the shilling (against the USD) reflects an increase in foreign currency inflows - attributed to increase in regional trade, aid inflows and remittances, and an improvement in the trade account. The shilling is likely to remain resilient at current levels throughout 2007. Over the medium term we expect the exchange rate to stabilise as current infrastructure investments could boost the competitiveness of domestic goods and services, which should offset any depreciation pressures prompted by external factors such as fall in commodity prices.

3.4 Remaining challenges

3.4.1 Stagnating agriculture

While in the beginning of the economic reform process the improvement in economic performance to a large extent was driven by the agricultural sector, the agricultural sector experienced lower growth rates than the rest of the economy in recent years (Table 6).

Agricultural productivity has generally decreased, which is one of the reasons for the slow development of the sector. Crop yields in Uganda rank one of the lowest in sub-Saharan Africa (Opio, Ayoki and Odwongo, 2000). Yields of most cereals are below 2.0 metric tones per hectare. Similarly, yields of pulses and oil seeds also average below 1.0 metric tonnes per hectare, except

sweet potatoes. These low yields suggest that agricultural productivity in Uganda is still very low (Opio, Ayoki and Odwongo, 2000).[9]

Table 6. Percentage agricultural growth, 1998-2006 (GDP at constant 1997/98 prices)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Monetary									
Agriculture	9.9	6.0	2.5	6.4	3.6	4.7	-1.9	0.8	0.7
Cash crops	-0.1	9.9	-8.6	11.4	7.0	-5.4	10.2	-8.0	-9.8
Food crops	17.4	7.0	6.3	5.5	2.3	8.8	-6.0	1.0	3.0
Livestock	4.2	4.1	2.6	5.0	3.9	3.9	-6.1	8.9	2.9
Manufacturing	9.4	9.0	3.4	10.3	3.0	3.5	10.2	5.3	1.8
Total monetary	8.8	6.2	4.6	7.2	5.8	6.3	6.9	6.7	6.9
Non-monetary									
Agriculture	10.6	5.9	5.1	3.0	-1.0	5.4	-5.1	0.5	2.3
Food crops	12.3	6.1	5.2	2.6	-2.2	5.6	-5.3	-0.9	2.0
Livestock	3.3	5.8	4.5	6.7	5.7	5.9	-9.6	8.8	3.0
Total non-monetary	9.8	6.2	5.5	3.6	0.4	5.5	-2.9	1.2	2.7

GoU (1996, 2007) – Background to the Budget

Indeed, the total area under crops and total production for food and export crops has not exceeded the 1960s and 1970s peak levels. This seems to be one of the reasons for a steady growth of income inequality.

Available evidence suggests that the impressive growth rates achieved during the earlier periods of reforms were in effect recovery from very low base and near stagnation in agriculture (APSEC 1996). The rate of agricultural growth has not kept pace with population growth, and food production per capita is still below the pre-1971 level. As a result, nutritional indicators in Uganda remain among the lowest in the world (UNDP, 2003). There is supporting evidence about significant decline in per capita food availability particularly in the case of cereals, pulses and oilseeds in view of the growing population (APSEC; 1994, 1997).

Studies attribute this to civil strife, poor infrastructure and markets, lack of private sector investment, and the collapse of the emerging commercial agriculture. With the breakdown of the traditional agriculture and industrial sectors, agriculture virtually returned to subsistence production.

[9] Apart from millet and beans, yields of all food crops grown under present technologies are 50% below those grown under improved technologies (Opio, Ayoki, Odwongo, 2000)

3.4.2 Investment in agriculture – grossly inadequate

Accelerated growth in agriculture can only be achieved if there is increased investment in the sector by both the public and private sectors. However, evidence shows that direct public sector expenditures in agriculture during the last two decades compares poorly with expenditures in other sectors (Table 7). The share of agriculture in total public expenditure averages about 2 percent, compared with 10 – 20 percent share of the public spending on health, education or public administration (Table 7).

Table 7. Sectoral composition of expenditures as share (%) of total government spending

Sector	1990/1	91/2	92/3	93/4	94/5	96/97	97/98	99/00	2000/01	2001/02	2005/06
Public admin excl grant /1	21.7	37.1	48.2	33.8	20.4	21.2	24.1	14.0	13.4	12.7	
Public admin incl. grant /1					1.4	4.5	5.4	3.4	3.2	2.7	6.0
Security	31.5	13.7	12.5	18.3	18.9	17.5	15.5	10.5	9.8	8.4	10.1
Roads & works	7.6	3.3	1.8	4.0	4.2	6.5	4.3	12.5	13.6	12.2	10.1
Agriculture	2.5	2.0	1.8	2.1	2.6	1.3	1.0	4.0	5.7	4.7	4.0
Education	13.7	11.1	10.4	12.8	19.3	20.7	22.8	19.5	18.5	18.8	17.1
Health	4.4	3.3	3.9	5.7	7.8	7.1	6.5	10.8	8.6	11.1	13.7
Water	-	-	-	-	-	-	-	4.5	7.5	5.1	3.0
Justice/Law & Order	4.3	4.8	4.2	8.6	8.7	8.3	8.3	5.1	2.3	4.9	4.9
Economic Functions & services	3.4	2.4	2.7	4.4	9.1	6.2	5.4	9.9	14.2	12.7	
Accountability	0.1	0.1	0.0	0.1				0.6	1.7	0.9	4.7
Interest payments	10.3	22.1	14.5	10.2	7.7	6.7	6.7	5.2	1.6	5.7	
Total	100	100	100	100	100	100	100	100	100	100	100

Note: Blank cell means data not available; -- means sector not created at that time, e.g. water.
This table does not include external development expenditure before 1999/2000.
Source: Ministry of Finance, Planning and Economic Development (Background tot the Budget, various years)

Public expenditures directed to the agricultural sector, which includes MAAIF, NARO and conditional grants for extension services delivered in the districts have declined from 9.6 per cent in 1986/87 to 2.5 per cent in 1994/95 to 1.8 per cent in 1998/99.

These low budget allocations are reflected in the district trend in public expenditure in agriculture. For example, of the 32 districts for which the Ministry of Local Government analysed the 1997/98 budget, only four (Mbarara, Sembabule, Kasese and Kalangala) had allocated more than 3% of their budget to agriculture (i.e. 11%, 9%, 6% and 4%, respectively). The majority of the districts had planned to spend 1-2% on agriculture yet most of them are agro-based.

Likewise, the share of agriculture in donor assistance has also declined from US$ 44 million in 1994/95 to US$ 16.3 million in 2000/01 (i.e. from 6.6% to 3.1% of total donor support, respectively).

Table 8. Agriculture intra-sectoral expenditure (in billion Ushs), 2004/05- 2005/06

Codes	Sub-sector	2004/05	2005/06
010	Agriculture, Animal Industry And Fisheries	67.81	74.51
142	National Research Organization (NARO)	25.82	**137.21**
501-850	District Agriculture Extension	5.98	5.95
152	National Agriculture Advisory Services (District)	16.02	27.21
	NAADS Secretariat	0	12.19
	Total Agriculture expenditure	**115.64**	**137.21**
	Grand Total (Government Expenditure)	**3,380.33**	**3,896.86**

Source: Ministry of Finance Planning and Economic Development

Government officials often argue that the low share of government in total expenditure resulted from privatization of agricultural state enterprises, and sometimes that the decline is compensated by increased expenditure in sectors that are supportive to agriculture. Such sectors include roads, which share in total expenditure doubles from 6 percent in 1999 to 12 percent in 2001/2002. Still, national and district resources to agriculture need to be proportionately expanded to support core agricultural programmes in addition to financing supporting sectors such as road.

Current policy objective and goal of government is to eradicate poverty by increasing people's incomes, mainly through agricultural modernization – by focusing on 7 priority areas: (i) research and technology development; (ii) national agricultural advisory services; (iii) agricultural education; (iv) improving access to rural financial services; (v) agro-processing and marketing; (vi) sustainable natural resource utilisation and management; and (vii) supportive physical infrastructure.

Again, as part of the government's objective of bringing "prosperity to all" and given the fact that the poorest of the population are based in rural areas, government intends to introduce NAADS to all districts and start Savings and Credit Cooperative Society (SACCOs) and marketing cooperatives in all sub-counties.

However, implementation of PMA still faces a number of challenges ranging from inadequate capacity to political support. The capacity and will to plan district programmes in consistency with national development plans may be inadequate as reflected in low share of agriculture in district budgets.

There is need for complementary non-governmental assistance programmes to facilitate the realization of the objectives of the PMA. The World Bank, DFID have provided substantial support to the PMA. The substantial contribution from DANIDA through the ASPS program has also boosted the implementation of some aspects of the PMA. The ASPS has supported agricultural education, livestock systems, research, farmers' organizations, individual farm households, the Ministry of Agriculture, Animal Industry and Fisheries, rural credit schemes, and district agricultural training and information centres. The challenge is that the ASPS tends to be market oriented, which means that farmers who do not have some minimum level of financial and farm assets may not benefit from it.

3.4.3 Poor infrastructure

Another challenge to food security is that many of the roads are in sorry state. Due to the huge backlog in the road maintenance programme, 20% of the roads have deteriorated to poor or bad conditions and 60% are in an "alert" situation that is on the brink of worsening to a poor condition. In addition, the availability of vehicles and transport services within Uganda is limited and expensive, and fuel costs are high. In September 2006, rising transport cost and energy crisis led to increase in underlying inflation to 6.8%. Heavy rains hampered the transportation of food from food surplus to deficit areas and hence led to a 3.3% increase in prices. Inflation peaked at 11.3% in December 2006 as flood-related food supply constraints heightened. The situation is much worse now (2007) as severe floods have cut off many parts of Teso and northern Uganda.

Poor road networks in Uganda explain why it has the second highest transportation cost for a landlocked African country, after Ethiopia.[10].

The government's objective is to implement a road maintenance programme in all constituencies. Since the 2003/04 fiscal year the proportion of fiscal expenditure on roads and works originating from donors has been increasing and stood at 62% in the 2005/06 fiscal year. Ushs35 billion has been allocated this financial year (2007/08) to clear the maintenance backlog and Ush15 billon for

[10]. As roads are the main mode of transport given that they move more than 82% of freight and human passengers, investment in the development and maintenance of the road network is essential.

completion of road construction projects that have been behind schedule due to lack of funds on the counterparty's side.

In addition, government has established a Road Fund that has essentially got road users to pay for the maintenance costs. Excise duty on fuel has been increased this fiscal year (effective 1 July 2007) to raise additional funds for the maintenance of road infrastructure. The excise duty on diesel rose from Ushs450 per litre to Ushs720, and for petrol from Ushs530 per litre to Ushs870.

3.4.4 Low farm benefits from the value chain

To develop the value chain in agricultural production, the government is prepared to provide assistance in the processing and marketing of produce. The government prefers to assist cooperatives, through savings and credit or production and marketing, as they have greater capacity to develop the value chain. In the last budget speech 2007/08, the Minister of Finance has proposed a Ushs2 billion allocation to assist cooperatives with marketing-research and implementation of cooperatives' activities.

In addition, funds will be made available to cooperatives that have the potential to engage in value addition and agro-processing. Apart from physical capital, farmers in these cooperatives can also be assisted by human capital that provides the requisite marketing and production skills. The Minister of Finance had suggested in his budget speech that the government assist the cooperatives in hiring professional managers who could be supervised by a board of directors selected from members of the cooperative.

3.4.5 Limited access to land

To enable the poor to access land, government has also set up a Land Acquisition Loan Facility of Ushs3 billion that will be distributed to 30 districts initially. In order to equip farmers with the requisite farming skills and farming implements that will enable them to boost production, the finance minister has proposed that the National Agricultural Advisory Services (NAADS) programme be assigned Ushs12 billion for its roll out to the 16 districts that have not been covered. NAADS, which has been rolled out to 64 districts, is a programme that trains farmers in

using fertilisers, pesticides, farm machinery and irrigation – aimed at transforming farming from small-scale subsistence to commercial agriculture.

3.4.6 Poor functioning of agricultural market and support institutions/infrastructure

- ***Poor market infrastructure and functioning of agricultural price information***

Poor roads network in rural areas has also limited the scope of the markets to meet the needs of consumers, and integration of the markets. There is scanty information on market demand, and no system of agricultural price information exists. As a result, farm-gate prices as well as prices or profit margins obtained by small-scale traders/processors are abysmally small and may easily fall under production costs, particularly under adverse weather conditions.

4. Functioning of agricultural foodstuff markets in Uganda

4.1 Food production and consumption – general overview

Agriculture is still the dominant component of the Ugandan economy, contributing about 32 per cent of total GDP (2006/07) and employing over 70 per cent of the total labor force, which comprises about 90 per cent of the rural population. Data from the Ministry of Agriculture, Animal Industry and Fisheries (Appendix 2: Table A2.8) shows that, at aggregate level, food production increased significantly, between 1987 and 2005. However, further analysis reveals a significant decline in per capita food production particularly in the case of cereals (e.g. sorghum and finger millet), pulses and oilseeds in view of the growing population (Figure 5).

In Northern region in particular, which has been affected by war, finger millet is the main staple and commercial crop for people in Lira and Gulu (others are sim sim and groundnut). Since over 1.6 million people were displaced from their homes (and could not cultivate their land) for the last 20 years, production went down. Insecurity in the north also reflects on sorghum production. [11]

Generally, the rate of agricultural growth has not kept pace with population growth. Available data shows that the share of agriculture in GDP has declined by 10 percentage points of GDP since 1997/98 (GoU, 2007). In 2004/05, there was 1.7 percent growth in food crop production (compared with 3.5% growth in population). In 2005/06 growth in food crop production was only 0.9 percent (while population grew by about 4%). Consequently, food production per capita except for export-oriented food crops (non-traditional export) such as maize has declined over time.

[11] Apart from finger millet, sim sim and groundnut in Lira and Gulu, other staple crops are cassava, beans and Matoke in Nebbi; cassava in Arua and Moyo. Also produced both for consumption and cash include; groundnuts, sorghum, peas, maize, sweet potatoes, cassava, beans and soy beans and sunflower. However, production of these crops has decreased over the year due to insecurity, and cases of malnutrition have been reported.Though relative peace has been observed over the last one year, the current peace talks between government and the rebel group so far have not indicated that the conflict will necessarily come to an end in the near future.

Figure 8. Per capita production of selected food crops (MT)

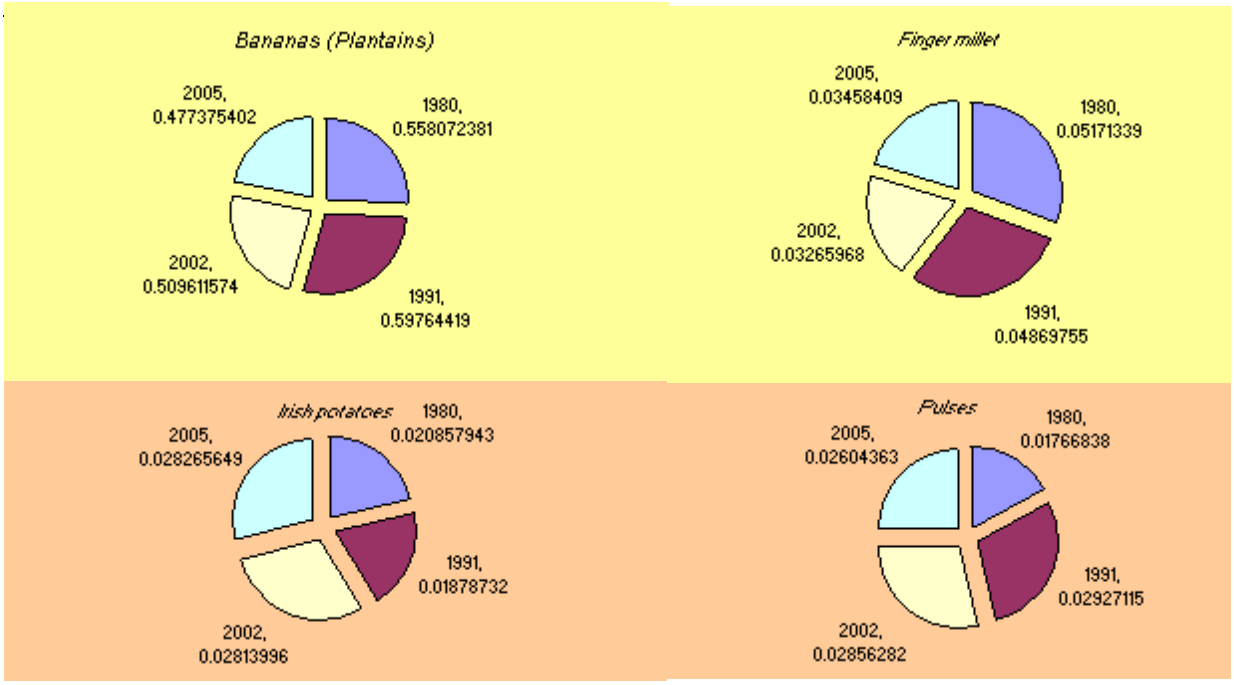
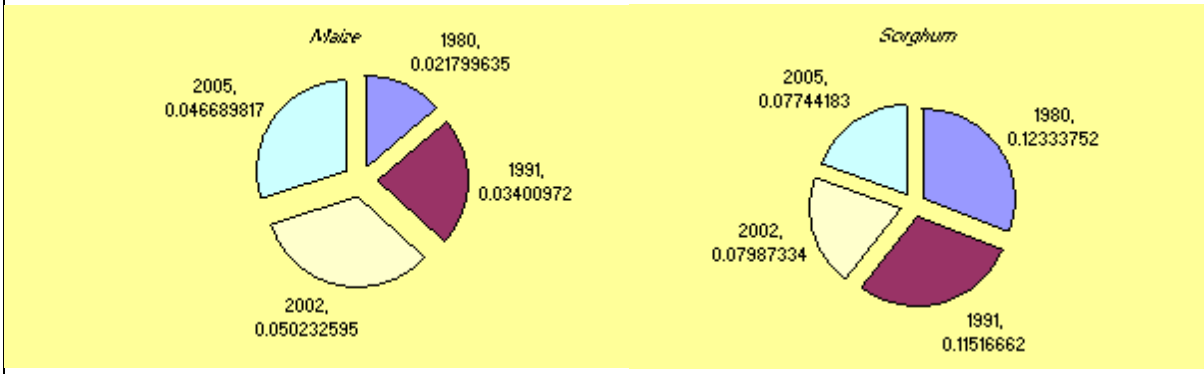


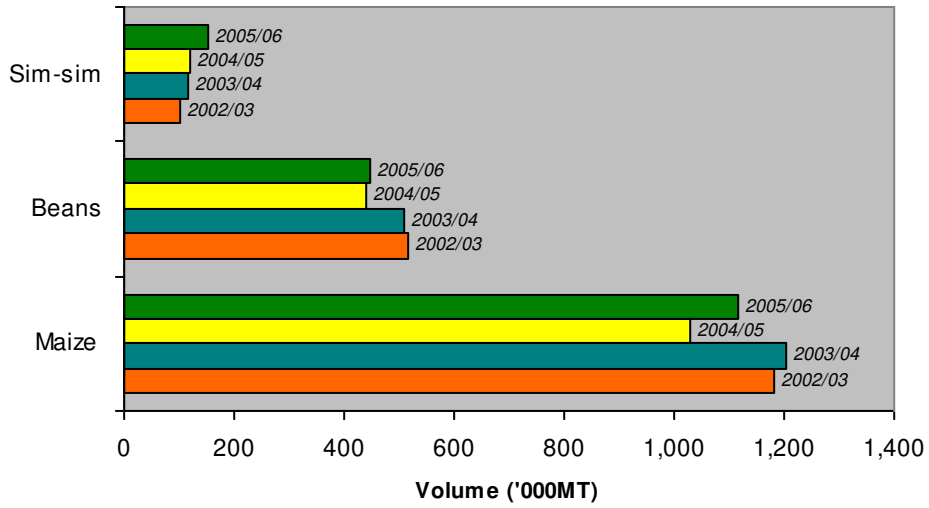
Figure 9 cont…



Source: Ministry of Agriculture, Animal Industry and Fisheries

The examples in Figure 10 shows that aggregate level of food consumption is declining, which may reflects the situation at the household level.

Figure 9. Consumption of selected home-produced food



Source: Based on data from Ministry of Agriculture, Animal Industries and Fisheries; and Bank of Uganda

According to data from Uganda Bureau of Statistics, food consumption per capita fell by 3 percent between 1999/2000 and 20003, with per capita of home-produced food declining by about 20 percent. It is not clear what the main reasons are, but this could be a reflection of overall decline in per capita food production, and rise in poverty levels and inequality especially in the northern Uganda.

While low production and consumption persist in areas (such as the north) that have suffered the 20-year long conflicts (including frequent droughts), limited gains were recorded in areas that experienced relative peace.

In Mid-western Uganda (Bunyoro), information from district authorities (Masindi and Hoima), suggests that aggregate production of maize has remained nearly the same for the last one and half decade. Per capita production has gone down due to decrease in acreage per family (maize is the main crop grown/commercial crop). Millet, rice, sweet potatoes, and cassava being the main staple crops are rarely sold in Bunyoro. As we heard from key informant interviews, about 80 percent of maize produced by households is sold. Only about 20 percent is retained for consumption.

In Western region, a steady increase in production of and demand for banana has been reported in Mbarara (banana is the main staple and commercial crop in Mbarara). According to the households

we talked to (in Omukinazi village), ready market and high prices for banana has led to a shift in food consumption from banana to maize and Irish potato for many families in Mbarara. In Omukinazi village for example, many households confessed that they have chosen to eat maize and sell the banana they produce. Banana is regarded as the men's crop though women provide bulk of the labor in banana production. As such, women first have to seek permission from their husband to prepare banana (matoke). In one of the families we visited, the husband told us that he can only allow four meals of banana, a week.

Families would sell a bunch of banana and buy 3kgs of maize flour for half the proceeds. The rest of the money is used to meet other family needs. Women have the liberty to sell Irish potato and beans, but they cannot sell a single bunch of banana except in a situation of emergency such as sickness. If it happens, the husband would expect them to provide satisfactory accountability - how the money has been used. There is a popular saying that 'men move with banana plantation in their pocket'. Often, when a man runs short of money to pay for his drinks he asks for credit. He will always say, "give me more beer; I am 'cutting' tomorrow" (meaning I will sell a bunch of banana tomorrow and repay your money).

In Kabale, Irish potato serves as a staple and commercial crop. Sorghum, maize, beans, and peas are grown for domestic consumption. The main imported foodstuff is rice and banana. In Kasese, households depend on maize and coffee for income, but production is said to be declining due to environmental degradation.

In Karamoja, Sorghum is grown by most of the households in Moroto, Kotido and Abim but at very subsistance level – hardly sufficient to meet household consumption needs. However, because of lack of alternative source of income, part of what should have been meant for home consumption is sold to meet other household needs such as medical. Maize is grown particularly in Namalu (Nakapiripirit District), but cassava, maize, beans, and groundnuts are also produced. Official statistics on production in Karamoja are lacking, but information obtained through focus group discussion suggests that yields of sorghum and maize, the main staple crops in the region, have declined over the past 20 years due to a combination of factors including droughts, insecurity, soil degradation, pests and diseases.

Livestock remains the main source of livelihood particularly in the drier belts where cultivation is extremely limited such as in Amudat/Pokot. However, continued cattle rustling has drastically reduced the number of animals in the region, and consumption of meat and milk has reduced.

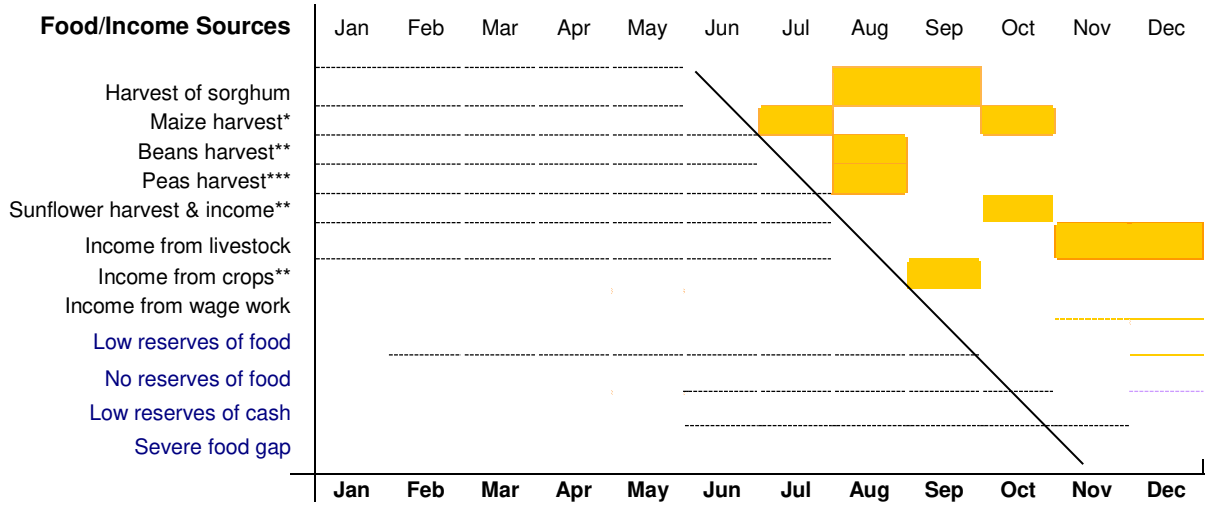
In Central Uganda, banana is the traditional food for the region grown at large scale but banana wilt has threatened production in many areas. Consequently, production of other food crops such as cassava is gaining importance is such places like Kiboga, Mubende, Rakai and Luwero districts (produced as staple and commercial crop). This problem of banana wilt that has severely affected banana production in the region has caused many households to switch consumption to maize and other staples. Apart from banana, maize and cassava, other subsistence crops produced are sweet potatoes, beans, and groundnuts. Available sources indicate that Rakai so far leads in banana production and in marketed output in central region, followed by Mubende, Kiboga and Luwero.

4.2 Seasonality and shocks

The results in Figures 11-13 reflect the variations in the conditions that prevail from year to year in different regions. There are noticeable challenges of dealing with the exceptional shortage in food supply particularly in Karamoja. All the people consulted agree that food crisis is increasing in frequency due to droughts and insecurity. For most households, food stock hardly lasts four months from the time of harvest in August/September/October. Most families depend on sorghum harvests in August/September (Figure 11) and maize in October (and July for early maize in the case of Moroto). A monitoring of the situation at time of harvest in July, August, September and October (and at time of arrival of rains) would be useful to forestall severe food security problems.

Monetary incomes are obtained from the sale of maize and sorghum mainly in September, November and December. Income is also obtained from wage employment, beginning in March and culminating in July. Additional wage earnings are obtained in January through March (from casual work in town/ nearby trading centres). Wage employment occurs in short, seasonal fashion, mainly 5-10days per month.

Figure 10. Seasonality of food and income sources in Karamoja



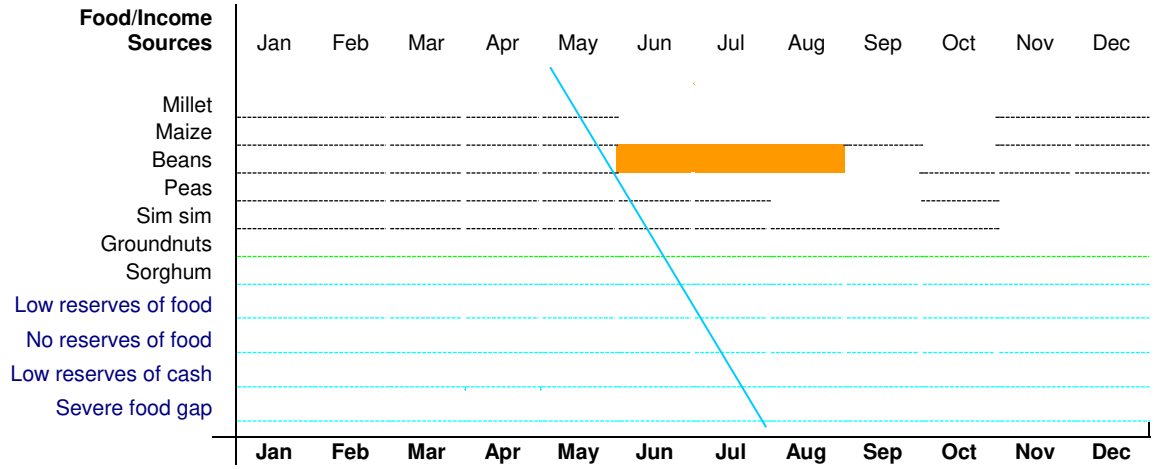
Source: Compiled by author from survey data
Note: ** This source is available only in a few places in the wet zone such as Namalu and Iriiri
Income from wage work meets less than 20% of household consumption needs hence should not be construed as constant or stable source of income to sustain the households.

Incomes from livestock, though seems relatively secure and stable, are for very few households who own livestock. Worst food shortage occurs in May and June.

In the rest of northern Uganda (Figure 12), millet is harvested from June-August, with second harvesting coming in December (for crop planted during September/second rains). June-August also marks the period for harvesting of maize and beans; November-December for sim sim and July for groundnuts (sim sim planted during first rains is harvested in August/September). Although the region as a whole experiences a shorter period of food gap compared to Karamoja, most of the households in Acholi sub-region and part of Lira have, as a result of war experienced production shortfalls. Some of these are the vulnerable groups particularly the orphans, widows and elderly people who were not able to cultivate.

There are signs of portent hard times ahead for most households especially those who were displaced from their homes. This could increase the number of people that might be in need of emergency food assistance including those who have just returned to their villages.

Figure 11. Seasonality of food and income sources in Northern Uganda



Source: Compiled by author from survey data

In western Uganda, June-August coincides with beginning of maize harvest in Masindi and Hoima, and is associated with a rise in maize supply in the market, from early September to October. September-November is the second season for maize - always associated with low production and relatively lower supply in the market, and high prices. Many farmers disposed off their stocks during December-February following a general rise in farm-gate prices. No harvests occur between January-May and therefore, prices tend to be higher during such periods than any time of the year.

In eastern region, supply of food is sustained by maize harvest in parts of Mbale, Sironko and other eastern districts beginning March to July; and the October-December maize harvest in Kapchorwa. Severe food gaps are rarely experienced, but February-March marks the time when food reserves are low and prices tend to be higher than at any time of the year.

In central Uganda, highest supply of banana occurs between May-August and in December (considered the main harvest time for banana), and the lowest supply is experienced between January and March – the period the price of a bunch of banana tends to rise considerably.

Vulnerability to price shocks is perceived to be increasing due to decline in output and increasing poverty perpetuated by erratic weather and conflicts in some regions e.g. Karamoja and northern Uganda. Extreme increases in output prices occur every year between March and May for most

districts, but in central and western region, banana prices are in their peak in December. Crop pests and diseases (e.g. banana wilt) are reported to be a major problem in some areas.

Apart from severe food shortage that was frequently the issue in many focus group discussions; informants emphasized the problems of output price collapses during harvesting seasons in a number of districts e.g. maize prices in Masindi, Hoima, and Kapchorwa. In Karamoja for example, the price for a kilo of sorghum grain fell from over Shs 300 to less than Shs 200 during harvest reason last August-October 2006. The price again rose to over shs 300 between March-July. The seasonal variability in outputs prices reflects the market and distribution constraints in the region. Sudden increases in prices as seen later in Figure 16 are associated with low supply of food especially during rainy season when poor roads conditions cut off transport of produce to the region.

Across the regions, most of the shocks reported are 'covariate' in nature e.g. droughts, commodity prices, crop diseases (e.g. banana wilt), and AIDS/HIV – affecting many people in the same community, and by nature beyond the scope of households or community. AIDS/HIV seems to have debilitating effects in terms of productivity in many districts visited.

Given that drought is the most prevalent shock (reported in Karamoja and northern Uganda in general), its impact on poverty is substantial. This means that poverty in such areas is less likely to reduce due to occurrence of shocks. This is a tremendous challenge, but households are devising various coping mechanisms including crop diversification and entering into new activities to earn extra income in response to shocks. Particularly, those without sufficient livestock assets to buffer against shocks have diversified into wide range of cropping activities including maize, sorghum, millet, beans, groundnuts, and sunflower, among other crops. This was being done in Iriiri (Moroto) and Namalu (in Nakapiripirit), among other areas. Some households have not been able to do this because of poverty and insecurity.

Poverty in areas experiencing transitory shocks can be reduced by improving on current policies and interventions to deal with shocks. This is the type of concern that is behind much of the 'safety net' related argument, whereby, the potential shocks that households and individuals may

experience leading to increase in poverty justifies more interventions to avoid them.[12] This is important because shocks can work more substantively to generate long term consequences. Experience from northern Uganda seem to suggest that whenever a household suffers from severe shocks (e.g. food shortage or other crisis) the effects usually last a long time even after a solution is found e.g serious illness in the households as it was reported in the internally displaced people's camps (IDPs) in Lira and Gulu.

If children end up engaging in more child labour (as it was reported in Moyo, Gulu, Kiboga and Karamoja) in response to income and agricultural crop shocks experienced by the family, then it translates itself in permanent losses in terms of education attainment, taking children out of school. Or at least burdening them with more work while in school comes at a cost in the long run. With education closely related to higher learning potential at adulthood, the economic consequences of those affected, and probably the rest of the society, are serious.

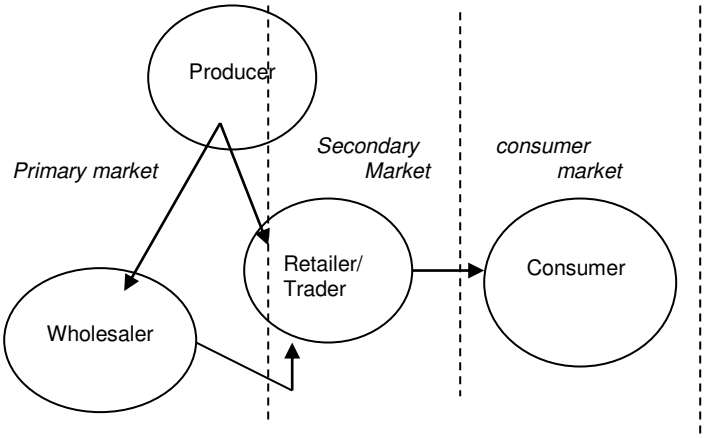
4.3 Marketing channels for Uganda's foodstuff

About 30-45% of farmers sell their crops direct to traders or retailers who approach them at home. About the same number take produce to the nearby assembly markets (rural/urban market) or by the road side. Flow diagrams for locally produced foodstuffs are shown in Figure 13. Retailers, wholesalers, exporters and consumers are represented at different levels of the market chain: farm-gate, rural market, urban market, and some of the commodities find their way to markets across the border. In all the foodstuffs, marketing channels usually begin with the farmer (whether at the farm, home or rural market) producing and selling commodity to retailers, wholesalers or consumers.

In all the areas visited, wholesalers and retailers often travel to producing areas to make purchases from farmers or rural assemblers/wholesalers. Wholesalers are largely responsible for the intra and inter-regional flow of foodstuffs in the survey area. They sell to retailers, consumers and other wholesalers. Secondary markets (where a wholesaler sells commodity to retailers) are found to be

[12] If one performs a distribution analysis basing on a sensitive poverty measure such as squared poverty gap the impact of shocks of this nature can be surprising.

the most common practice in the 23 survey areas where information was obtained (Table 9). The second in importance is the consumer market (where retailer sells directly to consumers). This signifies the dominant role played by wholesalers in Uganda food market.



Across the region, secondary market is most common in the mid-western Uganda i.e. Masindi and Hoima, where large consignments of maize leave for various destinations, including Southern Sudan. Consumer market is a prevalent practice in Karamoja and Kampala – where small quantities of commodities are traded (commodities repackaged and delivered in small quantities).

As the data shows it is rare to find a combination of primary, secondary and consumer markets. Like the case with the consumer markets, the primary market operates more in the western and central regions – where rural roads networks are better developed and large scale producers who occasionally double as farmers and traders. All the three different types of markets are represented in all the survey areas, and most operate on daily basis (Table 9).

Table 9 Distribution of primary, secondary, and consumer markets

Types of markets	Frequency of trade					Average number of traders per districts						Av. No. of respon dents
	Daily	Weekly	Bi-monthly	Monthly	Seasonal	Karam-oja	East	Central	West	Mid west	North	
Primary	19	09	09	02	05	1.4	01	2.5	05	01	1.4	1..9
Secondary	75	24	03	09	02	04	03	8.25	3.67	9.5	3.8	4..96
Consumer	65	09	02	04	02	4.4	2.3	3.5	03	02	5.8	3.65
Primary/ sec	28	05	0	01	02	2.4	1.75	0.75	03	1.5	0.8	1.65
Combination of all	24	07	03	01	05	02	4.75	0.5	0	0.5	3	2.04

Source: Survey data, May/June 2007
Note: Population of traders/wholesalers per region (estimated by traders in the respective regions): Karamoja 30; Eastern 60; Central 50; Western 60; Mid-West 20; North 70

Markets are more concentrated at the wholesale level than at the retail sub-sector. Wholesalers play vital roles in the distribution of foodstuffs in Uganda (survey areas). Since less commodity is being retained at retail level, coupled with limited capacity of local traders to engage in wholesale activity, the present market system could increases vulnerability to food insecurity – as more and more foodstuff is ferried away from producing areas by wholesalers.

Very few respondents (traders) deal directly with farmers or use commissioned agents. Most of the traders seem to be working with small scale traders (commodity assemblers) who do the buying for them. There are as many as 200 small retailers or commodity assemblers in each district during peak marketing season (especially in areas where the market is very active). More wholesalers are represented in Eastern compared to Karamoja, Central, Western, or Northern region (Table 10).

Table 10. Traders/trade activity across region

Trader	Region					
	Karamoja	Eastern	Central	Western	Mid Western	North
Wholesalers	32	34	25	25	17	22
Retailers	30	13	17	12	06	39
Purchase from farmers	02	04	12	02	07	11
Use buying agents	0	0	02	01	0	0
Use commodity broker	0	0	01	0	0	0
Combination of 1&2	11	08	03	03	0	03

Source: Survey data, May/June 2007
Note: No trader sells products other than agricultural

Weekly markets are popular especially in Western Uganda and account for over 30% of marketable volume each year. Table 11 provides a list of such type of markets operating in Mbarara – where many households buy essential commodities and sell some of their produce there.

Table 11. Main weekly markets in Mbarara District

	Major items sold	Coverage/Scope	Frequency
Location			
Kabuyanda	1. Food stuff 2. chicken and goats	3. Kbuyanda, Kikagati Nyakitunda and Ntumgamo	Tuesdays
Nyeihanga	4. Food stuff (matoke, beans, etc)	5. Ndeija, Rugando, Rugamba, Bushenyi and Ntungamo	Fridays
Rubindi	6. Food stuff 7. Chicken and goats	8. Rubindi, Kashare, Kagogi, Kashonji, Bukiri, Rwanyamahembe, and Bushenyi	Tuesdays
Kyeibuza	9. Livestock (cows, goats, etc)	10. Kikasi, Kenshunga, Sanga, Rubaya, Mbarara town, Kampala and Iganga	Thursdays (2 times a month)

Biharwe	11. Food stuff and 12. Livestock	13. Biharwe, Rubaya, Kakika, Kanyaryeru, Sanga, Kikasi, Mbarara town and Kampala	Wednesdays
Ishongororo	14. Food stuff 15. Chicken and goats	16. Nyabani, Kicheche, Ntara, Mahyoro and Mbarara town	Fridays
Central Market (in Municipality)	17. Food stuff, poultry, fish and meat	18. Mbarara town, Kakika, Birere, Rugando, Rubaya and Bubare	Daily

Source: IPRA survey data, May/June 2007

In Deije in Mbarara, the weekly markets do better during coffee marketing season. During this season, there is migration of labour from villages to trading centre, including prostitutes who migrate from Masaka to Deije trading centers, and return home after the coffee season is over. In Masindi district, weekly markets are active during tobacco marketing season and when sugar cane out-growers start delivering their cane to Kinyara Sugar Works.

However in many districts, the role of the rural markets is increasingly taken over by the trading centres that are dotted all over the villages. These trading centres now provide most of the commodities that used to be in weekly market, including foodstuffs. In addition, mini-markets operate in most of the trading centers on daily basis.

Road side market is another important channel many farmers in the survey areas were using. During crop marketing, farmers (especially those who can not afford transport to distant markets) bring their produce at the road side for traders and travelers on passenger transport. For example, in Ndeija, along Mbarara-Kabale road, Kikagati road in Mbarara; Tegerese in Kapchorwa (e.g. Bosha village) are always bunches of matoke by the road side. A lot of transactions have also been observed at different locations along Gulu-Kampala high way; Lira-Kampala road, Lira-Soroti Road; Lira-Kitgum road; Gulu-Kitgum road and Gulu Adjumani road. These markets are specialized and are characterised by small transactions (e.g. 10-20kg of groundnuts, millet or simsim or 2-5 bunches of banana per seller), and account for about 10% marketable volume in areas where they operate.

4.4 Types of traders, market boundaries covered and market competition

Majority of traders are self-employed, small-scale traders. Of the 75 traders interviewed in Karamoja, 63 (i.e. 80%) were actual owners of the business, compared with 56 for Eastern (75%),

50 in central (67%), 58 (77%) for Western (including Mid-Western), and 61 (81%) for Northern region (Table 15). Again, we see reasonable participation of women. Of the 75 traders interviewed in Karamoja, 20 (i.e. 26.6%) were women-business owners; compared with 33 (44%) in Northern region; 6 (20%) in Mid-western; 17 (16%) in western; 19 (32%) in central; and 13 (22%) in eastern region (Table 12).

Table 12. Respondents /traders' background and role in the business

	Karamoja	Eastern	Central	Western	Mid- Western	North
Owner	63	56	50	34	24	61
Manager	10	02	03	07	06	12
Sales manager	01	0	01	0	0	01
Purchasing manager	0	0	04	03	0	0
Other	0	02	0	0	0	0
Male - owned	55	47	41	27	24	42
Female - owned	20	13	19	17	6	33
No schooling	12	01	08	02	0	05
Primary	24	18	26	04	08	18
Secondary	33	35	22	29	20	29
Tertiary	05	06	04	07	02	14

Source: Survey data, May/June 2007

Across the region, majority had some formal education – mostly secondary level (Table 15). In addition, respondents have had experience of at least five years in management and running their businesses. Majority of traders started their businesses within the last 5-10 years. On average, more than twenty years of previous experience, working in another business (before present one) was reported by most traders a cross all the regions (Table 16).

Table 13. Management of trade businesses

	Region					
	Karamoja	Eastern	Central	Western	North Westen	North
Manager in charge	57	47	51	40	29	64
Manager responsible for purchases	13	08	03	02	01	03
Manager responsible for sales	04	04	03	01	00	06
Other	01	01	02	01	00	02
Years of experience in management	7	4.6	6	10.7	11	5.8
Years in business	7	4.7	7.2	10	7	7
Has worked in another business before	35	18	35	25	20	30
Yrs of experience elsewhere as manager	5..5	12	5	5.9	10	7.5

Source: Survey data, May/June 2007

The poor state of the market infrastructure and high transportation costs, coupled with insufficient price information transmission channels, tend to limit the geographical that can be covered by each trader in the food markets. In the North, most traders (80%) operate in a single market or in a specific locality (Table 14). Traders' concentration in a single market is also observed in Karamoja and western region (with 59% and 67% respectively, reporting that they operated only in one market).

Across the region, Mid-western has more traders who operate outside their districts than other regions.

Table 14. Markets covered by traders in different regions

	Number of traders/respondents (%)					
	Karamoja	**Eastern**	**Central**	**Western**	**Mid- Western**	**Northern**
Single locality	44 (59)	22 (37)	29 (48)	30 (67)	14 (47)	60 (80)
With other principle markets	16 (21)	28 (47)	18 (30)	07 (16)	08 (27)	06 (8)
In other markets	13 (17)	08 (13)	13 (22)	06 (13)	08 (27)	09 (12)

Source: Survey data, May 2007
Note: Figures in parenthesis represent percentage (per region)

Can new arrangements be designed to enable traders to extend the reach of markets to the most marginalized communities? Most operate as individual single traders as opposed to organized trader groups. Most of the traders reported that their operations were limited within district boundaries (Table 15). Only a handful of them extended their activities outside the districts, and up to the national level with that are able to compete at national level. Only two businesses in Karamoja reported to be competing with similar businesses at national, 10 reported this in Eastern, 16 Central, 23 Western and 12 in Northern region.

Table 15. Level of competition among traders by region

	Level of competition				Estimated number of traders (wholesalers + retailers)
Region	District level	Regional	Country	Other	
Karamoja	42 (56)	14 (5)	2 (3)	16 (21)	100
Eastern	28 (13)	22 (37)	10 (17)	0	200
Central	35 (58)	9 (15)	16 (27)	0	100
Western	26 (58)	9 (20)	9 (20)	0	150
Mid west	16 (53)	0 (0)	14 (47)	0	60
Northern	55 (73)	6 (8)	12 (16)	2 (3)	200

Source: Survey data, May/June 2007
Note: Figures in parenthesis represent percentage

Traders' profit margins

Respondents in all the regions reported decline in their business profitability between 2005 and 2007. Traders in Western region experienced slight increase in business profitability. The year 2006 was perceived to have been the worst of all the past three years, reflected in relatively small number of traders (respondents), who at least reported that their business profitably was good.

Businesses changes in profitability were influenced by changes in prices of commodities in about 4/75% of the cases in Karamoja, 5/75% in Eastern, (12/30 + 9/45) % in Western and 9/75% in Northern region (Table 16).

Table 16. Events impacting business profitability as reported by respondents (traders)

Reasons	+ve impact						-ve impact					
	Karamoja	East	Central	West	Mid West	North	Karamoja	East	Central	West	Mid West	North
Sales price	2	5	4	06	08	5	4	4	7	7	8	8
Purchase price	2	0	5	03	04	4	5	2	1	0	0	1
Volume of trade	3	13	0	06	02	6	2	6	5	3	0	5
Labour costs	0	0	0	01	00	1	0	0	1	1	0	3
Taxes	0	0	0	01	00	2	0	0	0	3	0	1
Weather	4	2	9	00	00	1	9	9	9	1	0	1
Other operating costs	1	0	2	00	00	2	0	2	1	0	1	0
Government policy/intervention	0	0	0	01	01	2	1	0	1	1	1	0
Price volatility	0	0	2	00	00	0	0	2	3	0	0	0
Competition level	2	0	3	02	01	1	7	3	4	1	0	6
Others	3	0	1	01	01	3	13	1	1	0	0	5

Source: Survey data, May/June 2007

4.5 Business associations/network

Commercial networks such as farmers or traders associations that might intervene in shaping the market conditions, and to advocate for interest of their members in the value chain, and disseminate market and price information are underdeveloped. Of those that were affiliated (members) an association majority (29) are from Central region, with the least representation from Karamoja and the Western region (Table 17). Most of the associations are based in Kampala, with limited outreach in rural areas.

When number of years of membership to associations is considered, the Northern and Central regions had average of 25 years, Eastern 18 and 16 Karamoja.

Table 17. Commercial networks within the region

	Karamoja	Eastern	Central	Western	Mid west	Northern
Affiliated to traders/ commodity associations	17	20	29	9	7	23
No. of associations affiliated	18	20	27	11	4	26
Years of membership to association that provides most benefit	16	18	25	9	4	25
Membership fee and voluntary contributions in the year 2006	16	18	27	7	4	23
Association's total membership in 2006 (No. of traders/businesses	17	19	25	11	4	23
No. of businesses from association who are trader's suppliers and buyers	9	00	8	03	1	19

Source: Survey data, May/June 2007

The commercial networks are sources of business contact, but few of the association members do business with colleagues in the association. For example, 19 respondents in Northern Uganda have suppliers from within the association to which they belong; 9 from Karamoja and 8 from the Central.

Easier access to credit facility is usually the major reasons why traders choose to join commercial network, (Table 18). Another important advantage for joining a commercial network is easier access to market information and commercial contacts.

Table 18. Advantages of commercial network as rated by respondents

	Percentage of respondents (%) ranking as:		
	First in importance	Second	Third
Access to credit	13	1.74	0.29
Access to market information	5.5	8.15	4.06
Commercial contacts	2.03	3.18	4.35
Resolve comm. Disputes with customers and suppliers	1.2	5.51	4.06
Negotiate with authorities (police/custom/gov't)	1.7	1.74	3.49
More credibility	0.86	1.16	0.29
Protects from unfair competition	0.58	2.03	0.89
Enables members to agree on floor or ceiling prices	1.7	1.16	2.89
Satisfies large group	0.29	1.45	1.45
Mutual insurance in case of bad shocks	0.86	0.58	1.74
Pays license fee for individual members	1.2	0.29	0.29
Enables coordination of sales and purchase activities	0.58	2.03	3.77
Others	0.86	0.87	0.58

Source: Survey data, May/June 2007

4.6 Price and market information system

The major source of day-to-day price and market information is speaking with other traders (Table 19). Information from other traders may be more reliable than from other sources such as news papers or other messengers. Traders travel widely and tend to be better informed about prices and market conditions than news paper writer or a messenger. Speaking with regular suppliers or clients is another important way of accessing information in different regions.

Table 19. Day-to-day sources of market and price information

	Number of respondents/Region – using various sources					
Source	**Karamoja**	**Eastern**	**Central**	**Western**	**Mid Western**	**North**
Personal observation	21 (28)	21 (35)	08 (13)	6 (13)	2 (7)	10 (13)
Speaking with other traders	29 (39)	35 (58)	26 (43)	29 (64)	14 (47)	42 (56)
Speaking with suppliers and clients	17 (23)	4 (7)	6 (10)	5 (11)	3 (10)	18 (24)
Messengers	5 (7)	0	0	2 (4)	1 (3)	2 (3)
Radio	0	0	0	1 (2)	7 (23)	1 (1)
Respondent sets his/her own price	0	0	3 (5)	1 (2)	1 (3)	1 (1)
others	1 (1)	0	2 (3)	0	0	0

Source: Survey data, May/June 2007
Note: Figures in parenthesis represent percentage

These two sources of information (especially speaking with other traders and suppliers) have the highest representation in the north (56% of respondents in the north), eastern (58%), and western (64%), unlike Central (43%), and Karamoja (39%).

The use of news papers, internet and radio as daily (day-to-day) sources of information is still very limited in all the regions. Local radio stations and Newspaper usually report price and market related information. As shown in Table 20, only traders in Western, Mid-Western and Northern regions use radio information.

Table 20. Source of day-to-day information on supply conditions

	Number of respondents/Region – using various sources					
Source	**Karamoja**	**Eastern**	**Central**	**Western**	**Mid Western**	**North**
Personal observation	15	11	12	5	4	7
Speaking with other traders	28	42	24	21	6	39
Speaking with regular suppliers and clients	22	6	19	10	15	23
Messengers	6	0	0	1	33	3
News papers	0	0	0	1	0	0
Radio	0	0	0	1	1	1
Trader sets his/her own price	0	0	3	2	0	0
others	2	0	1	2	0	0

Source: IPRA survey data, May/June 2007

The newspaper circulation tends to cover urban areas with very limited penetration in rural areas.

Approximately 30,000 copies of newspaper are circulated daily; in a country with a population 31million people (per capita newspaper outreach is 0.001 or newspaper per 100 people). Newspaper distribution is hampered by poor transport infrastructure, poverty and illiteracy.

Table 21. Source of day-to-day information on demand

	Number of respondents using various sources					
Source	**Karamoja**	**Eastern**	**Central**	**Western**	**Mid western**	**North**
Personal observation	19 (12)	21 (35)	7 (12)	8 (18)	3 (10)	15 (7)
Other traders	23 (31)	32 (53)	26 (43)	20 (44)	10 (33)	35 (47)
Suppliers and clients	19 (12)	5 (8)	21 (35)	9 (20)	12 (40)	14 (19)
Messengers	8 (11)	0	0	5 (11)	0	6 (8)
News papers	0	0	0	0	0	1 (1)
Radio	1 (1)	0	2 (3)	1 (2)	4 (13)	2 (3)
Respondent sets his/her own price	0	0	3 (5)	0	0	0
others	1 (1)	0	1 (2)	0	0	0

Source: IPRA survey data, May/June 2007
Note: Figures in parenthesis represent percentage

Use of mobile phones and other ICT infrastructure by market agents

Use of mobile phones, landline telephones, and computers amongst people in rural and urban areas where information was obtained are substantial (Table 22). In all the districts, traders advertise themselves by giving a mobile phone number. Taxi drivers are contacted by phone, and retailers try to avoid unnecessary travel by making inquiry over the phone for supplies.

The study found that majority of traders (49 out of 75 consulted in Karamoja), 60 in eastern, 47 in central, 68 in western (west & mid-west), and 56 in northern region use mobile phones despite the relatively high price for mobile telephone calls.

The use of information and communication technologies (ICT) has grown relatively rapidly in a few areas of Uganda. Ten years ago, only a handful of people local internet access, now it is available almost in every town. It was reported that many people had no form of telephone access before the acquisition of mobile phones; but in only about 10 years, more mobile cell phones were deployed in the country than the number of fixed lines laid in the last century. Radio usage tops in certain regions particularly in the north and Karamoja. Hundreds of new local and community radio stations have been licensed.

Table 22. ICT application among traders by region

	Region											
	Karamoja		Eastern		Central		Western		Mid Western		Northern	
	Access	Use	Access	Use	Access	Use	Access	Use	Access	Use	Access	Use
Mobile tel.	58 *(77)*	49 *(65)*	59 *(98)*	60 *(100)*	44	47	41	27	27	27	58	56
Regular (fix line)	18 *(24)*	33 *(44)*	21 *(25)*	41 *(68)*	40	41	01	03	15	18	43	67
Public telephone	50 *(67)*	47 *(63)*	58 *(97)*	57 *(95)*	54	50	14	15	15	17	46	68
Fax service	1 *(1)*	07 *(9)*	00	22 *(37)*	02	01	01	02	00	17	04	32
Computer	5 *(7)*	07 *(9)*	03 *(5)*	22 *(37)*	03	01	02	04	00	17	08	34
Internet	2 *(3)*	07 *(9)*	07 *(12)*	28 *(47)*	04	02	03	04	01	17	07	38
Radio	63 *(84)*	66 *(88)*	47 *(63)*	57 *(95)*	52	41	21	14	28	26	64	66

Source: IPRA survey data, May/June 2007
Note: Figures in parenthesis represent percentage

However, the digital divide is still experienced, where the use of ICT is still very low compared to other regions. Only a handful (less than 20%) indicated that they have access to computers, with internet usage occurring among less than 15 percent; and Karamoja (as expected) remains at the bottom in internet usage (Table 22). The divide between the urban and the rural areas is even greater. Most of the services and users are concentrated in towns, while the majority of the population are scattered in small communities spread out across the vast rural areas.

Very limited diffusion of the telecommunications networks into rural areas (over 75% o the country telephone lines are concentrated in Kampala. Irregular or non-existent electricity supply is a common feature and a major barrier to use of ICTs especially outside urban areas. Further more, the tax regime in Uganda still treat cell phones as luxury items, which makes these exclusively imported items all the more expensive, and even less obtainable by the majority. In addition, excise tax on air time makes it even more difficult for the majority to use mobile cell phones.

Although there has been notable effort by government to remove duties on computers, communication equipments and peripherals are still charged at higher rates. There has been rapid progress in mobile telephony, with the greater emphasis on regulation, compensation policy and universal access.

Use of various communication infrastructures vary among traders across the regions. Traders (in the North and Eastern) seem to be adopting the usage of modern communication infrastructure including internet, computer and fax, and mobile phones. Higher usage is represented in the Northern and Eastern regions than other regions of the country. Radio usage is the most common across the region. However, in rural areas where access to electricity is limited, progress in ICT penetration has been limited (they use dry cells which are unaffordable to many people). This means, discriminating information through a radio is likely to be limiting even to those especially farmers owning radio.

4.6 Means of transportation of agricultural produce

Table 23 shows that access to convenient means of transportation of agricultural produce is still limited as a number of agents use foot, bicycle, and wheel barrow.

Table 23. major means of transport

Means of transport	Karamoja	Eastern	Central	Western	Mid-Western	North
Foot	20	04	10	6	0	21
Bicycle	12	04	25	14	1	11
Hand cart/wheel barrow	03	01	0	0	0	4
Oxcart	00	15	0	3	0	0
Motor bike	00	3	23	8	10	4
Hilux	01	08	1	8	1	10
Dyna (7-ton truck)	23	24	1	2	6	17
Fuso (big truck)	15	08	0	3	11	08
Others	00	01	0	0	0	0

Source: IPRA survey data, May/June 2007

In Karamoja and Northern Uganda where public transport is limited, bicycles is alternative means of transport to market, a number of people walk. Dyna Hilux (7 tone track) – is a popular means of transportation in Karamoja and Eastern region, and the North. Fuso (big) tracks are used to transport cattle from Karamoja, maize from Masindi and Hoima and Sim Sim from the North.

Table 24. Own vs hired vehicles among traders by region

Region	Own	Hire	Both own and hire
Karamoja	10	30	31
Eastern	07	51	02
Central	13	42	05
Western	11	32	01
Mid-Western	02	26	00
Northern	13	45	15

4.7 Financial services

Value chain and term finance

During peak marketing season, when competition for commodities is steppe, credit is one way of seaming greater access to commodities. However, results reveal that convenient and safe deposit facilities, value chain finance and term finance are inadequate or totally lacking in certain areas. As a result, market agents have devised informal financial mechanism to help those involved in the agricultural value chain. For example, farmers are paid in advance for crops, still in the field or just harvested (Table 25). This is common in Central and Eastern region when competition seem to be higher.

Table 25. Credit and terms

	Repayment period (days)	Average credit premium	Karamoja	Eastern	Central	Western	Mid-Western	North
Receive credit from suppliers/buyers	23	7078.3	12	26	44	17	06	33
Provide credit to clients	10	174000	48	46	55	26	30	49
Makes advance payments to farmers	-	-	07	30	45	22	23	29

Source: IPRA survey data, May/June 2007

Across the regions some traders received credit from their colleagues: 12 in Karamoja, 26 Eastern Region, 44 Central, 23 Western and 33 Northern regions (Table 26). It is possible that traders pass in form of advance payment for commodities the credit to their regular suppliers. These are usually very short term advances, for procurement in particular marketing season or purchase contract of 10 – 30 days (Table 26).

Table 26. Traders receiving and offering credits

	Receipt from buyers	Offering credit to clients
Karamoja	12	09
Eastern	26	24
Central	44	43
Western	17	30
Midwest	06	05
Northern	33	29

Source: IPRA survey data, May/June 2007

Mode of payment by those involved in agricultural value chain

Banking services or facilities for payments are lacking in rural areas. As result, cash dominates mode of payment for suppliers used by 68 respondents (traders) in northern Uganda, 63 in Karamoja and Western regions, 60 in the Central, and 47 in Eastern region (Table 27). Most of the traders also receive payment in cash from their clients when they supply commodities; 69 in Northern Uganda, 66 in Karamoja, 67 in Western region, 60 in Central, and 49 in Eastern Uganda.

Table 27. Transaction with suppliers and other clients

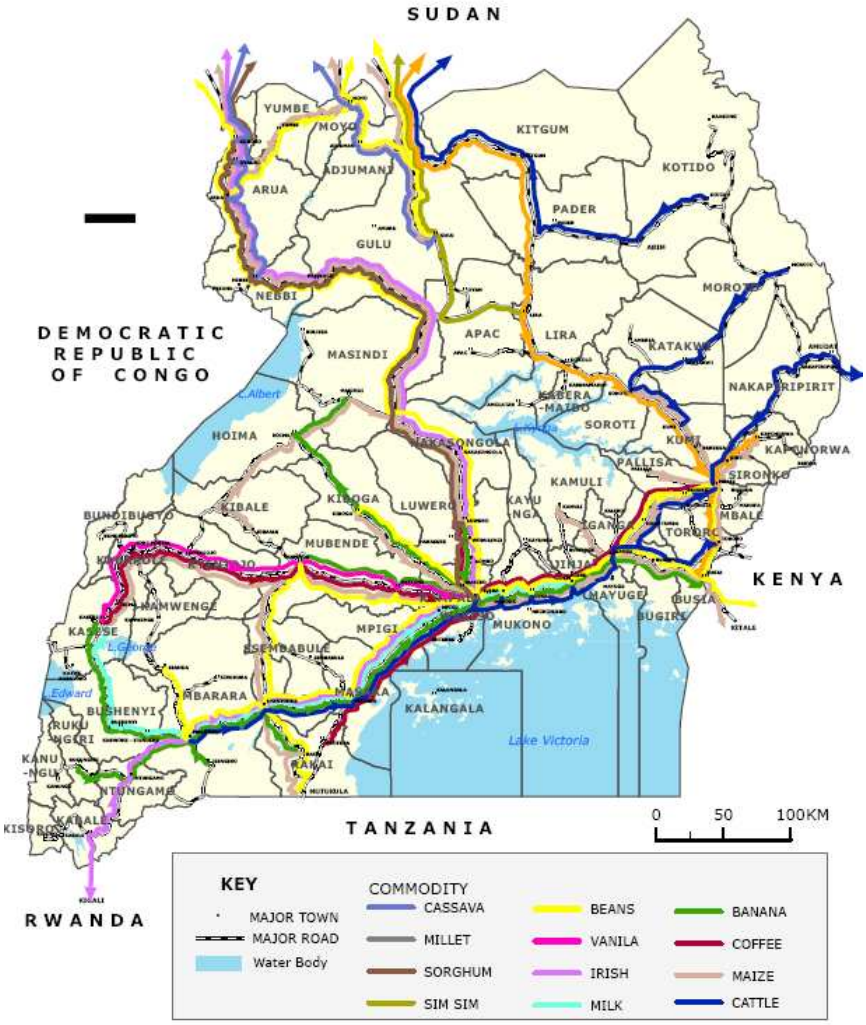
Region	Suppliers						Client s					
	Karamoja	East	Central	West	Mid West	North	Karamoja	East	Central	West	Mid west	North
Cash, local currency	63	47	60	33	30	68	66	49	60	37	30	69
Cash, other currency	0	01	0	02	0	0	2	10	0	1	0	6
Cheque	0	0	0	0	0	01	0	0	0	3	0	0
In kind	0	0	0	02	0	0	2	1	**0**	**3**	**0**	**0**
Wire transfer	0	0	0	0	0	0		0	0	0	0	0
Other	03	01	0	0	0	0	2	0	0	0	0	0

Source: IPRA survey data, May/June 2007

Only 3 traders paid their suppliers in foreign currency other than Uganda shillings and only 19 (with 10 from Eastern) received payment in other currency. A lot of cross border takes place in Eastern Uganda, where both currencies Uganda shillings and Kenya shillings are used. Cheques are rarely used. In Uganda, the public has very little confidence in cheque payment.

5. Intra- and inter-regional trade routes and trade patterns, and linkages between markets

Figure 12. Spatial structure of agricultural market in Uganda – direction of trade flow



5.1 Northern Region

Figure 14 (see also Figure 35 at appendix) indicates two major destinations for sim sim from Lira District (i.e. Gulu and Southern Sudan); two for maize and beans from Gulu (Moyo and Southern Sudan); and five for cassava and beans from Nebbi District (Moyo, Southern Sudan, Kampala, Western Uganda and DRC). Cassava and millet from Arua District are destined for Southern

Sudan; while major destination for cassava and millet from Moyo is Gulu (but often on transit to Southern Sudan).

Figure 14 clearly shows that Northern Uganda's most important trading partner is Southern Sudan. Uganda is the main source of food commodities. Maize, beans, and cassava are transported in pick-ups (Hilux), and Fuso trucks, sometimes in lorry trucks and passengers buses through three main routes to Sudan. These include direct route from Lira to destinations in Southern Sudan e.g. Juba, and Yei, or from Lira via Kitgum or Gulu, to Southern Sudan. Another route is Lira – Gulu –- Adjumani – Moyo, then Southern Sudan.

Some traders connect to Kitgum from Gulu, then Sudan. Lira – Kamudini – Gulu – Kitgum – Southern Sudan route is also frequently used by traders because it is relatively safe. The route through Kitgum is generally insecure due to rebel activities and the roads are in sorrow state. The section of the roads connecting Gulu to Adjumani, Moyo and Southern Sudan is also in bad state requiring serious rehabilitation. However, being the shortest and safest of all the routes to Juba many traders and transporters prefer to use this route to other routes.

The roads connecting Moyo to Koboko, and Arua is impassible. That is why it costs Ushs 25,000 to travel from Moyo to Arua by bus, much higher than a bus fare to Kampala. A direct route from Moyo to Juba is 120 km. The route from Gulu to Southern Sudan involves many traders outside the region. People from west Nile and Sudan come and buy directly from Gulu. This is a convenient route for many traders across the Sudan-Uganda border because of similarity in the language.

Apart from Southern Sudan, Karamoja, Teso (Soroti, Bukedea, etc), Busia and Kampala, (and to some extend Kenya – through Mbale and Tororo), are important destinations for food commodities from northern Uganda. Eastern Uganda used to be the major trading partner (market) for northern Uganda due to geographical proximity, similarity in culture and since eastern region was relatively food insecure. In the 1980s, when Lira – Soroti roads were in good conditions over 60 percent of total volume of trade in northern Uganda was routed to various destinations in eastern Uganda through this route.

Sim sim, millet, beans, sorghum, groundnuts and peas from Lira; and simsim, millet and sorghum from Gulu (through Oyam) are also destined for various markets in Kampala, namely, Kalerwe, Nakawa, Owino, Kisenyi (apart from chicken). Transport on this route is hampered by worsening conditions of roads due to poor maintenance. For example, the section of the road from Mijera all the way to Kampala has a lot of potholes, and some spots are nearly impassable. Still, over 40 percent of traded commodities are transported to Kampala (through here).

The other market destination is West Nile. The goods are normally taken to the principal markets of the major towns in this region like Arua municipal, Nebbi and Pakwach. The goods to this region use route 11 and 4. Route 11 has a road that has recently been rehabilitated. Due to the war, the route lost its important trading relation with the northern region. The major crops from the region are millet, maize and ground nuts. This route has less than 50 tons of goods from the region going to it.

Another less important market destination is from northern region to western Uganda. The major commodities ferried on this route are millet, sorghum and simsim. The commodities normally go to Masindi and Hoima. Sometimes these commodities are ferried to Congo through Lake Albert.

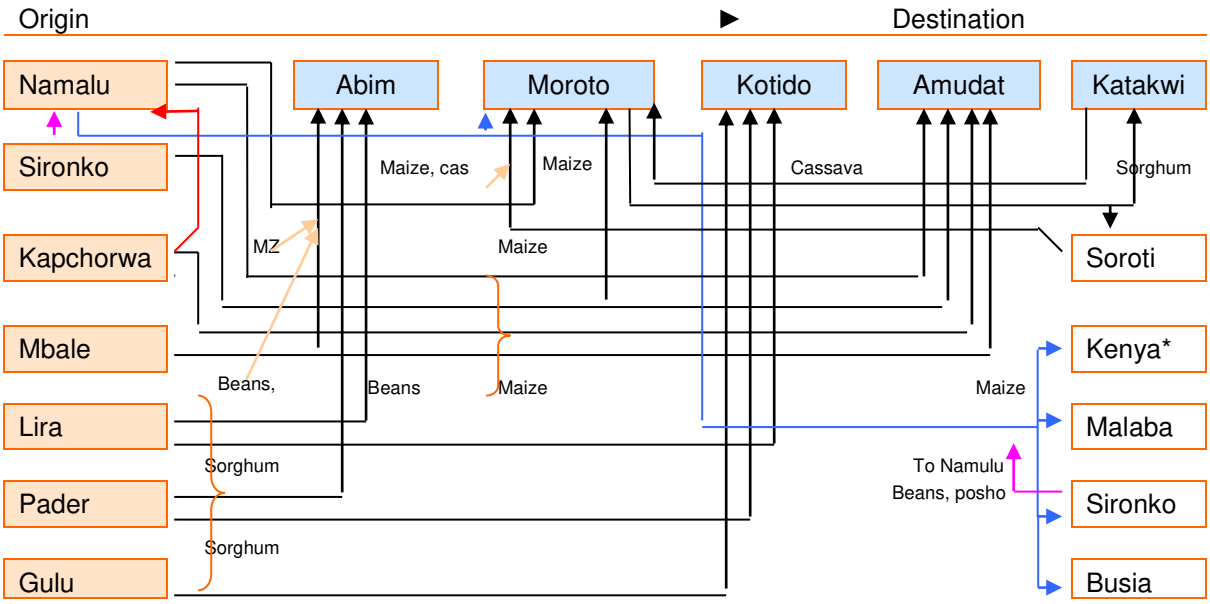
Roads infrastructure and transport within the region

The district has fairly good network of community roads. A number of these roads were constructed /rehabilitated in the late 1990s with financial assistance from the Netherlands Government- implemented under Lire Development Programme. Nearly all the people contacted in Lira believe that roads improvement have enhanced agricultural production. For example, the road from Apala to aloi, passing Abako and joining the Lira- Soroti highway through Amach is said to have boosted the production of sun flower in that belt. These roads were constructed by Uganda Oil seeds processor Association between 1999 and 2001 in appreciation of the potential for sunflower production in the area.

5.2 Karamoja Region

Karamoja is known for importing food, yet poorly developed regional markets for agriculture output, due to a variety of complex reasons: insecurity, poor state of roads network, etc, is a challenge for the population in the region who largely depends on the market. The flow signals in Figure 15 shows the low supply potential of local production. Local supply (for the region) is mainly from Namulu i.e. maize and sorghum to Moroto; maize to Amudat; and Kotido. The external markets for food from Namalu is Kenya, Malaba, Soronko and Busia.

Figure 13. Spatial structure of food market in Karamoja – direction of trade flow



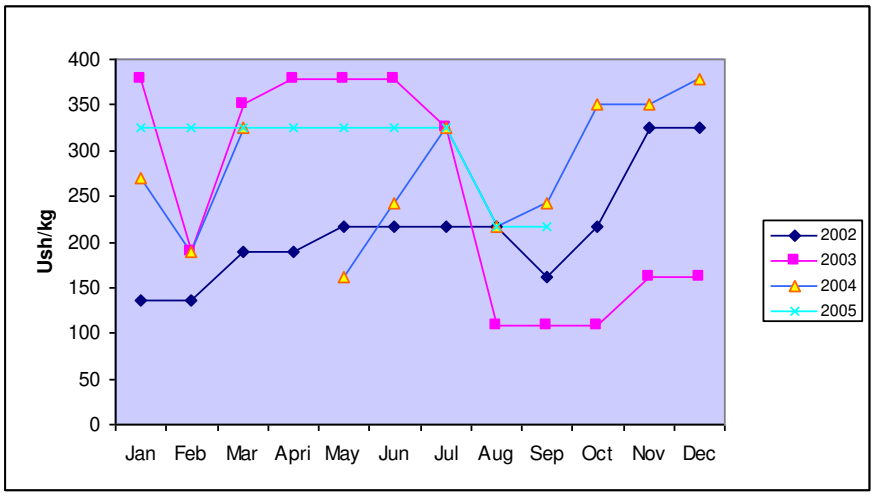
Source: IPRA Survey data, 2007
Note: * Makutano, Kunyao; MZ = maize; Namalu and Amudat are in Nakapiripirit District
Other routes/commodities not labeled in the diagram e.g. → Maize: from Kapchorwa to Namalu/Nakapiripirit; and Iganga to Nakapiripirit
Routes/destinations for cattle: Kotido – Mbale; Kotido – Katuma (Kenya); Kotido – Jinja; Kotido – Pader; Kotido – Lira; Kotido – Soroti

Apart from Namalu, very little of what is produced in other districts (Abim, Moroto, Kotido and Amudat) leaves the region, but is traded internally within district. For example, Iriir supplies the market in Matany (both in Moroto), and Kaaya supplies the market in Abim. Indeed, most of the food supplies in the region, other than in Namalu is from sources outside the region. For example, part of the maize, sorghum and beans, available in various markets in Abim District is procured (imported) from Lira, Pader, Gulu and Mbale districts.

In Moroto, maize comes from Sironko and Soroti (among other sources e.g. Namalu), and cassava from Soroti and Katakwi districts. Among the main sources of sorghum marketed in Kotido are: Gulu, Pader and Lira districts. Being a very dry area, Amudat depends almost entirely on food supplies from other areas/regions.

The seasonal variability in outputs prices in Figure 16 reflects the market and distribution constraints in the region. Sudden increases in prices are associated with low supply of food especially during rainy season when poor roads conditions cut off transport of produce to the region. Incidences of insecurity might also have affected supplies. Vulnerability to price shocks is perceived to be increasing due to decline in output and increasing poverty perpetuated by erratic weather.

Figure 14. Price of sorghum in a local market in Moroto, 2002 – 2005



Source: Karamoja Agro Pastoral Development Programme (Matheniko Agro Pastoral Development Centre) data
Note: It was difficult to access more current data (i.e. after 2005)

Trading routes and trends in livestock sales

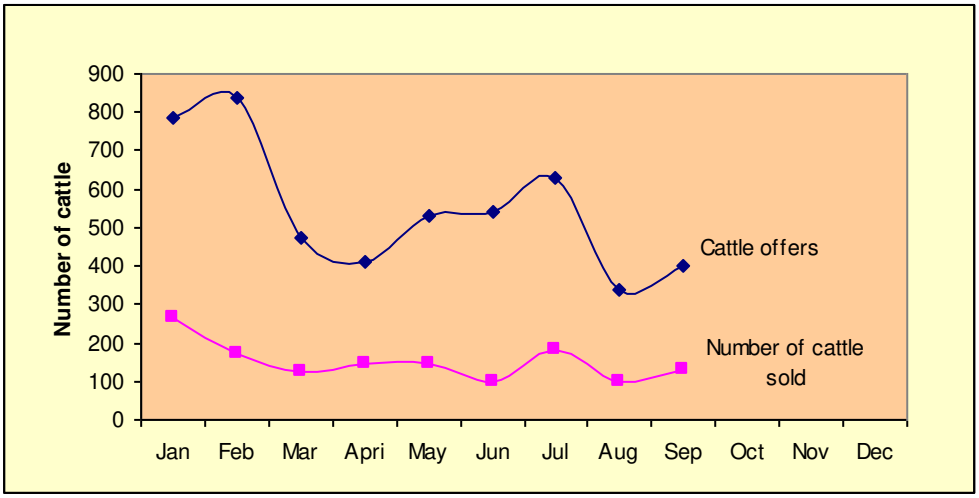
Most livestock traders who operate in Karamoja are from districts outside the regions, including Soroti, Kumi, Katakwi, Mbale, Lira, Katuma (in Kenya), Jinja, and Pader – which for several years have been the main destinations for livestock from Karamoja.

Demand seems to be limited as Figure 9 indicates that less than half of the cattle offered for sale in Moroto in 2005, for example, were sold. The demand is constant at about 200 heads of cattle per

month, compared to 400 to over 800 heads of cattle brought to the market every month. On 26 September 2006 we had visited Naitakwae market and found that 170 head of cattle were brought to market that day, but only 50 (less than 30%) were bought.[13]

The market authority explained to us that few buyers turned up that day since it had rained and the roads were bad. While we agree that it had rained the previous week and some sections of the roads were affected, we believe that the roads conditions could not have changed the sales dramatically because monthly sales were quite similar for the last 5-6 months.

Figure 15. Aggregate number of cattle offered for sale, and sold in 2005, Moroto



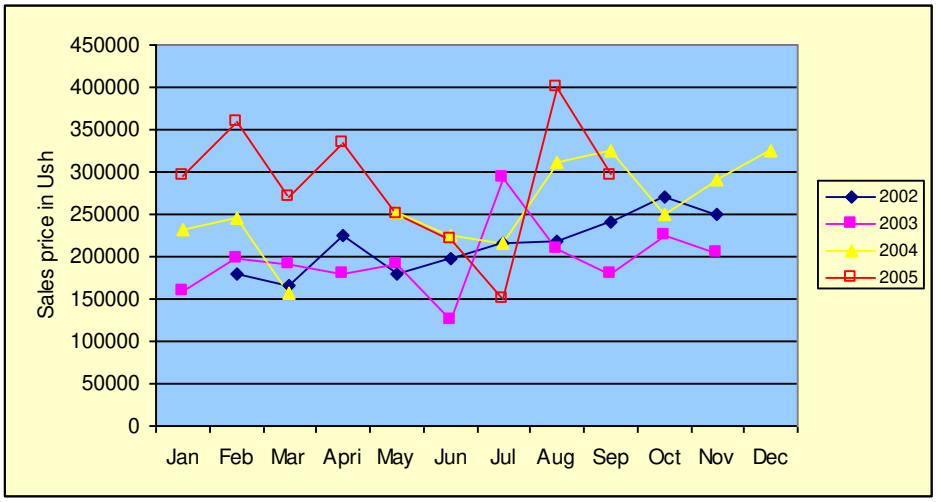
Source: Karamoja Agro Pastoral Development Programme (Matheniko Agro Pastoral Development Centre) data
Note: It was difficult to access more current data (i.e. after 2005)

Correlation between livestock sales and grain prices

Livestock sales levels in Karamoja tend to correlate with grain prices. Using the data for Moroto for the period 2002-2005, lowest livestock sales were recorded at the time when prices of sorghum was lowest, and that corresponded to harvesting season (August, September and October) when relatively few animals are offered for sales. Similarly, the highest livestock sales occurred at the time when prices of sorghum were at the highest (March, April, and July) and the price of livestock had dropped. This corresponds to lean or off-season, when there is high rate of disposal of assets.

[13] On 26 September only 20 goats, 15 sheep and 6 poultry were sold.

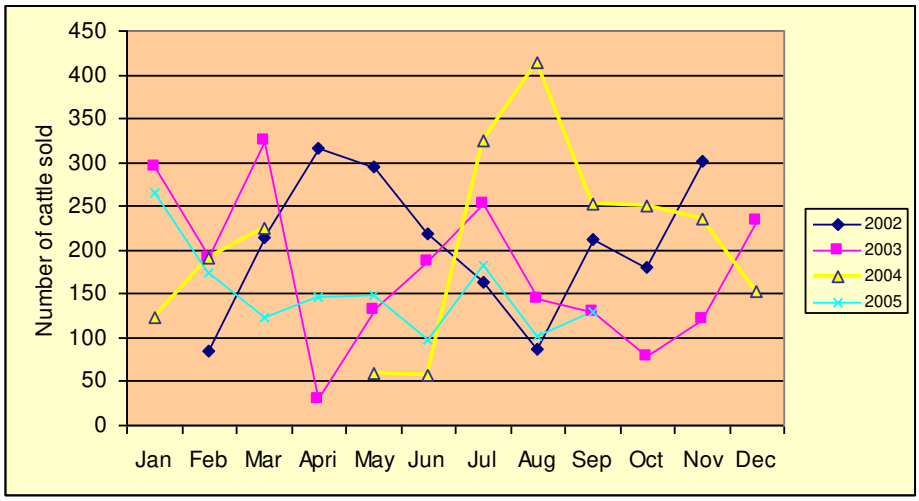
Figure 16. Trend in price of cattle (a bull) in Moroto



Source: Karamoja Agro Pastoral Development Programme data
Note: It was difficult to access more current data (i.e. after 2005)

The results in Figure 19 seem to reflect the conditions that prevail from year to year. High disposal of assets i.e. high livestock sales - reflects adverse weather conditions and magnitude of (unmet) household needs. Low disposal of assets may reflect favourable whether conditions experienced that year (e.g. 2005), food aid and other relief interventions.

Figure 17. Trends in cattle sales in Moroto District, 2002-2005



Source: Karamoja Agro Pastoral Development Programme data
Note: It was difficult to access more current data (after 2005)

Year 2005 represents the lowest incidences of cattle sales in the last four years. It was also the only year that showed a stable grain price from January up to July when it declined. There are two possible explanations for this – improved timing and distribution of food aid, and favourable weather in 2005.

5.3 Eastern Region

As illustrated in Figure 35 (Appendix), the final destination for most of the food commodities particularly maize is Busia. From Busia, much of the maize crosses the border to Kenya. Cross-border transactions are aided by brokers found on both sides of the border especially where they act as agents and commodity assemblers for big traders. Brokers generally have the most current information and networks on commodity supplies and prices across the borders. A Kenyan trader would contract Kenyan brokers who then link up with their Ugandan counterparts (working for stockists) - to initiate a transaction.

Part of the maize exported to Kenya returns to Busia and other eastern districts (Uganda) as posho, at much higher prices.

The main season for maize is July-October and December-May, when traders try to accumulate stock (a trader may hoard 25 tonnes of maize, or more) in anticipation for higher prices. Prices differ across the districts. For example, in the previous harvest when a kilo of maize was Ush210 ($0.12) in Kapchorwa, it was being sold at Ush 210($0.121) in Busia District. When prices rose to Ush 250 ($0.14) in Mbale, it even went much higher to Ush 370 ($0.213) in Kapchorwa and Ush 400 ($0.23) in Busia (in off peak season). It is relatively more expensive to transport produce to Kapchorwa which is off the main road with difficult topography than Mbale and Busia that are on the highway.

The extent of cross-border trade

In all the regions, there were cross border activities taking place. About 45 percent of traders interviewed in the North reported that they were indeed involved in trade across the national boundaries; 18.64% in the East reported so; 17% in the West; 16.67% in Mid west; 10% in Central and 6.9% in Karamoja (Table 28).

Table 28. Number of respondents (traders) involved in cross border trade by region

Region	Number	Percentage		
Karamoja	04	**6.89**		
Eastern	11	18.64		
Central	06	10.00		
Western	07	17.07		
North Western	05	16.67		
Northern	33	44.59		

Note: The frequency is out of total number of traders interviewed within the region

A large part of cross-border trade comprises day-to-day transactions between traders living in locations on either side of the Ugandan borders. Most commodities crossing borders are absorbed by the local markets along the border – usually delivered on bicycles and heads, and hands in 'caveras' (polythane bags) normally in small quantities. Whether to brand such transaction an illegal/illicit trade or not, is not so straightforward because they could easily be mistaken for goods for own personal use or gift from relatives. Besides, the region's borders are inherited from a colonial era that split entire communities who shared historical trading, family and cultural links, which makes these small-scale types of transactions to attract less attention.

Again, since small traders operate without many cost hassles associated with customs clearance, it is generally convenient and less expensive for traders to buy from them than to pass with large consignments through the customs. Even those involved in small transactions are upgrading slowly into handling huge consignments especially where they act as agents and commodity assemblers for big traders, who use them to avoid delays and costs associated with passing through the official border posts or customs.

5.4 Western Region

Figure 9 (appendix) provides major market destinations for key commodities from western Uganda e.g. banana and milk from Mbarara; Irish potatoes from Kabale; maize and coffee from Kasese, maize from Masindi and Hoima. Kampala alone accounts for over 30 percent of the total market for Irish from Kabale. Katuna and Kigali accounts for about 20 percent, Mbarara about 10 percent and southern Sudan about 5 percent. About 5 percent goes to Masaka, Wakiso, Mukono, and Jinja, among other districts.

Toro, Mbarara, Bushenyi, Ntungamu, Kabale, and Kampala are major markets for maize from Kasese.

Kampala is also the main market for banana from Mbarara (part of the supply goes to Wakiso, Jinja and Entebbe). Mbarara also supplies Kampala markets with milk (at least 15% of milk sold in Mbarara is transported to Kampala and about 10 percent to Toro sub-region and Kasese). Most of the milk traders operate diaries with coolers for storage. However, power shortage and high electricity tariffs were the major problems a cross all milk traders.

Masindi and Hoima represent the region in maize production and trade. There are three major centres that serve as points of exit for maize from Bunyoro, namely, Masindi Town, Bweyale, Kigumba, and Hoima Town – to various destinations including Southern Sudan (Juba and Torit), Kampala, Arua, Gulu, and Kitigum. At the time of the survey (June 2007), Southern Sudan was providing the largest market for maize from the region followed by Kampala, Gulu, Kitgum, and Arua.

Comparing prices within the region

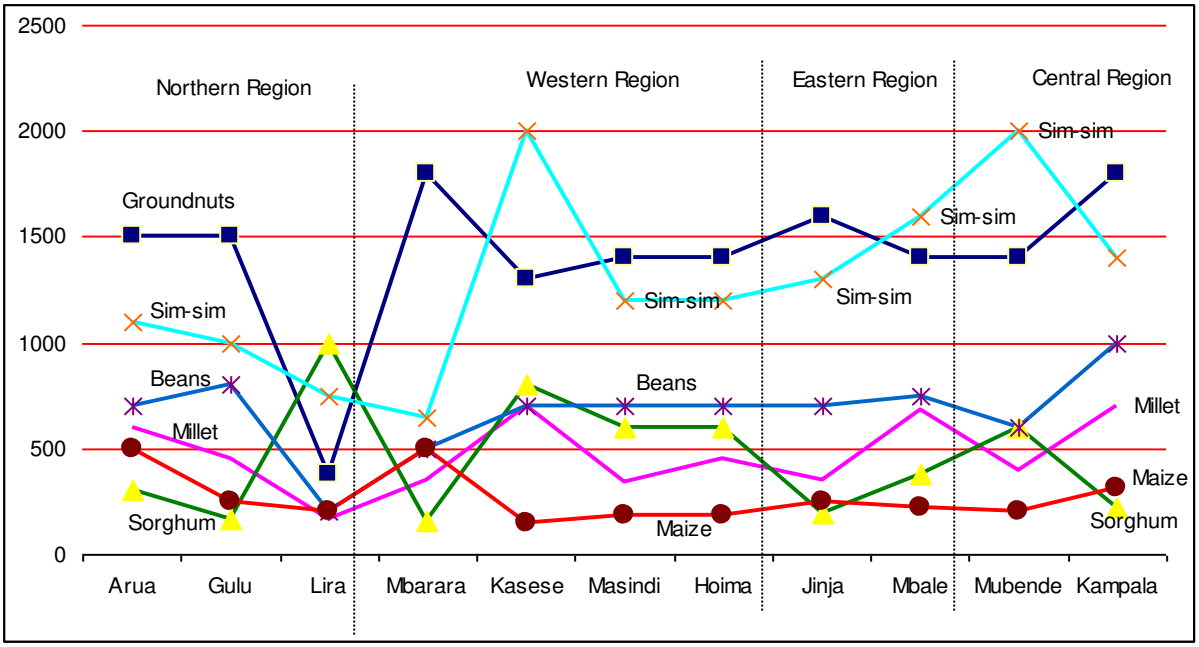
Prices vary widely across the region. For example, an average bunch of matoke (banana) from Rubale (Ntungamu District) was Ush.3500 ($2.02) in Kabale, and 4000 in Kasese (for a bunch coming from Toro, Kichwamba, Ishaka or Bushenyi). Figure 20 provides another example of how the prices tend to vary substantially across the region and the final market.

5.5 Central Region

Banana is the main staple and key export commodity in the region. Maize, beans, rice and Irish potatoes are the main commodities imported from other regions. Looking at Figure 8, you will notice that Kampala is the main destination for commodities from each of the districts. From the districts visited, Mubende ranks as the largest regional supplier of banana especially to Kampala.

There are other traditional routes as well. For example, Mityana market is supplied mainly by Mubende; Kyankwanzi by Kiboga; Rakai by Masaka, and Luwero by Mukono. Due to short fall in production, the region receives further supply (of banana) from Bushenyi and other districts outside the region.

Figure 18. Comparison of prices across the regions (retail prices), June 2007



Source: Survey data, 2007

5.6 Food distribution constraints

Agricultural markets in Uganda like else where in developing countries are characterized by inadequate physical and marketing infrastructure, information asymmetry among producers and traders, and entry barriers due to the inefficient functioning of support services such as credit and transport. These factors contribute to high transaction costs and arbitrage failure in intra-trade across regions within the country, leading to inefficient allocation of resources.

Local tax

One of the marketing constraints that farmers and small traders face are several layers of taxes along the way to the market.

Does local government taxation hinder distribution? Some testimonies from Lira

"If you are taking your produce even if you are transporting your produce from the garden to the homestead, you would be asked to pay. So I do not know if it is a road due or a market due.
If you are taking produce like sunflower for exchange for oil; you will be asked to leave property like a graduated tax ticket or a bicycle pump which you could reclaim if you returned with cooking oil.

" A woman was taking sunflower to exchange with cooking oil in Lira when she was asked by tax collectors on the road to leave her baby towel with local tax officials; that she would claim, when she came back with cooking oil".

Women taking maize to sell pay tax to those standing on the way to town and they would be required to pay another tax when they reach town.

According to community interviewed in Lira, there are 3 types of taxes levied on when they take their commodities to sell: road due (tax), and market due. Additional tax is levied if the commodity is to be taken around town (mobile sale) – i.e. outside gazetted markets.

Fish Mongers who buy fish from kyoga to Apala but happen to pass Lira are asked to pay tax. This is what makes it look unrealistic and because of this, farmers are discouraged from taking their produce to town or major trading centres. Instead, they have resorted to selling crops from the garden.

Poor means of transportation of agricultural produce

Uganda faces an enormous challenge to develop transport infrastructure that can support the country's goals of poverty eradication and MDGs. Road is the dominant mode of transport, accounting for over 70 percent of the volume of freight and human movement. In 2005, for example, about 70 percent of exports crossed Uganda's border by road and 29 percent by air. In the same way, 83 percent of the imports came in by road and 15 percent by air (Table 29).

Table 29. Share of export and imports by modes of transport (%)

Modes of Transport	Exports (%)	Imports (%)
Air	29.3	15.2
Road	70.1	83.8
Railway	0.4	1.0
Uknown	0.2	0.0

Source: Uganda Bureau of Statistics

Within the country, nearly 100% of producers and traders use roads to transport commodities to markets some of which are perishable in nature (e.g. milk and vegetables). With roads being the

dominant mode of transport, a good road network can facilitate market integration by linking surplus areas to deficit areas, and producers to input markets.

Over the last fifteen years, considerable progress has been made in roads improvements as government and development partners invested heavily in developing and rehabilitating roads infrastructure in various parts of the country. However, most community access roads and urban roads are still in a very poor condition. [14]

In many areas that were visited, most of the routes linking villages to township are hard to access by trucks and passenger transport. In western Uganda, the routes from Rubanda county and Ikumba for example, need substantial rehabilitation. Transport cost for a bag of Irish is Ush.7000 ($4.04) to Kampala which is very high. The road networks in Kasese and Mbarara are quite good and traders find it more accessible. The section of the roads connecting Gulu to Adjumani, Moyo and Southern Sudan is also in bad state requiring serious rehabilitation. The roads connecting Moyo to Koboko, and Arua is impassible. That is why it costs Ushs 25,000 to travel from Moyo to Arua by bus, much higher than a bus fare to Kampala. [15]

Railways

The railway network has virtually collapsed. Only 2 lines are functional (Kampala-Malaba and Tororo-Soroti line – commissioned in July 2004), yet it is the cheapest means of transport for bulky agricultural products. Railways currently handle less than 30 percent of Uganda's bulk cargo to and from the ports of Mombasa and Dar-es-Salaam

[14] There is about 70,800km roads network in the country (10, 500km of national roads, 27,500km of district roads, 2,800km of urban roads and about 30,000km of community access roads). The national roads are developed and maintained by the Ministry of Works, Transport and Communications (MWTC), while district roads are maintained by district local governments, and urban roads by urban local government and community access roads are maintained by the area sub-counties.

[15] The 10-year road sector development plan (RSDP), which started in 1996, guides investment in roads infrastructure. Implementation of the RSDP is managed by the Road Agency Formation Unit (RAFU) - established in 1998. Such agencies also exist in other countries like Ethiopia, Zambia and Ghana. The Ministry of Works, Transport and Communications has retained its overall planning mandate, while the coordination unit within the Ministry of Finance develops an expenditure programmes for the RSDP and oversees performance of the work undertaken.
National budgets for district, urban and community access roads are protected from cuts and is financed via *Poverty Action Fund* (PAF) resources.

Table 30. Trade/market barriers experienced by traders

Experienced restriction	Region					
	Karamoja	**Eastern**	**Central**	**Western**	**Mid-Western**	**North**
Police conduct	03	11	26	16	02	29
Inter district blocks	07		00	00	01	04
Export blocks	01	00	00	03	02	00
Food company regulations	01	01	00	00	00	01
Tolls	01	01	04	01	00	04
Ministry of trade regulations	00	00	00	01	00	02
Health inspections	04	00	00	00	00	01
Others	07	00	08	01	06	02

Source: Survey data, May/June 2007

Cross-border transits

Uganda, being a land-locked country, relies on the ports of Mombassa and Dar es Salaam to transit her exports and imports. Other landlocked countries in the regions that rely on the northern and the central corridors (Mombassa and Dar es Salaam ports, respectively) for their external trade are Burundi, Rwanda and Eastern Congo. The northern corridor comprises roads/rail and lake network from Mombassa to Kampala. It has road routes from Mombassa via Malaba and Busia to Kampala – Malaba/Kabale reaching Kigali and Butare in Rwanda and on to Bujumbura in Burundi.

The Northern Corridor Transit Agreement (NCTA) signed in 1985 aimed at simplifying and harmonising procedures relevant to the expeditious movement of goods in transit. The agreement provided for establishment of Transit Transportation Coordination Authority (TTCA), which is responsible for implementation of NCTA particularly matters related to transit traffic.

The contracting states are Kenya, Uganda, Rwanda, Burundi and Democratic Republic of Congo. With TTCA the northern corridor has tried to sustain its traditional role as the main route to the landlocked countries. However, TTCA has not been fully successful in reducing the delays relating to cumbersome transit procedures along the northern corridor. These problems are created by the rigidities in government management at transit points, lack of political commitment and political instability in some countries in the region.

Some of the problems faced by the transit transporters along the northern corridor:

- The roads conditions deteriorated on most sections owing to insufficient maintenance and axle overloads;
- Increased transit times and higher operating costs have led to the increased transit costs that are born by the consumer;
- Inadequate facilities at Nakawa in Uganda inland depot and other container depots has led to delays in clearing imports and exports by customs department of Uganda Revenue Authority;
- Lengthy customs procedures and too many uncoordinated institutions involved in the processing of papers (at port of Mombassa and Border crossing points). The facilities at Malaba on the Kenya-Uganda border crossing point are inadequate hence impede the free flow of transit traffic;
- Uganda, Kenya and Tanzania Railways Corporations all have a shortage of locomotive powers and wagons. They run on an old rail network that impedes transportation by rail to a great extent making road transport the most preferred though expensive option;
- The strict enforcement of axle load limits implies less tonnage for most vehicles and this is unfavourable to cargo transporters because their income is independent on tonnage. As a result, some transporters have ended up paying fines or corruptly paying their way through the weigh bridges or have had the excess cargo off loaded in places where there are no cargo storage facilities especially at the border points;
- According to the Northern Corridor Observatory Baseline Survey Study and Corridor Performance Indicators, it takes seven days to transport goods from Mombasa to the Kenya-Uganda Malaba border-post. Without non-tariff barriers, it should take 3-4 days.
- Port procedures take over 60 hours followed by border post procedures that take 15 hours;
- A World Bank Study shows that insecurity, border crossing procedures, too many weighbridges and road blocks are among the non-tariff barriers causing delays in transporting goods on the northern corridor.

Recently Uganda's State Minister for Trade observed that, barriers introduced along the route have a double effect of increasing the cost of industrial inputs and exports, thereby impacting negatively on the economy. Barriers to the smooth flow of cargo increase the cost of doing business along the corridor. The recently launched East African Trade and Transportation Facilitation Project funded by the World Bank is expected to bring about reduction in transit times (and hence costs) along the Northern Corridor. With assistance of the World Bank sub-Saharan transport policy and Programme, the Northern Corridor is establishing an observatory of non-tariff barriers and performance indicators.

5.7 Market integration and linkages

The Johansen test is based on a vector regressive (VAR) model. The bivariate cointegration test of prices between different markets was carried out with VAR = 2. The results are presented in Tables 31-32. The livelihood ratio (LR) statistic tests (Table 31) reject the null hypothesis that there is zero cointegrating relationship between the two price series Y1 (Kampala prices) and Y2 (Mbale prices) in both cases (i.e. maize and beans). The LR tests do not reject the null hypothesis that there is at least one cointegrating relation.

Table 31. Johansen's Bivariate tests for Y_1 and Y_2 (Kampala-Mbale maize prices)

HO: rank = r/No. of cointegration (r)	Elgenvalues in descending order	Max LR test statistic	95% critical values	Trace LR test statistic	Critical value 95%
R = 0	0.18106	23.0538	16.58	24.3755	19.706
R < = 1	0.012001	1.4140	9.100	1.4140	9.100

Note: Critical values from Osterwald-Lenum (1992)

The cointegration tests suggest that prices of maize and beans between Kampala (Y_1) and Mbale (Y_2) have an equilibrium condition that keeps them in proportion to each other in the long run.

Table 32. Johansen's Bivariate tests for Y_1 and Y_2 (Kampala-Mbale beans prices)

HO: rank = r/No. of cointegration (r)	Elgenvalues in descending order	Max LR test statistic	95% critical values	Trace LR test statistic	Critical value 95%
R = 0	0.1800	21.4583	14.85	22.7596	17.86
R < = 1	0.012201	1.3013	8.07	1.3013	8.07

Note: Critical values from Osterwald-Lenum (1992)

Tables 33 and 34 suggest that prices of maize and beans in Kampala (Y_1) and Mbale (Y_2) are pair-wise integrated meaning that all the prices contain the same stochastic trend. The implication of this result is that there is some factor (most probably arbitrage) that binds the prices together over time. Kampala and Mbale's maize/beans are in the same market.

Table 33. Estimated cointegration vectors in Johansen estimation (Kampala-Mbale maize prices)

Variables	Estimates Un-normalised	Estimates Normalised (to Y_2)
Y_2	-0.003019	1. 0000
Y_1	0.002008	-0.9200

Note: Normality tests are carried out using Doornik and Hansen's (1995)

Table 34 Estimated cointegration vectors in Johansen estimation (Kampala-Mbale beans prices)

Variables	Estimates Un-normalised	Estimates Normalised (to Y_2)
Y_2	-0.008776	1. 0000
Y_1	0.007090	-0.9222

Note: Normality tests are carried out using Doornik and Hansen's (1995)

6. Food aid and other support programmes

World Food Programme (WFP) is the leading food aid agency in Uganda. Between 1995 and 2004, about 17 million metric tones of food have been delivered to various countries including Djibouti, Eritrea, Ethiopia, Sudan, and Uganda, among others (Table 34). Between 1994 and mid-May 2007, WFP bought over 1.1 million metric tons of food worth about US$ 280 million, within Uganda – hence enlarging market opportunities for Ugandan producers.

Table 35. Food aid deliveries by recipient country ('000 tons - cereals in grain equivalent)

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Djibouti	20	11	14	11	11	12	11	21	8	13
Eritrea	104	40	54	110	35	257	319	162	348	304
Ethiopia	636	457	434	594	877	1527	1155	339	1998	790
Kenya	80	32	117	142	72	301	387	167	224	212
Somalia	53	32	5	69	40	61	10	34	33	44
Sudan	82	108	114	201	294	182	203	149	256	389
Tanzania	145	30	42	81	32	63	185	93	132	126
Uganda	77	43	73	88	99	87	80	82	200	257
GHA total	**1197**	**752**	**853**	**1296**	**1459**	**2490**	**2349**	**1048**	**3198**	**2136**
SSA	**3299**	**2570**	**2429**	**2777**	**2786**	**4010**	**3693**	**2929**	**5434**	**3806**
GHA % SSA	**0.36**	**0.29**	**0.35**	**0.47**	**0.52**	**0.62**	**0.64**	**0.36**	**0.59**	**0.56**

Source: WFP/INTERFAIS, June 2005
* 2004 data are provisional

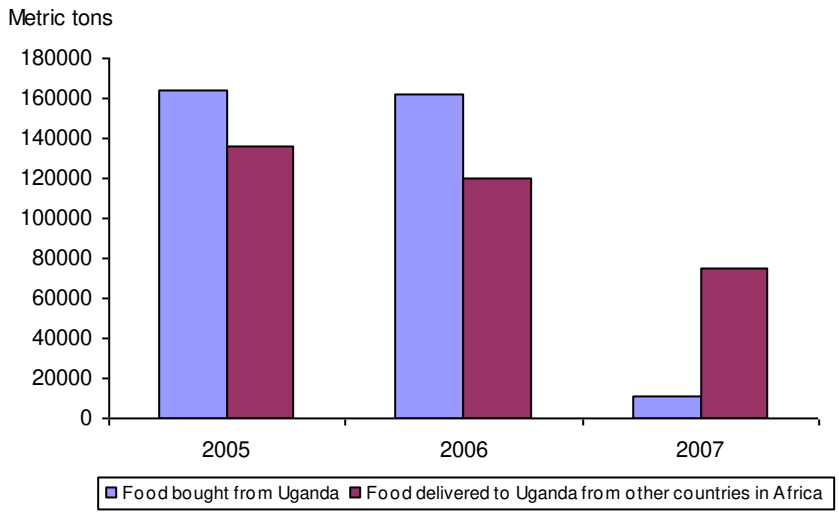
The trend in Figure 31 is consistent with the desire to improve market conditions in Uganda - by sourcing locally - which is also in line with WTO provision that food aid shall not contribute to commercial displacement. The approach by WFP seem to emphasize on promoting local supplies than relying on external sources (other countries) for food distributed by WFP. This will help to addresses the trade aspect of food aid, and the effect of food aid on local agricultural production that has a negative impact on development through depressed prices – by encouraging local sourcing as far as possible.

About 80 percent of the food purchased for cash in 2007, 2.1 metric tones, valued at more than US$760 million was bought from about 69 developing countries. Under the programme, WFP

buys food supplies such as grains from areas that produce more than enough food and takes it where there is scarcity instead of importing it from other countries. If the cost of food in a country exceeds the cost of importing plus the transport costs, then WFP will not purchase locally. Soaring commodity and fuel prices have a major impact on WFP's ability to deliver food to the hungry. Local purchases create win-win solutions to hunger. In an area of soaring food prices – which hit hardest those already hungry – such solutions are more critical than ever.

One way in which WFP is able to offset some of these price rises is to buy food on local markets in developing countries, where prices are sometimes lower and which are located closer to areas where WFP distributes food. As food prices rise, helping to support local markets and to keep food affordable to the most vulnerable becomes ever more important.

Figure 19. Food from external sources compared to domestic purchase



Source: based on WFP data
Note: The data for 2007 is only up to May

In recent years, WFP has been buying half of the food it supplies in Uganda from traders in Uganda through a competitive bidding process, and from the farmers group – hence contributing to local livelihood. Local procurements create a ready market for farmers who end up producing

more as they are sure of selling their products at competitive prices. Purchasing food locally helps provide more income for small-scale farmers, while saving money for WFP.

Available information indicates that in 2006, WFP bought 7 percent of its total local maize purchase from small-scale farmers' groups, and 93 percent from traders (Table 34). Total purchase in 2006 through this scheme (from farmers' group and traders) amounted to substantial 106,005 metric tones of food (maize and beans combined).

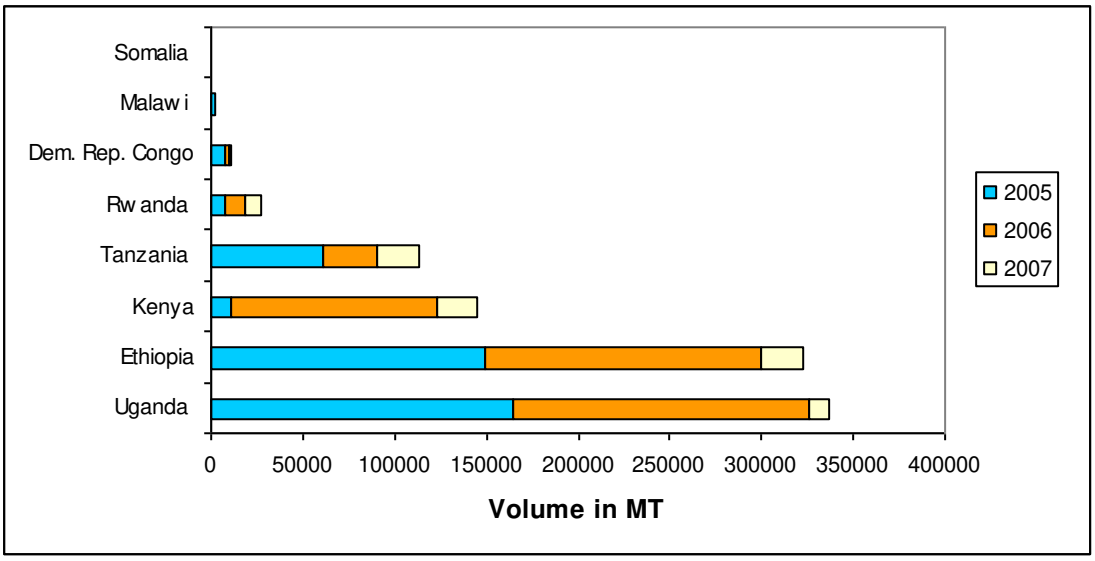
Table 36. Volume maize and beans purchased by WFP from farmers' group and traders in Uganda, 2006 (in metric tones)

	Farmers group	Traders	Total
Maize	6363	82766	89129
Beans	1087	15789	16876
Uganda total	7450	98555	106005
Grand total	**7450**	**98555**	**106005**
Percentage of purchase of maize and beans	7.03%	92.97%	
Percentage of purchase of maize only	7.14%	92.86%	

Source: WFP

Compared with other countries in sub-Saharan Africa where WFP undertakes local food procurement, Uganda has registered the highest purchases in recent years, followed by Ethiopia, Kenya and Tanzania (Figure 32).

Figure 20. Comparison of WFP purchases (from traders/farmers) in selected countries



Uganda has maintained its place as the leading supplier of food to the World Food Programme. In 2007, WFP purchased about 210,000 metric tones of food (worth about $54.8 million or Ush 98 billion) from Uganda. This tops the list of developing countries from which food was purchased locally.

Among developing countries, Ecuador came second with food supplies worth $51 million, followed by Turkey and Pakistan at $44 and $36 respectively. In 2006, Uganda also topped the list with food supplies worth $41 million, constituting 7 percent of total food supplies. Most of the procurements in Uganda include fortified maize flour and grains and beans.

Table 37. Food procurement by WFP from traders and farmers groups, in MT

Country of origin	2005	2006	2007	Grand-total
Dem. Rep. Congo	7295	2300	1233	10825
Ethiopia	149013	151061	22382	322456
Kenya	10645	112427	21733	144805
Malawi	2512			2512
Rwanda	7465	10675	9435	27575
Somalia		25	120	145
Tanzania	60821	30022	22730	113573
Uganda	164271	161530	11448	437,249
Grand total	**402,023**	**468,040**	**189,080**	**1,059,143**

Source: World Food Programme

Out of the total purchase, 8 percent is distributed for relief and recovery programmes in Uganda, including supply to displaced people in northern Uganda and thousands of drought-affected populations in Karamoja, among other vulnerable populations. The rest is used in WFP programmes in Rwanda, Burundi and the Democratic Republic of Congo. Table 36 lists the recipient countries of WFP food procurement programme.

Table 38. Recipient countries of WFP food procurement programme

Recipient country	2005	2006	2007	Grand-total
Burundi	35,710	31,240	41,396	108,346
Dec. Rep. Congo	21,592	4,391	5,667	31,650
Djibouti		312	30	342
Ethiopia	143.879	150,749	22,352	316,980
Kenya	3.375	100,435	15,616	119,426
Rwanda	13,851	13,670	4,251	31,772
Somalia	516	16,093	5,832	22,441
Sudan	2,306	2,833		5,139
Tanzania	44,331	28,806	18,471	91,608
Uganda	136,462	119,511	75,466	331,440
Grand total	**402,023**	**468,040**	**189,080**	**1,059,143**

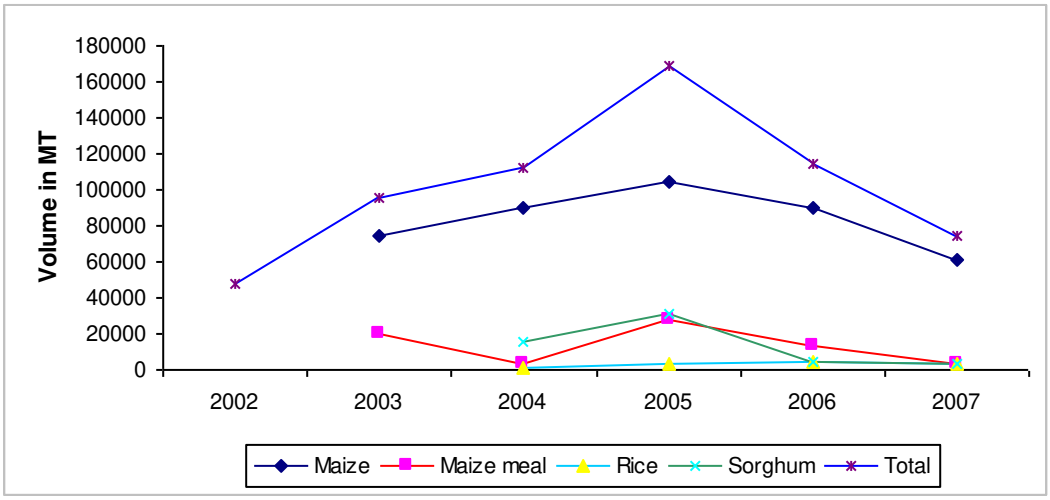
Source: World Food Programme

In spite of sustained large scale humanitarian interventions, there are no clear indications that food insecurity trends of rural households are showing significant improvements. In stead, humanitarian aid requirements seem to be increasing with more frequent food emergencies (Figure 33 highlights this trend for the case of Uganda). This is a major concern to national governments, the donor community and humanitarian agencies whose main objective is to provide humanitarian assistance to enable households effectively cope with emergencies and preserve their livelihoods.

In addition to providing market opportunity for local producers, WFP has been facilitating training for farmers groups in post-harvest handling, storage and commercial agriculture. Over 400 farmers have participated in this training in 2006. WFP has made effort substantive contribution to improving quality standards and export potential in the country by working together with farmers groups and traders. Since 2006, WFP has adopted the East African Community maize standards

for all its purchases. This will make it easier for maize originating from Ugandan to be traded regionally.

Figure 21. Distribution of cereals in Uganda (by WFP), 2002-2007



Source: World Food Programme

In a strategic move, the WFP is working on plans to expand its food procurement activities to better support sustainable crop production and help address the root causes of hunger. The aim is for agricultural markets in Africa to develop in such away that by 2015, more of Africa's low-income farmers – the majority of whom are women – are able to produce large surpluses of food, sell them at a fair price and earn sufficient incomes to help them get out of poverty. In deed WFP is no longer just feeding the hungry people, but helping to develop sustainable solution to hunger.

7. Conclusions and recommendations

The study examine the structure and functioning of the food market in Uganda, the role of agricultural reforms with regards to food security, the trends in food production and consumption, market linkages, seasonality and shocks, among other things. Based on findings from a survey sample of 345 traders in 22 districts and key information from key informant interviews and secondary sources, the study reached the following conclusions:

Liberalization of agricultural reform has contributed to inequality in rural areas – as share of benefits (share in export prices) is disproportionately skewed towards cash crop farmers (food crop farmers – comprise the poor majority). This means that poverty among food crop farmers is less likely to reduce is spite of liberalized market. A fall in food production and consumption per capita and increase in food exports signifies a vulnerable situation that could degenerate into worsening food insecurity problem if no appropriate action is taken.

Localized supply shortages in many parts of the country (despite adequate food in the aggregate - at national level) and debilitating seasonal shortages are caused by poor functioning of the market. The poor state of the market infrastructure and high transportation costs, coupled with underdeveloped price information transmission channels, tend to limit the geographical coverage that can be reached by each trader in the food markets. As such, food distribution continues to be a problem.

Food markets across regions could be in the same market boundary as a result of arbitrage as evidenced by the existence of co-integration between them.

Recommendations – Uganda government and development partners

There are several policy implications from these findings. First, since food production may be adversely affected if prices of food continue to lag behind prices of other commodities and if domestically produced foodstuffs are substituted for imported food stuffs. Policy options should be adopted that promotes not only export-driven production, but that gives priority to food

sustainability. Measures may have to be taken to save food producers from collapse and to increase agricultural productivity.

Given the poor state of the infrastructure and high transportation costs, which limits equitable distribution of food across different parts of the country, food insecurity can be reduced by interventions to improve redistribution through increased public investment in infrastructure particularly rural roads networks. Increasing the productivity of small holder agriculture to raise rural incomes as a strategy to reduce poverty will not be achieved without first improving the necessary infrastructure.

General financial interventions and alternative credit sources can help improve market integration by enhancing ability of farmers and traders to keep stocks of staple foodstuffs for many more months after harvest. Policy interventions for improvement of market integration in the long-run may take the form of improvement of market infrastructure, price information channels, roads networks in rural areas and transportation facilities, which may help to reduce the high transport cost and enhance inter-regional trade. This is likely to lead to expansion of the market boundary within which each trader dealing in foodstuffs operates and to increase accessibility to market by those in food deficit areas.

Specific recommendations - for WFP

If the price dichotomy is a result of differences in quantity of food supplied in different markets, producers in the low price areas may be able to take advantage of higher prices in the deficit areas by moving their foodstuffs from food surplus areas to food deficit areas. This will redistribute food equitably and reduce income inequality (between cash crop producers and between producers in different regions). To this end, special efforts are needed to ensure that market and trade information systems are strengthened and tailored to help improve market opportunities for farmers especially in low price areas and the vulnerable communities, and to strengthen institutions (e.g. district commercial office) mandated to facilitate market exchange.

In line with improving market information system, building capacity of market agency in use of price and market information is needed. This includes strengthening monitoring system (e.g. WFP need to monitor carefully volatility of agricultural prices and development in cross-border trade especially with Southern Sudan; monitor supply in key market outlets and changes in prices; production dependant indicators such as rainfall patterns, security situation, etc).

Providing targeted food aid programs and market-based support, including development related component and incorporating weather prediction in its overall planning.

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Appendix 1

Overview of food and nutrition policy

Legal and institutional framework

Over the years, there has been concern about the high prevalence of hunger and malnutrition in many parts of the developing world. To this end, many international conferences have been convened to find solutions to persistent food insecurity, famine and under-nutrition especially in the developing countries. Among them are the United Nations Conference on Food and Agriculture held in 1943, and 1974, the International Conference on Nutrition held in 1992 and the World Food Summit in 1996 and 2002.

Other than these events, many governments (Uganda's inclusive) have ratified international treaties and conventions that recognize the right to adequate food as a fundamental human right. For instance, Article 25 (1) of the Universal Declaration of Human Rights, and Article 11 (1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) both provide for the right (of everyone) to an adequate standard of living including access to adequate food. Article 11(2) of the ICESCR recognizes the need for more immediate and urgent steps to ensure the fundamental right to freedom from hunger and malnutrition.1

Since the ratification of the ICESCR, Uganda has been party to the commitment and resolution at most of the international conferences on "the right to food". At national level, Uganda has developed national goals and plans of action e.g. the Action Plan for Children (1993) that addresses, among other things, the right to food. Several conferences and seminars have been held to address the various aspects of the right to adequate food. For example in 2003, a national seminar on implementation of the right to adequate food in Uganda was held, which discussed issues relating to the right to food, including draft text of the Uganda Food and Nutrition Policy (UFNP).

The 1995 Constitution of the Republic of Uganda recognizes the importance of food and nutrition. It mandates (or commits) the state (government) to devise measures to ensure food security and adequate nutrition for Uganda citizens.

The Constitution (under objective XXII) provides that the State shall:
take appropriate steps to encourage people to grow and store adequate food; establish national food reserves; and encourage and promote proper nutrition through mass education and other appropriate means in order to build a healthy state.

Overview of food and nutrition policy *cont..*

Institutional framework

The Ministry of Health (MOH) and Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) are the lead ministries in food security and nutrition issues. They are mandated by the Constitution to set minimum security standards, assure quality and develop relevant policies. Nutrition is one of the priority components of the National Minimum Health Care Package being implemented under the Health Sector Strategic Plan (HSSP) by the MOH. It is the responsibility of the MOH to improve the quality of health services and to ensure equity in accessing essential health services with the overall goal of reducing morbidity and mortality.

The constitutional mandate of the MAAIF, on the other hand, is to support, promote and guide the production of crops, livestock and fish so as to ensure improved quality and quantity of agricultural produce and products for domestic consumption, nutrition, food security and exports. Both the MAAIF and MOH promote diet diversification as well as other food based strategies for a healthy and productive population.

However, government recognizes that food security and nutrition issues extend beyond the precinct of the two ministries (MAAIF and MOH), but multi-sectoral - involving both public and private stakeholders. In 1987, government established the National Food and Nutrition Council (NFNC) to coordinate the activities of various stakeholders. In addition, NFNC was to offer advice on the formulation of the national food and nutrition policy and to guide government on the implementation of the policy, including research, monitoring and evaluation issues.

The Uganda Food and Nutrition Policy (UFNP) has been formulated within the overall context of poverty eradication - as spelt out in the Poverty Eradication Action Plan (PEAP). This is in recognition that poverty and malnutrition are quite closely inter-linked. In addition, the UFNP is bears some elements of the Plan for the Modernization of Agriculture (PMA), which seeks to ensure food security, create gainful employment, increase incomes and improve the quality of life of the rural people. The UFNP is in consonance with the other policies already formulated by the government and international treaties, covenants and resolutions to which Uganda is committed.

International perspective

Recognising that LDCs and net-food importing developing countries are likely to experience negative effects in terms of the availability of adequate supplies of basic foodstuffs from external sources on reasonable terms and conditions as a result of the multilateral reform process in agriculture, the Marrakesh *Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries* provides for four response mechanisms:

- Food aid;
- Short-term financing of normal levels of commercial imports;
- Favourable terms for agricultural export credits; and
- Technical and financial assistance to improve agricultural productivity and infrastructures.

These measures need to be made operationally effective, including acceptance and implementation of the proposal on the establishment of a revolving fund. Although the provision is clear that food aid shall not contribute to commercial displacement, this is not possible in practice. Many developing countries have requested that food aid should only be given in full grant form with the provision of regional sourcing as far as possible. This addresses the trade aspect of food aid, but it does not address the effect of food aid on local agricultural production that has a negative impact on development through depressed prices. There is no clear-cut solution to this. S&D could be envisaged to integrate food aid with development aid to encourage effective food production in recipient countries.

Acronyms

ASPS	Agriculture Sector Programme Support (DANIDA)
CET	Common External Tariff
CFSVA	Comprehensive food security and vulnerability analysis
CMB	Coffee Marketing Board
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer price index
EAC	East African Community
ERP	Economic Recovery Program
GDP	Gross domestic product
LMB	Lint Marketing Board
PMB	Produce Marketing Board
CERUDEB	Centenary Rural Development Bank
EU	European Union
HIPC	Highly Indebted Poor Country
HMS	Household monitoring survey
IMF	International Monetary Fund
PMA	Plan for the Modernisation of Agriculture
MDI	Microfinance Deposit-taking Institution
NAADS	National Agricultural Advisory Services
MFI	Microfinance Institution
MTTI	Ministry of Tourism, Trade and Industry
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MFPED	Ministry of Finance, Planning and Economic Development
NGO	Non Government Organisation
PEAP	Poverty Eradication Action Plan
ROW	Rest of the world
SACCOs	Savings and Credit Cooperative Society
SENAC	Strengthening Emergency Needs Assessment Capacity
SITC	Standard International Trade Classification
UPPAP	Uganda Participatory Poverty Assessment Process
USh	Uganda Shilling

Exchange Rates: 1 EURO = 2,200 USh
1 USD = 1,730 Ush
1 BP (British Pound) = 3,500 Ush

Appendix 2

Table A2.1 Exports by value ('000 US $), 2002 – 2005

Commodity	2002	2003	2004	2005
Traditional Export Crops				
Coffee	96,626	100,233	124,237	172,942
Cotton	9,519	17,755	42,758	28,821
Tea	31,293	38,314	37,258	34,274
Tobacco	45,262	43,042	40,702	31,486
Non-Traditional Exports				
Maize	10,609	13,724	17,896	21,261
Beans and other Legumes	3,284	5,235	8,968	8,693
Fish and Fish products	87,945	88,113	103,309	142,691
Cattle hides	9,810	4,925	5,409	7,064
Sesame seeds	510	2,183	2,788	4,779
Soya beans	74	87	118	126
Soap	3,434	5,553	7,708	7,194
Electric Current	15,645	13,778	12,075	4,465
Cocoa beans	2,023	7,001	6,801	9,638
Cobalt	7,032	0	11,548	14,320
Hoes and hand tools	385	580	348	1,159
Pepper	111	176	368	594
Vanilla	6,898	13,546	6,120	6,135
Live animals	80	61	130	29
Fruits	670	436	917	1,158
Groundnuts	75	7	1	23
Bananas	225	110	850	806
Roses and Cut flowers	17,828	22,080	26,424	24,128
Ginger	462	15		78
Gold and gold compounds	60,342	38,446	61,233	73,072
Other Precious Compounds	0	13,612	4,713	6
Other products	46,714	77,193	114,507	183,935
Petroleum products	10,749	27,901	27,904	32,015
Traditional export	182,700	199,344	244,955	267,522
Non-traditional exports	284,905	334,762	420,134	545,335
Total	467,605	534,106	665,090	812,857

Source: Uganda Bureau of Statistics

Table A2.2 Exports by Region ('000 US $), 2000 – 2005

Region/Country	2000	2001	2002	2003	2004	2005
Exports by region						
COMESA	93,733	122,040	107,493	147,793	177,995	249,336
o/w Kenya	62,947	59,063	61,504	78,432	76,903	72,437
Tanzania	5,487	6,689	5,774	5,832	12,155	15,445
Other Africa	32,160	33,465	55,141	45,963	37,823	38,931
o/w South Africa	28,893	24,076	42,997	29,632	9,250	9,796
European Union	100,021	128,237	156,386	140,529	195,849	335,174
Other Europe	102,576	75,662	73,206	79,033	110,770	82,466
North America	9,264	8,348	10,549	14,635	18,653	18,340
Middle East	5,971	9,898	9,138	18,489	37,421	88,111
Asia	39,225	52,953	42,255	49,797	53,488	61,180
South America	332	1,138	1,286	342	379	1,005
Rest of the World	18,348	20,023	1,505	2,334	5,029	566
Unknown	0	0	10,646	35,191	27,683	20,214
Other	3,267	9,389	12,145	16,332	16,817	0
European Union						
o/w United Kingdom	38,690	28,806	30,015	33,883	29,438	26,831
North America						
United States	8,545	6,743	9,190	12,693	15,182	15,892
Total	**401,645**	**451,764**	**467,605**	**534,106**	**665,090**	**812,857**

Source: Uganda Bureau of Statistics

Table A2.3 Imports by region ('000 US$), 2000 – 2005

Region/Country	2000	2001	2002	2003	2004	2005
COMESA	312,246	295,695	337,711	389,630	434,154	565,011
o/wKenya	296,033	281,472	312,870	357,327	399,152	520,686
Other Africa	76,708	82,455	84,968	101,047	160,139	177,881
o/w South Africa	65,915	72,850	83,665	98,984	140,749	143,676
Asia	224,127	259,761	292,580	382,110	499,396	540,808
o/w China	29,457	36,227	44,026	70,248	103,093	109,217
European Union	185,566	198,181	183,573	243,734	314,496	387,158
Other Europe	27,920	34,643	27,921	24,325	11,793	21,703
Middle East	60,270	69,319	73,904	101,707	121,883	206,879
North America	45,454	38,439	43,149	88,031	122,926	105,723
o/w United States	30,813	28,133	35,842	78,129	103,499	78,143
South America	8,823	7,457	2,175	5,521	26,092	31,550
Rest of the World	17,316	20,607	27,752	38,999	35,250	17,424
Unknown	33	-	-	1	0	0
Total	958,464	1,006,557	1,073,732	1,375,106	1,726,128	2,054,137

Source: Uganda Bureau of Statistics

Table A2.4 Imports by SITC and value (000 US$), 2003-2006

SITC2	Description	2003	2004	2005	2006
33	Petroleum, petroleum products and related materials	187,255	217,762	343,159	526,581
78	Road vehicles (including air-cushion vehicles)	115,096	144,695	192,198	216,357
04	Cereals and cereal preparations	106,698	134,431	141,194	156,768
67	Iron and steel	77,755	96,020	118,823	141,632
76	Telecommunications and sound recording/reproducing apparatus, etc	48,936	82,764	100,410	137,029
54	Medical and pharmaceutical products	74,920	80,137	85,721	123,065
66	Non-metallic mineral manufactures, nes	51,862	57,269	68,576	77,815
89	Miscellaneous manufactured articles, nes	52,358	62,078	81,723	68,211
57	Plastics in primary forms	28,332	43,886	62,606	70,588
72	Machinery specialized for particular industries	40,070	59,104	60,491	66,781
77	Electrical machinery, apparatus and appliances, nes	52,178	61,971	56,843	76,873
75	Office machines and automatic data-processing machines	37,678	36,779	50,233	48,352
64	Paper, paperboard, and articles of paper pulp, paper or paperboard	37,660	48,513	50,098	62,131
42	Fixed vegetable fats and oils, crude, refined or fractionated	39,248	45,175	46,928	68,410
65	Textile yarn, fabrics, made-up articles, nes, and related products	36,904	40,028	42,703	53,372
	Others	388,156	515,626	552,431	663,343
	Total	**1,375,106**	**1,726,238**	**2,054,137**	**2,557,308**

Source: Uganda Bureau of Statistics

Table A2.5 Food Imports by value ('000 US $), SITC grouping, 2000 – 2005

SITC	Description	2000	2001	2002	2003	2004	2005
00	Live animals	369	573	449	1,103	583	802
01	Meat and meat preparations	258	278	422	542	574	816
02	Dairy products and bird's eggs	1,525	1,494	2,545	2,857	2,130	2,268
03	Fish, crustaceans and molluscs & preps	98	113	94	1,029	160	556
04	Cereals and cereal preparations	63,014	54,421	73,039	106,698	134,467	141,194
05	Vegetables and fruit	2,478	2,400	4,076	7,423	16,391	20,371
06	Sugars, sugar preparations and honey	22,931	24,326	16,085	14,940	23,047	29,003
07	Coffee, tea, cocoa, spices, and manufactures thereof	2,495	1,605	2,131	2,032	2,542	3,260
08	Feeding stuff for animals	181	287	286	324	458	334
09	Miscellaneous edible products and preparations	5,387	4,322	7,015	7,888	9,645	13,517
11	Beverages	2,158	1,074	1,705	2,770	9,429	6,633
12	Tobacco and tobacco manufactures	1,397	964	1,126	1,380	3,159	4,028
22	Oil-seeds and oleaginous fruits	20	658	460	9,396	5,344	11,651
41	Animal oils and fats	1,072	23	16	18	1	6
42	Fixed vegetable fats and oils, crude, refined or fractionated	17,632	19,062	28,824	39,248	45,097	46,928
43	Animal or vegetetable fats and oils, or vegetable	14,269	11,545	12,402	25,257	26,881	26,773

Source Uganda Bureau of Statistics

Table A2.6 Uganda: Sectoral growth in GDP (%)

Industry group	1996/97	1997/98	1998/99	99/00	2000/01	01/02	2002/03	2003/04	2004/05	2005/06
Monetary										
Agriculture	3.8	2.5	6.6	5.2	4.5	5.7	3.9	0.9	2.6	0.2
Mining and quarrying	50.2	27.7	14.5	6.3	10.1	11	1.2	8.6	11.6	-1.5
Manufacturing	13.4	14.4	14.2	3.6	8.9	5.3	4.2	4.5	11.1	-1.6
Electricity & water	10.1	7	5.3	7.9	8.2	5.3	4.5	6.7	5.9	-1.2
Construction	7.7	8	10.9	7.1	1.3	13.4	11.6	13.8	11.9	13.7
Wholesale & retail trade	2.3	6.3	10.5	1.9	6.5	6.2	4.7	3.3	9.1	4.2
Hotels & restaurants	9.1	4.4	7.3	18.7	7.1	18.1	7.5	19.1	4.5	21.8
Transport & communication	10.6	10	6.9	8.5	9.6	12.3	16.8	21.2	21.4	20.7
Community services	6.3	6	4.4	8.6	2.4	7	2.6	6	5	6.2
Total monetary	6.3	6.5		6.1	5.1	7.5	5.4	6.4	7.7	6
Non-monetary										
Agriculture	-1.9	1.2	4.9	6.1	4.6	1.7	0.1	0.7	0	0.6
Construction	2.8	2.7	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3
Owner-occupied dwellings	8	7	8.5	8	8	7	6.5	6	6	4
Total Non-Monetary	-0.7	2	5.4	6.3	5.1	2.6	1.3	1.7	1.2	1.4
Total GDP	**4.5**	**5.4**	**7.3**	**6.2**	**5**	**6.4**	**4.7**	**5.5**	**6.6**	**5.3**
Per capita GDP	1.7	2.7	3.8	2.6	1.5	3	1.4	2.2	3.2	1.9

Notes: GDP at factor cost at constant (1991) prices
Source: Abstract (2001 to 2006) Uganda Bureau of Statistics

Table A2.7 Uganda's Sectoral composition of GDP, 1992-2005

Commodity	1992	1996	1997	1999	2000	2001	2002	2004	2005
Agriculture	51.1	44	42.8	42.2	42	40.6	39.8	36	34.6
Of which food crops	39.4	28.5	27.8	27.3	27.4	27	26.2	23.5	22.5
Mining and quarrying	0.3	0.5	0.7	0.7	0.7	0.7	0.7	0.8	0.7
Manufacturing	6.2	8.6	9	9.6	9.1	9.8	9.7	9.6	9.3
Electricity	0.9	1	1	1	1	1.4	1.4	1.4	1.4
Construction	5.9	8.2	8.2	8.1	8.4	7.2	7.7	9	9.3
Commerce	12.7	14.5	14.7	14.6	14.5	12.6	12.7	14.2	15
Transport & com	4.2	4.9	5.2	5.3	5.5	5.1	5.3	7.5	8.3
Community services	15.8	15.3	15.5	15.4	15.7	19.1	19.1	17.9	17.8
Owner occupied dwellings	2.9	3	3	3	3.1	3.6	3.6	3.6	3.6
Total GDP	2,270,177	2,999,457	3,058,581	3,443,926	3,601,710	8,528,413	8,977,259	10,066,510	10,714,006
GDP growth rate (%)	**8.4**	**5**	**5.3**	**4.7**	**4.6**	**6.1**	**5.3**	**5.2**	**6.4**

Notes: GDP at factor cost at constant (1991) prices for the years 1992 to 2000, and at (1997/98) for the years 2001 to 2005
Source: Ministry of Planning and Economic Development (1995, 1996, 1998) and Ministry of Finance, Planning and Economic Development

Table A2.8 Production of major agricultural crops ('000 tonnes)

Item	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Export crops																			
Coffee	167.07	151.16	169.04	128.75	147.37	10.33	144.55	198.37	181.35	287.93	219.62	205.06	251.89	143.48	197.41	209,546	150,871	170,081	
Tobacco	1.21	2.64	3.46	3.32	5.14	6.69	5.18	6.55	6.85	6.35	8.2	11.33	20.86	22.84	22.57	36,310	34,250	32,520	
Tea	3.51	3.51	4.66	6.7	8.88	9.5	12.32	13.46	12.69	17.42	21.08	25.9	24.74	29.24	32.86	39,476	36,895	35,706	
Food crops																			
Plantains(Banana)	7039	7,293	7469	7842	8080	7806	8,222	8500	9012	9144	9303	9318	8949	9428	9732	9,888	9,700	9,686	9,880
Cereals	1,220	1398	1637	1,580	1576	1743	1880	1936	2030	1588	1625	2085	2188	2112	2309	2,368	2,508	2,274	2,526
Maize	357	440	624	602	567	657	804	850	913	759	740	924	1053	1096	1174	1,217	1,300	1,080	1,237
Finger millet	518	578	610	560	576	634	610	610	632	440	502	642	606	534	584	590	640	659	672
Sorghum	315	344	347	360	363	375	383	390	399	298	294	420	413	361	423	427	421	399	449
Rice	20	23	45	54	61	68	74	77	77	82	80	90	95	109	114	120	132	121	153
Wheat	10	13	11	4	9	9	9	9	9	9	9	9	11	12	14	14	15	15	15
Root crops	4960	5,177	5474	5337	5268	5069	5417	4577	4849	4111	4545	5764	7678	7842	8288	8511	8617	8723	8765
Sweet potatoes	1,674	1716	1658	1693	1785	1905	1958	2129	2223	1548	1894	2176	2354	2398	2515	2,592	2,610	2,650	2,604
Irish potatoes	185	190	248	224	254	268	320	368	402	318	360	384	449	478	508	546	557	573	585
Cassava	3,101	3271	3568	3420	3229	2896	3139	2080	2224	2245	2291	3204	4875	4966	5265	5,373	5,450	5,500	5,576
Oil seeds	163	184	206	257	264	272	295	287	294	285	248	309	331	364	392	420	430	420	478
Sim-sim	33	36	45	62	61	72	75	70	71	73	73	77	93	97	102	106	120	125	161
Groundnuts	122	134	145	158	144	147	153	142	144	125	91	140	137	139	146	148	150	137	159
Soyabeans	8	14	16	37	59	53	67	75	79	87	84	92	101	128	144	166	160	158	158
Pulses	374	430	485	498	488	509	540	495	509	356	346	517	558	574	665	692	690	623	649
Beans(mixed)	299	338	389	396	383	402	428	378	390	234	221	387	401	420	511	535	525	455	478
Field peas	11	12	12	12	15	15	16	17	16	17	20	19	19	16	15	16	14	15	16
Pigeon peas	27	42	46	51	50	51	53	55	58	58	59	61	76	78	80	82	84	84	85
Cow peas	37	38	38	39	40	41	43	45	45	47	46	50	62	60	59	59	67	69	70

Source: Ministry of Agriculture, Animal Industry and Fisheries (adopted from Bank of Uganda Annual Report 2005/06)

Table A2.9 What needs to be done to remove market constraints faced by traders and by whom?

Need to be done	frequency	By whom
►Reduce tax rate and boarder tariffs	130	Government
►Improve on road network	146	Government
►Support traders and farmers with cheap loans/credits	100	Government & FIs
►Set minimum price level that can benefit both traders & farmers	89	Government
►Sensitize both traders and farmers on trade opportunities	10	Government
►Subside agricultural inputs	08	Government
►Fuel prices need to be regulated	18	Government
►Look for markets for produce	31	Government
►set up purchasing schemes/ cooperatives to improve bargaining power	10	Government
►Provide storage facilities like community stores	15	Government & FAs
►Improve on security	24	Government
►Provide extension services	10	Government
►Constant power supply should be effected	5	Government & Umeme
►Modernization of agriculture	5	Government
►Associations need to be formed	12	Farmers and traders
►Construct milk processing plants for farmers	4	

Note: FIs = financial institutions, FAs = farmers associations

Table A2.10 Percentage share of business income by source across the region

Source	Region					
	Karamoja	Eastern	Central	Western	Mid west	Northern
Agric production	26	13	20	23	14	16
Agric input trade	4	34	2	12	3	3
Agric commodity trade	27	34	50	50	52	53
Processing for a fee	3	5	0	3	2	3
Processing (buy & sell)	11	6	16	8	24	12
Other agric related	2	2	4	1	2	3
Non-agric related	29	8	8	3	3	10

Table A2.11 Commodity purchase through an order arrangement

	Karamoja	Eastern	Central	Western	Mid west	Northern
Place order with supplier	21	24	43	25	24	37
% share of the commodity purchase by placing an order	58.7	41.7	78.33	64.44	83.33	49.33
No. of suppliers wit whom orders are made	40	25	46	19	25	33

Table A2.12 Average marketing cost from purchase point of sales

Region	Peak season	Off peak season
Karamoja	235466.8	191162.7
Eastern	13362536.1	3005330.8
Central	217619.1	196924.2
Western	96827.3	97785.2
North Western	752110.5	607083.8
Northern	675193.2	571755.4

Table A2.13 Profitability Marketing cost from purchase point to sales point

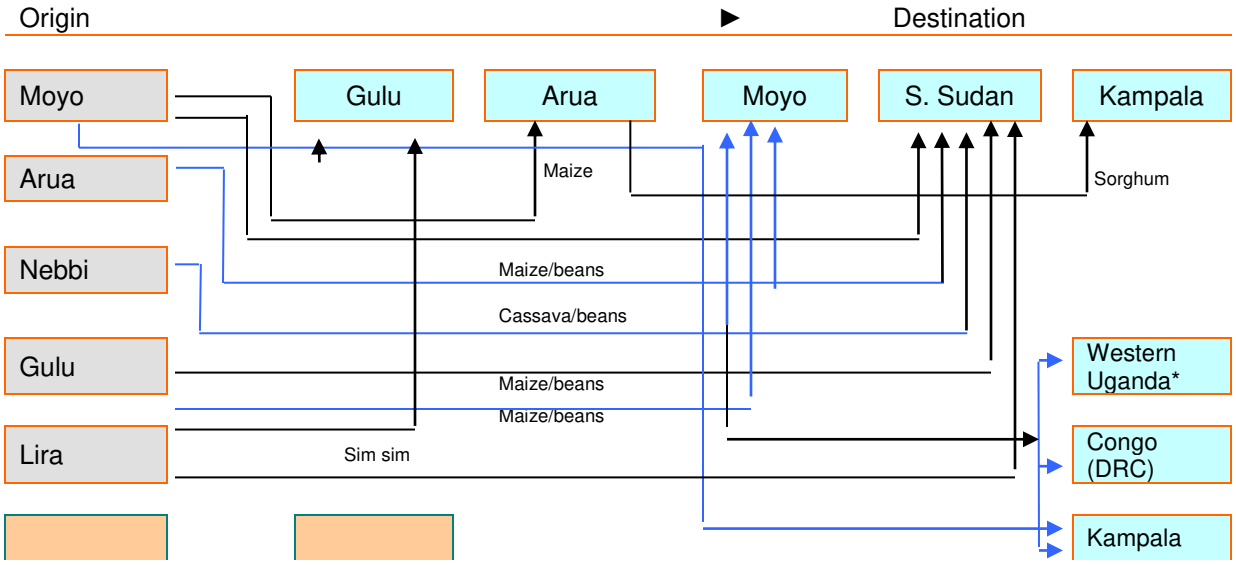
Region	Year	Very poor	poor	Fair	Good	Very good
Karamoja	2005	1	3	17	35	14
	2006	0	8	27	31	6
	2007	0	9	26	27	10
Eastern	2005	0	1	18	36	5
	2006	0	1	26	16	16
	2007	9	12	19	11	2
Central	2005	0	5	8	24	21
	2006	1	9	9	28	13
	2007	5	14	19	14	8
Western	2005	0	0	8	14	20
	2006	0	2	13	17	11
	2007	0	2	17	4	21
North Western	2005	1	5	8	12	3
	2006	1	2	6	19	2
	2007	3	10	6	8	3
Northern	2005	0	5	21	31	15
	2006	0	2	23	39	10
	2007	3	6	30	23	13

Source: IPRA survey data, May/June 2007

Table A2.14 Trips made by traders over the last 12 months

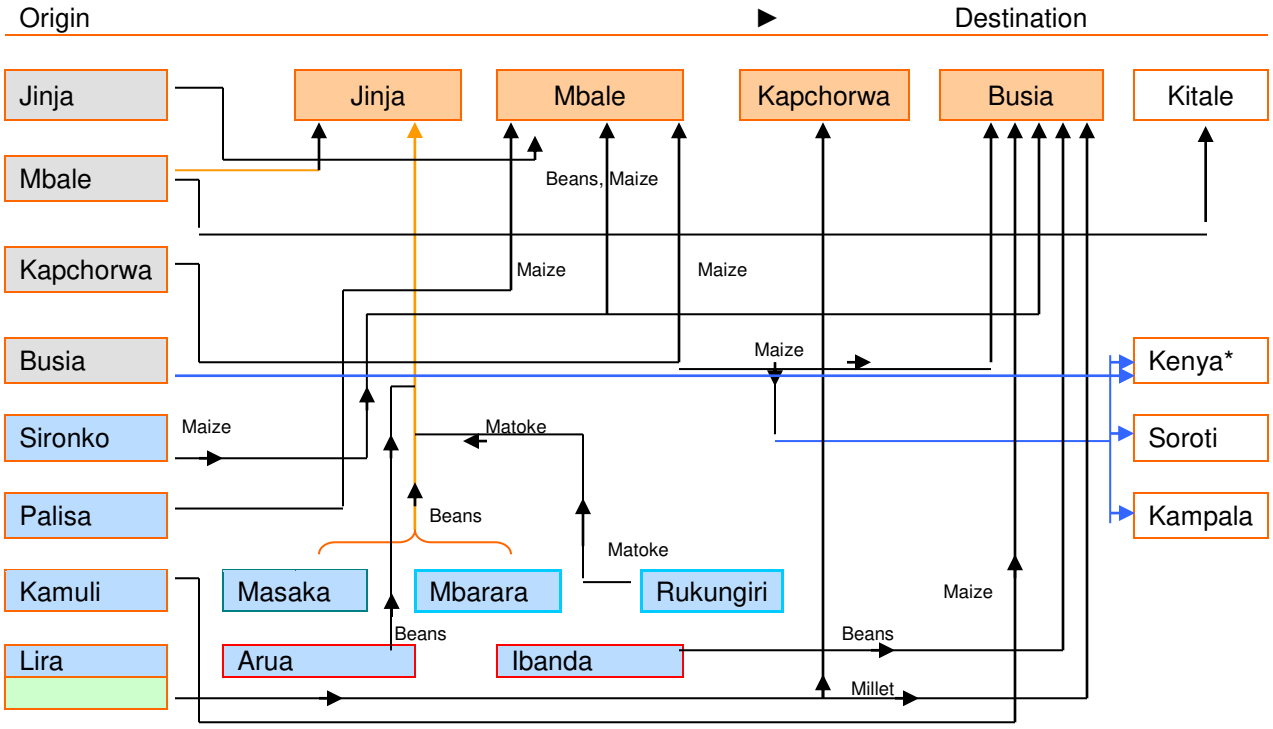
Peak season				
Region	**To purchase points**		**To sales markets**	
	No. of trips	**Travel costs**	**No. of trips**	**Travel costs**
Karamoja	62	6,057,780	101	13,653,668
Eastern	137	9,441,604	156	22,063,109
Central	121	2,329,725	119	4,232,125
Western	194	746,918	159	935,188
North Western	195	1,154,705	210	22,454,026
Northern	84	2,230,709	131	4,423,955
Off peak season				
Karamoja	65	4,453,787	101	13,653,668
Eastern	105	5,136,829	156	22,063,109
Central	79	2,107,739	119	3,897,241
Western	149	709,052	159	21,373,636
North Western	151	5,222,347	231	22,454,026
Northern	93	1,452,886	131	4,423,955

Figure 22. Spatial structure of food market in Northern Uganda – direction of trade flow



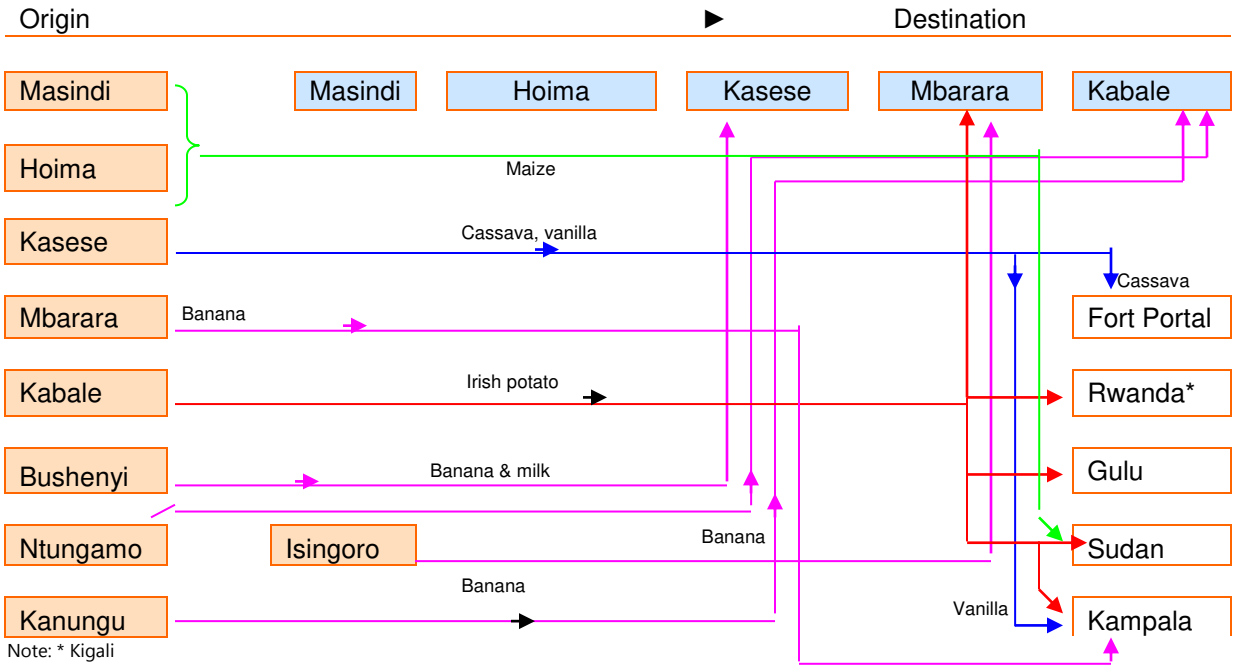
Source: IPRA Survey data, 2007
Note: * Include also the mid-western districts of Masinda and Hoima

Figure 23. Spatial structure of the food market in Eastern Uganda – direction of trade flow



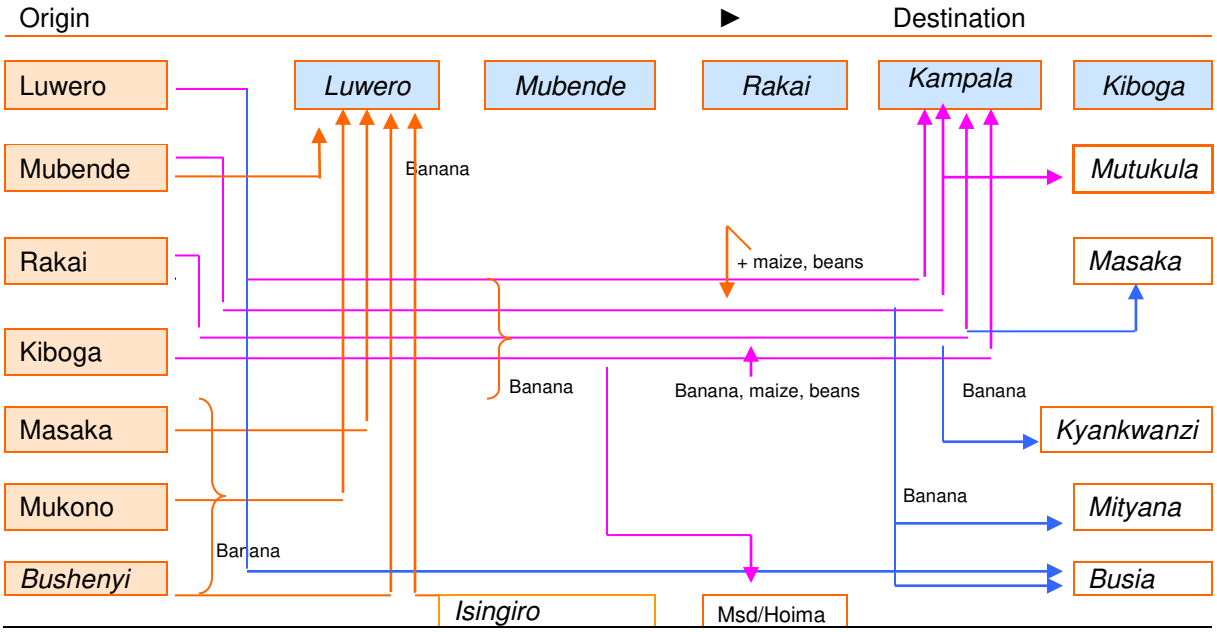
Source: IPRA Survey data, 2007, Note: * Kitale

Figure 24 Spatial structure of food market in Western region – direction of trade flow



Source: IPRA Survey data, 2007
Note: * Kigali → route for banana; → route for Irish potato; → maize
In Kabale District, sorghum, maize, beans, and peas are grown for domestic consumption. The imported commodities in the region include rice and banana.

Figure 25. Spatial structure of food markets in Central region – intra/inter regional trading routes



Source: IPRA Survey data, 2007, ote: Msd = Masindi

Appendix 3

Check list of thematic areas/issues used in key informant interviews and focus group discussions

A. Food production, consumption and distribution

(i) Agricultural/food production and consumption patterns;
(ii) Marketable surplus of farmers in selected surplus and deficit areas (% of produce farmers sell);
(iii) A constraint analysis of in-country food trading between surplus and deficit locations, and elaborate recommendations for improving trading within the country;
(iv) Seasonality and shocks

B. National and intra-regional trade patterns, market linkages and agents

(v) Marketing and price patterns of major food crops;
(vi) important markets and key players (government institutions, private sector, international and bi-lateral agencies, as well as NGOs involved in food trade and food aid distribution) in the country;
(vii) Location (physical using GPS), size and structure of primary and secondary markets (number of farmers, assemblers, wholesalers, retailers, millers, traders and their principal market strategies);
(viii) Direction of trade flows between production areas and markets; and how households in remote areas access markets;
(ix) Key consumption goods and their substitutes in the market and in possible food aid deliveries;
(x) Role that markets play in providing credit and employment;
(i) Non-food markets (labor) and livestock markets;
(ii) Potential of various markets to meet the needs of consumers: local markets, markets in other parts of the country & regional markets under current conditions and in the event of a shock(s);
(iii) Roles and responsiveness of the private sector in markets and especially during shortfalls;
(iv) Current dimensions and potentials of local purchase schemes, practiced by government agencies, private sector, aid agencies and agricultural cooperatives;

C. Market integration

(v) Presence and the level of inter-market price dependencies
(vi) Short-run interactions through cross-market lagged price changes;
(vii) Long-run responses to contemporaneous price changes in the food markets;
(viii) Speed of market price adjustments to long-run equilibrium
(ix) Cases of spatial integration (and fragmentation) of markets and under what circumstances they are likely to occur (degree of price transmission among different markets; transaction costs; status of transport and road infrastructure);
(x) Cases of temporal integration of markets (seasonal price and trade variability and discussion of the primary causes of this variability);
(xi) Likely shocks and potential consequences of those shocks on markets.

Check list of thematic areas/issues used in key informant interviews and focus group discussions

E. Market information and network, monitoring and infrastructure

(xxi) Market efficiency (farm gate/producer prices, wholesale prices, retail prices; transaction costs; status of national/local marketing information systems and communication infrastructure);

(xxii) Storage capacity (private and public for bulk grains as well as food grade), both national total as well as for important local markets;
(xxiii) Key factors, market information and/or data to be monitored and evaluated when determining the potential impact that food aid and other interventions might have on markets;
(xxiv) Key indicators to be monitored for early warning and inform design and adjustment of interventions related to market functioning;
(xxv) Market information/data sources and which information could be integrated into the ongoing inter-agency Food Security Monitoring System;
(xxvi) Brief recommendations as to how best to maintain and update the pre-crisis market monitoring indicators;
(xxvii) Informing decision makers of the basic market conditions and the key aspects of markets that should be monitored over time;

F. Regional and cross-border trade flows

(xxii) Regional trade both formal, in-formal cross border and inter-governmental (EAC, COMESA, etc) policies (trade, prices, exchange rates, inflation, non-tariff barriers, etc) affecting trade and possible interventions through markets;
(xxiii) Trade flow maps of both formal and informal trade (by private and public sectors; its dimension and flows from entering the country to household consumption), with attention to the role of private commercial imports in local markets;

F. Food and non-food intervention

(xxii) Markets and non-food response initiatives and the potential capacity for these interventions.
(xxiii) Shock (production/consumption) scenario/risk analysis and potential related intervention

Date of interview |__|__| |__|__| 2007 Name of Interviewer (print) _____ Interviewer ID |__|__|

Region _____ District _____ Town _____ Rural/Urban _____

Trader Name/Code _____

Has this questionnaire been checked: Yes / No Supervisor / Team leader's signature _____ Date checked: |__|__| |__|__| 2007

Remarks: _____

Section 1 – Basic Market and Trader Characteristics

1.1: Type of Market: (circle from selection below)
1= Primary (producers sell to traders – wholesalers or retailers)
2= Secondary (wholesalers sell to traders/retailers)
3= Consumer market (retailers sell to final consumers)
4= Combination of 1) and 2)
5= Combination of 1), 2) and 3)

1.2: How often does this market take place?
(Frequency of trade |__|
1 = Daily 2 = Weekly
3 = Bi-monthly 4 = Monthly

1.3: What is your specialization in trade?
1 Sell wholesale
2 Sell retail
3 Purchase from farmers
4 Operate as buying agent
5 Operate as broker
6 Sell products other than agricultural
7 Other

1.4: What markets do you operate in?
1. Only this market
2. With other principal markets
3. Operate in other markets

1.5: What is your position in this business? |__|
1. Owner
2. Manager
3. Sales Manager
4. Purchasing Manager
5. Other _____

1.6: What is the gender (sex) of business owner?
|__| 1 = Male 2 = Female

1.7: Marital status of business owner? |__|
1. Married
2. Divorced/separated
3. Widow/widower
4. Never married

1.8: What is the education level of the current manager? |__|
1. No schooling, cannot read
2. No schooling, can read
3. Some primary
4. Completed primary
5. Some secondary
6. Completed O-levels
7. Completed A-levels
8. Some University
9. Completed University
10. Graduate/Post-Grad
11. Technical college
12. Professional certificate
13. Does not know

1.9: Total number of persons in your household:

Age	**1.5.1:** Males	**1.5.2:** Females
a. 0-5 years	|__|	|__|
b. 6-14 years	|__|	|__|
c. 15-59 years	|__|	|__|
d. 60+ years	|__|	|__|

Section 2 – Management of business/firm

2.1: How many years of trade experience do you

have (manager)? |__|__| *years*

2.2: How many years have you been in operation? |__|__| *years*

2.3: How many years has the manager been in charge of this business/operation? |__|__| *years*

2.4: How is this business managed? |__|

1. Manager is in charge
2. Manager is responsible for purchases
3. Manager is responsible for sales
4. Other _____

2.5: How many firms/businesses has the owner started? |__|__| Number

2.6: Has the manager worked in another business before? |__|

1 = Yes 2 = No

2.7: How many years of experience does the manager have elsewhere? |__|__| Years

Section 3 – Payment methods & contractual terms

3.1: How are transactions with suppliers done? |__|

1 Cash, local currency
2 Cash other currency
3 Check
4 In kind
5 Wire transfer
6 Other _____

3.2: How are transactions with clients done? |__|

7 Cash, local currency
8 Cash other currency
9 Check
10 In kind
11 Wire transfer
12 Other _____

3.3: Do you receive credit from your suppliers/principle buyers? |__|

1 = Yes 2 = No

3.4: If yes, what are the payment conditions?

1 Number of days to pay back |__|__|
2 Do you pay a different price if supply is on credit? |__| 1 = Yes 2 = No
3 What is the credit premium? |__|__|__|

3.5: Do you give credit to clients? |__|

1 = Yes 2 = No

3.6: If yes, what are the payment conditions?

1 Number of days to pay back |__|__|
2 Do you charge a different price if supply is on credit? |__| 1 = Yes 2 = No
3 What is the credit premium? |__|__|__|

3.7: Do you make advance payments to farmers? |__|

1 = Yes 2 = No

3.8: If yes, which price of commodities do you use?

1 Market price at delivery
2 Price set forward
3 Other _____

3.9: Over the last 12 months have you had any of the following problems with your suppliers related to:

1 Disagreement over quality of purchased product? |__|
2 Disagreement over measuring system? |__|
3 Attempt to renegotiate agreed upon price? |__|
4 Delivery after agreed upon date? |__|
5 Partial delivery |__|
6 No delivery |__|
4 Other _____ |__|

1 = Yes 2 = No

3.10: Over the last 12 months have you had any of the following problems with your clients related to:

1 Disagreement over quality of purchased product? |__|
2 Disagreement over measuring system? |__|
3 Attempt to renegotiate agreed upon price? |__|
4 Late payment? |__|
5 Partial payment? |__|
6 No payment? |__|
7 Attempt to renegotiate agreed upon price? |__|
8 Other _____ |__|

1 = Yes 2 = No

3.11: What was the total quantity of trade you handled for the past 12 months?

#	Commodity	Purchases Volume	Sales Volume
1			
2			

3			
4			
5			

3.14: Are you engaged in cross-border trade? |__|

1 = Yes 2 = No

3.15: What are your marketing costs from purchase point to sales for major transactions?

#	Cost category	Peak season cost	Off-peak season cost
1	Cost of empty sacks (if provided by respondent)		
2	Bagging and sewing		
3	Loading at purchase point		
4	Payment to intermediary agent at purchase		
5	Tips during purchase		
6	Transport from purchase to sales market		
7	Payments at road stops		
8	Payment to transport broker		
9	Off-loading at sales market		
10	Storage costs		
11	Information search costs		
12	Payment to intermediary agent at sales		
13	Tips during sales		
14	Personal travel costs		
15	Taxes and fees		
16	Other_____		

7

Section 4 – Traders' Use of Intermediaries (agents)

4.1: Do you use intermediaries in trade? |__|

1 = Yes 2 = No

4.2: How many intermediaries do you use

|__|__| Number

4.3: For how long have you worked with intermediaries? |__|__| Years

Section 5 – Information search behavior

5.1: Could you give us the figures relating to the following trade activities you do?

1 Number of products regularly followed |__|__|
2 Number of supply markets regularly followed |__|__|
3 Number of sales markets regularly followed |__|__|
4 Number of people regularly consulted in your market |__|__|
5 Number of people regularly consulted in other markets |__|__|
6 Number of employees that collect price information for you |__|__|

5.2: What sources of information do you use for assessing the market conditions indicated below?

5.2.1 Information on prices? (Tick as appropriate)

1 Personal observation (seeing, etc)
2 Other traders
3 Suppliers and clients
4 Messengers
5 Newspapers
6 Radio
7 Respondent sets his/her own price
8 Other _____

3.12: Where are your commodities taken or sold?
3.13: Where are your commodities brought from?

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____

5.2.2 Information on supply conditions? (Tick)

1 Personal observation (seeing, etc)
2 Other traders
3 Suppliers and clients
4 Messengers
5 Newspapers
6 Radio
7 Respondent sets his/her own price
8 Other _____

5.2.3 Information on demand? (Tick)

1 Personal observation (seeing, eavesdropping)
2 Other traders
3 Suppliers and clients
4 Messengers
5 Newspapers
6 Radio
7 Respondent sets his/her own price
8 Other _____

5.3: What does it cost you to search for information?

Information on prices? |___|

1 Number of phone calls per year made in search of price and market information?
2 Number of trips do you make to purchase markets per year?
3 What is the cost of trips to purchase markets per year?
4 How many trips do you make to sales market per year?
5 What is the cost of trips to sales markets per year?

5.4: Do you own or have access to any of these?

1 Mobile telephone? |___|
2 Regular (non-mobile telephone? |___|
3 Access to telephone? |___|
4 Fax machine? |___|
5 Computer? |___|
6 Access to Internet? |___|
7 Radio? |___|
8 Access to radio? |___|

1 = Yes 2 = No

5.5: Do you use any of these to access information about the market and prices?

1 Mobile telephone? |___|
2 Regular (non-mobile telephone? |___|
3 Access to telephone? |___|
4 Fax machine? |___|
5. Computer? |___|
6. Access to Internet? |___|
7. Radio? |___|
8. Access to radio? |___|

1 = Yes, very frequently 2 = Yes, but very rarely 2 = No

Section 6 – Transport Practices and Means

6.1: Indicate (tick) if you use any of these means of transport and for what purpose? |___|

1 Foot _____
2 Bicycle _____
3 Handcart/Wheel barrow_____
4 Oxcart _____
5 Motorbike _____
6 Hilux_____
7 Dyna (7-ton truck)_____
8 Fuso (Large truck)_____
9 Other _____

6.2: Do you own or rent transportation? |___|
1 = Own 1 = Hire

6.3: Please describe your most frequently traveled transport routes

#	Cost category	Route 1	Route 2	Route 3
1	From which town/market			
2	To which town/market			
3	Distance transported			
4	Type of transportation used			
5	Main commodities transported			
6	Quantities of commodities transported			
7	Normal transport costs			
8	Highest transport costs			
9	Transport cost basis 1.Own 2. Rented			

6.4: Over the last 12 months, how many trips have you made to purchase sites and other markets?

Peak Season			
Markets	Number of trips	Period	Travel costs
Purchase points/markets			
Sales markets			
Non Peak Season			
Markets	Number of trips	Period	Travel costs
Purchase points/markets			
Sales markets			

6.5: Are there occasional restrictions on the movement of goods? |___|
1 = Yes 1 = No

6.5: If yes, indicate and rank the two most important movement restrictions that negatively affect your business.
1st _____ 2nd _____

1. Police conduct
2. Inter-district blocks
3. Export blocks

4. Food company regulations
5. Tolls
6. Ministry of Trade regulation
7. Health inspections
8. Other _____

Section 7 – Storage Practices

7.1: Do you trade at your residence? |__|
1 = Yes 1 = No

7.2: Do you store goods at your residence? |__|
1 = Yes 1 = No

7.3: What is the storage capacity at residence?
|__|__|__|__|__| Kilograms

7.4: Do you store outside your home? |__|
1 = Yes 1 = No

7.5: What is the storage capacity outside of your residence?
|__|__|__|__|__| Kilograms

7.6: Do you have access to collective storage? |__|
1 = Yes 1 = No

7.7: What is the cost of collective storage?
|__|__|__|

7.8: Do you own your residence? |__|
1 = Yes 1 = No

7.9: Did you own your residence a year ago? |__|
1 = Yes 1 = No

Section 8 – Level of Competition

8.1: Based on the following categories, at what level do your direct trading competitors operate?

|__|

1 District
2 Region
3 Country
4 Other _____

8.2: Did your business have other sources of income other than from the processing of your principal crop, during the past 12 months? |__|
1 1 = Yes 1 = No

8.3: What proportion of the business' income came from the following sources during the last 12 months?

Income source	% Of total income
Agricultural production	
Agricultural input trade	
Agricultural commodity trade	
Processing for a fee	
Processing (buy & sell)	
Other agriculture related	
Non-agriculture related	

8.4: How do you consider the profitability of your business during the following periods:

Period	Profitability
Last year (2005)	
Currently (2006)	
Expected future (2007)	

Profitability codes
1 Very good
2 Good
3 Fair
4 Poor
5 Very poor

8.5: If profitability of your business has changed between 2005 and 2006, complete the following table:

Main reason ranked	What are the two main reasons for changes in profitability of your business? (Codes below)	How did these affect your business? 1. Positively 2. Negatively
1st main reason		
2nd main reason		

Change in profitability codes
1 Sale price
2 Purchase price
3 Volume of trade
4 Labor costs
5 Taxes
6 Weather
7 Other operating costs
8 Government policy/intervention
9 Price volatility
10 Competition level
11 Other _____

Section 9 – Commercial Networks

9.1: Are you a member of a processor's or traders' association? |__|

1 = Yes 1 = No

9.2: How many associations are you member of?

|__|__|

9.3: Of these associations, from which do you receive the most benefit?

9.4: For how long have you been a member of this association?

9.5: Over the last 12 months, what is the total amount of membership fees and voluntary contributions that you paid to this association?

9.6: How many traders (companies) are members of this association?

9.7: From or to how many of these businesses do you buy or sell agricultural products?

9.8: What are the three main advantages that your business derives from membership in this association?

1st 2nd 3rd

1. Easier access to credit
2. Easier access to market information
3. Development of commercial contacts
4. Helps resolve commercial disputes with customers and suppliers
5. Helps negotiate with authorities/the police/customs/government
6. Gives me more credibility
7. Protect me from unfair competition
8. Enable members to agree on floor or ceiling prices
9. Makes it possible to satisfy large grouped
10. Mutual insurance in case of bad shocks
11. The association pays the license fee for the individual members
12. Enable businesses to coordinate their sales and purchase activities
13. No benefits
14. Other

Section 10 – Procurement

10.1: For your principal crop, complete the following table about the different types of suppliers from which you purchased, and indicate the quantity, % purchased during the harvest period, and the average harvest and non-harvest prices.

Crop commodity 1:					
#	Supplier	Quantity	% Purchased peak period	Peak period average price	Non-peak period average price
1	Farmer				
2	Primary no-fixed location trader				
3	Primary fixed location trader				
4	Main town trader				
5	Agent / broker				
6	Importer				
7	Other				

Crop commodity 2:					
#	Supplier	Quantity	% Purchased peak period	Peak period average price	Non-peak period average price
1	Farmer				
2	Primary no-fixed location trader				
3	Primary fixed location trader				
4	Main town trader				
5	Agent / broker				
6	Importer				
7	Other				

Crop commodity 3:					
#	Supplier	Quantity	% Purchased peak period	Peak period average price	Non-peak period average price
1	Farmer				
2	Primary no-fixed location trader				
3	Primary fixed location trader				
4	Main town trader				
5	Agent / broker				
6	Importer				

7	Other				

10.2: For your principally crop, indicate the percentage of your total purchases by district and the average distance to the markets in that district.

Product 1 _____			
#	District	% Purchases	Average distance to market (km)
1			
2			
3			
4			
5			
6			

Product 2 _____			
#	District	% Purchases	Average distance to market (km)
1			
2			
3			
4			
5			
6			

Product 3_____			
#	District	% Purchases	Average distance to market (km)
1			
2			
3			
4			
5			
6			

11.3: Do you place orders (for delivery at a future date) with suppliers (with or without advance payment)? |__|

1 = Yes 1 = No

11.4: Over the last 12 months, what proportion of your total purchases has been made by placing an order? |___| %

11.5: With how many suppliers do you place orders without meeting the suppliers personally (e.g., by mail, by telephone, by fax, etc)? |__|__|

Section 12 – Opportunities and constraints

12.1: What are the 5 most important constraints to the future development of your business, and rank them from most important (1) to least important (5).

Constraints (Codes below)					
Ranking (1-5)					

1. Consumer demand
2. Taxes and duties
3. Commodity prices
4. Seasonality of commodity supply
5. Credit availability
6. Government regulation
7. Labor costs
8. Government bureaucracy
9. Poor road/rail infrastructure
10. Price volatility
11. Other _____

12.2: What needs to be done to remove these constraints and by whom?

Needs to be done	By whom
1.	
2.	
3.	
4.	