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USAID OFFICE OF FOOD FOR PEACE UGANDA BELLMON ESTIMATION

JULY 2011

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Preface

During the months of April and May 2011, the Bellmon Estimation Studies for Title II (BEST) team undertook a study of the current state of agricultural markets in Uganda to inform USAID food aid programming decisions.

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Acronyms and Notes

Acronym	Meaning
ACDI/VOCA	Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance
ACTED	Agency for Technical Cooperation and Development
APEP	Agricultural Productivity Enhancement Project
ASPS II	Agricultural Sector Programme Support
ATU	Appropriate Technology Uganda
AU	African Union
BEST	Bellmon Estimation Studies for Title II
CAADP	Comprehensive Africa Agriculture Development Programme
CBPP	Contagious Bovine PleuroPneumonia
CDP	Central Distribution Point
CDSO	Crude Degummed Soy Oil
CET	Common External Tariff
CFSVA	Comprehensive Food Security & Vulnerability Analysis
CLUSA	Cooperative League of the USA
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer Price Index
CSB	Corn Soy Blend
CSI	Coping Strategy Index
DANIDA	Danish International Development Agency
DFCU	Development Finance Company of Uganda
DHS	Demographic Health Survey
DR Congo	Democratic Republic of the Congo
EAC	East African Community
ECHO	Educational Concerns for Hunger Organization
EDP	Extended Delivery Point
EFSA	Emergency Food Security Assessment
EMOP	Emergency Operation
EU	European Union
FANTA	Food And Nutrition Technical Assistance
FAO	Food and Agriculture Organization of the United Nations
FCG	Food Consumption Group
FCS	Food Consumption Score
FDP	Final Delivery Point
FEG	Food Economy Group
FEWS NET	Famine Early Warning Systems Network
FFP	Food For Peace
FFA	Food For Assets

Acronym	Meaning
FFW	Food For Work
FOB	Freight On Board
FY	Fiscal Year
GAO	Government Accountability Office
GAM	Global Acute Malnutrition
GBHL	Grain Bulk Handlers Limited
GDP	Gross Domestic Product
GINI	Gini Index
GMO	Genetically Modified Organism
GNI	Gross National Income
GoU	Government of Uganda
HAZ	Height-for-Age z score
HEA	Household Economy Analysis
HIPC	Heavily Indebted Poor Country
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HRWW	Hard Red Winter Wheat
IDP	Internally Displaced Person
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IPC	Integrated Phase Classification
IPP	Import Parity Price
ITC	International Trade Commission
JICA	Japan International Cooperation Agency
KIDDP	Karamoja Integrated Disarmament and Development Program
KOPGT	Kalangala Oil Pam Growers Trust
KPAP	Karamoja Productive Assets Program
KRA	Kenya Revenue Authority
LDC	Least Developed Country
LHZ	Livelihood Zone
LIFDC	Low Income Food Deficit Country
LRA	Lord's Resistance Army
LRP	Local and Regional Procurement
MCH/MCHN	Mother Child Health/Maternal Child Health and Nutrition
MoU	Memorandum of Understanding
MT	Metric Ton
MUAC	Mid Upper Arm Circumference
MYAP	Multi-Year Assistance Program
NAADS	National Agricultural Advisory Services
NCBA	National Cooperative Business Association

Acronym	Meaning
NEMA	National Environment Management Authority
NFDM	Non-Fat Dry Milk
NGO	Non-Governmental Organization
NUSAF-2	Northern Uganda Social Action Fund
OECD-DAC	Organisation for Economic Cooperation and Development- Development Assistance Committee
OPUL	Oil Palm Uganda Ltd
P4P	Purchase for Progress
PEAP	Poverty Eradication Action Plan
PLWHA	People Living With HIV/AIDS
PM2A	Preventing Malnutrition in Children Under 2 Approach
PMA	Plan for Modernization of Agriculture
POM	Palm Oil Mill
PPP	Purchasing Power Parity
PRDP	Peace and Recovery Development Plan
PRSP	Poverty Reduction Strategy Paper
PVO	Private Voluntary Organization
RALNUC	Restoration of Agricultural Livelihoods in Northern Uganda Component
RM	Regional Monetization
RVR	Rift Valley Railways
SAACOS	Savings and Credit Cooperatives
SAM	Severe Acute Malnutrition
S-C-P	Structure-Conduct-Performance
SD	Standard Deviation
TASO	The Aids Support Organization
TLU	Tropical Livestock Unit
TPD	Tons Per Day
TPH	Tons Per Hour
UBoS	Uganda Bureau of Statistics
UCE	Uganda Commodity Exchange
UDHS	Uganda Demographic and Health Survey
UGX	Ugandan Shilling
UMR	Usual Marketing Requirement
UNBS	Uganda National Bureau of Standards
UNHS	Uganda National Household Survey
UNICEF	United Nations Children's Fund
UPHL	Uganda Property Holdings Limited
UQIS	Uganda Quarantine Inspection Services
URA	Uganda Revenue Authority
US	United States

Acronym	Meaning
US\$	US Dollar
USAID	United States Agency for International Development
USDA	US Department of Agriculture
USG	US Government
VAC	Vulnerability Assessment Committee
VAM	Vulnerability Analysis and Mapping
VAT	Value-Added Tax
VODP	Vegetable Oil Development Project
WAAP	Without Anyone's Approval
WAEF	With Approval from Extended Family
WALO	With Approval from Landlord/Owner
WASC	With Approval from Spouse and Children
WFP	World Food Programme
WHA	World Health Assembly
WHO	World Health Organization
WHZ	Weight-for-Height z score
WRS	Warehouse Receipt System
WTO	World Trade Organization
WV	World Vision

Chapter 1. Executive Summary

This report presents findings to support a Bellmon Determination in advance of a Fiscal Year (FY)12 USAID Title II-funded non-emergency program in Uganda. Since monetization is likely to fund at least a portion of these activities, the Bellmon Estimation Studies for Title II (BEST) team conducted a market analysis of key commodities to assess the feasibility and appropriateness of monetization of Title II commodities. This study is based on a desk study and field work conducted during the period April to June 2011.

1.1. Country Background

Uganda is a land-locked country of 34 million people in East Africa. It currently ranks 143 out of 169 countries on the United Nations Development Programme (UNDP) Human Development Index, and suffers from chronic food insecurity. Food insecurity was worst in northern and north-eastern Uganda; however, food insecurity has improved in northern Uganda since the return of an estimated 1.8 million Internally Displaced Persons (IDPs) over the past three years, and resulting improved agricultural production (UNDP).

Karamoja region, in northeastern Uganda, has continued food insecurity; however, the situation has also improved over the past two years. Karamoja suffers from chronic drought, conflict and high levels of poverty. It includes diverse and neighboring livelihood zones that encompass agriculturalists, agro-pastoralists, and pastoralists. The majority (51 percent) of Karamoja households experienced severe or borderline food insecurity according to the Food Consumption Group (FCG-Low) index (Makerere University, 2010). Corroborating these findings (but using a slightly different methodology and having been completed earlier), the World Food Program (WFP) Comprehensive Food Security & Vulnerability Analysis (CFSVA) of 2009 states that Karamoja's population is the most food-insecure as compared to other regions (20 percent of its population classified as food insecure). Within the Karamoja region, food insecurity was highest in the southern districts of Moroto (30 percent) and Nakapiripirit (23 percent). Overall, 595,000 residents of Karamoja's estimated one million residents are deemed to be in the categories of "food insecure" or "moderately food insecure."

Strong positive national economic growth for Uganda over the past two years (5.8 percent in 2010 and 7.2 percent in 2009) has not been fully reflected in the livestock-based economy of Karamoja. Furthermore, election spending by the state and global trends (rising oil and food prices) have contributed to inflation of 14.1 percent in early 2011, leading to increased fuel costs, and increased staples costs (The Guardian Weekly, 5/13-19, 2011). These trends, along with below-normal rainfall, would be expected to negatively impact food security overall in 2011 (FEWS NET, 2011).

1.2. Food Aid

Uganda has received food aid from USAID and other donors over the past two decades, directly linked to the Lord's Resistance Army (LRA) insurgency which began in 1987. The Karamoja region in northeastern Uganda has also received food aid over the past four decades, primarily through WFP, due to chronic drought, conflict, and high levels of poverty. Significant quantities of food aid have been transported through Uganda, to southern Sudan, the eastern DR Congo, and Rwanda. Kampala serves as a hub for much of this assistance, and some surplus from

Uganda (primarily maize and beans) has also been purchased for regional humanitarian assistance. USAID plans to move its Title II Non-Emergency Food Aid Programs from northern Uganda to the northeastern Karamoja region, and bordering zones.

MYAP partners. Current Multi-year Assistance Program (MYAP) partners for USAID are ACDI/VOCA and Mercy Corps. Both operate in northern Uganda, which was hardest hit by the LRA. USAID developmental food aid to northern Uganda has steadied as IDPs returned home and restarted their rural agricultural livelihoods in the past three years. As overall civil security has improved and IDPs have returned to their rural homes, USAID emergency assistance has therefore declined over the past five years to northern Uganda.

ACDI/VOCA's program began in 2006, and its annual funding is approximately US\$15 million. The program covers the northern districts of Gulu, and continues southeast to Soroti and surrounding districts. ACDI/VOCA works with 20 partner NGOs to promote agricultural rehabilitation, assist People Living with HIV/AIDs (PLWHAs), implement microfinance loans and encourage village savings, and improve nutrition and hygiene. Mercy Corps' program began in 2008, and its annual funding is about US\$10 million. Mercy Corps' program also promotes agricultural/livelihoods rehabilitation (e.g., road construction and perma-gardening), Maternal Child Health and Nutrition (MCHN), and Water and Sanitation and Hygiene (WASH) activities. The two Awardees' programs combined reach an estimated 256,000 beneficiaries, including activities directly and indirectly linked to food assistance. Distributed food aid totals for both partners are quite small; each program includes annual distribution of roughly 4,000 MT of cornmeal, corn-soya blend (CSB), split peas, and vegetable oil.

WFP. USAID provides roughly 30 percent of WFP/Uganda's annual funding. WFP's food aid to the Karamoja region has decreased in 2010 and 2011, largely due to improved conditions in the area and increased targeting. WFP ended its Emergency Operation (EMOP) program for Karamoja in 2010. It then transitioned beneficiaries into the more developmental Karamoja Productive Assets Program (KPAP), for those only deemed "moderately food insecure."

USDA. USDA McGovern-Dole Food For Education programming is also supported in Uganda. WFP and ACDI/VOCA are the two current program partners, and receive funding of US\$19 million and US\$12 million, respectively. The programs target students for food assistance, and support activities for the targeted schools and local communities. In April 2011, USDA also announced two new Food For Progress awards to Mercy Corps (US\$11.2 million) and to the Cooperative League of the USA/National Cooperative Business Association (CLUSA/NCBA) (US\$12.0 million).

Feed the Future. Feed the Future activities in Uganda are also expected to complement the above food assistance programs, to reach the program's goal of improving overall food security levels in-country. Feed the Future programming in-country is expected to target the value chains for beans, maize, and coffee, among many other planned activities.

1.3. Adequacy of Storage and Transportation

Uganda is capable of transporting and storing current and planned food aid volumes. As discussed in Chapter 2, current and planned food aid volumes are not nearly as high as they were five years ago; nonetheless, most of the roads and warehouses that handled over 200,000

MT¹ in 2005 are still available today, with current annual donor warehouse volumes of approximately 68,600 MT.² Donors have solidified storage and transport routes over their long history of food aid distribution in the country and to neighboring countries, which stretches over 40 years.

The large majority of food aid destined for Uganda arrives at Port Mombasa, Kenya. Uganda accounted for 80 percent of the port's transit goods in 2009 (Dredging Today, 2010). In 2008, WFP reported total shipping costs for bulk grain, from the US to Mombasa port, were about US\$153/MT, plus port charges (including repacking) of about US\$30 (IFPRI, 2008).

Donors, the private sector, and the GoU own and operate a number of warehouses and storage facilities across the country. WFP currently has the most storage capacity in country, as compared to other donors. WFP warehouses in Tororo and Kampala each store 18,000 MT. As of May 2011, both facilities are currently well under capacity. ACDI/VOCA and Mercy Corps operate a total of five warehouses. As detailed in Chapter 6, private companies own and operate cleaning and storage facilities, some of which are a part of the warehouse receipt system and the Ugandan Commodity Exchange.

Road transport along the Northern Corridor is largely preferred by both donors and private companies; although road transport is relatively more expensive, donors and private market actors both reported that the higher cost was worth the time saved compared to rail transport. Transport by rail from Mombasa to Kampala costs an estimated US\$95 per MT, and transport by road from Mombasa to Kampala is about US\$107 per MT (personal interviews, 2011).

The most common and efficient route for food aid destined for Karamoja is through Tororo. From Tororo, food aid travels north through Moroto and into the Karamoja region. In rare cases, food aid may pass through Kampala instead of Tororo. In such circumstances, shipments travel through Soroti and then into Karamoja.

1.4. Monetization Analysis

1.4.1. Introduction

For the purposes of this study, a commodity was selected for review and possible recommendation following six “tests”:

1. Eligibility for export from the US³
2. Eligibility for import to Uganda
3. Significance of domestic demand⁴
4. Domestic supply shortfalls are filled through commercial imports and food aid
5. Presence of adequate competition for the commodities
6. Expectations that fair market prices can be achieved.⁵

¹ WFP Interfais reports 2005 total food aid tonnages of 223,835 MT.

² This is a total of MercyCorps storage (600 MT), ACDI/VOCA storage (14,000 MT), and WFP storage (54,000 MT). However, this figure could increase with WFP's planned increased capacity of 23,000 MT.

³ This “test” implies that it is also on the FFP list of approved commodities for monetization

⁴ This threshold is set at in the following way: Average import levels for the past five years must be greater than US\$5 million *and* a regular portion of these volumes must be commercial imports. A threshold is set to ensure efficiencies in the funding of Awardee programs.

Based on the above tests, three commodities were evaluated as potential candidates for monetization in Uganda for FY12: wheat grain, edible oil, and rice.

The analysis is broken into three core sections: a brief overview of historical monetization in-country, initial commodity selection, and commodity-specific market analyses and recommendations. For the complete methodology for determining the potential impact of monetized food aid, please see Annex VI.

1.4.2. Monetization History

Small-lot refined soybean oil monetization was the mainstay of the Title II monetization program in Uganda for 18 years, until 2007 when it was discontinued due to a zero-rated Usual Marketing Requirements (UMR) by USDA, and the removal of a waiver on VAT by the GoU.

Only hard red winter wheat (HRWW) has been monetized during the current non-emergency programs under this review. HRWW was first monetized in 1998 and averaged approximately 23,428 MT per year during the most period FY07 to FY10. Title II Awardees expect to monetize 21,120 MT of HRWW for FY11. USDA anticipates monetizing 18,000 MT of HRWW during FY11.

Since the beginning of USAID-supported non-emergency programs in 1988, ACDI/VOCA has been the sole monetization agent for all implementing NGOs receiving resources from USAID and USDA.

1.4.3. Recommendations

Based on a market analysis for each of these commodities, the following recommendations are made:

Wheat grain. The study team recommends a maximum annual tonnage of HRWW monetization of 27,000 MT for FY11, which represents 15 percent of the current year's estimated annual demand for hard wheat. This recommendation is based on an estimated demand of 450,000 MT for wheat grain for 2011, and an estimated 180,000 MT demand for hard wheat for 2011. **Assuming five percent annual growth in demand, the maximum tonnage recommended for FY12 is 28,350 MT of HRWW.** ACDI/VOCA has acted as the monetization agent for all Title II sales during the period under review. Sales prices achieved have been within an acceptable range of an estimated Import Parity Price (IPP); sales prices have achieved an average of 92 percent of estimated IPP since 2007, which includes a period of volatility on the world markets.

The recommended volumes are similar to those of the recent past, and would represent no substantial disincentive to domestic producers or processors of wheat grain. The study team finds that, on the contrary, Title II wheat monetizations have played a pivotal role in developing a competitive domestic milling industry, by providing high-quality wheat under favorable sales contract conditions that are generally not available through regular commercial sales (including payment in Ugandan Shillings).

⁵ Implicit in the above six bullets is that the destination market must be able to absorb the volume of monetized commodity in question without "substantial" disruption. Recent precedent follows a ten percent rule--- that is; "substantial" disruption to the market is assumed not to occur below a threshold of either 10 percent of commercial imports or 5 percent of the domestic production of any particular commodity if there is substantial domestic production. We will follow this convention throughout this analysis.

The team recommends one minor adjustment in the tendering and negotiation process. Rather than using soft wheat prices, Cost, Insurance, Freight (CIF) Mombasa, as a benchmark against which to derive a (unstated) floor price in the tendering and negotiation process, the monetization managers should attempt to discover prices for more comparable quality hard wheat CIF Mombasa, to which costs of commercial clearing and transport to the ultimate delivery point (i.e., the mills) should then be added. These may include, but are not limited to, hard wheat varieties of comparable protein content (13-13.5 percent) originating from Canada, US, or Argentina.

Edible oil. The study team does NOT recommend refined vegetable oil for monetization as the study team believes it has potential to disrupt the marketing of processing industries and, to a lesser extent, a possible disincentive to oil seed production. GoU policy on import substitution, and possible Genetically Modified Organism (GMO) policy, makes monetization of US refined vegetable oil extremely sensitive, an additional reason for our team to recommend against monetization of refined vegetable oil.

The study team DOES recommend consideration of small volumes of Crude Degummed Soy Oil (CDSO) for monetization. Although the GoU and private industry have invested heavily in oil seed and oil palm production, domestic sources account for only 10 to 15 percent of annual demand at present. Both oil processors have excess installed capacity in anticipation of continual growth in demand and will continue to be forced to import crude oil (most likely crude palm oil) for processing in country for the next five years, at a minimum. While the share of domestic production is expected to increase, the ability to meet demand with domestic seed/palm inputs will be a gradual process, driven primarily by the maturation of BIDCO's oil palms in the coming years. Expansion of sunflower oil seed production is expected to be relatively slower, mostly due to lack of seed availability and credit constraints at the smallholder farmer level. However, the feasibility and desirability of monetizing CDSO should be reassessed on a regular basis (at least yearly) as Uganda continues to increase its domestic production of oil palm⁶ and sunflower oil seeds.

CDSO could be monetized in Uganda, and then refined by a private refiner (e.g. Mukwano or BIDCO) to add value and utilize refining capacity in-country. There is excess current installed refining capacity (BIDCO estimates it has 300 MT per day excess capacity, for example). Both processors have expressed interest in purchasing monetized CDSO should USAID make monetized CDSO available in Uganda.

The GoU Ministry of Finance has informed the USAID Mission that they are not supportive of the monetization of CDSO; such GoU support is a critical consideration for the success of upcoming Title II food security funding. Based on only technical considerations, however, the team finds that volumes in the range of 7,000-14,000 MT for the first year would represent no substantial disincentive to domestic oil seed or oil palm producers, nor to processors of crude oil, because commercial imports continue to meet 85 to 90 percent of demand for edible oil. This recommended tonnage is based on the following assumptions: 85 percent demand met through commercial imports, 65 percent conversion rate of crude to refined oil, and monetized CDSO representing between 2.5 percent to five percent of commercial import volumes.

Given lack of prior experience monetizing CDSO, uncertainty about sales price performance, and largely duopolistic nature of oil processing industry, BEST recommends a conservative

⁶ "Oil palm" in this report refers to the oil seed of the palm plant.

monetization tonnage in the first year, with increasing tonnages in the second to fifth years, should the sale prices meet expectations.

Rice. The study team does NOT recommend rice for monetization for FY11 or FY12 for two primary reasons: 1) there is relatively low demand for commercial imports of rice, which would limit the funding available through monetization of a small percentage of the average commercial imports; and 2) there is substantial interest among the GoU in investments in domestic rice production.

1.5. Distribution Analysis

In order to provide guidance for *distributed* food aid interventions, to ensure any potential negative impact on production incentive and markets is minimized, this summary analysis provides: 1) an overview of available evidence of national and localized food deficits, and private market capacity to meet those localized food deficits; 2) key considerations for all distributed food aid interventions in Uganda; and 3) guidelines for each of the most likely modalities for distributed food aid during the upcoming Title II non-emergency programs cycle (FY12-FY16) in Uganda.

The overall strategic objective for USAID/Uganda's Title II Non-Emergency Programming (FY12-FY16) is to strengthen livelihoods and improve nutrition. Programming is expected to target greater Karamoja, and food-for-work (FFW), food-for-assets (FFA), and Maternal Child Health and Nutrition (MCHN) activities should be considered.

The BEST team visited Uganda in April/May 2011. The team made the following observations: 1) no sighting of leakage of Title II commodities on markets visited in northern and northeastern Uganda, and few (if any) reports of leakage in the past one to two years; 2) current MYAP programming being undertaken appears to minimize any negative impacts on production incentives and markets, especially as agricultural rehabilitation is still in its infancy in northern Uganda; and 3) current commodity selection of cornmeal, corn-soy blend (CSB), split peas, and vegetable oil seems appropriate for local populations and complements typical local diets.

Karamoja and surrounding areas. Karamoja's unimodal rainy season contrasts with the rest of Uganda's bimodal seasons, creating unique challenges for its residents' livelihoods and for development of economic links with neighboring, bimodal areas outside of Karamoja proper. Karamoja's chronic food insecurity, which has slightly improved in recent years but still remains, is due to many factors, including: subsistence-based livelihoods, the isolation of inhabitants, the disruption of traditional livelihood systems, civil insecurity, poor rainfall, crop and livestock disease, and reduced coping capacity.

Karamoja holds three distinct populations: agriculturalists, agro-pastoralists, and pastoralists; which are further divided into six distinct livelihood zones within the region. Many extended families in Karamoja also live under a 'manyatta' structure. Typically, these structures facilitate individual or family ration sharing among a broader group of people.

The private market's capacity to meet food deficits within Karamoja is generally good in terms of availability, but access is the key issue for poorer Karamoja residents. Terms of trade between livestock and grains is also a key determinant for various sub-populations' livelihoods and ability to access marketed foods within Karamoja, with seasonality, quality of transport, levels of conflict or insecurity, storage, and market integration acting as additional key determinants.

PVOs will need to take the area's culture and diverse, complex set of livelihoods into account in designing successful programmatic interventions. Furthermore, conflict, corruption and lessons learned should all be taken into account by potential Awardees in designing appropriate food security interventions for the greater Karamoja region.

1.6. Local/Regional Procurement (LRP)

1.6.1. Introduction

LRP allows for the local and/or regional procurement of foodstuffs for distribution in recipient countries. The rationale for LRP is that it allows for foodstuffs to arrive more quickly to targeted areas, and locally-procured foods are generally less expensive than imported food aid from donor countries, which allows for greater beneficiary coverage. Many cash/voucher programs have also been implemented in Uganda, with most targeting IDPs in northern Uganda in the process of returning home, and/or targeting beneficiaries in the greater Karamoja region.

WFP is the largest LRP actor in Uganda, and has implemented a significant LRP program in Uganda, primarily due to the availability of staple surpluses to meet needs in-country and in neighboring countries. WFP purchased 210,000 MT of foodstuffs in 2007, primarily maize and beans. This has decreased to approximately 136,000 MT in both 2009 and 2010, due in part to decreasing IDP population numbers in northern Uganda as well as rising commodity prices.

A number of NGOs (World Vision, Danish International Development Agency (DANIDA), Agency for Technical Cooperation and Development (ACTED), Mercy Corps, Oxfam, United Nations Food and Agriculture Organization (FAO), Catholic Relief Services (CRS), and Appropriate Technology Uganda (ATU)) have undertaken various cash/voucher programs (usually for food, seeds, and/or tools). These programs usually target returning IDPs, and promote agricultural rehabilitation.

1.6.2. WFP and Uganda Commodity Exchange (UCE)

WFP's nascent Purchase for Progress (P4P) program aims to improve incomes of smallholder farmers through increased marketing of agricultural products. P4P uses traditional tendering as its dominant strategy, and current tonnages purchased are quite small (6,800 MT in 2009 and 4,000 MT in 2010) as compared to the program's targets and to regular LRP-purchased foodstuffs. This is in part due to the program's strict grade requirements, which small-holder farmers are especially challenged to meet, and procurement regulations, as well as general challenges related to the program's startup (for details, see Chapter 6). The program's success also depends in part on the private sector, which has considerable market power.

The UCE was launched in 2008 under the Warehouse Receipts System (WRS) Act of 2006. The goal of the UCE and the WRS is to improve rural livelihoods, by supporting private sector-operated, public warehouses which store commodities according to standardized requirements. UCE's target is to establish nine regional warehouses with a total storage capacity of 34,000 MT, and this is expected to expand. Tonnages purchased through the UCE are still low, amounting to roughly 11,000 MT sold to WFP and other organizations between 2008 and 2010. There is potential for the expansion of the WRS; however, a major challenge for the program is the fact that its prices for maize are slightly higher than those available on the informal market (by about 4.7 percent).

Overall, some of the objectives of P4P and WFP's regular LRP programs may conflict. P4P aims to benefit smallholder farmers, who typically do not benefit from economies of scale, unless they market their produce through large groups. On the other hand, WFP's regular and much larger LRP program's main goal is to purchase large volumes of food efficiently and at the lowest price. WFP will need to resolve the goals of these conflicting programs to best meet the food security needs of its beneficiaries in Uganda, and elsewhere.

Chapter 2. Food Aid Overview

2.1. Introduction

This Chapter provides a summary of previous, current, and planned US food aid that is directly distributed through USAID Multi-Year Assistance Program (MYAP) partners and the World Food Program (WFP), as well as USDA Food for Progress and McGovern-Dole food aid programming. Details are provided on the two Title II MYAP partners' activities, monetizations by the MYAP partners and other organizations,⁷ and planned activities for the major food security stakeholders within Uganda in the coming years.

Uganda has been a large recipient of USAID Office of Food for Peace Title II resources (emergency and non-emergency) over the past two decades. This was due to the country's widespread food insecurity and decreased agricultural production in northern Uganda, directly tied to the Lord's Resistance Army (LRA) insurgency which began in 1987. At the height of the insurgency, there were roughly 1.8 million IDPs in northern Uganda in 2005 (Internal Displacement Monitoring Center). These IDPs were primarily based near towns for their own protection, which resulted in the neglect of agriculture in more rural areas and significant declines in production.

Both the GoU and the LRA agreed to end hostilities in 2006; the last noted activity by the LRA within northern Uganda occurred in 2008 (UN, 2011). Internally Displaced Persons (IDP) numbers have steadily declined, with the same report noting that over 92 percent of IDPs in Acholi and Teso Regions having returned home or gone to new locations for settlement by early 2011. Community resettlement rates varied depending on whether communities were closer or further away from known LRA presence areas, how many families used or did not use transit centers on the way back to their homesteads, levels and types of aid available for IDPs, and whether or not attacks occurred after resettlement began. The IDP resettlement process is fragile and has yet to be fully consolidated (UN, 2011), with field interviews confirming this in northern Uganda.

As the threat from the LRA has waned, Uganda has shifted from emergency aid to transitional and development aid. This transition is due to factors including: 1) the successful expulsion of the LRA to the DR Congo, South Sudan, and/or Central African Republic; 2) the subsequent return of Ugandan IDPs to transit centers/home areas; and 3) the re-opening of farmland in northern Uganda. USAID's current MYAP partners, ACDI/VOCA and Mercy Corps, are ideally situated in northern Uganda to provide some of this developmental aid. These and other organizations have helped build the resiliency of local communities, by assisting them in the transition from camps and dependency to improved food security, through improved access, availability, and utilization.

The overall food security situation has improved considerably in Uganda over the last five years, as evidenced by the decrease in USAID and WFP food aid tonnages (50 percent and 71 percent, respectively since 2006, see following tables), and Ugandan national cereal production increasing 19 percent from 2004 to 2008 (see Agricultural Overview Annex). However, acute

⁷ USDA specifically, for Food for Progress activities

needs remain, particularly 1) in the Karamoja region and 2) in northern Uganda where IDPs have only recently returned, and developmental gains need to be consolidated. In Karamoja, cyclical drought conditions and long-term under-development continue to threaten food security for large portions of the population. However, good rains in 2010 provided a respite from two consecutive years of drought. Overall, the food security situation remains particularly fluid in Karamoja, and will require close monitoring over the near term as drought conditions have been a chronic threat in Karamoja for decades.

The study team visited Gulu, Kitgum, Kaabong, Kotido, Kapchorwa, and Mbale districts in northern and eastern Uganda, in May 2011. The team conducted field assessments regarding overall food security.

2.2. Ongoing Initiatives

The table below summarizes US Title II food aid to Uganda from 2006 to 2011.

Table 1. Annual US Title II Food Aid Supplied to Uganda (MT), 2006-2011*

Year	2006	2007	2008	2009	2010	2011*	Totals
Emergency (WFP)	68,380	64,210	47,850	19,520	15,530	7,260	222,750
Developmental (PVOs)	23,850	21,960	33,170	30,020	30,180	24,150	163,330
Total	92,230	86,170	81,020	49,540	45,710	31,410	386,080

Source: USAID

*Estimates. For 2011, figures are planned tonnages to be completed by the end of the fiscal year, 9/30/2011.

Table 1 shows USAID's transition from emergency to developmental resources over the past five years. This dovetails with improved overall physical security for local populations, and the relocation of IDPs to their rural homesteads. WFP carried out USAID emergency assistance, and PVOs in northern Uganda carry out USAID developmental assistance. Note that USAID/FFP developmental assistance in Uganda is the third-largest program in Africa, in terms of non-emergency resources, following Ethiopia and Sudan. Although this tonnage is high, it is still important to note that food aid volumes to the country are declining overall, in response to improving levels of agricultural production and greater self-sufficiency for northern Ugandans.

Table 2. Annual WFP Food Aid Distributed in Uganda (MT), 2006-2011

Year	2006	2007	2008	2009	2010	2011**	Totals
Karamoja distributions	5,848	25,082	45,111	83,916	35,057	1,817	196,831
Other distributions*	204,148	180,021	121,737	55,962	26,010	4,425	592,303
WFP Total Distributions	209,996	205,103	166,848	139,878	61,067	6,242	789,134
Karamoja as % of total WFP distributions	3%	12%	27%	60%	57%	29%	25%

Source: WFP Uganda

Note: There are some discrepancies with above WFP and USAID Title II tables, in part due to WFP calendar year vs. USG fiscal year accounting: **Other distributions* covers primarily northern Gulu/Kitgum/Pader/Lira districts but also include other minor areas within the country. **2011 figures cover up to March 2011, as reported by WFP/Uganda

Overall, USAID provided roughly 30 percent of WFP/Uganda's resources over the past five years. As noted, WFP/Uganda's food aid distributions have decreased over this same time period, as shown in Table 2. This is primarily due to IDPs who have returned to rural areas (mostly covered by "other distributions" in above table), and resumed their agricultural activities.

Generally, this includes populations that returned to their homes in greater Gulu, Kitgum, Pader, and Lira.

WFP decreased assistance to Karamoja in 2010 and 2011. Though Karamoja was largely spared from LRA attacks and threats, the region historically suffers from periodic droughts, poor infrastructure, internal conflict,⁸ and overall food insecurity. However, conditions have improved since 2009, and WFP has reduced and better targeted its food aid within Karamoja. As part of this shift in strategy, WFP reduced emergency beneficiaries (275,000 individuals in 2010 under the Emergency Operations (EMOP)), and transitioned households into Karamoja Productive Assets Program (KPAP), a program which targets only "moderately food insecure" populations. The EMOP ended after 2010 for Karamoja. Currently, the KPAP is reaching over 450,000 beneficiaries.⁹ Table 2 highlights WFP's transition from emergency to more developmental aid in Karamoja; this shift is expected to continue in 2011, barring any unforeseen shocks later this year.

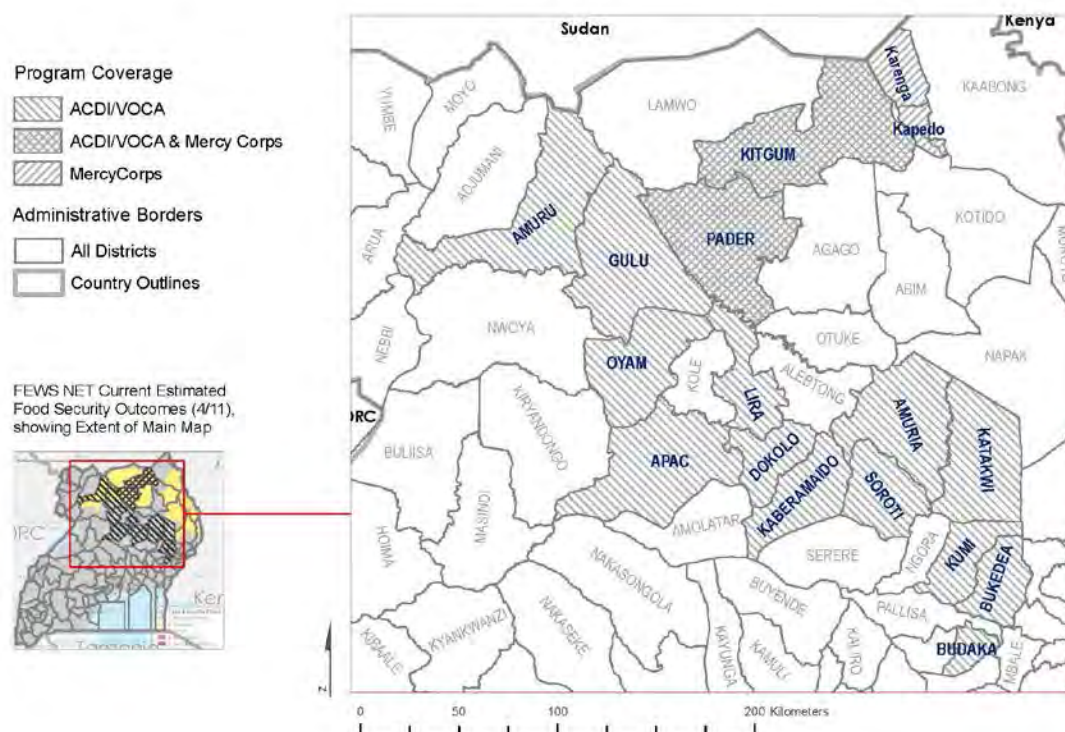
As part of WFP/Uganda's program activities, WFP purchased 41,000 MT of food locally within Uganda for direct distribution in-country in 2010. Please see Chapter 6 covering Local and Regional Procurement for further details.

2.2.1. Awardees/NGOs Currently Operating

Under the current MYAP, ACDI/VOCA began its activities in 2006, and Mercy Corps began its activities in 2008. Both programs target recently-returned populations in northern Uganda. ACDI/VOCA's annual project budget (approximately US\$15 million/year) is a bit larger than Mercy Corps' (approximately US\$10 million/year). Figure 1 illustrates Title II program coverage by Awardee.

⁸ Largely due to cattle theft and other resource conflict between ethnic groups within Karamoja and with rival ethnic groups from NW Kenya; see "A Food Security Analysis of Karamoja," 9/2010, FAO/ECHO (Simon Levine)

⁹ WFP/Uganda: actual beneficiaries for KPAP in 2011 is 456,684 individuals, with 410,364 receiving food and 46,320 receiving cash; this also translates to 68,394 heads of house receiving food and 7,720 heads of house receiving cash; WFP uses 6 to represent members of a household in Karamoja;

Figure 1. Title II Program Coverage by Awardee, FY11

Map by Bellmon Estimated Studies for Title II (USAID/BEST). Not all non-program district names displayed due to space constraints. Sources - District Boundaries (Admin 2), Names and Current Estimated Food Security Outcomes: FEWS NET. Admin 0 (Country) boundaries - GAUL dataset. Parish Boundaries (Admin 4) - GIST Data Repository.

Stakeholders interviewed during the field trip commented that emergency aid to northern Uganda ended somewhat abruptly for particular local communities over the past two to four years. However, MYAP funding has helped bridge this gap in donor support. Specifically, it has helped bolster many rural communities in northern Uganda by stabilizing livelihoods and supporting general agricultural rehabilitation.

ACDI/VOCA. ACDI/VOCA and its partners currently target areas in Gulu (northern Uganda), and extend southeast in an arc to greater Soroti and Katakwi. Their MYAP activities (including the work of 20 partner NGOs) focus on: farmer training; improved inputs; post-harvest handling; group savings mobilization and management; Farming as a Business; collective marketing; improved nutrition/hygiene; and the rehabilitation of feeder roads. In addition, ACDI/VOCA and its partners provide corn soy blend (CSB)/vegetable oil food rations to 53,000 particularly vulnerable people and their families (42,000 of which are PLWHAs, and 11,000 of whom are highly-food insecure children). The BEST team visited returnee farmer groups in rural areas 30 to 40 km outside of Gulu, who reported feeling physically secure and eager to resume agricultural activities as small-holder farmers.

Mercy Corps. Mercy Corps' activities are concentrated in the northern districts of Kitgum, Pader, and part of Kaabong. Program sectors include agriculture/livelihoods (focusing on road rehabilitation and perma-gardening), Maternal Child Health and Nutrition (MCHN), and water/sanitation/hygiene activities, with the above sectoral activities integrated.

2.2.2. Monetized Food Aid

Title II partners and other PVOs have monetized commodities for more than two decades in Uganda. Currently ACDI/VOCA is the lead on monetization for the MYAP consortium, and monetizes wheat for Mercy Corps and itself. Vegetable oil was monetized in the past, but its tax status was changed by the GoU in 2007, making it less desirable for monetization. Monetization funds support general food security programming activities by the Title II PVO Awardees. Table 3 summarizes USAID and USDA monetized food aid from FY07 to FY11.

Table 3. Monetized Commodities (MT), FY07-FY11

Year	FY07	FY08	FY09	FY10	FY11**	Totals
Wheat (Title II)	20,310	30,140	21,550	21,710	21,120	114,830
Wheat (USDA)	0	0	15,000	0	18,000	33,000
<i>Sub-total Wheat</i>	<i>20,310</i>	<i>30,140</i>	<i>36,550</i>	<i>21,710</i>	<i>39,120</i>	<i>147,830</i>
Vegetable Oil (Title II)	762	0	0	0	0	762
Vegetable Oil (USDA)	0	0	0	0	6,830	6,830
<i>Sub-total Vegetable Oil</i>	<i>0</i>	<i>0</i>	<i>15,000</i>	<i>0</i>	<i>6,830</i>	<i>21,830</i>
Grand Total	21,072	30,140	51,550	21,710	45,950	170,422

Source: USAID, USDA, MYAP partners, 2009 Bellmon

Note: *USDA/FFProgress wheat grants in 2006 and 2009 were awarded to FINCA; **FY11 USDA monetizations to Mercy Corps (wheat) and CLUSA/NCBA (oil) have not yet been undertaken, and the 6,830 MT of vegetable oil may be substituted for approximately 20,000 MT of wheat; USAID Title II monetization total includes 4,190 MT wheat grain that is anticipated to arrive in mid-June 2011.

See further details on monetization in Chapter 4.

2.2.3. Distributed Food Aid

Table 4. Uganda USAID FY 2010 Non-Emergency MT for MYAP Partners

Year	CSB	Maize Meal	Pulse (peas)	Veg. Oil	Total (MT)	Beneficiaries*
ACDI/VOCA	3793	--	--	241	4,034	139,000
Mercy Corps	140	3780	290	210	4,420	117,000

Source:ACDI/VOCA and Mercy Corps; *beneficiary numbers include those receiving distributed food aid and those directly benefiting from other MYAP programming, e.g. agriculture/livelihoods

Distributed food aid is a relatively small component for both of the current Uganda MYAP programs. As mentioned above, ACDI/VOCA targets PLWHAs with a family ration of CSB/vegetable oil¹⁰ for one year, and uses the Ugandan NGO The Aids Support Organization (TASO) to identify and register individuals who are HIV positive. Mercy Corps provides food aid to vulnerable beneficiaries under its various programmatic interventions.¹¹

USDA's McGovern-Dole Food For Education programming is typically used for school feeding programs and ancillary activities. WFP/Uganda uses aid to establish school gardens, promote

¹⁰ ACDI/VOCA PLWHA Rations are 7.5 kg/person/month of CSB, and 0.518 litre/person/month of vegetable oil, up to a maximum of six people/household

¹¹ Mercy Corps food aid rations are as follows: Food for Work (for road construction/rehab) and WASH activities: 37.5 kg/person/month of cornmeal; 2 liters/person/month of vegetable oil; MCHN program-supplementary feeding program ration for moderately malnourished child: 5 kgs. CSB, 6.25 kgs. peas, 25 kgs. cornmeal and 2 liters vegetable oil/month; for pregnant and lactating mothers: 6.25 kgs. peas, 25 kgs. cornmeal and 2 liters vegetable oil/month

fuel-saving stoves, promote nutrition and health education, improve HIV/AIDS awareness, provide Vitamin A supplementation, and support training for schools in food handling and management. The table below summarizes USDA distributed food aid from 2005 to 2010.

Table 5. USDA McGovern-Dole Food for Education Programming, Uganda (MT) 2005-2010

Year	2005/6	2007	2008	2009	2010	Totals
Tonnage	8,090			16,230	4480*	
Program Value	\$6,800,000			\$19,000,000	\$12,700,000	\$38,500,000
Implementing Partner	WFP			WFP	ACDI/VOCA	

Source: USDA, GAO, ACDI/VOCA

Note: *tonnage for ACDI/VOCA is expected to be 2650 MT in 2011, and 1270 MT in 2012.

2.3. Planned Initiatives

USAID/FFP currently supports MYAPs in 2011 for ACDI/VOCA (US\$15 million per year) and Mercy Corps (US\$10 million per year). ACDI/VOCA's MYAP is scheduled to end at the end of FY11. Mercy Corps' current MYAP is scheduled to run until FY13 at a similar level. The new Title II Non-Emergency program (formerly referred to as MYAP) for Uganda is expected to be funded in the range of US\$18 million to US\$25 million per year from FY12 to FY16, may include awards for up to two PVOs, and will likely target the greater northeast Karamoja region.

USAID/Uganda's Feed the Future program activities are also expected to significantly improve overall food security and agricultural production for Uganda. Currently, the USG expects to commit US\$150 million for these activities, to complement US\$200 million in support from other donors in support of the GoU agricultural strategy, as detailed in their compact under Comprehensive Africa Agriculture Development Program (CAADP).

Under USAID/Uganda's Feed the Future program agenda, activities that will be funded include: 1) agricultural research; 2) policy and enabling environment; 3) partnership investment development fund; 4) capacity building; 5) value chain production and market linkages (with a focus on maize, beans, and coffee); 6) agro-input supplies; 7) producer organization (farm-level aggregation development); 8) market information systems; 9) community connector (targeting communities with the highest levels of malnutrition, and empowering women and children/youth); and 10) nutrition programs.

Chapter 3. Adequacy of Ports, Storage, and Inland Transport

Uganda is capable of transporting and storing current and planned food aid volumes. As discussed in Chapter 2, current and planned food aid volumes are not nearly as high as they were five years ago; nonetheless, most of the roads and warehouses that handled over 200,000 MT¹² in 2005 are still available today, with current annual donor warehouse volumes of approximately 68,600 MT.¹³ Donors have solidified storage and transport routes over their long history of food aid distribution in the country, which stretches past 40 years. Additionally, over the past two decades, food aid for the DR Congo, Rwanda, and southern Sudan has been transported through and stored in Uganda. In sum, Uganda currently houses experienced donors who effectively utilize infrastructure to ship, store, and transport food aid.

3.1. Ports

3.1.1. Port Mombasa

The large majority of food aid destined for Uganda arrives at Port Mombasa, Kenya. The port is Kenya's largest and busiest port, and also serves Rwanda, Burundi, the DR Congo, Southern Sudan, Ethiopia, Somalia, and Tanzania (WFP, 2010). Uganda accounted for 80 percent of the port's transit goods in 2009 (Dredging Today, 2010).

In 2009, the port handled slightly over 19 million MT, almost utilizing the port's total capacity of 22 million MT (Dredging Today, 2010). However, this capacity is estimated to double with the construction of a new terminal, supported by Japan International Cooperation Agency (JICA). The first phase of construction should be completed by 2013 (Dredging Today, 2010).

Mombasa port has 16 deep-water berths, and five container berths (WFP, 2010). Only one berth is reserved for bulk transfer, which limits bulk loading capacity to 300,000 MT per month. One study notes that this capacity is further reduced to 200,000 MT per month due to the fact that only one bagging line is available, operated by Grain Bulk Handlers Limited (GBHL) (Kirimi, 2011). The port is equipped with forklift trucks, cranes, reach-stackers, and other tools. In 2008, the average wait time for a container dwell time was 8.6 days (WFP, 2010).

GBHL is the sole grain bulk handling agent currently used for monetized wheat, and is the largest grain handler at the port (Kirimi, 2011). GBHL owns and operates a dry bulk discharge and handling terminal for grain imports with a capacity of 67,500 MT (BEST/Fintrac, 2009). Their facilities include transit and storage silos, warehouses, and, as stated above, the port's only bagging line. GBHL provides transport to rail and road links near the port, with a discharge rate of 4,500 MT per day (BEST/Fintrac, 2009).

¹² WFP interfaits reports 2005 total food aid tonnages of 223,835 MT.

¹³ This is a total of MercyCorps storage (600 MT), ACDI/VOCA storage (14,000 MT), and WFP storage (54,000 MT). However, this figure could increase with WFP's planned increased capacity of 23,000 MT.

WFP imports are generally brought in tax-free,¹⁴ and NGOs may be eligible for tax exemption, depending on the type and purpose of their cargo (WFP, 2010). In 2008, WFP reported total shipping costs for bulk grain, from the US to Mombasa port, were about US\$153/MT, plus port charges (including repacking) of about US\$30 (IFPRI, 2008).

3.1.2. Dar es Salaam Port

Dar es Salaam Port can be considered as an alternative port to Mombasa, if Mombasa is too congested. The current likelihood of using Dar es Salaam is low; only one to five percent of all Uganda's seaborne imports are brought in through the port (Lyatuu, 2008), and the route from Dar es Salaam to Kampala is about twice as long as it is from Mombasa (Kagenda, 2011). Furthermore, the tax freight charges on the Central Corridor deter importers from using Dar es Salaam (Ihucha, 2011). However, the likelihood of Dar es Salaam as an option for Title II commodities may increase in the near future, given Kenya's upcoming political events. If Mombasa port is deemed unfit for future Title II shipments, Awardees should further examine Dar es Salaam port.

The port's total capacity is 9.5 million MT, 85 percent of which was fulfilled in 2009. The port has 11 deep-water berths (three for containers, eight for general cargo). Grain silos and bagging facilities are available. For Ugandan imports, total average wait time from port arrival to Kampala (using road transport along the Central Corridor) is about 29 days.¹⁵ WFP currently utilizes road transport, and offloads trucks onto wagons at Dodoma.

3.2. Storage

Donors, the private sector, and the GoU own and operate a number of warehouses and storage facilities across the country. Due to the decreasing amounts of food aid coming into the country, utilization of storage spaces is well below installed capacity as of May 2011.

3.2.1. WFP

WFP currently has the most storage capacity in country, as compared to other donors. WFP warehouses in Tororo and Kampala each store 18,000 MT. As of May 2011, both facilities are currently well under capacity. WFP uses these two warehouses as its Central Distribution Points (CDPs), which serve as the first and primary storage for all Uganda-destined food aid coming from Port Mombasa. After food aid is stored in these facilities for an average of five months, it is transported to an Extended Delivery Point (EDP). The organization's 18 EDPs store a total of 24,850 MT (WFP). Finally, food is transported to Final Delivery Points (FDPs) for distribution.

Tororo. WFP's three Tororo warehouses have a total capacity of 18,000 MT (three warehouses of 6,000 MT). However, WFP is planning to increase capacity by another 23,000 MT. As of May 2011, the three Tororo warehouses stored a total of 2,000 MT. One of the three

¹⁴ According to the WFP 2010 Logistics Capacity Assessment, WFP imports "are generally duty and tax exempt except for purchase of non-food items where tax exemption is sought on a case by case." For other NGOs, "tax and duty exemption is now granted to only diplomatic missions and on a case by case depending on the status of the project for which the exemption is being sought. If the mission or actual project/programme is in support of a specific public service i.e. health, water, education, environment etc, the line Ministry would facilitate the tax and duty exemption application."

¹⁵ Comprised of: ship waiting time (13 days), cargo dwell time (12 days), and road transport from port (4 days). Source: Uganda Coffee Trade Presentation- 9th Breakfast Fellowship Meeting, May 2011. Kampala.
<http://www.ugandacoffeetrade.com/documents/CENTRAL%20CORRIDOR%20PRESENTATION%20MAY%202011.pdf>

warehouses at Tororo is earmarked as a public grain warehouse for the warehouse receipt system, though as of May 2011 WFP is still seeking a private company to take over the facility.

About 95 percent of WFP's food aid destined for Karamoja is stored in Tororo. From Tororo, food is transported to the two EDPs in Moroto and Kotido, and then to FDPs. The team visited the warehouses in Tororo and found them to be secure, well-managed, with reported food aid losses less than one percent. However, the warehouse management reported some minor leakage in the roofs. WFP has contacted the facility owner, Uganda Property Holdings Limited (UPHL), to address the problem with little success.¹⁶ Rather than waiting for the landlord to take action, the warehouse management decided to address the leakage problem themselves. As of 2009, WFP paid US\$8,000/month in rent to UPHL for the Tororo warehouse (UPHL, 2009).

Kampala. WFP rents three warehouses in Kampala with a total capacity of 18,000 MT (three warehouses of 6,000 MT). As of May 2011, the warehouses only held 6,000 MT. Of this, 2,000 MT was destined for the DR Congo. The Kampala warehouses also face leakage problems to a larger degree than the Tororo warehouses. Despite the fact that some food is protected by tarps instead of a solid roof, reported losses remain below one percent. WFP has been in contact with UPHL for over a year to repair the roof of the Kampala warehouse; as of May 2011 the problem remained unaddressed.

Table 6. WFP In-Country Storage (MT)

Location	Capacity
Abim (EDP)	700
Arua (EDP)	700
Gulu (EDP)	2,100
Kaabong (EDP)	2,100
Kampala (CDP)	18,000
Kapeka (EDP)	700
Kiryandongo (EDP)	350
Kitgum (EDP)	1,750
Kotido (EDP)	2,500
Kyakaii (EDP)	350
Kyangwali (EDP)	350
Lira (EDP)	36
Masindi (EDP)	700
Moroto (EDP)	3,150
Nakivale (EDP)	1,050
Nebbi (EDP)	350
Oruchinga (EDP)	350
Pader (EDP)	1,050
Pakelle (EDP)	350
Rubondo (EDP)	350
Sembabule (EDP)	350
Tokoka (EDP)	1,600
Tororo (CDP)	18,000
Total Capacity	56,936

Source: WFP

¹⁶ UPHL is a government parastatal which took hold of the warehouse in 2003.

3.2.2. ACDI/VOCA

ACDI/VOCA has four warehouses in Uganda, located in Kampala, Lira, Soroti, and Gulu. Their largest warehouse in Kampala stores about 8,000 MT, and their total capacity country-wide is 14,000 MT. The main warehouse in Kampala stores commodities for Mercy Corps and the Clinton Foundation, along with ACDI/VOCA's own commodities destined for its distribution program areas in the north. ACDI/VOCA's food aid destined for Karamoja usually passes through Kampala to Soroti. ACDI/VOCA owns their small warehouse in Bobi, in Gulu District, and rents the remaining properties from private companies. The organization also borrows storage space from WFP. The team visited the ACDI/VOCA warehouse in Kampala and found it to be well-managed, secure, in very good condition, with acceptable minimal losses (less than 0.5 percent). The team visited the ACDI/VOCA warehouse in Bobi and did not note any issues. All of ACDI/VOCA's monetized commodities are transported straight to their buyers' facilities without any need for storage along the way.

3.2.3. Mercy Corps

Mercy Corps largely depends on WFP and ACDI/VOCA for storage, and also uses local churches for a small amount of their storage in Karamoja. Mercy Corps has one storage unit of 600 MT in Kitgum to primarily support their MYAP activities, which was gifted to them by the district authorities. The management noted that the warehouse entrance is too small for large trucks to maneuver (roughly larger than 12 MT). Apart from this issue, the warehouse appeared to provide adequate storage with no problems.

3.2.4. Private Storage

As detailed in Chapter 6, private companies own and operate cleaning and storage facilities, some of which are a part of the warehouse receipt system and Ugandan Commodity Exchange. WFP, through its P4P program, supports many of these operations - especially those along the "grain corridor." One private storage/cleaning facility, Agroways in Jinja, is part of the public grain warehouse receipt system. Agroways supports 150 farmers groups, and has a current warehouse capacity of 800 MT (plus an additional 450 MT in rented warehouses). Agroways has another 3,000 MT warehouse under construction. The team visited the Agroways facility and found it well-managed, secure, in very good condition, with no problems of note.

In Gulu and Kitgum, WFP utilizes warehouses operated by the private company, Coronet. WFP is currently the most active advocate and client of the recently-opened Kitgum warehouse, but is emphasizing to the community that the warehouse is privately-owned and operated, and open to anyone. WFP is also in the process of privatizing one of its Tororo warehouses for conversion into a public grain warehouse for the P4P-supported warehouse receipt system.

Large private grain traders who sell to WFP's LRP program, such as Aponye, Premier, Export Trading, and Sunrise, have their own private warehouses in the Kampala area.

3.3. Inland Transport

3.3.1. Rail vs. Road

Road transport along the Northern Corridor is largely preferred by both donors and private companies; although road transport is relatively more expensive, donors and private market actors both reported that the higher cost was worth the time saved compared to rail transport.

Transport by rail from Mombasa to Kampala costs an estimated US\$95 per MT, and transport by road from Mombasa to Kampala is about US\$107 per MT (personal interviews, 2011). Fuel prices have increased both rail and road transport costs, and some interviewees noted that rail prices have especially increased to the point where they are only slightly less expensive than road transport.

Wait time at Mombasa port accounts for approximately 61 percent of all road transport time along the Northern Corridor, whereas it accounts for 85 percent of all railway transport time. Rail cargo can be held at the port for up to 40 days (JICA, 2009). Road transport of a 40-ft container from Mombasa to Kampala takes about 19 days, whereas rail transport from Mombasa to Kampala takes about 51 days (JICA, 2009). From Dar es Salaam, a 40 ft container transported by road to Kampala takes about 48 days (JICA, 2009).

Main roads within Uganda's larger cities are paved, but the majority of the country's secondary roads are made of muram. The latest FEWS NET Livelihood Zone report noted six zones with poor road conditions, which are located in the far southwest corner of the country, the northeast Karamoja region, and the Mt. Elgon area, where rains and difficult terrain limit transport.

Security issues in the north and northeast parts of the country continue to impact transport, and trucks carrying food aid have been attacked in the past. Though insecurity has greatly decreased in recent years, drivers should be cautious and consider measures such as a security escort, especially if traveling at odd hours.

WFP has a fleet of 55 trucks and trailers, which serve its P4P and LRP programs as well as distribution activities (WFP). The majority of WFP's transport services, however, are operated by private companies which incur the costs of any loss. Mercy Corps uses some of their own trucks, but also hires private transport companies. ACDI/VOCA's monetized wheat is handled by private transporter Ripe Co., for transport from Mombasa directly to the Ugandan buyers' mills. Unlike WFP, ACDI/VOCA must bear the cost of any loss of product during transit.

Road transport costs from Tororo to the Karamoja area range from about US\$33 per MT (Tororo to Nakapiripirit) to about US\$44 per MT (Tororo to Kaabong). Road transport costs from Kampala to the Karamoja area range from about US\$35 per MT (Kampala to Nakapiripirit) to about US\$40 per MT (Kampala to Kaabong) (WFP/Uganda, 2011).

Railways operate from Mombasa through the Kenyan cities of Nairobi, Nakuru, and Eldoret, to Uganda's Tororo, Jinja, and Kampala. The rail route from Mombasa to Kampala is about 1,333 km. As stated earlier, these lines are rarely used by donors or the private sector to ship food. However, the GoU has noted in their 2011/2012 budget that they intend to improve rail transport; if these improvements are made, then Awardees may reconsider rail transport as a reasonable option.

Table 7. Estimated Rail and Road Costs/Transport Time

Origin	Destination	Cost- US\$/MT Road	Cost- US\$/MT Rail
Mombasa	Tororo	75.00	71.50
Mombasa	Kampala	87.00	87.00
Kampala	Gulu	21.00	
Kampala	Kitgum	31.00	
Kampala	Pader	31.00	
Kampala	Lira	21.00	

Origin	Destination	Cost- US\$/MT Road	Cost- US\$/MT Rail
Kampala	Kotido	40.00	
Kampala	Abim	37.50	
Kampala	Moroto	37.50	
Kampala	Nakivale	27.00	

Source: WFP

3.3.2. Kenya/Uganda Border

A number of customs procedures take place at the Busia and Malaba border crossing points. Trucks should receive clearance from the Kenya Revenue Authority (KRA) and complete two KRA Bill of Entry C63 forms, along with a waybill (WFP, 2010). Trucks are then inspected and cleared by the Uganda Revenue Authority (URA), the Uganda Quarantine and Inspection Service (UQIS), and the Uganda National Bureau of Standards (UNBS).

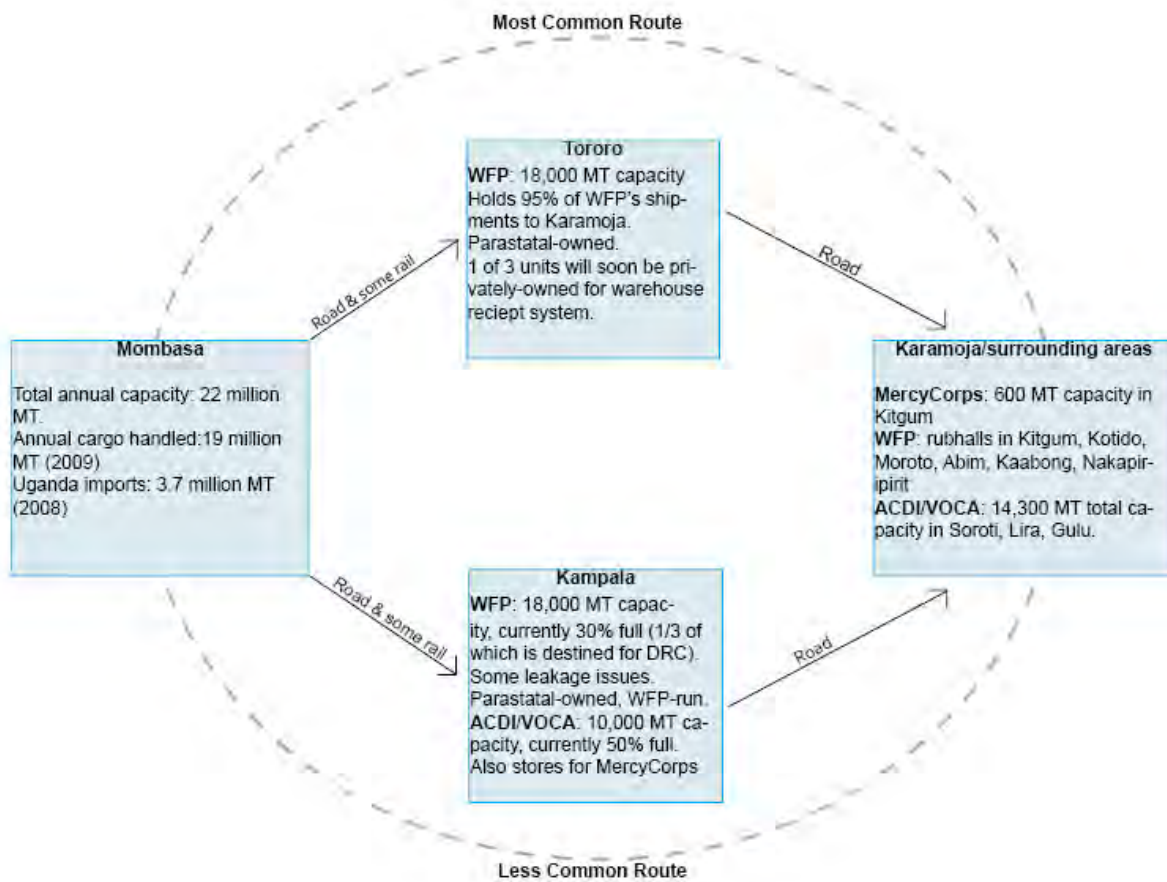
For rail shipments, Rift Valley Railways (RVR) handles clearance procedures at Tororo, about 16 km away from Malaba. The GoU, in collaboration with the World Bank, has made plans to harmonize rail clearance procedures with road clearance procedures at Malaba, but this has yet to happen (WFP, 2010).

Interviewees noted levees in Kenya of about US\$0.12/MT, and a US\$1 to US\$1.50/MT fee at the Malaba crossing. From the Busia and Malaba crossings, transporters must pay the URA a road toll for each truck. These tolls are approximately US\$35 per truck, for shipments destined to Kampala and US\$4 per truck, for shipments destined for Tororo (WFP, 2010). Furthermore, parking fees range from US\$2 to US\$4 per day (Ugandan side) and US\$3.50 (Kenyan side) (Uganda Radio Network, 2011).

3.4. Mombasa to Karamoja

The most common and efficient route for food aid destined for Karamoja is through Tororo. From Tororo, food aid travels north through Moroto and into the Karamoja region. In rare cases, food aid may pass through Kampala instead of Tororo. In such circumstances, shipments travel through Soroti and then into Karamoja. See the figure below.

Figure 2. Transport to Karamoja



Chapter 4. Monetization Analysis

4.1. Introduction

This chapter is meant to inform USAID in its determination of the appropriateness of monetization in Uganda during FY11 and FY12. It covers four critical areas of inquiry:

1. How appropriate is monetization for Uganda during the remainder of FY11 and under any new Title II non-emergency program in FY12?
2. If monetization is appropriate during this period, which commodities are the most appropriate to monetize?
3. What is the approximate maximum tonnage feasible for monetization for each commodity?
4. Are there special consideration (e.g. sales platform or timing of sales) that should be taken into account when considering/undertaking monetization in Uganda?

The content of this analysis is broken into three core sections: a brief overview of historical monetization in-country, initial commodity selection, and commodity-specific market analyses and recommendations. For the complete methodology for determining the potential impact of monetized food aid, please see Annex VI.

4.2. Monetization History

Small-lot refined soybean oil monetization was the mainstay of the Title II monetization program in Uganda for 18 years, from 1988 when the first consignment was provided through a government-to-government program until 2007 when it was discontinued due to a zero-rated Usual Marketing Requirement (UMR) by USDA, and the removal of a waiver on Value-Added Tax (VAT).

Only hard red winter wheat (HRWW) has been monetized during the current non-emergency programs under this review. HRWW was first monetized in 1998 and averaged approximately 23,428 MT per year during the period FY07 to FY10. Title II Awardees expect to monetize 21,120 MT of HRWW for FY11.

Since the beginning of USAID-supported non-emergency programs in 1988, ACDI/VOCA has been the sole monetization agent for all implementing NGOs receiving resources from USAID and USDA. The table below provides an overview of the tonnages monetized by USAID and USDA implementing partners during FY07-FY10, and planned for FY11.

Table 8. Monetized Commodities (MT), FY07-FY11

Year	FY07	FY08	FY09	FY10	FY11**	Totals
Wheat (Title II)	20,310	30,140	21,550	21,710	21,120	114,830
Wheat (USDA)	0	0	15,000	0	18,000	33,000
<i>Sub-total Wheat</i>	<i>20,310</i>	<i>30,140</i>	<i>36,550</i>	<i>21,710</i>	<i>39,120</i>	<i>147,830</i>
Vegetable Oil (Title II)	762	0	0	0	0	762
Vegetable Oil (USDA)	0	0	0	0	6,830	6,830

<i>Sub-total Vegetable Oil</i>	762	0	15,000	0	6,830	22592
Grand Total	21,072	30,140	51,550	21,710	45,950	170,422

Source: USAID, USDA, MYAP partners, 2009 Bellmon

Note: *USDA/FFProgress wheat grants in 2006 and 2009 were awarded to FINCA; **FY11 USDA monetizations to Mercy Corps (wheat) and CLUSA/NCBA (oil) have not yet been undertaken, and the 6,830 MT of vegetable oil may be substituted for approximately 20,000 MT of wheat; USAID Title II monetization total includes 4,190 MT wheat grain that is anticipated to arrive in mid-June 2011.

4.3. Initial Commodity Selection

The BEST study team performed a desk review to identify an initial set of commodities for study in this report. The selection is based on available trade statistics, previous Bellmon studies, review of other relevant country reports, and interviews with key informants during an April/May 2011 field visit. For the purpose of this study, a commodity selection for review and possible recommendation followed six “tests”:

1. Eligibility for export from the US;¹⁷
2. Eligibility for import to Uganda;
3. Significance of domestic demand;¹⁸
4. Domestic supply shortfalls are filled through commercial imports;
5. Presence of adequate competition for the commodities; and
6. Expectations that fair market prices can be achieved.¹⁹

Test 1: Eligibility for export from the US. All the commodities discussed in this report are in the FFP commodity list for FY11 and FY12.

Test 2: Eligibility for import. Monetization of Title II commodities is properly viewed within the context of the GoU’s policy of import substitution industrialization. This is particularly true in the case of vegetable oil (refined or crude), but also impacts some GoU perspectives on wheat grain monetization.

At present, the GoU does not currently have a law regulating GMO products. According to officials at the Uganda National Council for Science and Technology (UNCST), the GoU recently drafted and submitted to cabinet for approval principles for the regulation of products, the “Biotechnology and Biosafety Bill.” After the approval process, the bill will be sent to the Attorney General’s office for drafting. The law is expected to provide for an acceptable percentage of genetic modification in the product, but the percentage has not yet been agreed upon. Should a restriction on GMO commodities be effected,²⁰ this may affect the consideration of soybean products for monetization.

¹⁷ This “test” implies that it is also on the FFP list of approved commodities for monetization.

¹⁸ This threshold is set in the following way: Average import levels for the past five years must be greater than US\$5 million and a regular portion of these volumes must be commercial imports. A threshold is set to ensure efficiencies in the funding of Awardee programs.

¹⁹ Implicit in the above six bullets is that the destination market must be able to absorb the volume of monetized commodity in question without “substantial” disruption. Recent precedent follows a ten percent rule--- that is; “substantial” disruption to the market is assumed not to occur below a threshold of either 10 percent of commercial imports, or 5 percent of the domestic production of any particular commodity if there is substantial domestic production. We will follow this convention throughout this analysis.

²⁰ The Plant Protection And Health Bill, 2010, Part IV—Import And Export Control states section (3) states, “Unless exempted under sub-Section (6), no plants including the living cultures of genetically modified organism, any fungus, bacterium, or any other microorganism, plant products, beneficial organisms or any other material or substance specified under this Act may be imported into Uganda without a prescribed permit.” It does appear to allow exceptions to be made (“Unless exempted under sub-Section (6)”), but prior approval will need to be made if GMO commodities are to be considered.

With these caveats in mind, all of the commodities included for consideration are currently imported in Uganda commercially, making them eligible for further consideration for monetization.

Test 3 and 4: Significance of domestic demand and deficit in Uganda. To warrant importation and sale of monetized food aid, both local dietary preferences and available market information must strongly suggest that a commodity is consumed in significant amounts (i.e., there is significant demand), and that national production is insufficient to meet the demand (i.e., there is insufficient national supply to meet demand). National demand is estimated based on the latest five-year overall supply trends, equivalent to the sum of domestic production and net trade. One common rule of thumb, which we adapt for the present analysis, is that monetized food aid should not exceed ten percent of average yearly commercial import volumes. Based on the value of the average imports of the last five years, the following table lists the only three food commodities with five-year average import values of greater than US\$5 million and which also appear on the FFP list of products eligible for monetization during FY12. This market analysis considers wheat grain, vegetable oil, and rice as potential candidates for monetization for the remainder of FY11 and FY12.

Table 9. Average Annual Commercial Import Volume and Value for Select Commodities During Previous 5-year Period, 2005-2009

Commodity	Average Volume of Imports (MT)	Average Value of Commercial Imports (US\$000)
Edible oil	155,929	\$115,890,210
Wheat	301,901	\$103,519,391
Rice	60,465	\$19,694,811

Source: UN Comtrade, WFP Interfais

Note: UN Comtrade reports Uganda imports inclusive of food aid. To obtain average volume and value of commercial imports excluding food aid, both the volume and value of food aid was subtracted from Comtrade figures by imputing a value to the food aid, using commercial values for all imports as reported by Comtrade for the period.

The table below summarizes each of the first four tests.

Table 10. Initial Selection of Commodities Based on Test 1-4

Commodity	Eligibility of export from the US	Eligibility for import to Uganda	Significance of domestic demand	Deficit in Uganda
Vegetable oil	Yes	Yes	Yes	Yes
Wheat	Yes	Yes	Yes	Yes
Rice	Yes	Yes	Yes	Yes

The remainder of the analysis will assess the ability of local markets to absorb wheat, edible oil, and rice, as these are the only commodities that passed the first four tests. The existence of GoU policies, regulations, and practices that may complicate the importation and monetization of commodities also informs further analysis. If it is determined that local markets are able to absorb these commodities and GoU policies are favorable for monetization, the analysis will continue to recommend volumes for monetization. Local markets' absorption abilities, as well as recommended volumes, will stem from critical analysis of market competition (which must be adequate, according to test 5) and prices (which must be fair, according to test 6).

4.4. Market Analysis - Wheat Grain

4.4.1. Demand and Supply Overview

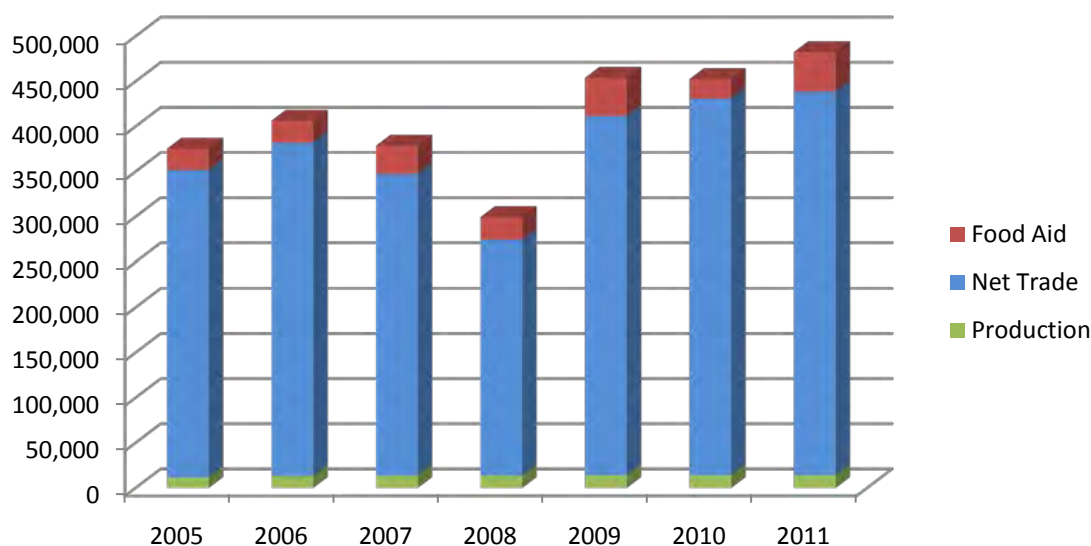
Demand. Demand for wheat flour has grown tremendously in the last decades, particularly with increasing urbanization. As GoU development successes have resulted in rising per capita incomes and Uganda has become increasingly urbanized, consumers have increasingly incorporated wheat products into their diet, particularly chapatis and pan-style breads. Relative to traditional cereals, such as millet and sorghum, or roots and tubers, wheat-based products are particularly well-suited to urban living due to the shorter time required for their preparation and the relatively greater availability of wheat in processed, convenient forms.

According to official trade statistics, Uganda's annual wheat grain consumption is approximately 400,000 MT per year (based on 2009 figures, the last year available, with an assumed five percent annual growth rate). According to interviews with seven of the country's ten private wheat mills, Uganda's annual wheat grain consumption ranges from 360,000 to 600,000 MT, with most mills reporting approximately 450,000 MT per year, with growth estimates ranging from five percent to 10 percent for the next five years.

Demand is anticipated to grow at an average of five percent per year, barring any major economic shocks that negatively impact consumer purchasing power. A minority of the mills estimate growth on the order of 50 percent over the next five years. Certainly some of this growth reflects growth in the larger regional market. Of note for USG programming, while there may be some minimal re-export of wheat grain to Rwanda, DR Congo, southern Sudan, and Kenya, the bulk of Uganda's wheat exports would be in the form of wheat flour (milled in Uganda).

In an effort to capitalize on the growing consumption of wheat flour products, the Global Alliance for Improved Nutrition (GAIN) provided a grant to Uganda's ten wheat flour mills to begin fortification of wheat flour to address micronutrient deficiencies in urban populations.²¹

²¹ According to the 2010 GAIN report, wheat flour was chosen "as a viable vehicle for mass fortification for providing micronutrients that are inadequate in the diets of the urban population." The objectives of the flour fortification project were to (1) reduce the prevalence of iron deficiency anemia by 10 percent in 3 years, (2) reduce the prevalence of vitamin A deficiency by 10 percent in 3 years, (3) reduce the prevalence of neural tube defects" <http://www.sph.emory.edu/wheatflour/Africa/UgandaMS.pdf>

Figure 3. Ugandan Wheat Supply Overview (MT), 2005-2011

There are ten millers in Uganda with a combined milling capacity of 569,100 MT, most of which have been established since 2004/2005 with a few dating back to 1999/2000. One of the largest mills, Bajaber, added an additional 180 MT per day milling capacity to its Kampala mill. According to the millers, their total annual grain throughput is nearly 449,000 MT per year, suggesting they are currently operating at just under 80 percent of installed capacity.

Table 11. Milling Capacities and Annual Throughput, 2011

Mill	Installed Milling Capacity (MT/year)	Average Annual Throughput (MT/year)	Installed Storage Capacity (MT)
Asam Products(Samco)	6,000	2,400	500
Bakhresa	182,500	182,500	8,000
Kengrow	36,000	25,000	8,000
Nile Agro	42,000	33,600	6,500
Ntake	66,000	52,800	12,000
Pan Afric	60,000	48,000	5,000
Ngano (UGMC)	18,000	14,400	8,000
UNGA	28,800	23,040	4,000
Bajaber (part of Pembe Group)	111,800	52,800	20,000
Mount Elgon	18,000	14,400	5,000
TOTAL	569,100	448,940	77,000

Source: Interviews with millers, 2009 BEST, Awardee documentation

Notes: Installed storage capacity includes both warehouses and silos, and is likely underestimated as some millers reported only warehouse capacity while others reported both installed capacity in warehouses and silos combined. Both Bakhresa and Bajaber report newly-expanded milling capacity since the 2009 BEST report.

Wheat grain is milled into three main types of flour, though there are some specialty flours (e.g., cake, donut, hot loaf, brown flour, etc): 1) home baking flour (usually soft wheat only, mostly for home-prepared chapatis), typically sold by millers in bulk to wholesalers; 2) baker's flour (blend

of hard and soft wheat), typically sold in bulk to bakers; and 3) biscuit flour (blend of hard and soft wheat), sold in bulk exclusively to biscuit manufacturers.

The estimated annual demand for the hard wheat grain required for both baker's flour, biscuit flour, and some of the specialty flours Uganda's millers produce is 160,000-180,000 MT. As stated above, bakers and biscuit manufacturers use a blend of hard and soft wheat to create their product, and each product has a unique hard/soft blending ratio. Estimated demand for hard wheat grain is based on an average ratio for hard and soft wheat, of 40 percent hard with 60 percent soft wheat. However, this ratio changes depending on the availability (and hence prices) of hard and soft wheat of differing varieties. Ratios of between 20 and 70 percent of hard wheat were reported by Ugandan millers, with the largest buyer (Ntake) reporting a willingness to use up to 55 percent hard wheat.

Domestic production of wheat grain. Per official GoU statistics, Uganda produces 19,000 MT per year of soft wheat (approximately four percent of its total wheat grain requirement using the 450,000 MT consumption figure, and zero percent of its total hard wheat grain requirement). Domestic production of wheat grain is limited to two regions within the country which have suitable growing conditions: Kapchorwa (on the Uganda-Kenya border) and Kabale (on the Uganda-Rwanda border).

Interviews with seven of the ten wheat mills suggest that GoU estimates are perhaps double actual production levels, and actual production levels are likely in the range of approximately 8,000 MT per year (two percent of Uganda's total wheat grain requirement using the 450,000 MT consumption figure, zero percent of its total hard wheat grain requirement.)

This 8,000 MT per year estimate is based on:

- Last official GoU statistic indicates 19,000 MT total domestic wheat production per year.
- Mt. Elgon mill indicates it buys 90 percent of Kapchorwa surplus wheat, which reaches a max tonnage of 2,000-3,000 MT in any given year.
- Ntake indicates they make concerted effort to buy domestic wheat from Kapchorwa, but the maximum tonnage brought to their mill in Kampala in any one year is 50 MT. USDA/Nairobi estimates that 50 percent of surplus from Kapchorwa reaches markets across the border in Kenya.

Commercial imports. An estimated 98 to 99 percent of domestic demand for wheat grain (hard and soft) is met through commercial imports. One hundred percent of domestic demand for hard wheat grain is met through commercial imports; hard wheat cannot be produced within Uganda because of the country's tropical climate. Imported hard wheat grain has a higher protein content (typically 13 to 13.5 percent) than soft wheat, and is essential for gristing quality baking flour.

The previous BEST study found that Australia was the largest wheat source for Ugandan millers during the early 2000s; in recent years, Australia was replaced by Black Sea exporters Russia and Ukraine, as well as Argentina and Canada, to a lesser extent. According to the International Association of Operative Millers, East African millers had been increasing their use of wheat from Black Sea origins up until 2009, but the quality of this wheat was less reliable than traditional sources "which means relying more on laboratory analysis and the use of flour improvers" (McKee, 2009). According to ITC data, in 2010, Ukraine and Russia supplied half of Uganda's cereal imports (in US dollar terms), each supplying one-quarter of wheat imports. The US and Brazil each supplied about one-tenth of wheat imports in 2010. Beginning in the

summer of 2010, however, the dramatic increase of Black Sea wheat was just as dramatically halted and reversed with the imposition of an export ban by Ukraine and Russia, which forced Ugandan millers to instead source from Canada, US, and Australia.

At present, the bulk of commercial imports of hard wheat are sourced from Canada, with some from the US, and a small amount of semi-hard wheat from Germany. It is unlikely that Ugandan millers will have access to Ukrainian wheat in the near future; while Ukraine recently lifted the export ban on wheat²², beginning July 1, 2011 and running through January 1, 2012, the government of Ukraine will begin imposing export duties on wheat (among other grains) of nine percent of the customs cost.²³ The swing demand for US and Canadian wheat has brought with it the advantage of clear grading standards. Whereas eastern European wheat grain suppliers generally blend hard and soft varieties, which are then marketed as "milling wheat," US HRWW is graded according to a protein content in moisture content equivalent, which makes it easier for mills to buy the right mixture of hard and soft wheats to meet their specifications.

Food aid. Title II Awardees have been monetizing an annual average of 23,420 MT of HRWW during the most recent five-year period, FY07-FY11. This average is increased by the inclusion of the larger than usual tonnage in FY08 of 30,140 MT; excluding that year, the average has been 21,173 MT. This amount represents approximately five to six percent of total supply, and about five to slightly less than seven percent of commercial imports, depending on the year. Title II FY11 executed and planned sales total 21,120 MT, which will represent about 4.5 percent of the total wheat grain supply and about five percent of the commercial import volume of wheat grain.

USDA Food For Progress Awardees also occasionally monetize HRWW. There has been one USDA monetization in the period FY07-FY10, when FINCA monetized 15,000 MT HRWW in FY09. There is a single planned monetization of 18,000 MT HRWW in FY11.

The addition of USDA monetizations brings the annual average of monetized HRWW to 29,566 MT per year, an amount which represents six to eight percent of total supply, and about seven to nine percent of commercial imports (depending on the year). Not surprisingly, the contribution of monetized wheat was greater in the exceptional year 2008 (about 11 to 12 percent, respectively), given that the global food price crisis drastically dampened commercial imports. Neither Title II wheat grain nor wheat flour is used as a distributed food aid commodities.

The following table summarizes the components of wheat grain supply for the most recent five-year period.

Table 12. Uganda Wheat Supply (MT), 2005-2011

	Wheat grain (MT)	2005	2006	2007	2008	2009	2010	2011
1	Imports	340,058	371,038	334,969	262,279	397,592	417,472	438,345
2	Of which, Food Aid	23,670	24,631	31,410	25,015	42,415	21,710	39,120*
3	Exports	20	2,382	1,393	1,450	226	838	532

²² Announced by Russian President Putin in late May and Ukrainian President Yanukovich in early June 2011. See, for example, <http://www.agrimarket.info/showart.php?id=108866>

²³ On June 17, 2011, the state newspaper Uryadoviy Courier reported that President Yanukovich signed the law #3387-VI on June 10, 2011, which imposes 9-14% customs duties for grain exports till 2012.

	Wheat grain (MT)	2005	2006	2007	2008	2009	2010	2011
4	Net Trade	340,038	368,656	333,576	260,829	397,366	416,633	437,813
5	Production	11,500	13,000	13,500	13,500	19,000	19,000	19,000
6	Supply	351,538	381,656	347,076	274,329	416,366	435,633	456,813

Sources/Notes:

1 FAOSTAT, Comtrade, ITC; 2010 is estimated based on 5% growth from previous year. 2011 based on BEST field interviews with 8 out of 10 millers.

2 WFP Interfais, IGC, AMEX, USDA; 2005-2006 is average of WFP Interfais and IGC; 2007, 2009 & 2010 from IGC; 2008 is average of IGC, AMEX and USDA; 2011 is sum of USAID and USDA planned FY11 monetizations; There are discrepancies between the monetized wheat food aid totals in Table 8 and the totals indicated here, likely due to differences in the calendar year versus fiscal year reporting standards.

3 FAOSTAT, Comtrade, ITC; 2010 and 2011 are averages of previous two years' data.

4 Imports minus exports

5 FAOSTAT, BEST field interviews; 2010 and 2011 are averages of previous two years' data.

6 Sum of lines 4, 5

GoU policy. Current GoU policy is to treat wheat grain as a raw material which, therefore, is not subject to duties or taxes. This is in harmony with current East African Community (EAC) Common External Tariff (CET) policy. Wheat flour, however, is taxed at 60 percent outside of the EAC. Please see Annex I for more information on EAC CET policies. The status quo contributes to the continued feasibility of in-country wheat monetization. EAC members are currently undertaking annual review of CET policy and revising commodities considered 'sensitive' by member countries. Based on discussions with GoU and millers during the field visit, the study team does not anticipate wheat grain will be taxed in the near future; however, PVOs should monitor updates in CET policies.

At present, there are no GoU direct activities to increase domestic wheat production. The GoU has, however, expressed an interest in promoting its domestic soft wheat production, even though officials acknowledge that the most efficient production may never meet more than two to three percent of domestic soft wheat grain demand. A value chain analysis would have to be conducted to determine if Uganda has a comparative advantage with domestic wheat production in the two areas of Kapchorwa and Kabale. Importantly, even if an analysis determines that Uganda could competitively grow its own soft wheat, the domestic milling industry would still be required to source hard wheat for gristing to make baking flour.

4.4.2. Starch Substitution

Rather than substituting for other staple carbohydrate sources, demand for wheat appears to be driven by increasing urbanization, increasing purchasing power, and a growing population. In many other LIFDCs, wheat consumption may be replacing more traditional foods to a greater extent. However, the typical Ugandan diet is remarkably diverse for sub-Saharan Africa, and even more so among LIFDCs globally, and remains so despite increasing wheat consumption. Approximately 80 percent of the diet comes from four to five different staples (UBoS, Uganda National Household Survey, Agricultural Module, 2006). With some regional variation in preferences (which are heavily influenced by local availability, though not in a one-to-one manner), domestically-produced crops that provide carbohydrates for the average Ugandan include bananas, cassava, Irish and sweet potatoes, millet, sorghum, maize, and rice.

Among the key staples that would be likeliest substitutes for wheat -- roots and tubers, millet, sorghum, and rice, there appears to be continued growth in production on the whole. Previous studies provide evidence of significant growth in production of the main starch crops (BEST/Fintrac, 2009) (Economic Policy Research Centre and USAID, 2006), including

continued increased production of six of the main food commodities (sweet potato, Irish potato, maize, millet, sorghum, and rice). Bananas²⁴ and cassava have experienced some decline in production, due to biological threats (black leaf disease and cassava mosaic virus, respectively) rather than economic threats. Thus, just as the 2009 BEST study found, this study team finds that the production and marketing of the likeliest substitutes for wheat-based flour have grown simultaneously with demand for wheat flour.

4.4.3. Competitive Environment

Uganda's ten millers serve a relatively small country of 34 million (Population Reference Bureau), and many have slightly different product specialties and/or markets. Thus, there is evidence of adequate competition for monetized commodities. The team met with eight of the ten millers/bakeries: Ntake, Bajaber, Mt. Elgon, Unga, Nile Agro, Kengrow, Bakhresa, and Pan Afric.²⁵ As illustrated in Table 11 above, all millers have excess installed capacity in anticipation of growing market demand in the coming years. A review of the prices offered during the tendering process, and interviews with key informants knowledgeable about Uganda's wheat market, reveals no evidence of collusion among the millers.

All participating mills indicate they would purchase more Title II wheat than is generally available through the once-per-year tenders. The country's largest mill, Bakhresa, does not participate in Title II monetization. As part of Said Salim Bakhresa & Company Ltd., East Africa's largest milling company with operations in six countries, Bakhresa reportedly has access to its own 50,000 MT vessel, which reduces the unit cost of sourcing wheat from and distributing wheat via its own supply chains. Ngano (formerly Uganda Grain Milling Company (UGMC)) concentrates on animal feed.

4.4.4. Monetization Process

ACDI/VOCA uses a closed bid tender system, followed by negotiations with each mill to arrive at a final sales price. Detailed tender information is provided to all ten millers, and to increase public awareness and transparency, the tender announcement is published in two leading daily newspapers. Bidders are provided a one-week submission deadline. Eligibility is based on each bidder's ability to secure a bank guarantee or letter of credit, storage capacity, and payment and credit history.²⁶

The general consensus among millers is that Title II HRWW monetization has the following advantages: 1) reliability of delivery; 2) quality of wheat grain; 3) reliable contract enforcement; and 4) cost advantage over regular commercial sales because ACDI/VOCA delivers directly to

²⁴"Bananas" in this report includes plantains and matooke.

²⁵ Due to time constraints, the team was unable to interview the smallest miller, Samco. The study team did not interview Ngano, as they reportedly concentrate on animal feed. The team interviewed officials at Pan Afric, but obtained little information of use for the present study.

²⁶ As detailed in the 2009 Bellmon, and confirmed with ACDI/VOCA through document review, certain aspects of the monetization process which contribute to better monetization returns include: 1)Tenders are opened and awards are announced the day after the submission deadline, facilitating planning and supply scheduling for the buyers; 2) Tender process is timed so that commodity delivery is within a few days of tender awards; 3) Shipments are "shared" to lower shipping costs and allow smaller buyers to participate; 4) Prices include delivery to miller warehouses with all transport logistics managed by ACDI/VOCA; 5) Payments terms are designed to provide buyers with a number of options including: Ten percent on contract signing, Payment balance allowed in up to six installments if supported by bank guarantee, with the second payment of 15 percent due on arrival at miller's warehouse; Trade credit of 30 to60 days after delivery; 6) If rail transport is used, which is slower and less predictable, two additional payments are allowed -- on date of first and last wagon delivery; 7) Final payment of five percent is due once consignment has been reconciled (weight differences taken into account); 8) ACDI/VOCA assumes responsibility for fumigation and provides warranty on stated quality.

the mill., with ACDI/VOCA's private transporter assuming the risk of loss during transport (mills pay only for the wheat they actually receive, as opposed to the volume they order). This fourth advantage appears to be the most attractive aspect of the current monetization program from the millers' perspective; mills report average losses during ocean and overland transport can average four to five percent. Losses during overland transport from Port Mombasa to the final delivery point are assumed by the private transporters contracted by the lead monetization agent. ACDI/VOCA reports average losses during transport of less than one percent.

4.4.5. Performance of Past Monetizations

A study of the impact of Title II vegetable oil and wheat monetization sales during the period 1989-2006 (Murphy, 2007) examines the specific impacts of Title II wheat monetization on the development of the domestic milling industry, and reports,

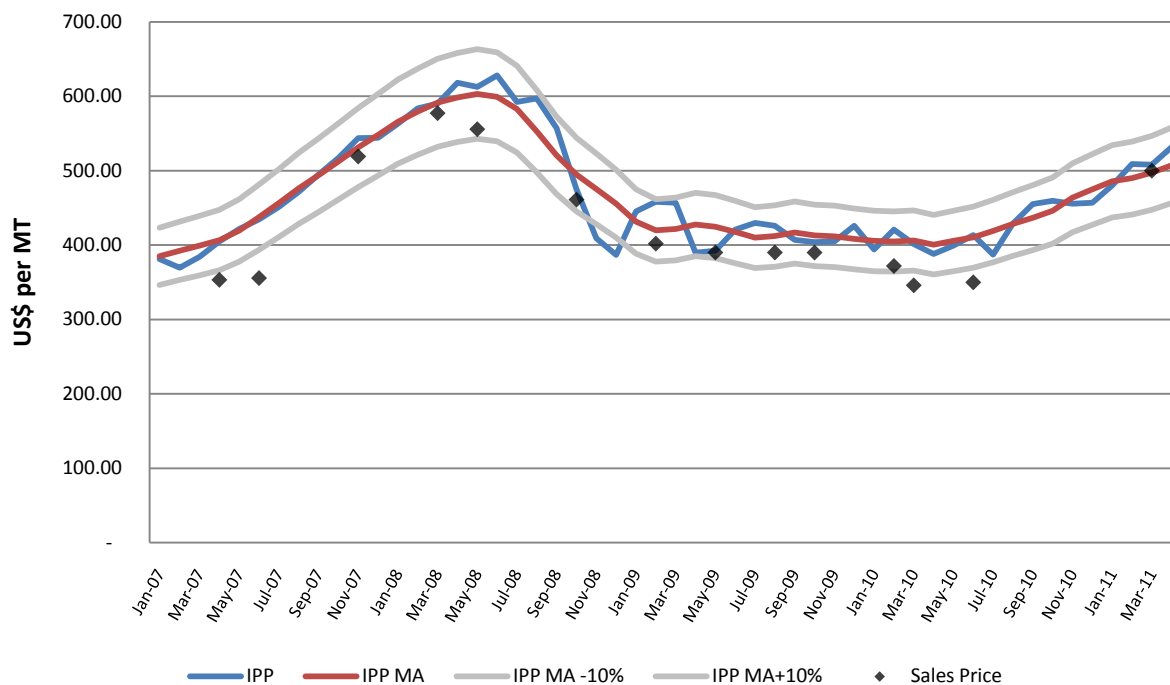
"Millers overwhelmingly credited PL-480 Title II wheat sales as a contributing factor to their growth. Specifically, they attributed US HRW wheat grain's continued market presence for the past ten years and dependable quality as key aspects....Title II monetization sales began when the industry was in its infancy. The steady supply of US-origin hard wheat during this period allowed new mills to build a market for quality flour required by bakers....Critically, most millers concurred that Title II sales were instrumental in their growth in terms of sales, assets and employees... (p 17-18)"

In the five-year period since that study, participation in monetization sales remains strong. For the most recent monetization sales, seven of the ten existing Ugandan flour millers participated on a consistent basis.

Sales prices achieved have been within an acceptable range of an estimated Import Parity Price (IPP). Given the shifts in sourcing, inflation during the past six months, and the absence of Black Sea wheat from the global market, estimating an IPP back in time is complex. Using prices for Argentina Trigo Pan, one of the less expensive wheats of quality roughly comparable to US HRWW and, at present, a common source of wheat among Ugandan millers, the team estimated IPP in order to assess how well monetization sales have performed against one measure of a "fair market price." As shown in the figure below, sales prices have achieved an average of 92 percent of estimated IPP since 2007, which includes a period of volatility on the world markets.²⁷

²⁷ Based on interviews in-country, CIF Kampala for the most comparable quality Canadian wheat is currently US\$563 (the same wheat CIF Jinja is about US\$10 less per MT). For comparison, hard wheat out of Canada commands about a US\$50-80 per MT premium over Ukrainian soft wheat CIF Mombasa. One miller reported that monetized wheat was currently priced at approximately five percent less the price at which the mill was purchasing US wheat via regular commercial channels.

Figure 4. Comparison of Estimated IPP for Argentine Trigo Pan versus Sales Prices Achieved



IPP= Import Parity Price; IPP MA= Moving Average, calculated over 6-month period

ACDI/VOCA has acted as the monetization agent for both USAID and USDA Awardees, and has used the same tendering/negotiation process for both agencies; although the study team did not intend to nor did it fully analyze the sales price performance of USDA-funded monetizations, USAID and USDA-funded monetizations should have been indistinguishable.²⁸

Please see Annex V for a detailed breakdown of IPP versus sales prices.

4.4.6. Recommendations

Monetization of HRWW in volumes similar to those of the recent past represents no substantial disincentive to domestic producers or processors of wheat grain. The study team finds that, on the contrary, Title II wheat monetizations have played a pivotal role in developing a competitive domestic milling industry, by providing high-quality wheat under favorable sales contract conditions that are generally not available through regular commercial sales (including payment in Ugandan Shillings).

²⁸ As noted above, this study is not intended to fully analyze USDA monetizations. Nonetheless, there may be lessons to be learned from FINCA's experience for successful future monetizations by any NGO. Relative to IPP, the USDA (FINCA) monetization sales performed less well than the Title II sales, a fact that the lead agent attributes to three factors: (1) The FINCA sales occurred just four months after two tranches of Title II sales, and thus the millers already had relatively sufficient HRWW stocks, (2) FINCA requested millers to bid for minimum quantities of 5,000 MT, which limited the number of mills that could participate, and (3) FINCA requested payment in hard currency (US dollars) as opposed to Ugandan Shillings (the norm for Title II sales), which lowered the price Ugandan millers were willing to pay.

The team recommends one minor adjustment in the tendering and negotiation process. Rather than using soft wheat prices, CIF Mombasa, as a benchmark against which to derive a (unstated) floor price in the tendering and negotiation process, the monetization managers should attempt to discover prices for more comparable quality hard wheat CIF Mombasa, to which costs of commercial clearing and transport to the ultimate delivery point (i.e., the mills) should then be added to estimate a CIF Kampala (or CIF Jinja) price. These may include, but are not limited to, hard wheat varieties of comparable protein content (13-13.5 percent) originating from Canada, US, or Argentina.

The Title II partners currently contract private transporters to deliver the wheat grain directly to the mill's doors; where appropriate, the equivalent commercial costs of handling and transport to the mill's doors should thus be added to the CIF Kampala (or CIF Jinja) price, and built in to the agent's (unstated) floor price.

The study team recommends a maximum tonnage per year of HRWW monetization of 27,000 MT for FY11, which represents 15 percent of the current year's estimated annual demand for hard wheat. This recommendation is based on the following:

- 450,000 MT - estimated demand for wheat grain per year for 2011
- 180,000 MT - estimated demand for hard wheat per year for 2011

Assuming five percent annual growth in demand, the maximum tonnage recommended for FY12 is 28,350 MT of HRWW.

Importantly, the BEST team's standard rule of thumb to recommend up to 10 percent of the average commercial import volume has been adjusted upwards to 15 percent based on the following findings: 1) potential buyers behave competitively; 2) demand is expected to grow at a rapid rate; 3) there are no seasonal surges in demand which might make limiting monetization sales an important factor in reducing the risk of market disruptions; and 4) the monetization sales tendering process approximates commercial transactions. With minor adjustments to further improve the ability of the lead agent to mimic a commercial seller, the team does not believe the tonnage would create any notable disincentive to production or marketing of wheat or likely substitutes. The study team believes this is a conservative but reasonable tonnage based on all available data.

At the time of the field visit, the wheat flour market was down an estimated 10 to 15 percent following February 2011 elections because of inflationary impacts on consumer spending, and expected election-related uncertainty among market actors about demand, which motivated many actors to reduce inventories. However, millers expect demand to pick back up within six to eight months; therefore, the recommendation does not incorporate this temporary dampening of demand.

Given the anticipated growth in demand for wheat flour products, and the current global wheat prices, the team strongly recommends annual review of wheat market conditions to refine appropriate maximum tonnages for future FY programming.

There are no seasonality considerations since demand for wheat grain/flour is constant through the year. However, calls forward should be adequately spaced throughout the year to take advantage of supply chain practices among the millers.

The study team recommends that a single agency continue to act as the monetization agent for future USDA Food For Progress monetizations (contingent on receiving continued USG funding) to 1) ensure efficiency gains from the agent's two decades of experience in that role; and 2) enhance coordination of sales process and timing.

Both agencies, USDA and USAID, are strongly urged to coordinate planned wheat monetizations. Evidence suggests that such coordination is less important in avoiding any over-saturation of the wheat grain market, and more important in maintaining GoU confidence in the careful use of monetization as a critical donor tool for meeting larger food security objectives in Uganda, as well as fostering continued growth of a dynamic domestic wheat milling industry.

4.5. Market Analysis - Edible Oil

4.5.1. Demand and Supply Overview

Demand. Although vegetable oil consumption in Uganda is low relative to the world average, and well below the World Health Organization (WHO)-recommended consumption levels, consumption has doubled in the last five years, and is expected to continue increasing. Per capita consumption of edible oil was estimated at 2.3 kg per capita per year in 1998. At present, consumption estimates range from 4.4 to 7.5 kg per capita per year, with most placing per capita consumption levels at 6.4 kg per year. This compares with the WHO recommendation of 19 to 22 kg per capita per year consumption of oil and fat to maintain human nutritional requirements. Key informants in the edible oil sector all agree that key GoU investments in overall economic development have been strong drivers behind improvements in the standard of living, which have increased consumer purchasing power which, in turn, has increased the ability of consumers to incorporate edible oil into their diets.

Edible oil consumed in Uganda is primarily a mix of palm (bulk) and sunflower (second-largest share), with simsim (sesame), cottonseed, soya, and other products together making up a small portion.

Edible oils are near-perfect substitutes from Ugandan consumers' perspective. While consumers in many other countries have strong preferences for frying many foods, Ugandans are accustomed to boiling and roasting typical foods, which increases their sensitivity to edible oil prices. Price and packaging are the primary factors consumers consider when choosing among oils. As a result, processors frequently blend different types of oils.

With increased standard of living, increased consumer purchasing power, and continued marketing and consumer education on the health benefits of oil consumption by Mukwano and BIDCO, demand can be expected to increase year-on-year, barring any major economic shocks that negatively impact consumer purchasing power.

Supply: domestic production. Of the estimated annual demand of 222,000 MT, approximately 10 to 15 percent is met through domestic oil seed and oil palm production.

The GoU and the private sector have substantial investments in domestic oil palm and oil seed (sunflower) production and processing capacity, and medium- to long-term growth of domestic production and processing is fully expected. It is critical to fully appreciate these investments in the edible oil sector when assessing the feasibility and appropriateness of monetizing either crude or refined edible oil.

These investments include a Public-Private Partnership to expand domestic palm oil production via BIDCO's oil palm²⁹ outgrower scheme in the Kalangala Islands in Lake Victoria, which is soon expanding to the Buvuma Islands. The private Ugandan company Mukwano has also initiated a large sunflower outgrower scheme in Northern Uganda. Other investments include Kenyan company Mt. Meru's efforts to increase sunflower, soybean, and shea nut butter production in northern Uganda, and the recent GoU investments which doubled cotton production.

Vegetable Oil Development Project (VODP), and the Public-Private Partnership (BIDCO). The Vegetable Oil Development Project (VODP) is a GoU strategic effort which aims to: 1) increase domestic vegetable oil production; 2) address rural poverty through involvement of smallholder farmers in oilseed production and processing; 3) improve health through increased vegetable oil intake in the villages; and 4) address food security through provision of alternative crops for income generation. The overall goal of the project is to expand production of oil-bearing crops in Uganda, with particular emphasis on smallholder farmers in partnership with organized private sector processors. The project has three components: 1) Oil Palm Development, 2) Vegetable Oil Development Fund (Traditional Oilseeds and Essential Oils Development Subcomponents), and 3) Institutional Support. VODP was approved by International Fund for Agricultural Development (IFAD) in 1997, and is due to close in June 2012.

VODP was created in the context of Uganda's heavy reliance on vegetable oil imports, as well as the population's substantially low intake of vegetable oils. The project is funded by the GoU, via a soft loan from IFAD to the GoU and BIDCO, the private sector partner.³⁰ The program's main component (oil palm production) is co-implemented by BIDCO (based in Jinja), in Kalangala district, Bugala Island. In the future, VODP production expects to spread to the mainland and other areas with suitable climate for production.

VODP has three subprojects: 1) Oil Palm Uganda Limited (OPUL), also on Bugala Island, which opened up 6,500 hectares of nucleus oil palm plantations, installed a 30 MT per hour palm oil mill (along with other infrastructure), and manages 3,500 hectares of outgrowers' plantations; 2) an ongoing expansion of oil palm production, targeting 20,000 hectares of land to be developed by BIDCO,³¹ and 10,000 hectares of land to be developed by the GoU, as well as the related establishment of palm oil mills; and 3) the establishment of the edible oil complex at Jinja, which comprises a 300 MT per day refinery and a 150 MT per day oil mill.

The project was designed with environmental impact in mind. Environmental impact assessments for the project were carried out and approved by National Environment Management Authority (NEMA). The project has also constructed over 450 km of roads.

Due to delayed negotiations with BIDCO, a subproject of VODP only started in 2003, and actual planting on smallholder farms did not begin until 2006 (IFAD, 2010). The smallholder outgrower scheme activities seriously began in 2006 after Kalangala Oil Palm Growers Trust (KOPGT)

²⁹ "oil palm" in this report refers to the oil seed of the palm plant.

³⁰ BIDCO Uganda is a multinational company, with Kenyan, Malaysian, Indonesian, US (ADM), and Singaporean (Wilmar) joint ownership. On the loan, IFAD reported: "Originally, the total project cost was to be US\$60 million, consisting of an IFAD loan of US\$20 million, US\$33.1 million of co-financing from the private sector partner, US\$3.8 million from the Government of Uganda and US\$3.1 million from beneficiaries. However, due to an increase in the scale of the Oil Palm Subproject, the private investor and the Government increased their contributions to US\$120 million and US\$12 million respectively, bringing the total cost to about US\$156 million." (IFAD, 2010)

³¹ As of May 2011, roughly 5,700 hectares of the 40,000 total hectares of expansion have been acquired (1,700 hectares on Buvuma Island, and 4,000 hectares inland).

was initiated. KOPGT administers the oil palm growers' scheme and protects the interests of smallholder oil palm farmers. Farmers have accessed about UGX two billion in production financing (UGX 1.265 billion in cash, and the rest in kind), and they have been trained in oil palm agronomy. Farmers face a transparent and set pricing formula for their output, which is based on (1) the international price of palm oil plus costs to bring it to Jinja (CIF Jinja) plus (2) extraction costs, which are expected to improve over time as palms mature.

A primary palm oil mill has been constructed at Bwendero, in Kalangala. The mill's crude oil product is transported to BIDCO's recently-established refinery in Jinja for final processing. This refinery is responsible for both crushing oil seeds into oil and refining crude palm oil. The refinery has a capacity of 800 MT per day and currently operates at an average throughout of 500 MT per day (personal interview, BIDCO, 2011). BIDCO's edible oil produced from locally-grown palm goes by the brand name Buto.

Mukwano Sunflower Outgrower Scheme. Increased competition in the edible oils market has encouraged Mukwano to increase their investment in the sunflower sector. As part of this program, Mukwano is developing milling capacity in Masindi and Lira districts. As of May 2011, the company has established a large warehouse facility in Lira and are considering investing into a solvent extraction oil processing plant. Mukwano aims to place their sunflower oil competitively against palm oil (processed from both imported crude palm oil (mainly from Malaysia) and locally-produced palm oil (produced by VODP, described above)). Mukwano operates a contract farming system, and collaborated with USAID's APEP (Agricultural Productivity Enhancement Project)/CLUSA consortium for technical assistance in developing and organizing the various players. Mukwano was a monopsony buyer, but recently opted for price competition in the procurement of sunflower oil seeds. This scheme is currently supporting over 3,000 farmers, who are selling sunflower oil seeds at a farm gate price of about US\$0.30 per kg.³²

Current investments in Uganda's agriculture sector reflect investors' increased confidence in the country. To the extent that they are either purely private ventures or public-private partnerships augurs well for the future of Uganda's agriculture. Barring land constraints, the outgrowers scheme being adopted is scalable with positive future expansion prospects. Ultimately, its aim is to advance toward an end goal of decreased dependence on imported edible oil products. The most pressing current constraints are availability and access to improved seeds, and underlying lack of access to credit for smallholder oil seed farmers.

Imports. At present, imports appear to account for an estimated 85 to 90 percent of total annual consumption at present. The bulk of imported edible oil (an estimated 60 percent) comes in the form of crude palm from Malaysia and Indonesia for refining in-country. As with wheat grain, there are no tariffs levied on crude oils (this includes palm, soybean, etc.) though refined vegetable oils (including palm and soybean) face a 25 percent tariff according to the current EAC CET Handbook.³³

Despite the necessity to meet demand through substantial commercial imports, monetization of Title II commodities is properly viewed within the context of the GoU's policy of import substitution industrialization. This is particularly true in the case of vegetable oil (refined or crude).

³² Figure of UGX 700 per kg converted using rate of 1 UGX = 0.000414931 USD, www.xe.com (accessed June 14, 2011). The program originally targeted 50,000 farmers, but had to be scaled back

³³ The EAC Common External Tariff Handbook notes that there is a "0%" tariff for crude soya bean oil.

Food aid. As detailed in Section 4.2 above, Title II monetizations of refined vegetable oil were halted in 2007 due to a zero-rated UMR by USDA, and the removal of a waiver on VAT.

Both BIDCO and Mukwano indicated that distributed US refined vegetable oil poses no disincentive to domestic production of oil seeds, nor to the processing or marketing of their respective refined edible oils. They reported that this is because distributed oil is reaching households who lack the purchasing power to buy edible oil on the market. Mukwano noted that, conversely, distributed vegetable oil is excellent pre-marketing for Mukwano's refined oils since Ugandan households always have the option of boiling or roasting foods.

4.5.2. Competitive environment

Together, Mukwano and BIDCO control 80 percent of the edible oil market, which suggests that together they exert significant market power. However, each company focuses on separate markets -- BIDCO on palm oil (imported and domestic) while Mukwano focuses on sunflower seed production and processing. At present, the average Ugandan consumer is indifferent among edible oils, which effectively negates any market segmentation that may exist based on the two companies' differing supply chains and long-term sourcing plans. Despite the duopolistic nature of the oil processing and marketing industry, prices appear to be dictated by limited consumer demand, and an extremely high degree of consumer sensitivity to price differences. As noted above, Ugandan consumers have both the ability and willingness to simply boil or roast foods for which frying is an alternative.

4.5.3. Performance of Past Monetizations

There have been no monetizations of CDSO to inform an assessment of past performance in achieving a fair market price.

As noted above, monetization of refined vegetable oil was the mainstay of the PL-480 program in Uganda for nearly two decades. For overviews of the performance of those sales, please see the 2009 BEST study, the 2006 Bellmon Analysis, and Murphy's study on the impact of Title II monetizations during the period 1989-2006.

4.5.4. Recommendations

Refined vegetable oil is NOT recommended for monetization as the study team believes it has potential to disrupt the marketing of processing industries and, to a lesser extent, a possible disincentive to oil seed production. GoU policy on import substitution, and possible GMO policy, makes monetization of US refined vegetable oil extremely sensitive, an additional reason for our team to recommend against monetization of refined vegetable oil.

The study team recommends consideration of small volumes of CDSO for monetization as the team believes it will NOT represent a disincentive to oil seed production and processing industries. Although the GoU and private industry have invested heavily in oil seed and oil palm production, domestic sources account for only 10 to 15 percent of annual demand at present. Both oil processors have excess installed capacity in anticipation of continual growth in demand and will continue to be forced to import crude oil (most likely crude palm oil) for processing in country for the next five years, at a minimum. While the share of domestic production is expected to increase, the ability to meet demand with domestic seed/palm inputs will be a gradual process, driven primarily by the maturation of BIDCO's oil palms in the coming years. Expansion of sunflower oil seed production is expected to be relatively slower, mostly due to lack of seed availability and credit constraints at the small-holder farmer level. However, the

feasibility and desirability of monetizing CDSO should be reassessed on a regular basis (at least yearly) as Uganda continues to increase its domestic production of oil palm and sunflower oil seeds.

CDSO could be monetized in Uganda, and then refined by a private refiner (e.g. Mukwano or BIDCO) to add value and utilize refining capacity in-country. There is excess current installed refining capacity (BIDCO estimates it has 300 MT per day excess capacity, for example). Both processors have expressed interest in purchasing monetized CDSO should USAID make monetized CDSO available in Uganda.

CDSO would not be taxed by the GoU, per current tariff legislation. Any GMO concerns would need to be presented and addressed.

The GoU Ministry of Finance has informed the USAID Mission that they are not supportive of the monetization of CDSO; such GoU support is a critical consideration for the success of upcoming Title II food security funding. Based on only technical considerations, however, the team finds that monetization of CDSO in small volumes -- in the range of 7,000-14,000 MT for the first year -- would represent no substantial disincentive to domestic oil seed or palm oil producers, nor to processors of crude oil, because commercial imports continue to meet 85 to 90 percent of demand for edible oil. This recommended tonnage is based on the following assumptions: 85 percent demand met through commercial imports, 65 percent conversion rate of crude to refined oil, and monetized CDSO representing between 2.5 percent to five percent of commercial import volumes.

Sales would likely be large lot negotiated sales be to one of two large processors (possibly three, should Mt. Meru provide an interested potential buyer) who have the capacity to refine CDSO and market the finished product.

Analysis of whether sales price would represent a fair market price for CDSO, however, will be difficult. Given consumer indifference among types of oils, Title II CDSO should not be expected to command a premium. Instead, expected sales prices for CDSO will likely be closer to (lower) palm oil prices. While cost recovery may be less favorable than USAID might prefer, the Bellmon amendment simply requires the sales price to represent a fair market price. The team believes it is possible to achieve a fair market price, though the determination of that price may be less straightforward. The June 2011 crude palm oil prices are US\$1,183 CIF Mombasa, with port and transport costs adding approximately US\$118.50 per MT, for a CIF Jinja/Kampala price of approximately US\$1,301.50.³⁴

Given lack of prior experience monetizing CDSO, uncertainty about sales price performance, and largely duopolistic nature of oil processing industry, BEST recommends a conservative monetization tonnage in first year, with increasing tonnages in the second to fifth years, should the sale prices meet expectations.

There are no seasonal considerations in terms of timing of calls forward and sales because demand is fairly constant throughout the year.

USDA and USAID must coordinate and seek the concurrence of the USAID Mission in Kampala to ensure there is sufficient market space for both USDA and USAID monetization

³⁴ Per Louis Dreyfuss spot price quote, VODP, and miller interviews

programming, given market dynamics and GoU sensitivities surrounding vegetable oil monetization in Uganda.

4.6. Market Analysis - Rice

4.6.1. Demand and Supply Overview

Demand. Rice is increasingly considered a staple in certain regions of Uganda, particularly in urban centers where its convenience influences consumer choices. Where lowland rice has been grown traditionally, rice is viewed as both a staple and cash crop by the smallholder farmers who produce it. Increasingly, however, it is viewed as an important cash crop with great potential to meet regional market demand, with a premium for the organic methods utilized by many Ugandan farmers.

Domestic production. Both upland and lowland rice are domestically produced. FAOSTAT reports paddy rice production of 181,000 MT for 2009, from which about 126,700 MT of milled rice is derived. The table below summarizes estimates of domestic production.

Table 13. Domestic Rice Production (MT), 2005-2010

Production	2005	2006	2007	2008	2009	2010
Paddy rice	153,000	154,000	162,000	171,000	181,000	-
Milled equivalent 70%	107,100	107,800	113,400	119,700	126,700	-
Production*	79,000	99,000	100,000	117,000	117,000	120,000

Source: FAOSTAT, USDA-FAS

Note: FAOSTAT has not yet reported 2010 production estimates. USDA-FAS reports "production" without specifying whether it is paddy or milled, though a comparison of the two data source figures suggest FAS is reporting milled equivalent tonnages.

Recent investments in the edible oil sector have increased the local availability of agricultural commodities. This, in turn, should influence food aid programming decisions. The review of recent investments in Uganda's rice sector is critical to appreciating GoU food security objectives that would impact the rice market. Following President Museveni's launch of the Upland Rice Project in 2006, and interest in Ugandan production of NERICA seed varieties from neighboring countries, the GoU and donors have initiated a number of public-private partnerships. Interest among donors, including JICA, USAID (through IDEA and Agricultural Productivity Enhancement Project (APEP)),³⁵ FAO, and AGRA, and investments have focused on capacity building, technical support to newly-established rice farmers in areas of crop, soil and water management), and strengthening input and output market linkages (Mohapatra, 2009).

The Kibimba Rice Scheme, known for its Tilda rice brand, is one of Uganda's leading rice growing estates. In an effort to protect the growing industry, the GoU increased tariffs on rice imports. Along with donor investments, this policy shift helped to encourage the expansion of production and milling capacity, which has quickly turned Uganda into a regional supplier of rice. Representatives of the Tilda brand estimate that 75 per cent of their rice is domestically-consumed, and 25 percent exported to Kenya, Southern Sudan and DR Congo (Africa News Network).

³⁵ See, for example, the impact described by USAID of its investments in upland rice, which contributed to increases in production as well as vast expansion of milling capacity in country (http://www.usaid.gov/stories/uganda/fp_uganda_rice.html).

Imports. According to official trade figures, five countries account for over 90 percent of all of Uganda's rice imports: Vietnam, Pakistan, Tanzania, UAE, and Thailand. Together, these major rice exporting countries supplied nearly 78,000 MT in 2009, the last year for which data are available. As the following table illustrates, demand has steadily grown since 2005.

Table 14. Top Five Source Countries for Rice (MT), 2005-2009

Rice & by-products (broken and nonbroken)	2005	2006	2007	2008	2009	5-year Average
Total Imports	62,186	48,379	70,485	59,988	80,063	64,220
Viet Nam	34,419	31,698	11,688	11,833	36,352	25,198
Pakistan	11,984	9,950	36,878	25,043	24,620	21,695
Tanzania	4,842	912	11,988	13,069	14,045	8,971
United Arab Emirates	1,942	507	2,318	902	1,349	1,404
Thailand	346	9	1,224	3,879	1,420	1,375
Total MT for Top 5 Source Countries	53,533	43,075	64,096	54,725	77,785	58,643
% Total Imports Attributable to Top 5 Sources	0.8608	0.8904	0.9094	0.9123	0.9715	0.9132

Food aid. To the best of the team's knowledge, rice has not been monetized or distributed through any USG food aid programming. There may be small-scale rice monetization or distribution programs among other donors, but the team is unaware of any.

The table below summarizes Uganda's rice supply.

Table 15. Uganda Rice Supply (MT), 2005-2010

	Rice	2005	2006	2007	2008	2009	2010	Five-year Average
1	Imports	62,613	49,375	70,153	62,081	71,715	66,898	64,044
2	Of which, Food Aid	3,270	2,735	4,223	4,412	3,790
3	Exports	12,520	15,026	23,524	25,244	32,115	28,679	24,918
4	Net Trade	50,093	34,349	46,628	36,837	39,600	38,219	39,127
5	Production	93,050	103,400	106,700	118,350	121,850	120,000	114,060
6	Supply	143,143	137,749	153,328	155,187	161,450	158,219	153,187

Notes/Sources

- 1 FAOSTAT, Comtrade, ITC, USDA-FAS; 2010 is an average of previous two years' data
- 2 WFP Interfais, IGC
- 3 FAOSTAT, Comtrade, ITC, USDA-FAS, 2010 is an average of previous two years' data
- 4 Imports minus exports
- 5 FAOSTAT, USDA-FAS
- 6 Sum of lines 4, 5

4.6.2. Performance of Past Monetizations

To the best of the study team's knowledge, rice has not been previously monetized in Uganda.

4.6.3. Recommendations

The study team recommends against considering rice for monetization for FY11 and FY12 for two primary reasons: 1) there is relatively low demand for commercial imports of rice, which would limit the funding available through monetization of a small percentage of the average commercial imports; and 2) there is substantial interest among the GoU in investments in domestic rice production.

4.7. Third-Country Monetization

When competition in a commodity market is severely limited, monetization activities in that market run the risk of introducing or intensifying market distortions. These effects frustrate the development of an open and fully competitive market, by contributing to either excessive profits or barriers to entry. By denying producers and consumers the opportunity to operate within a competitive market, over time, the monetization activity could lead to reduced national economic efficiency and assign indeterminate costs to producers and consumers. Monetization in such a market would be contrary to the legal requirements of the U.S. agricultural legislation (e.g. Farm Bill), which requires that monetization does not introduce local market or production disincentives.

Third-country monetization (sometimes referred to as "regional monetization") can offer a legally-compliant alternative for Awardees operating in a country where 1) there exist less than fully competitive domestic commodity markets; 2) commercial markets are relatively limited in size, therefore limiting scope for monetization; and 3) host government policies constrain the ability of USAID implementing partners from meeting sufficient funding needs through in-country monetization.

Third-country monetization provides Awardees with the option of selling into a market where there is sufficient competition among buyers in order to increase the likelihood that bids will be at or near IPP, which is the best measure of a fair market price. With competition, there is increased assurance that the monetization will not distort the market and will generate higher revenues than if the monetization is conducted in a domestic market with limited or no competition. Third-country monetization can generate greater revenue for food security activities and thereby increase the efficiencies of the FFP program. It also provides the Awardees with a fallback position if a commodity that was initially recommended for monetization becomes unviable at a later date due to changing market or policy conditions.

Third-country monetization is a reasonable option in Uganda, either alone or as a supplement to in-country monetization, for the foreseeable future (FY12 and beyond) because:

1. Current GoU policies towards Title II commodities with sufficient commercial demand may constrain the ability of USAID implementing partners from meeting sufficient funding needs through in-country monetization.
2. Monetization should be viewed as an appropriate long-term tool for the development of local markets in Uganda, and not primarily as a source of needed funds for programming.
3. There are multiple potential regional markets with substantial commercial demand for Title II commodities. The appropriate third country or regional market is that market in which one may expect to receive a price for a commodity that is reflective of the international price. According to FFP Guidelines, the country must be either a Low Income Food Deficit Country (LIFDC) or a Least Developed Country (LDC) on the Organisation for Economic Cooperation and Development- Development Assistance Committee (OECD-DAC) list. Within the region, there are many LIFDCs, including Tanzania, Sudan, DR Congo, Rwanda, Kenya, Burundi, Mozambique, Djibouti, Ethiopia, and Egypt. As the final destination of the commodities sold is indeterminate, the relevant reference to ensure that the Bellmon market conditions are satisfied is to ensure that the final negotiated price is comparable to the import price for that market. In addition, the port facilities of the selected market platform need to be sufficient to physically accommodate the commodities. This requires that a Bellmon analysis be

conducted in both the recipient country and the country in which third-country monetization takes place.

These guidelines specifically read:

"Monetization in the recipient country is preferred over monetization in a "third" country, a country where the food security activities will not be take place. If it is not feasible to monetize in the country where proceeds will be utilized, monetization may be carried out in another LIFDC in the region, i.e. "third country." A list of low-income food-deficit countries (LIFDCs) can be found on FAO's web site at <http://www.fao.org/countryprofiles/lifdc.asp?lang=en>. If the LIFDC option is not feasible, then monetization may take place in a U.N. classified, least-developed country (LDC) in the region at <http://www.un.org/special-rep/ohrls/ldc/list.htm>. In the case of "third country" sales, the USAID Mission and/or U.S. Embassy in both the program country and the monetization country must endorse the plan."

Monetization in a relatively large port city is preferred because inland freight and other costs will be assumed by the buyer. The preferred currency in which the transactions would be conducted would be specified in the offer. Based on the above criteria, the following table provides an overview of some of the products in three select markets that may reasonably be considered for regional monetization, including the estimated potential proceeds from monetizing 10 percent of the average annual commercial import volume of each commodity.

Table 16. Potential Proceeds from Monetization of Select Commodities in Three Regional Ports

Commodity	Value in US\$/MT	Kenya ****			Mozambique *****			Tanzania *****		
		Annual Average Commercial Imports (MT)	10% of Avg (MT)	Potential Proceeds (US\$)	Annual Average Commercial Imports (MT)	10% of Avg.	Potential Proceeds (US\$)	Annual Avg. Commercial Imports (MT)	10% of Avg.	Potential Proceeds (US\$)
Maize*	\$319	252,176	25,218	8,051,337	38,975	4,101	1,309,403	8,616	1,192	380,562
NFDM	\$3,450	690	71	244,222	5,707	674	2,326,451	314	34	118,679
Rice*	\$448	128,060	12,746	5,713,509	135,283	15,995	7,169,915	1,022	471	211,193
Oil**	\$1,314	721	72	94,750	19,307	1,704	2,238,425	13,378	891	1,170,386
Wheat*	\$336	594,459	54,764	18,407,651	229,177	24,003	8,067,983	741,812	63,536	21,356,142
Grand Total		976,106	92,871	32,511,468	428,448	46,477	21,112,176	765,142	66,125	23,236,961
LIFDC			y			y			y	
Port City			y			y			y	
Adequate Port Facilities			y			y			y	
Convertible Foreign Exchange			y			y***			y***	
Does not Present Significant Security Issues						y			y	

Source for prices: Maize, rice, oil and wheat: World Bank pink sheet for April 2011; NFDM from International Dairy Product Prices > International 1.25% BF Skim Milk Powder Price, USDA, "Understanding Dairy Markets"

Sources for commercial imports: UN Comtrade for total Imports; WFP Interfais database for food aid; food aid is subtracted from total imports to estimate commercial imports

Notes: * bulk with bags; ** price for CDSO; ***The convertibility of these currencies can vary depending on internal macroeconomic conditions; ***** data for Kenya's imports for 2010 is not yet available. Data for 2005-2009 are used; ***** Food aid data are not yet available for 2010 for Mozambique or Tanzania (and thus 2006-2010 average is not available). Average food aid figures for 2005-2009 were used as a proxy.

If third-country monetization is selected as an option, a widely-advertised competitive procurement using newspapers, internet, and radio is recommended. Advertisement should be explicit regarding commodity specifications, delivery time range, transaction locations, payment terms, and required currency. An auction process using a commodity exchange should be considered. Finally, both the Mission Director of the regional monetization country and the Title II Non-Emergency Program country must endorse the monetization.

Chapter 5. Distribution Analysis

5.1. Introduction and Guidelines

The Bellmon Amendment requires assurances that a proposed food aid distribution program would not result in substantial disincentive to or interference with domestic production or marketing in that country. The extent to which distributed food aid has the potential to result in disincentive to local production or disruption of markets rests fundamentally on whether proposed food aid represents “additional consumption” for beneficiary households (i.e., food consumption that would not have occurred in the absence of the food aid distribution program). If food aid transfers exceed households’ perceived needs, the beneficiary is more likely to sell the food aid, reduce market purchases of food, and/or increase household farm sales. Such a response could lower market prices and/or reduce local incentives for production.

This pre-Title II Non-Emergency programming distribution analysis outlines the most likely distribution modalities for the upcoming Title II Non-Emergency programming cycle and provides Bellmon-relevant guidance that will help ensure potential impacts on production and markets of such food aid distributions are minimized, and therefore Bellmon-compliant.

5.2. Objectives of Distribution Analysis

To help ensure proposed programs will not result in substantial disincentive or market disruption, this chapter presents:

1. An overview of available evidence of national and localized food deficits in Uganda -- particularly the greater Karamoja region and northern Ugandan areas where distributed food aid has taken place, or is expected to take place in the next programming cycle.
2. An overview of the private market's capacity to meet localized food deficits, based on a Structure-Conduct-Performance framework.
3. An assessment of market integration within Karamoja, and nationally for Uganda.
4. Key considerations for all distributed food aid interventions in northern/north-eastern Uganda, and guidelines for each of the most likely modalities for distributed food aid.

5.2.1. USAID Food Aid Distribution Modalities and Geographic Targeting for FY12-FY16 Title II Non-Emergency Programming Cycle

There is broad scope and range for an array of Title II-funded development interventions in Uganda. USAID/Uganda guidance requests that interventions show how the three components of food security (access, availability, and utilization) will be improved.

The overall strategic objective for the Title II Non-Emergency program in Uganda is to reduce food insecurity among chronically food insecure households. Under this objective, two broadly-defined sector priorities have been identified: strengthening livelihoods and improving nutrition. In line with the principles behind USAID Uganda’s Feed the Future strategy which includes addressing underlying causes of hunger and under-nutrition, this dual-track effort intends to yield multiplicative returns for food security by simultaneously addressing food security’s three underlying components - food availability, access, and utilization. The strategy also recognizes that strengthening livelihoods and improving nutrition are causally linked at household and

community levels; investment in one will strengthen and reinforce the other. Interventions to strengthen livelihoods may include but not be limited to: 1) diversifying livelihood assets and opportunities; 2) increasing market access and orientation; 3) enhancing resiliency and risk management; 4) and improving natural resource management.

Interventions to reduce chronic malnutrition may include: 1) improving infant and young child feeding practices; 2) preventing and treating childhood illnesses; 3) promotion of growth monitoring by local health authorities, and screening and referral for children under five with severe acute malnutrition; 4) improving maternal health and nutrition in pregnant and lactating women; 5) enhancing access to clean water/sanitation, and improving hygiene practices; and 6) improving adoption of improved health practices through effective Behavior Change Communication (BCC) interventions. Interventions are expected to consider gender, complement and link with other USG investments - including Feed the Future - and GoU development priorities. In particular, interventions are expected to complement the Karamoja Integrated Disarmament and Development Program (KIDDP) (and the KIDDP Action Plan for Food Security, in particular), the Peace and Recovery Development Plan (PRDP) Northern Uganda Social Action Fund (NUSAF) for northern Uganda, and the efforts of the World Bank-funded NUSAF-2.

Proposals for USAID/Uganda for the FY12-FY16 Non-Emergency Programs are expected to target:

- Greater northeast Karamoja region, which includes Karamoja proper and/or bordering districts; this would include interventions in pastoralist, agro-pastoralist and/or agricultural zones; it could also include bordering areas in northern Uganda that are still recovering from internal displacement of populations and are in need of further agricultural rehabilitation.
- For the Title II Non-Emergency Programming cycle, the most likely modalities for distributed food aid to address Title II program priorities in northern and northeastern Uganda include food-for-work (FFW), food-for-assets (FFA), and/or Maternal Child Health and Nutrition (MCHN) activities, as described above.

5.3. National and Localized Food Deficits

5.3.1. Background

An estimated 80 percent of Uganda's households are subsistence farmers who own less than 2.5 acres of land on which they grow all their crops (both for home consumption and sale) as well as rear livestock. These producers' agriculture and livestock production systems depend primarily on seasonal rainfall. Poorly-distributed rainfall (e.g., timeliness, amount, and/or geospatial coverage) has a significant negative impact on crop and livestock production, which in turn limits households' food availability, access, and overall food security. The mixed cropping and livestock system maximizes land use and helps subsistence farmers cope with rainfall fluctuations. In recent years, farmers have also started coping by moving to lowland areas normally occupied by swamps to grow crops and rear livestock, or by migrating to other areas with their livestock in search of pasture and water.

Traditional production methods,³⁶ mostly using hand hoe, are used by smallholders to cultivate the same piece of land for many years, which usually restricts household production to subsistence levels. Nonetheless, producers with few other income-generating activities often find it necessary to sell some of their limited produce to meet other needs (e.g., health, education). These small-scale producers are thus continually unable to fully meet their household food needs or stock any surplus food. A cycle of low production and low stocks predisposes many households to food insecurity, especially in areas prone to civil insecurity or poorly-distributed rainfall. This has been the case over the past several years for northern Uganda where civil insecurity persisted for more than two decades. The Karamoja region in northeastern Uganda is currently recovering from both physical insecurity as well as chronic erratic rainfall conditions.

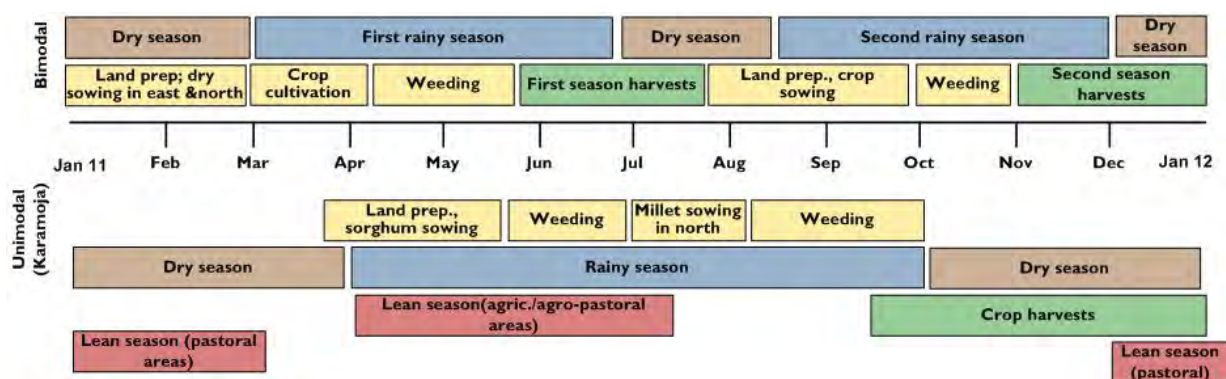
5.3.2. Seasonality

With the exception of northeastern Karamoja region, Uganda has bimodal rainy seasons. The first cropping season contributes about 60 percent of annual household food production, and normally begins in late February to mid-March and runs through mid-June. The dry season sets in by July. The second cropping season occurs between August and early December, followed by a dry period until early March.

Households in bimodal areas of Uganda do not normally experience a pronounced hunger period as they rely on food stocks from both seasons and/or market purchases to meet most of their food needs.

Karamoja seasonality. The cropping season in the northeastern unimodal Karamoja area (Abim, Kaabong, Kotido, Moroto, and Nakapiripirit districts) begins in April and continues until late September. The dry season begins in October and continues until April of the following year. Harvests in Karamoja's agricultural and agro-pastoral zones normally start in October and may continue into late December, increasing households' food availability and security, as well as replenishing households' stocks. These stocks normally start diminishing toward March of the following year, and are depleted by May/June. The hunger period for Karamoja's agricultural and agro-pastoral zones normally occurs between April and July. For the region's pastoral zone, the hunger period occurs from October to April, when water for livestock is scarce. The FEWS NET seasonal calendar below illustrates this timeline for the average year.

³⁶ Traditional methods include basic tools, such as hand hoes and machetes (and in some instances, rudimentary tools). The majority of producers do not use any production enhancement technology. For example, most producers depend on saved seed from past seasons instead of purchasing improved seed, and do not purchase fertilizer as it is either unavailable or too expensive.

Figure 5. Seasonal Calendar and Critical Events

Source: FEWS NET

5.4. Food Security

5.4.1. Overview

2004-2006. Uganda's food insecurity peaked in northern Uganda between 2004 and 2006 due to insurgency and civil insecurity caused by activities of the Lord's Resistance Army (LRA) in northern Uganda, and chronic erratic rainfall and conflict in Karamoja, northeastern Uganda. At one point, up to 1.8 million people were internally displaced in northern Uganda (UNHCR). The GoU implemented intensive military campaigns that eventually weakened the LRA and pushed it out of the region, leading to a gradual restoration of civil security and enabling IDPs to return home. By the first quarter of 2009, Uganda's IDP population had dropped to approximately 780,000. As IDPs started leaving camps to return home, food aid activities shifted accordingly. Instead of general distribution in camps, humanitarian and aid agencies began geographic and program-driven targeting. As the civil security situation continues to improve, food security has concurrently been improving. However, poorly-distributed rains, as well as livestock and crop diseases, remain among the factors which still hampered resident populations' full attainment of food security. In Karamoja, for example, poorly-distributed rainfall and livestock disease from 2005 on left as many as 500,000 to 700,000 people food insecure in the following year.

2009. By the first quarter of 2009, food insecurity was widespread in Karamoja,³⁷ in part as a result of three consecutive below-normal harvests since 2006 (Abim, Kaabong, Kotido, Moroto, and Nakapiripirit districts). Approximately 970,000 (slightly above 95 percent of the region's estimated 2008 total population) were considered highly food insecure, with agro-pastoralists and pastoralists being most vulnerable (FEWS NET 2009). Most households in the region had low incomes and few income-generating opportunities, and faced high crop prices and poor market access.³⁸ Livestock disease and sporadic insecurity also reduced households' livestock-based income, as their livestock had limited movement and limited access to pastures and water.

³⁷ Various assessments classify Karamoja as most susceptible to food insecurity during 2009, due to: 1) fluctuating crop and livestock prices; 2) high disease incidence; 3) few income-generating opportunities; 4) unstable to chronic malnutrition, morbidity, and mortality; 5) increased frequency of hazards and diminishing coping mechanisms due to consecutive below-average agricultural production seasons.

³⁸ Anecdotal information by observation, periodic spot checks indicated low access to markets. However, there were no specific, consistent studies on impact of prices.

Current. Many of the conditions hindering food security of Karamoja's households in 2009 continue today, indicating a need for long-term, targeted, and sustainable action. A 2010 FEWS NET study noted factors contributing to Karamoja's food insecurity, many of which were not new as compared to previous years': subsistence-based livelihoods, isolation of inhabitants, civil insecurity, poor rainfall, crop and livestock disease, and reduced coping capacity (FEWS NET, 2010).

The study also concluded that external assistance to Karamoja Region either contrasts with the livelihood context of the region, or only addresses a portion of actual needs, thereby limiting overall impact. The study describes programs initiated by the GoU,³⁹ UN agencies, and NGOs to enhance crop and livestock production, including provision of planting materials and livestock vaccination. These programs, under the Karamoja Action Plan for Food Security, prioritize sedentary agricultural production and mechanization. Reducing the vulnerability of pastoral and agro-pastoral populations remains an ongoing challenge.

The current Title II Multi-Year Assistance Program (MYAP) targets districts in northern Uganda, while future Title II Non-Emergency programming is expected to target greater Karamoja and bordering districts. Thus, the following subsections will focus on northern and northeastern Uganda.

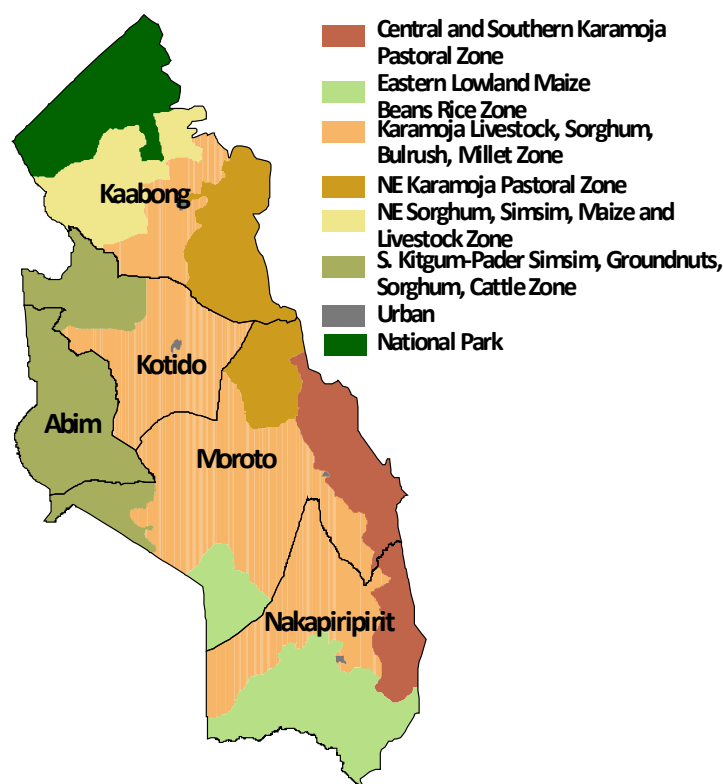
Northern Uganda. As stated above, the vast majority of IDPs in northern Uganda had resettled back home by mid to late 2010. These households were able to access more cultivable land and increase food production, with a focus on rehabilitation and development. Relatively well-distributed rainfall in the region, coupled with increased access to land and planting materials, has gradually improved food production, access, and security in northern Uganda, although some livelihood groups, mainly those who resettled later in relatively inaccessible parts of the Acholi region, still experience food insecurity. A combination of market purchases using income from agricultural labor opportunities, and harvests from both cropping seasons, have helped these poor households meet most of their basic needs in the last quarter of 2010, although their food security remains fragile as 2010 second-season stocks dwindle. Better-off households have been using stocks to meet their food needs through the first quarter of 2011, supplementing their first-season food stocks with market purchases using income from the sale of poultry, livestock, and petty trade (FEWS NET, 2011).

As stated earlier, assistance to vulnerable groups in northern and northeastern Uganda began shifting to a more targeted approach by mid-2010. Currently, food distribution in northern Uganda is limited to geographic and program-led targeting, mostly in areas recently resettled (less than 12 to 18 months). For example, in eastern Kitgum and Agago districts, assistance is restricted to nutritional and supplementary feeding programs as well as food-for-work (FFW). Partners conduct community surveys and assessments to better target assistance, and thereby minimize leakage (i.e., inclusion errors).⁴⁰

³⁹ Government of Uganda, together with development partners' five-year Karamoja Action Plan for Food Security (KAPFS 2010-2014) to ensure sustainable food security and increased household incomes. The plan is to be implemented at the community level, aiming to diversify livelihoods and improve food production to enable households to produce adequate food for own consumption and a marketable surplus. The plan is intended to strengthen livelihoods, improve food security, and reduce the need for external food assistance. The plan also includes the use of machinery to open large tracts of lands.

⁴⁰ Inclusion errors occur when food aid is unintentionally or intentionally provided to households not identified by program staff as in need of assistance. Errors of inclusion (i.e., leakage) are a Bellmon concern. Errors of inclusion are also a humanitarian concern because, by definition, leakage involves the inefficient use of scarce resources. See Annex VII for more details.

Figure 6. Karamoja Livelihood Zones



Source: FEWS NET

Karamoja. Karamoja has six livelihood zones broadly comprised within three livelihood systems: agriculture in the west, agro-pastoral in the center, and pastoral in the east. The study team traveled through three of Karamoja's livelihood zones during their field work in April/May 2011.

As FEWS NET's 2010 Karamoja Food Security Assessment notes, the livelihood zones in Karamoja share many inter-related causes of food insecurity: 1) climatic variability, evidenced by consecutive seasons of poor spatial and temporal rainfall distribution; 2) endemic hazards to productivity, such as crop and livestock diseases; 3) civil insecurity, including significant fluctuations in the incidence and prevalence of cattle raiding and other forms of theft and banditry. Furthermore, as noted above, the region only has one harvest season.

The majority of households in Moroto, Kotido, Nakapiripirit, and Amudat rely on market purchases for food supply. These agro-pastoral and pastoral areas rely on sale of livestock to support their food purchases. This contrasts with Kaabong and Abim, where most households rely on own-production as their main food source, due to improved conditions for agricultural activities (ACF, 2010).

By November 2010, food security in Karamoja had generally improved, in large part due to well distributed rainfall over the region's 2010 single season. Although rains favored crop production, some cereals such as sorghum and bulrush millet in the agricultural and agro-pastoral zones, fell victim to crop disease and water logging, reducing production (FEWS NET, 2011). Although all of the region's livelihood zones generally benefitted from this weather,

pastoralists and agro-pastoralists felt the largest positive impact as they registered better livestock production. Vaccination programs also helped ward off livestock disease, boosting livestock numbers (although reduced movement of livestock in some areas restricted livestock production) (FAO, Karamoja Seasonal Assessment, 2010-2011, 2011).⁴¹ Overall, pastoralists, as noted above, enjoyed increased livestock production and sale, with the exception of those pastoralists whose herds remained vulnerable to cattle raiding (FAO, Karamoja Seasonal Assessment, 2010-2011, 2011).

Many poor and very poor households earn income by selling firewood and charcoal. Although prices for these resources have improved (and are thus expected to increase income for poor and very poor households), over-exploitation of these resources increasingly limits their availability, and related volumes households can sell. On a positive note, cereal supply has increased (as noted above) and cereal prices have declined, both of which positively impact poor and very poor households in Karamoja as well as surrounding areas (FEWS NET, 2011). According to FAO's November 2010 Seasonal Assessment, grain supply in high-production areas is expected to remain secure through July 2011 at the minimum. However, some very poor agro-pastoralist households - especially those in Kotido, Napak, and Moroto - are expected to face food deficits through July 2011.

Food assistance. Overall, food security in Karamoja may currently be characterized as improving, but precarious. Food security assessments underscore the need for long-term targeted responses in this area. Stakeholders should plan for recurrent shocks to occur roughly every two to three years.

Direct transfers of food and/or cash, either free or in exchange for work, may be most appropriate. If households face deficits in the upcoming year, they are more likely to: 1) oversell livestock; 2) over-exploit natural resources; 3) reduce investments in livestock and crop production, as well as reduce investment in other expenses such as health or education; 4) reduce caloric intake.

MCHN assistance may be an effective direct transfer in the Karamoja region, which suffers from high malnutrition rates. As of December 2010, Global Acute Malnutrition (GAM) and Severe Acute Malnutrition (SAM) in all Karamoja livelihood zones stood at 9.4 percent and 1.2 percent, respectively. Neither of these figures is a significant decrease from 2009 levels. Underweight percentages ranged from 20 percent in some agro-pastoral and pastoral areas, up to 30 percent (ACF, 2010).⁴²

Ultimately, local communities and local government structures should lead discussions with other stakeholders (central GoU, donors, NGOs and others) in determining effective and appropriate long-term program interventions for corresponding targeted areas within the greater Karamoja region.

⁴¹ This is especially true for Kotido and Kaabong, where kraaling (restricting livestock to enclosed shelter during the night) was implemented as a security measure.

⁴² Note, for example, that severe stunting in children under five years of age in Karamoja is 25% versus a national average of 15%, severe underweight in children under five in Karamoja is 14% versus a national average of 4%, and severe wasting in Karamoja is 4% versus a national average of 2% (FANTA-2, The Analysis of the Nutritional Situation in Uganda, May 2010).

5.5. Private Market Capacity to Meet Food Deficits

5.5.1. Introduction

This section focuses on the capacity of private local markets to meet localized food deficits in Karamoja. This section relies on analysis of market prices, and anecdotal data on commodity flows, to explain whether or not markets in Karamoja can address food insecurity as and when it occurs.

Karamoja region, comprising of the districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, and Napak is part of the pastoralist corridor - an area inhabited by semi-nomadic cattle-keeping groups. The region is characterized by irregular climatic conditions and livelihoods heavily dependent on cattle, both culturally and economically (Ezaga, 2010).

There have been no formal market studies based on the Structure-Conduct-Performance (SCP) framework in Karamoja. However, a study conducted in late 2010 to inform potential WFP cash and voucher programming in Karamoja provides an overview of local markets and marketing characteristics, which inform this report. In addition, a number of market studies have been conducted in Karamoja's neighboring districts, such as Kitgum, Lira, Mbale, and Soroti, which are major cereal and pulse supply points for Karamoja. These studies are based on district-level time series data as well as anecdotal data. Until WFP began collecting market prices for some commodities in early 2010,⁴³ no consistent, published data for Karamoja have been available.

FEWS NET seasonal production and commodity flow information, as well as anecdotal data, show that staple food markets in the four districts of Kitgum, Lira, Mbale, and Soroti are linked to Karamoja markets. That is, a change in one of these markets is likely to be reflected in Karamoja markets, to varying degrees. Thus, market dynamics of these four above districts are relevant when assessing markets and food security in Karamoja. Lira holds the most production and supply routes destined for Karamoja, whereas Karamoja supplies mostly livestock (not crops) to neighboring areas, especially during lean production periods. For more information on market integration, see Section 5.6.

Although Karamoja does depend on neighboring areas for staple crop supply, the region is able to sell sorghum to surrounding areas during normal years with good harvests. Markets within Karamoja are also well-integrated; significant crop flows normally occur from the production areas located to the south and west of the region towards consumption areas in the middle and eastern parts of Karamoja, which help to alleviate shortages.

Price changes in neighboring areas are translated into higher prices in Karamoja, the final market, resulting in lower purchasing power for Karamoja households. Typically, average prices of commodities such as sorghum, a main staple in Karamoja, are generally higher in Karamoja than in the neighboring areas. Even though Karamoja produces sorghum, any marketed harvest is usually due to cash needs, not surplus. Flows from neighboring areas especially increase before the harvests (September to December), and during bad production years, thereby providing incentives for commodities such as pulses and sorghum to flow to markets into the region.

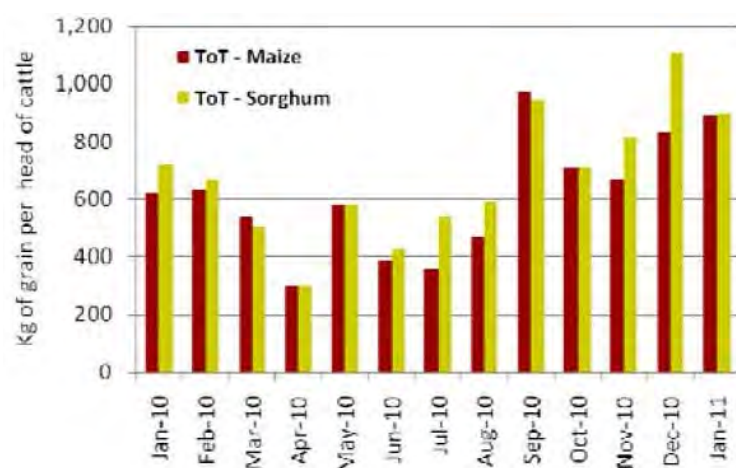
⁴³ WFP collects prices in Abim, Kaabong, Kotido, Moroto, and Nakapiripirit districts.

The ability of Karamoja's markets to function depends in part on availability of produce in neighboring markets and nominal commodity prices. However, a number of external conditions also play a role, such as security along the main supply routes into Karamoja. Traders may reduce or halt commodity flows and supplies to markets in Karamoja during times of insecurity or perceived insecurity, leading to higher market prices in the region. As a result, many households' economic access to markets is restricted. Poor road conditions, especially during the rainy season, also hinder the inflow of commodities to Karamoja.

Limited income-generating opportunities can hamper economic access to markets (especially for poorer households during the dry period when there is limited demand for agricultural labor). Market access is also restricted among those without livestock. Though livestock can be exchanged for cereals, livestock owners' purchasing power is dependent on the time of year and condition of the livestock.⁴⁴

As the figure below shows, terms of trade between cattle and cereal grains vary substantial over the course of a year, mostly due to seasonality.

Figure 7. Terms of Trade: Price per Medium Heifer to Sorghum and Maize Grain in Nakapiripirit



Source: FEWS NET, WFP *Note this graph is only representative of Nakapiripirit; other districts may have quite different terms of trade.

5.5.2. Market Structure

Karamoja generally has separate markets for sale of crops and sale of livestock; this is especially true in the villages, where a market may have only some types of crops, or only livestock. However, businessmen from outside Karamoja have begun bringing food crops to larger livestock markets such as Komuria and Kanawat (Ezaga, 2010). A FAO study found market days (which usually occur weekly) are intensive and short-lived, lasting two to three hours. Markets (especially for food crops) are located near towns or trading centers.

⁴⁴ All other conditions remaining the same, livestock are normally healthier during the wetter period and thus fetch higher prices, as compared to the dry season when livestock are unhealthier due to limited pasture and water, and thus fetch low prices.

Market information in Karamoja is often delayed or misguided; information flow is usually by word-of-mouth, among individuals, and long distances between markets make information flow slow or impossible.

Crops. Rain-fed crop production is practiced in most parts of the Karamoja region, although many argue that the area's land and climate (which is unimodal, as compared to the majority of the country, which is bimodal) is more conducive to livestock rearing than crop production. Crops grown in Karamoja include sorghum, maize, sweet potatoes, cassava, millet, groundnuts, sunflower, cowpeas, and beans (Levine, What to do about Karamoja?, 2010).

Crops in Karamoja are mostly produced for consumption, and levels of production are generally too low for producers to market surplus. When local harvests do have a surplus, quantities brought to the market cannot last for more than two weeks (Ezaga, 2010).

Figure 8. Karamoja and Its Districts⁴⁵



Karamoja's markets are small, hardly formal or organized, and face weak effective demand. This is especially true for village markets and between markets in different districts. There are no food commodity wholesalers in Karamoja (Bashaasha, 2010). The bulk of food commodity sales are direct retail to households and other retailers. Because the area's markets rely heavily on food supplies from other areas of Uganda (mostly Mbale, Soroti, Kitgum, Pader and Lira), factors such as road infrastructure and security are important for market performance (Levine, What to do about Karamoja?, 2010) (Bashaasha, 2010). While the security situation is improving, murram roads make transport into Karamoja difficult and costly.

Despite these challenges, the Karamoja market currently has the capacity to deliver a variety of foods in a timely way to satisfy current demand, which, as stated earlier, is low. The mean response time of traders to respond to increased demand is one week (Bashaasha, 2010). Currently, an average household in Karamoja sources 35 percent of its total food needs from the market (Bashaasha, 2010), and market supply remains steady enough to satisfy demand with little excess. The main factor limiting increased demand is

households' low income levels (Bashaasha, 2010). If demand increases in the near future, however, markets in their current form may not be able to maintain adequate supply, in terms of transport and warehousing capacity⁴⁶ (Bashaasha, 2010).

Livestock. Cattle, sheep, and goats are the main livestock available in markets.⁴⁷ Livestock sales are continuous throughout the year, but sales peak in the hunger season, when households food reserves are low (Levine, What to do about Karamoja?, 2010). Livestock traders have good links to other areas such as Kitgum, Gulu, Mbale, Soroti, Kampala, and

⁴⁵ Source: FEWS NET Uganda

⁴⁶ Currently, food shops themselves are mainly used as storage.

⁴⁷ Camels are rarely sold because they are expensive to replace and not plentiful compared to the other livestock. (Levin, S., 2010)

Southern Sudan, and are able to purchase and transport livestock to these areas (Levine, What to do about Karamoja?, 2010). The same traders usually bring back various food crops and non-food goods for sale to households within the region.

The degree of responsiveness in the livestock market depends, to some extent, on seasonality and harvest levels. For example, when harvests are good and most households have food surpluses, the terms of trade for livestock should benefit the seller. Alternately, livestock sales during the lean season are scarce, and should merit poorer terms of trade for the livestock seller (Ezaga, 2010). However, these scenarios are also dependent on other factors which may impact on overall terms of trade.

5.5.3. Market Conduct

Competition in the Karamoja food market is reasonable with the majority of the traders interviewed (58 percent) having more than five business competitors (Bashaasha, 2010). The results suggest that these regional food markets are fairly free of monopolistic and monopsonistic tendencies, though collusive tendencies could exist.

5.5.4. Market Performance

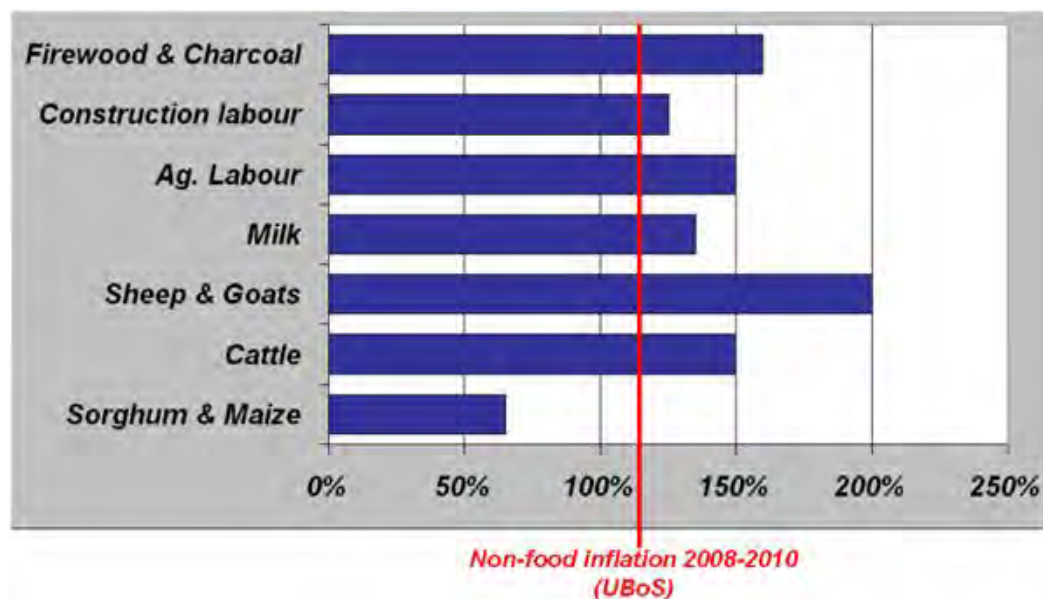
Prices are heavily dependent on the needs of the seller and the time of year. Prices for livestock are generally higher when pastures are in good condition, and lower during dry periods when pastures are low and affect the size of cattle. Additionally, during periods of low food harvests or drought, livestock prices are low as sellers lack negotiation power and are desperate to sell. A household's most valuable livestock is a cow, which is an ultimate last resort in terms of selling (Ezaga, 2010).

Prices are also influenced by the security situation; increased insecurity usually results in increased prices. Neither food crops nor livestock markets maintain a common price structure, and prices fluctuate according to a variety of factors. For example, in Komuria market, overhead costs such as market dues and transport costs have a bearing on the final price of cattle (Ezaga, 2010).

As noted earlier, Karamoja is able to market some of its sorghum supply to surrounding areas, during a good harvest year. As stated elsewhere, this sale is usually due to cash needs of Karamoja-based farmers, and these households typically do not produce enough cereals for home consumption. Karamoja's markets depend mostly on supplies from neighboring areas; thus, prices are higher in Karamoja as they include transport and other costs. Nonetheless, average prices of commodities such as sorghum, a main staple in Karamoja, are generally higher in Karamoja than in the neighboring areas. Prices are especially higher before the harvests, which occur between September and December of a given year, as well as during poor production years. During these times of production shortage, surrounding regions are more likely to market their production to Karamoja.

In Karamoja, staple food prices of sorghum and maize appear to have increased the least as compared to other commodities, from 2008 to 2010, as the following figure shows.

Figure 9. Market Price Changes in Karamoja: Percent Change in Prices, September 2008 and September 2010



Source: FAO November 2010, "Karamoja Seasonal Assessment"

The above figure uses the non-food inflation between 2008 and 2010 as a benchmark to judge price changes. Where prices have increased by more than this benchmark, there has been a real increase in the value of the commodity; this is the case for most commodities, and especially for sheep and goats, firewood and charcoal, cattle, and agricultural labor. In the case of firewood and charcoal, the explanation given in the report is supply reduction. Conversely, better harvests in Karamoja and good production in the areas which traditionally supply Karamoja have contributed to a real reduction in prices for sorghum and maize (FAO, Karamoja Seasonal Assessment, 2010-2011, 2011). Higher prices for commodities sold by households (such as firewood and charcoal), coupled with lower prices for staple cereals, meant a significant improvement in the terms of trade and therefore overall purchasing power in 2010 compared to 2008 (FAO, Karamoja Seasonal Assessment, 2010-2011, 2011).

In sum, Karamoja's markets are dependent on both seasonality and harvest levels within the region (which determine locally-supplied market availability, and households' economic ability and/or need to buy on the market), as well as in neighboring regions which also supply Karamoja's markets. Furthermore, external factors such as transport and security affect market performance as well. Lastly, household income fluctuates according to availability of sources of income, household herd size and condition.

A WFP report states that significant forces hindering market performance are low effective demand, low purchasing power, and high levels of poverty (Bashaasha, 2010). Thus, programs that enhance individual and household disposable incomes would in turn enhance market inflows, increasing the options people have to access adequate food in the short term. Karamoja's markets would need improved infrastructure and security to sustain an increased demand.

5.6. Market Integration Analysis

Introduction. Local markets in developing countries are often poorly integrated with one another due to inadequate provision of public goods (such as infrastructure), inefficient flow of information, imperfect competition, and incomplete or missing institutions for risk management, like credit and insurance—all of which qualify as sources of market failures.

A number of studies have examined price integration in different markets by testing for either static or dynamic correlations between price variables. The most common measure of spatial market integration between time series of commodity prices is the bivariate correlation coefficients. This test uses the Pearson correlation coefficient, a scale-free measure of the covariance between two price series, giving values between -1.00 and 1.00 . Statistically significant and positive correlation coefficients indicate a spatial integration between the respective pair of markets through trade; and the higher the correlation coefficient (the closer to 1 it is), the greater the degree of market integration. Absence of statistically significant price correlations suggests that markets are not linked through trade, and prices are determined independently from one market to another.

Uganda. Uganda has a wide range of agro-climatic conditions and livelihoods. Years of civil conflict have had damaging effects on its transport infrastructure and its agricultural marketing systems. Thus, to better understand markets, and analyze the impact of monetized and distributed food aid in the market, it is important to better understand the spatial linkages among main food markets.

Matooke (bananas), sorghum, sorghum flour, beans, maize, maize flour, and Irish and sweet potatoes are among the main staple and cash food commodities in Uganda. Using average monthly retail prices from October 2006 to March 2011 for each of these commodities, correlation coefficients were estimated for all the price pairs among select markets. Markets play an important role in trade networks of commodities; markets for this study were chosen primarily on the basis of data availability.

Karamoja. Markets within Karamoja are surprisingly well-integrated (considering the difficulties of market information flow, poor transport, and short-lived, seemingly spontaneous market presence), especially for beans and sorghum (Bashaasha, 2010). Price correlation is highest among Moroto, Central Kotido, and Kaabong districts, as noted in the following table.

Table 17. Price Correlation: Moroto, Kotido, Kaabong

	Kamuswahili (Moroto)	Kotido Central	Kaabong Central
Kamuswahili (Moroto)	1		
Kotido Central	0.90 (Maize flour)	1	
	0.98 (Beans)		
	0.87 (Sorghum)		
Kaabong Central	0.87 (Maize flour)	0.89 (Maize flour)	1
	0.98 (Beans)	1.00 (Beans)	
	0.97 (Sorghum)	0.96 (Sorghum)	

Source: Bashaasa, B, December 2010. "Market Analysis for Cash Transfer Programs in Karamoja" WFP

Beans. Correlation coefficients were computed for the following bean markets: Kampala, Gulu, and Mbarara. Bean markets are strongly correlated to each other (see table below). The bean markets of Mbarara and Gulu, both of which are major production areas, appear to be well-integrated (0.75). Bean price correlation between Kampala, the capital city, located in a bean-

deficit area, and other markets is also strong. The coefficients corroborate anecdotal observations that beans are shipped from Gulu to Kampala, via Lira, and from Mbarara to Kampala, via Masaka.

Maize. Correlation coefficients were computed for Kampala, Arua, and Mbarara maize markets. These markets are seemingly well-integrated for maize and maize flour. The highest level of integration for maize exists between Arua and Kampala, with a correlation coefficient of 0.900. This result supports information of maize trade flows from Masindi to both Arua and Kampala. Mbarara and Kampala receive flows of maize from Masaka, and thus the correlation coefficient between Mbarara and Kampala is high (0.847).

Matooke. Markets are also well integrated for Matooke. The highest level of integration exist between Kampala and Masaka (0.848), and Kampala and Mbarara (0.714). Kamapala's matooke supply comes from Mbarara and Masaka, both located in major production areas.

Irish potatoes. Of the three pairs of Irish potato markets analyzed, only one pair (Masaka and Mbarara) indicated high integration with the other two, which suggests little if any market integration. Masaka serves as a transit point for potatoes from Kabale, Bushenyi, Mbarara, Rukungiri, and Rakai markets in route to urban markets, so the prices in Masaka may influence or be influenced by prices in these producing markets.

Rice. Most rice in Uganda is grown in Eastern Uganda, with some grown in Western Uganda due to the areas' lowlands and high moisture content throughout the growing season. Although rice is increasing in popularity, particularly in urban areas, it is not a traditional staple food in Uganda, nor is it among the ten most important crops grown in the country. Rice is increasingly traded to Kenya, Rwanda, and the eastern part of the DR Congo (Odogola, 2006). Price coefficients show strong evidence that rice prices between Arua and Mbarara are correlated. However, given that there is poor accessibility in terms of infrastructure between the two markets, the high correlation coefficient is likely a coincidence.

Other crops. Markets for sorghum, sorghum flour, cassava, and sweet potato appear to be poorly-integrated. The lack of integration could be explained by the fact that these crops are primarily grown for domestic consumption. However, some of these crops are increasingly marketed, such as sorghum, which is sometimes sold at the farm-gate level or at the nearest rural market. Of the total sorghum marketed, about 80 percent is sold at the rural markets and 20 percent is sold at the farm-gate level (Shoreline Service Limited, 2010). Very little produce is marketed beyond most production regions, due to strong local markets and weak demand in Kampala.

Table 18. Price Correlation among Markets in Uganda

	Kampala	Arua	Mbarara	Masaka	Gulu
Kampala	1				
Arua	0.900** (Maize) 0.191 (Matooke)	1			
Mbarara	0.884** (Beans) 0.847** (Maize) 0.714** (Matooke)	0.894** (Maize) 0.865** (Maize flour_ 0.220 (Sorghum) 0.427** (Sorghum flour) 0.843** (Rice) 0.751** (Sweet Potatoes) 0.631** (Cassava fresh)	1		

	Kampala	Arua	Mbarara	Masaka	Gulu
		0.615** (Irish Potatoes) -0.023 (Matooke)			
Masaka	0.848** (Matooke)	0.676** (Sweet Potatoes) 0.519** (Cassava fresh) 0.492** (Irish Potatoes) 0.027 (Matooke)	0.456* (Sweet Potato) 0.349 (Cassava fresh) 0.839** (Irish Potatoes) 0.697** (Matooke)	1	
Gulu	0.774** (Beans)	0.523** (Sorghum)	0.750** (Beans) 0.310 (Sorghum)		1

Source: Compiled by Fintrac/BEST

5.7. Key Considerations

This section covers key considerations for all interventions which involve distributed food aid in northern and northeastern Uganda, including geographic targeting, seasonal targeting, household targeting, evidence of leakage in local markets, activity type, and commodity selection. The section concludes with brief mention of other considerations for distributed food aid.

5.7.1. Geographic Targeting

As of May 2011, USAID/Uganda anticipates funding upcoming Title II interventions in northern and northeastern Uganda (the Karamoja region and bordering areas). Based on available proxy indicators of district-level food deficits, any one of these areas would not be expected to pose any immediate Bellmon concerns.

Given the extremely high levels of poverty, crude mortality rate (WFP, 2009), and chronic malnutrition in Karamoja, the study team does not believe initial geographic targeting at the district level in the wider Karamoja region would create Bellmon concerns. However, as noted earlier in this chapter, markets are mostly integrated within parts of Karamoja, and any impacts would need to be studied more fully in neighboring areas (with potentially different livelihood activities) that could be potentially affected by programming in an original, neighboring zone. It is imperative that potential Awardees undertake careful needs assessments and analyze local market conditions to further refine appropriate geographic targeting at a more localized level.

5.7.2. Seasonal Targeting

Timing of ration delivery is critical. Food distributed during the lean season is more likely to be consumed by beneficiaries and therefore minimally disruptive (if at all) to markets, because of shortages of household stocks combined with high market prices. The potentially high variability of staple prices and livestock prices between seasons affects household income and consumption. Where food aid distribution is viewed by beneficiaries as either a short-term and/or unreliable source of food, agriculturalists, agro-pastoralists, and pastoralists will all be less likely to adapt food security decisions (access and availability) in response to distributed food aid rations.

Lean seasons are complicated in greater Karamoja because it is a unimodal area, whereas the rest of Uganda is bimodal. Furthermore, pastoralists have different lean periods (generally December through March) than agriculturalists/agro-pastoralists (April through mid-July), and rainfall can be highly variable (FEWS NET, 2011). Potential Awardees must determine the expected lean season for various populations and crops, specific to the geographic areas in

which they plan to work. Please see Section 5.3.2 for a seasonal agricultural calendar and seasonality details.

5.7.3. Household/Individual Targeting

In Uganda and the majority of sub-Saharan Africa, women play a major role in household nutrition. They are the primary caregivers and are responsible for acquiring or producing food for the household. Though gender relations are outside of this report's scope, gender equity issues, especially in pastoralist areas, surely affects these caregivers' ability to provide food for their households.⁴⁸

Food security access, availability, and utilization are inadequate throughout certain areas of greater Karamoja, depending on factors such as seasonality, transport, and security. As described earlier in this Chapter, availability on Karamoja's markets is generally not a problem, though markets usually offer a limited quantity of specific goods for a short time period. In regards to utilization, Karamoja has a unique culture that consists of manyattas, compounds where extended families live together.⁴⁹ These manyatta structures and other cultural aspects of Karamoja's population (such as the semi-nomadic lifestyle of some households) make it difficult to establish programming targeted for individual families, as ration sharing among manyatta members is likely. However, ration sharing could be seen as a "safety net" response, as it would improve overall aid within the group manyatta structure.⁵⁰

Interviewees during the field visit indicated that food aid may be appropriate in Karamoja, but emphasized that programs should be more targeted as the area's security and productivity improves. Furthermore, interviewees emphasized the need for donors to recognize culture and potential dependency issues as additional factors in programs' success. Potential Title II Non-Emergency programming should take these and other factors into account when designing appropriate food security programs for the diverse, targeted populations within the greater Karamoja area.

5.7.4. Evidence of Leakage in Local Markets

Because of: 1) the localized nature of the impact of distributed food aid; 2) the vulnerability of small markets to disruptions; and 3) the sensitivity of small farmers to production disincentives, quantities of food aid which may appear insignificant compared to a country's total food staple consumption can nonetheless have a major impact on markets and production at the local level. The BEST team visited Uganda from April to May 2011. The bulk of WFP food aid and all Title II MYAP activities are currently located in the northern and northeastern part of the country. The team therefore visited local markets and interviewed informants to determine whether food aid was appearing in the markets in Gulu, Bobi, Kitgum, Naam Okoro, Karenga, and Kotido.

The two MYAP partners are distributing minimal quantities of direct distribution commodities over a wide area (approximately 4,000 MT were distributed by each partner in FY10). WFP/Uganda, in comparison, has a much larger food aid tonnage throughout the country. In 2010 WFP's totals were 61,000 MT overall for the country, and 35,000 MT specifically targeted

⁴⁸ For further information, see the GoU's 2006 report "Gender Inequality in Uganda."

⁴⁹ See "Small Arms and Light Weapons Among Pastoral Groups in the Kenya-Uganda Border Area," by Kennedy Agade Mkuu, African Affairs 106/422, July 2006 for further information

⁵⁰ Bashaasha, B. and Mutengu, A., field interviews, 2010 and 2011; they also reported that communities within Karamoja are beginning to understand and accept the importance of targeted individual/family rations for those in acute need, and the role that local council administrators (LC1) can play in identifying and helping targeted individuals receive the aid that they need.

for Karamoja (interview, WFP/Uganda). WFP and the MYAP partners all reported that food aid appearing in local markets happens rarely, and that this was a much more pervasive problem over five years ago.⁵¹ No food aid was seen in markets that were visited. The current MYAP Awardees report that little to no Title II food assistance was appearing on local markets in their target areas in northern and northeastern Uganda.

No international food aid has been distributed around greater Kampala over the last few years. The BEST study team members further visited local markets in Kampala and Jinja, and saw no evidence of food aid being sold in these locations.

5.7.5. Activity Type

General Guidelines. The presentation of possible distribution modalities and program parameters are based on a review of official USAID guidance and discussions with stakeholders in the field and in Washington, including USAID/FFP and current Title II Awardees (ACDI/VOCA and Mercy Corps), and other important actors in food security in Uganda (including GoU, WFP, FAO, World Bank, Cooperative League of the USA/National Cooperative Business Association (CLUSA/NCBA), Land O Lakes, World Vision, Catholic Relief Services (CRS) and others). These scenarios are meant to serve as illustrative guidance rather than as a prescription, given that the potential Awardees' Non-Emergency Program proposals have yet to be finalized and are thus unavailable to inform the present Bellmon analysis.

Food for Work (FFW)/Food For Assets (FFA).⁵² The intent of FFW is to create food-wage employment during periods when rural unemployment increases. The rise in unemployment results in lower rural incomes at precisely the time of year when staple prices tend to spike because of food shortages in local markets.

Wage payments in FFW programs are generally made in-kind rather than in cash. If designed correctly, this practice can stabilize the price of staples in the market and improve food consumption and nutrition of participating households. If designed and implemented appropriately, FFW can also increase productivity on semi-subsistence farms (Abdulai, 2005).

The intent of FFA is to reduce community vulnerability to disasters and transitory or chronic food insecurity through micro-projects involving the construction and maintenance of productive community assets. Wage payments are made in-kind rather than in cash, and activities are meant to target the poorest households within a community. If designed correctly, FFA can improve food access for the most food insecure households within a community, while leaving behind useful assets for the entire community, a potentially more long-term approach as compared to FFW.

However, in practice, many activities could be placed under both FFW and FFA classifications in Uganda and other countries because of the programs' similar definitions. Activities that fall under these classifications could include building/rehabilitating roads, communal hand

⁵¹ This would have been during the height of the LRA insurgency in northern Uganda when much larger quantities of food aid were being distributed, and would also have included leakages from southern Sudan, during corresponding years of food aid for displaced Sudanese, and conflict between the SPLA and the Government of Sudan. Interviewees also mentioned that CSB was the most likely commodity to be marketed, because beneficiaries didn't know how to cook it. To alleviate the problem, organizations hold cooking demonstrations at the distribution site, which have reportedly been very useful.

⁵² For further guidance on the appropriate design of FFW activities, please see USAID's Commodities Reference Guide, accessible via: http://www.usaid.gov/our_work/humanitarian_assistance/ffp/crg/module2.html

washing/sanitation facilities, agricultural terraces or permagardens, water points, irrigation canals, latrines, rainwater harvesting systems, and/or other structures.

Considerations to ensure Bellmon compliance of proposed FFW/FFA programs. To encourage self-targeting and avoid drawing labor from other agricultural production or livelihood activities, the income transfer value of the ration should be set at slightly less than the prevailing rural wage. It may also be appropriate to include slightly less-preferred but still culturally-acceptable commodities in the FFW/FFA ration. If the value of the FFW/FFA ration is too high, it can disrupt local labor markets by attracting more laborers. Also, if the ration value is too high, the food may not benefit the most needy individuals, and/or families. Inclusion of a food used commonly in child feeding may also help in self-targeting women.

Timing of food distribution is critical. FFW/FFA commodity distribution will be less disruptive if distributed during the lean season rather than during the harvest season, and specific conditions should be taken into account for pastoralist and agro-pastoralist zones. By increasing the demand for labor at the time when staple prices typically spike, careful timing of food wage payments under FFW/FFA can help smooth irregular consumption patterns of food insecure households. During the lean period, rural households - especially the poorest - have little reserves of food from markets because of high prices. By carefully timing FFW/FFA activities to coincide with the lean season, FFW/FFA will maximize food security impact.

As noted above, lean seasons are complicated in Uganda because of the unimodal pattern in Karamoja, while the rest of the country has bimodal rainfall patterns. Also, the country relies on a wide range of foodstuffs to provide carbohydrates (bananas, cassava, Irish and sweet potatoes, millet, sorghum, maize, and rice), but drier parts of Karamoja produce and consume cereals that are more drought-resistant (e.g. sorghum and millet). Potential Awardees must determine the lean season for various populations and the seasonality of crops according to geographic areas. Please see 5.3.2, earlier in this chapter, for a seasonal agricultural calendar for Uganda, and details about seasonal variations across regions and commodities.

As noted above, there must be sufficient supervisory capacity for any proposed FFW activities to minimize possible leakages.

Where warranted and possible, FFW/FFA should target female-headed households, if they are deemed to be most vulnerable. Prior to such targeting, where appropriate, potential Awardees should also investigate the availability of female labor during the typical lean periods to ensure women could participate effectively in such gender-targeted FFW/FFA activities. Awardees should also take into account whether these proposed activities would put women at any increased security risk, based on past and current conditions within greater Karamoja.

Maternal Child Health and Nutrition (MCHN) Programming.⁵³ As stated earlier in this chapter, preventive approaches to malnutrition among children under two years of age will be supported. However blanket feeding will not/not be considered as part of any preventive approach in Uganda due to the Government of Uganda's policy on food distributions. However, preventive programming that specifically targets malnourished children/infants under the age of

⁵³ For further guidance on the appropriate design of MCHN interventions generally, and PM2A specifically, please see USAID's Commodities Reference Guide: accessible via http://www.usaid.gov/our_work/humanitarian_assistance/ffp/crg/module1.html, and FANTA-2's PM2A Technical Resource Materials (TRM) and other related guidance: accessible via <http://www.fantaproject.org/pm2a/index.shtml>.

two, and pregnant and lactating women, will be supported, similar to existing MCHN programming being undertaken by the current MYAP partner.

Commodity selection. Local diet should be considered in the selection of appropriate commodities for distribution. Beneficiaries are more likely to optimize the food aid as designed if the commodity is culturally acceptable and/or the distribution is accompanied by nutrition education and awareness. The Ugandan diet is notable for its diverse, domestically-produced foodstuffs (bananas, cassava, Irish and sweet potatoes, millet, sorghum, maize, rice, beans, groundnuts, milk, and others) that provide carbohydrates and protein for the average Ugandan, as mentioned earlier.

Specifically, sorghum is the main crop produced within Karamoja (WFP, 2009).⁵⁴ Karamoja's sorghum farmers also tend to be more food insecure than those in the area who have other income sources. Karamoja is also unique in its diet which also relies heavily on millet and maize, as opposed to other regions of Uganda, where matooke/bananas is the most commonly consumed foodstuff.

Palm oil is the most common edible oil used for cooking/consumption throughout the country, and current edible oil consumption estimates range from 4.4 to 7.5 kg per capita per year (interviews with private sector, 2011). The WHO recommends approximately 21 kg per capita per year consumption of oil and fat to maintain human nutritional requirements. The GoU is trying to increase domestic edible production (and consumption) through projects at Kalangala (palm oil) and Lira (sunflower), but Uganda still imports between 85 to 90 percent of its annual edible oil consumption (interviews with private sector, 2011). However, domestic consumption of edible oil has doubled in the last five years, and is expected to continue increasing with these above and other domestic initiatives.

Most poor households in Uganda tend to be net buyers of food staples (Simler, 2010). Currently, the majority of Karamoja households are meeting their needs through their own stocks and market purchases (FEWS NET, 2011).

The two current MYAP partners are located in northern Uganda, and distribute cornmeal, corn soy blend (CSB), split peas, and vegetable oil. All of these foodstuffs are reported to be readily accepted⁵⁵ by beneficiary populations in northern Uganda, and current MYAP coverage areas focus on the districts of Kitgum, Gulu, Pader, and Lira, but also extend into parts of Kaabong and as far south as Soroti (see MYAP Partner map in Chapter 2 for actual districts covered). It is difficult to generalize food preferences over northern and northeastern Uganda, but the above foodstuffs would likely also be readily accepted by agriculturalists, agro-pastoralists, and pastoralists in the greater Karamoja region.

5.7.6. Other Considerations

There is a long history of food aid assistance in Karamoja, and WFP has been providing differing quantities and rations of foodstuffs over the past 40 years. Therefore, it is imperative for future Title II Non-Emergency programming to be well-targeted within the region, and be in coordination with other development initiatives that target agricultural production. To avoid creating disincentives to production and marketing within Karamoja (and avoid worsening any

⁵⁴ WFP/Uganda CFSVA, p. 83, 2009

⁵⁵ CSB and vegetable oil, in particular, is viewed as extremely valuable (both economically and nutritionally) by beneficiaries, according to interviews.

cases of "dependency syndrome" some interviewees noted), as well as ensure that development programming within the area is harmonized among actors, coordination and well-designed targeting is absolutely essential.

Conflict. Karamoja has a history of conflict with other ethnic groups from Kenya and Sudan, and within ethnic groups in greater Karamoja. Different livelihood strategies- pastoral, agro-pastoral, and agricultural- often struggle to share land, water, and limited resources. These tensions are exacerbated by arms, drought, and poor infrastructure. However, the GoU has devoted significant resources to disarm and develop the Karamoja region and local communities and donors have also implemented peace-building activities in the region. To determine the most appropriate program for an area, these local communities should be involved in the decision-making and design process.

Corruption. Effective staffing and oversight of program implementers and recipients should be a key component of every food aid program to minimize corruption. Food aid was targeted to northern and northeastern Uganda for over 20 and 40 years, respectively. Dependency will definitely be a challenge for potential Awardees, and anecdotal stories of corruption from IDP camps and under various programs in Karamoja were often heard. During the field visit, partners explained strategies for overcoming duplication of rations (e.g., very targeted distributions, or strictly-monitored ration card systems). Partners noted the importance of community awareness of each program's targeting criteria and rationale, in order to avoid theft and/or violence between beneficiaries and non-beneficiaries.

Lessons learned. Potential Awardees should review and incorporate all relevant lessons learned and recommendations from both past and current FFP and development assistance-funded projects in Uganda and neighboring countries. WFP and the current MYAP partners all have a considerable amount of experience in Uganda, and interviewees noted many program improvements which resulted from lessons learned over time.

Potential Awardees should explore opportunities for collaborating and joint programming to maximize the impact of Title II resources. As part of their needs assessments, potential Awardees should review the status of programs and beneficiary coverage (who the target beneficiaries are and how many are covered, how much food is provided, what types of food and when, and whether aid is conditional or not) to assess where new program interventions may provide maximum food security impact and, therefore, minimum disruption of markets and production incentives.

Chapter 6. The Role of Local and Regional Procurement

6.1. Introduction

LRP allows for the local and/or regional purchase of foodstuffs for distribution to beneficiaries in recipient countries. Local procurement includes locally-purchased food for distribution, as well as cash transfers and vouchers provided to beneficiaries for the purpose of purchasing foodstuffs in local markets. Regional procurement involves distribution of food by donors within one country which has been purchased in a neighboring country within the region.

Locally-purchased food for distribution. The rationale for LRP is that locally-purchased (or regionally-purchased), donor-financed food aid in countries affected by disasters or other food crises often arrives more quickly than food aid shipped from donor countries and is less expensive than imported food aid shipped from donor countries, allowing for greater beneficiaries coverage.⁵⁶ LRP foodstuffs may also be more appropriate to local tastes. Importantly, in a development context, by ensuring a market for local products, LRP can stimulate local production and local markets by providing capital and/or incentives for local market actors (producers, traders, transporters, etc.) to invest in agricultural production and market infrastructure.

From the perspective of local markets and consumer welfare, the major risks associated with local purchase of food for distribution include:

- Inflationary pressure on the prices of foodstuffs purchased by poor consumers due to supply shortages caused by the diversion of food commodities away from local markets and toward aid organizations. This is a very serious risk where local producers have limited capacity to increase supply in response to increased demand by donor-financed LRP initiatives.

From the perspective of beneficiary welfare and donor planning, the major risks associated with local purchase of food for distribution include:

- Inability of donors/implementing partners to ensure locally-procured foodstuffs consistently meet food safety standards.
- Non-delivery or delayed delivery of locally-procured foodstuffs for distribution due to donors/implementing partners' inability to consistently secure and enforce procurement contracts.

Cash transfers and/or vouchers provided to beneficiaries for the purpose of purchasing foodstuffs in local markets. A cash transfer to beneficiary households in deficit areas can provide incentives for traders to move grain from surplus to deficit regions. However, if the value of the cash transfer is either set too low or eroded by inflation over time, such transfers will not increase effective demand as much as a program may intend.

⁵⁶ See, for example, Tschirley and del Castillo (2007), GAO (2009), USDA-FAS (2009).

From the perspective of local markets and consumer welfare, the major risks associated with cash transfers and/or vouchers are:

- Inflationary pressure on the prices of foodstuffs purchased by poor consumers due to increased demand caused by augmenting the purchasing power of beneficiaries. This is a very serious risk where local producers and/or traders have limited capacity and/or incentives to increase supply in response to increased effective demand.

6.2. Overview: LRP and Cash/Voucher Programs

Various aid and development agencies (including WFP, Danish International Development Agency (DANIDA's Restoration of Agricultural Livelihoods in Northern Uganda Component (RALNUC), Appropriate Technology Uganda (ATU), Mercy Corps, and World Vision) have experience with LRP and cash/voucher-based aid programming in Uganda.

6.2.1. LRP Programs

WFP. From 2001 to 2005, Uganda ranked third, in value terms, of African suppliers to WFP's LRP programs (Haggblade, Local and Regional Food Aid Procurement in Zambia, 2007). Currently, WFP is undertaking both regular LRP activities as well as a specialized LRP program, P4P, which differs from the organization's normal LRP activities in that it focuses specifically on supporting smallholder farmers. P4P is detailed in Section 6.3.1.

World Vision. The World Vision LRP pilot project is funded by USDA, and receives roughly US\$2.4 million to reach nearly 50,000 individuals over 13 months (from September 2010 to October 2011). The program targets the northern districts of Kitgum, Pader, and Agago. Beneficiaries receive vouchers for food, seeds, and tools that help former IDPs transition back into agricultural production and rehabilitation. The project also includes construction/rehabilitation of traditional shelters and roads, as well as agronomic training. Based on its own market assessment, World Vision preliminarily determined that maize and bean purchases from central and western Uganda for the project should have a positive impact on overall production, as these areas typically produce a surplus.

Roughly 80 percent of program funding is dedicated toward food vouchers, with the rest supporting seeds and tools vouchers. Vouchers are redeemed in shops owned by pre-selected vendors at the sub-county and parish level. World Vision expects that beneficiaries will purchase about 4,400 MT of food with program vouchers during the 13 months. However, delays in both program implementation and beneficiary redemption of vouchers have been reported; the latter suggesting that perhaps beneficiaries are less vulnerable than expected.

See WV's "Market Assessment and Analysis to Determine the Feasibility of a Local/Regional Procurement Based Food Assistance Project, July 2010" for further details.

6.2.2. Cash/Voucher Programs

Mercy Corps. Mercy Corps currently implements a seed fair/voucher system to increase smallholders' trust of and access to improved seeds, under an Office of Foreign Disaster Assistance (OFDA) grant which will end during 2011. Mercy Corps activities under the three-year OFDA grant target approximately 300,000 beneficiaries in the Karamoja area, and include economic development, loan guarantees, animal health services, and tool distribution (USAID, 2009).

Agency for Technical Cooperation and Development (ACTED). ACTED has been present in Uganda since 2007, and implements cash-for-work and voucher-for-work programs. From 2007 to 2008, the organization implemented five voucher-for-work programs in northern Uganda, and has continued voucher-for-work programs to date. In 2010, ACTED constructed local markets, woodlots, cattle crushes, health facilities, and 1,094 km of community access roads through their voucher-for-work and cash-for-work programs (ACTED, 2010). ACTED also conducts baseline surveys which assess the security environment, socio-economic status, and local economic conditions; ACTED then determines whether cash or vouchers will be used. According to a concept paper the group published based on their Uganda programs, voucher-for-work is preferable over cash and food-for-work (ACTED, 2009), because: 1) vouchers have a lower risk of misuse, offer higher security for staff, and are adequate where no banking systems exist, in comparison to cash for work; and 2) vouchers have easier logistic requirements and allow beneficiaries a greater choice of food items than food for work.

FAO. With funding from the EU, FAO also contracted ATU to implement a two-year project called the Agricultural Livelihoods Recovery Project (ALREP) for Northern Uganda, from 2008 to 2010. This project operated by issuing vouchers to returning IDP households to enhance their access to agricultural inputs.

DANIDA. The RALNUC program was designed as the last component of DANIDA's ASPS II (Agricultural Sector Program Support).⁵⁷ RALNUC's voucher-for-work operations commenced in 2006 and ended in 2009. The program assisted IDPs in northern Uganda to return and settle at home. Program activities included community road construction, market infrastructure, and water points, among others. RALNUC had four objectives: 1) facilitate households' ability to exercise effective demand for improved agricultural inputs (implemented by ATU and UNADA); 2) strengthen the private sector input distribution system (implemented by ATU and UNADA); 3) improve smallholders' access to microfinance institutions (implemented by CARE in West Nile and Lango); and 4) rehabilitate rural infrastructure through vouchers-for-work (implemented by ASPS/AT Uganda).

However, the voucher-for-work component of the program ran into problems. Reports of fake vouchers, farmers exceeding their voucher limits, voucher redemption without corresponding voucher sales receipts, and other issues led ASPS to replace the voucher-for-work aspect of the program with cash-for-work in its final implementation year.

Oxfam. Oxfam implemented cash-for-work programs in northern Uganda during 2006 and 2007. Program activities included dam de-silting, tree planting, and road construction. One thousand IDP households in Kitgum and Lokung participated in the project. Households reportedly used their cash to purchase livestock, replace lost assets, and pay debts and school fees. The program was unique in that it partnered with a local bank to deposit cash into beneficiaries' accounts, rather than directly disbursing cash. Each month, Oxfam transferred UGX 40,000 into households' accounts (Oxfam, 2008). This familiarized households with banking/savings systems as well as reduced security threats of direct cash handouts.

CRS. From 2002 to 2005, CRS implemented seed fair/seed voucher programs which targeted 24,282 households. Sixty to sixty-five percent of voucher recipients were women. In the

⁵⁷ RALNUC implemented some of its activities independently but also sub-contracted some of the activities to ATU. The ATU sub-contract totaled approximately US\$222,605. Conversion of UGX460,074,770, using an average 2009 USD/UGX exchange rate of 2,066.77 UGX = 1 US\$. www.xe.com (accessed June 2011).

program, farmers received seed vouchers worth about US\$8.50, to purchase seed from vendors registered with CRS (CRS, 2005).

6.3. LRP Initiatives

This section provides a review of operations of various local initiatives that leverage local and regional procurement. Key initiatives include WFP's regular LRP, WFP's P4P pilot, and the Uganda Commodity Exchange (UCE)-regulated Warehouse Receipt System (WRS).

6.3.1. WFP's Regular LRP

WFP Uganda has been involved in local procurement of grain and pulses since 1994 and has contributed greatly to the structuring of the Ugandan grain market. In 2007 alone, WFP Uganda locally purchased over 210,000 MT of food valued at US\$64.7 million, making the organization the largest single purchaser of grain in the country (WFP, 2009). During this time, WFP purchased primarily from large traders. From 2005 to 2009, WFP purchased a total of 27,500 MT of grain directly from farmer associations, through competitive tenders. Although WFP vowed to apportion 10 to 20 percent of its local purchases to smallholder farmer groups in 2004, it has yet to meet the set target, and currently purchases only six to seven percent of its total local purchases (both LRP and P4P) from farmer groups.

Table 19. WFP Regional Procurement- Destination Countries, 2009-2010

Destination	Maize 2009	Maize 2010	CSB 2009	CSB 2010	Beans 2009	Beans 2010	Totals
Uganda	69,786.00	33,816.68	8,321.00	4,119.00	8,025.00	3,227.39	127,295.07
Burundi	15,879.25	10,533.60	610.00	-	2,098.00	2,920.90	32,041.75
DRC	3,450.00	1,586.00	55.90	-	3,112.00	351.00	8,554.90
Rwanda	5,510.00	1,310.00	215.00	-	2,132.00	658.00	9,825.00
Somalia	9,362.00	-	607.00	-	-	2,000.00	11,969.00
Sudan	4,865.00	9,068.00	-	-	-	1,451.00	15,384.00
Kenya		41,806.61		3,130.00		5,441.93	50,378.54
Tanzania	640.00	9,464.00	-	932.00	542.00	3,584.00	15,162.00
Totals	109,492.25	107,584.89	9,808.90	8,181.00	15,909.00	19,634.22	270,610.26

Source: WFP/Uganda, 2011

*Maize figures include maize meal

6.3.2. WFP's Purchase for Progress (P4P)

WFP's P4P program is an initiative supported by the Bill and Melinda Gates Foundation to improve incomes of smallholder farmers through increased marketing of agricultural products. Uganda is one of the 21 countries piloting this program. P4P directly supports WFP's Strategic Objective 5 (strengthening the capacity of countries to reduce hunger, including through hand-over strategies and local purchase) and WFP Uganda priority Area 3 on agriculture and market support. P4P is actively involved in building and strengthening agricultural markets in Uganda through four core activities:

1. Strengthening agricultural marketing infrastructure by establishing market collection points and storage warehouses.
2. Enhancing the stock and capacity of post-harvest technology and training. As of May 2011, WFP has imported nine pieces of grain cleaning and drying equipment into the

country. Of these, two are operational, three have been installed, and four are awaiting installation. Upon completion, all equipment should process an estimated 54,000 MT per year.

3. Building market access infrastructure in partnership with local rural communities and facilitating access to market information by farmers. WFP has a partnership with the Grameen Foundation to disseminate market information sourced from FIT Uganda, a local market information service firm.
4. Strengthening small- to medium-scale commodity traders who are at the frontline in terms of procuring agricultural commodities from farmers.

P4P values partnership as a key to success and has collaborated with a number of local and international institutions. P4P had originally planned for a three-pronged procurement strategy comprised of direct purchasing, forward contracting, and traditional tendering processes. Currently, traditional tendering remains the most dominant strategy. The following table shows P4P commodity purchase performance against year one targets.

Table 20. P4P Food Purchase Performance against Year One (2009) Targets

Commodity	2009 target (MT)	2009 actual purchase (MT)	Performance (% of target)
Maize grain	8,914	6,838	76.7
Pulses	857	531	62.0
Sorghum	1029	0	0
Millet	240	0	0
Cassava chips (dry)	857	0	0
Sesame	103	0	0
Total	12,000	7369	61.4

Source: WFP Purchase for Progress Implementation Plan, March 2009 & P4P Progress report

As shown in the table above, maize dominated P4P's purchases; thus, WFP's plans to diversify procurement (by including other local staples such as sorghum, millet, cassava, and sesame) do not appear to have been realized. Reasons behind this lack of diversity may include: 1) unclear marketing chains for commodities other than maize and beans; 2) difficulty of producers (other than maize and beans producers) to meet WFP standards; and/or 3) inadequate experience on WFP's part in working with commodities other than maize or beans.

In 2010, 4,000 MT of grain were procured under P4P, which accounted for about three percent of WFP's total LRP for 2010, and was almost 3,000 MT less than in 2009. This percentage for 2010 is also slightly lower than P4P grain purchases as a percentage of total LRP purchases for 2009, which stood at 5.8 percent. The program continues to strive to procure directly from smallholder farmers; though, as noted in the following table, WFP procured from less farmer groups in 2010 than in previous years. The organization recognizes drought, shortages, price rises, and competition from buyers of un-graded maize (southern Sudan and the DR Congo) as likely causes of this drop in participating farmer groups, and overall tonnage.

Table 21. WFP P4P Direct Procurement from Farmer Groups, 2007-2010

Year	Amount purchased (MT)	Detail
2007	7,001	19 farmer groups supplied
2008	3,807	11 farmer groups supplied
2009	4,157	19 farmer groups supplied
2010	1,608	6 farmer groups supplied

Source: Jonathan Coulter, Henri Leturque, Rosemary Kaduru and Maria Pardo: Midterm Evaluation of the AMS/P4P Uganda (Slide presentation, WFP Kampala, Uganda, March 22, 2011).

Farmers struggle to meet WFP grade requirements, a problem exacerbated by WFP's slow procurement processes which impacts small-holder farmers' ability to participate given that they must wait for payment (Coulter, Midterm Evaluation of the AMS/P4P Uganda, 2011). Farmer organizations have also complained of changes in procurement procedures by WFP without prior communication. Savings and credit cooperatives (SACCOS) currently number 2,063 in Uganda, and sometimes provide credit support to farmer organizations, enabling these organizations to pay for grain sorting, cleaning, drying, transportation, packaging, storage, and fumigation.

Effective P4P procurement remains a challenge for WFP/Uganda. WFP remains hopeful that this can be overcome as systems are established and implemented, and still considers itself a major player in the grain market. Private grain traders and WFP estimate WFP accounts for 20 percent of all domestic maize purchases in Uganda; however, data collected during the field visit place this figure closer to six to seven percent.⁵⁸

P4P vs. LRP. On a larger scale, the P4P program as part of WFP's LRP program is challenged by the programs' sometimes conflicting objectives. LRP aims to buy large quantities, at low prices, with a main objective to distribute the procured food to many vulnerable people in a short amount of time; increasing local production and marketing is only a secondary goal of the program. P4P aims to buy small quantities, at sometimes higher prices, with a main objective to slowly increase the ability of smallholders to expand production and marketing. Thus, components of P4P - such as its lengthier purchasing process and inherently higher costs - conflict with LRP objectives.

Nonetheless, WFP insists that it will continue to play a major role in the Ugandan grain market in coming years, and is fine-tuning the program to overcome initial challenges as the program matures.

6.3.3. Uganda Commodity Exchange (UCE)

The UCE was mandated by the GoU under the WRS Act of 2006 to regulate the WRS, which was launched in 2008 (UCE and WFP, 2008). The goal of the UCE and WRS is to improve rural livelihoods, through supporting private sector-operated, public warehouses which store commodities according to standardized requirements (UCE). UCE was sustained by an EU grant until March 2011; currently, there are good prospects that the GoU will fund UCE's next budget which is effective July 1, 2011.

UCE is currently supporting the establishment of licensed warehouses across the country. These warehouses are open to stakeholders in the agricultural value chain, who can deposit graded commodities to store and trade. Commodities in the WRS are traded in an open exchange system established by UCE. UCE has strict criteria for the licensing and supervision of warehouses; all applicants must meet these criteria during licensing and renewal. The UCE warehouse system includes a secure, electronic component which enables traders and consumers to procure commodities with the confidence of location and quality guaranteed.

WFP has committed to procure up to 150,000 MT of graded commodities per year, for its P4P program, through the WRS (subject to adequate funding and the exigencies of its operations)

⁵⁸ BEST field interview and data collection, May 2011

(UCE and WFP, 2008). For its part, UCE has committed to work in collaboration with WFP to identify and evaluate warehouses for UCE.

UCE's target is to establish nine regional warehouses with a total storage capacity of 34,400 MT, with a vision of increasing this capacity to 50,000 MT of storage. Currently six out of the planned nine warehouses are operational. They include Agroways (east Uganda), Masindi (northwest Uganda), Gulu (north Uganda), Mbarara (southwest Uganda), Elshadai (west Uganda), and Nyakatonzi (west Uganda). The distribution of these warehouses essentially covers the entire range of Uganda's grain basket. All the operational warehouses focus on grains and pulses, except for the Mbarara warehouse which only handles coffee.

Both WFP and non-WFP buyers have undertaken procurement through the WRS. There is usually a price difference (about US\$17⁵⁹ per MT higher, or 4.7 percent price difference) for maize in the WRS as compared to the informal market price for the same grade of maize. The table below shows WFP maize purchases (in tonnages) through the WRS. From 2008 to 2010, WFP purchased 4,084 MT through the WRS, accounting for 58 percent of total P4P purchases during this period.

Table 22. WFP Procurement through UCE-Regulated WRS

Year	Amount purchased (MT)	Details
2008	48	1 warehouse supplied
2009	1,796	2 Warehouses supplied
2010	2,240	3 Warehouses supplied
Total	4,084	58 percent of Total P4P procurement

Source: Jonathan Coulter, Henri Leturque, Rosemary Kaduru and Maria Pardo: *Midterm Evaluation of the AMS/P4P Uganda* (Slide presentation, WFP Kampala, Uganda, March 22, 2011)

Over the same period, UCE sold a total of 7,005 MT to non-WFP buyers including private and public institutions.⁶⁰ Interviewees noted that non-WFP sales occur after failure to reach a deal with WFP, typically due to price. Non-WFP buyers are attracted to WRS grain because they can buy large quantities in a single transaction (although sometimes at a higher price), without incurring the transaction costs of bulking. Also, these buyers are willing to buy lower-grade maize.

6.3.4. Private Grain Traders

A number of private grain traders with cleaning and warehousing facilities are actively involved in the Ugandan grain market. These private agents leverage local grain purchases in the sense that they rely on their extensive knowledge of the local market conditions to procure grain from both smallholder farmers and small- to medium-scale traders, are able to bring grain to meet required standards,⁶¹ and then sell to large buyers. These large buyers include WFP, local private and government institutions, and even neighboring countries. A significant difference in these players' purchases as compared to those through UCE is that the large private traders

⁵⁹ Figure of 40 UGX per kg converted, using 1 UGX = 0.000414972 USD, www.xe.com (June 13, 2011). 1 kg= 1000 MT, and based on May 2011 maize prices of 850 USH/kg for informal market maize and 890 UGX/kg for WRS-stored and cleaned maize.

⁶⁰ Non-WFP buyers include organizations such as: schools, hostels, East African Foods, feed manufacturers, private Kenyan and Sudanese buyers.

⁶¹ The East African Quality Standards meet WFP specifications, other corporate specifications, and the CODEX alimentarius. These standards cover a range of issues such as moisture content, insect damage, foreign matter, pests, and "health" of the grain.

pay for grain in cash. As stated earlier, small-scale farmers and traders with immediate needs highly prefer this payment method.⁶²

There are about five large local grain traders who sell to WFP and other large quality grain buyers. Sellers to WFP include Sunrise, Premier, Aponye, Export Trading, and Afrokai;⁶³ these players hold an estimated 60 percent of the total grain market. Other large sellers include Tidy Millers and Come supplies. The total cleaning and warehousing capacity in the hands of these private traders is estimated at 60,000 MT.⁶⁴

6.3.5. Potential for Expansion

P4P. The P4P pilot in Uganda is an innovative program with high potential for expansion, although it remains constrained by WFP's strict procurement conditions and lack of a clear, direct procurement mechanism. It is hoped that WFP will improve P4P procurement modalities and fine-tune the program according to recommendations of the mid-term evaluation.

UCE. Although the UCE's WRS can currently be characterized as underdeveloped and underutilized, the warehouse network is well-distributed, adequate, well-maintained, and capable of safely handling increased imported or local grain deliveries. The WRS has promising growth prospects once the current constraints of poor and/or scarce price discovery mechanisms, inadequate information flow, and scarce funding, among other challenges, have been addressed.

Private sector. Private grain traders remain an invaluable link in Uganda's grain marketing system. They are motivated and control a sizeable amount of grain cleaning, drying, and warehousing capacity, and have the ability to expand these facilities should a need arise.

⁶² One private sector actor hypothesized that if he were to set up a warehouse next to a UCE warehouse, and offer small farmers a lower price for their grain – but, paid immediately in cash - farmers would store their grain with him over UCE despite the price difference.

⁶³ Afrokai noted that their sales to WFP were decreasing due to their frustration with the organization's slow and unpredictable purchasing process.

⁶⁴ Aponye alone has a combined warehousing capacity (in Kampala and Masaka) totalling 9,900 MT and plans to increase this by about 1/3, by the end of 2011. Afrokai owns cereal storage facilities in Kampala, Kayunga, Kabarole, and Masindi.

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UGANDA
BELLMON ESTIMATION**

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Annex I. Economic Data and Trends

I.i. Economic Growth

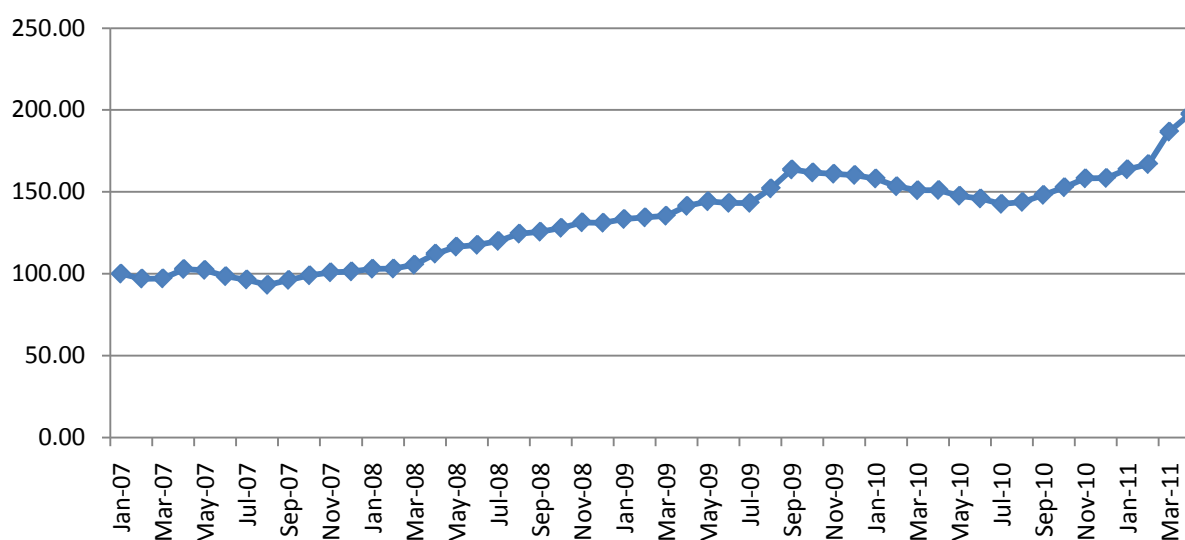
Uganda's GDP in 2009 was the equivalent of US\$15.2 billion, with a GDP per capita of US\$1,217. Economic growth has been strong, averaging eight percent annually over the last five years, as shown in Table 1. Growth continued to remain strong in 2010. However, the continued depreciation of the Ugandan Shilling relative to the American Dollar, as well as inflationary pressures, remains a concern. By 2009, the average annual inflation rate reached 16.5 percent, which was likely due in part to the food and fuel price crisis. Inflation continued to remain high through 2010. The rise in food prices are exhibited by sharp increases in the food CPI, shown in Figure 1.

Table 1. Economic Growth, 2006-2010

	2006	2007	2008	2009	2010
GDP (current, trillion Ugandan shillings)	18.2	21.2	24.5	30.1	34.6
GDP growth (%)	10.8	8.4	8.7	7.1	5.6
GDP per capita, PPP (current US\$)	998	1,083	1,164	1,217	..
Inflation, GDP deflator (%)	2.4	7.4	6.5	16.5	9.5
Exchange rate (Ugandan shillings per US\$1)	1,806	1,697	1,693	2,008	2,154

Sources: Table compiled by Fintrac/BEST, based on data from the Uganda Bureau of Statistics, The World Bank's World Development Indicators Database, OANDA.com, IMF

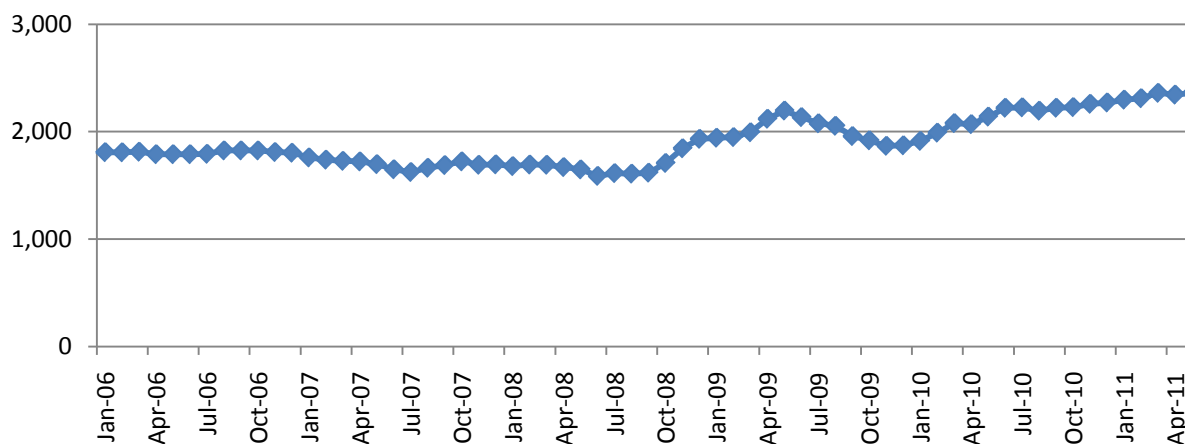
Figure 1. Food CPI, January 2007-April 2011 (January 2007=100)



Source: Uganda Bureau of Statistics, as cited in Bank of Uganda, Annual Report 2009/2010; 2010 figures from Jan 2011 CPI bulletin, and 2011 figures from April 2011 CPI bulletin from Uganda Bureau of Statistics

The Ugandan Shilling continued to depreciate against the American Dollar, between January 2011 and May 2011. As of May 2011, there were 2,360 UGX per US\$1.

Figure 2. Average Monthly Exchange Rates, UGX per US\$1, January 2006-May 2011



Source: OANDA.com

I.i.i. Decomposition of Growth

A decomposition of the sources of growth reveals that the services sector has been driving growth (accounting for half of GDP), with the agricultural sector having contributed the least to economic growth (around 20 percent).

Table 2. Decomposition of GDP

	2005	2006	2007	2008	2009	2010
Agriculture, value added	22%	21%	20%	19%	20%	21%
Industry, value added	27%	27%	28%	29%	29%	28%
Services, etc., value added	50%	52%	52%	52%	51%	51%

Source: Table compiled by Fintrac/BEST, based on data from the Uganda Bureau of Statistics

Further decomposition by sector shows that trade drives services sector growth, construction drives industrial sector growth, and food crop production drives agricultural sector growth.

I.ii. Trade Integration

Uganda is a member of the WTO, and participates in regional trade agreements, namely: EAC¹ and COMESA² (UNCTAD, 2003). The EAC comprises only five countries in East Africa, while COMESA encompasses 19 African countries. The EAC's objectives are: 1) to prepare countries to meet the requirements for participation in COMESA; 2) harmonize tariffs and customs systems; 3) enable free movement of capital; 4) harmonize fiscal and monetary policies (FAO,

¹ EAC's members are: Burundi, Kenya, Rwanda, Tanzania, Uganda. <http://www.eac.int/about-eac.html>

² COMESA's member states are: Burundi, Comoros, DR Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe. <http://about.comesa.int/>

2000). EAC's Common External Tariff (CET) Handbook describes the tariff structure. Note that there are no tariffs levied on wheat grain, crude soya bean oil³, or rice imports (EAC).

Table 3. EAC CETs

Commodity	CET rate per kg
Wheat flour	60%
Maize grain	50%
Maize flour	25%
Sorghum grain	25%
Soya beans	10%
Soya bean oil (crude)	0%
Soya bean oil (non-crude only)	25%
Vegetable oil	25%
Peas	25%
Beans	25%
Lentils	25%

Source: Table compiled by Fintrac/BEST, based on EAC Common External Tariff Handbook

COMESA's immediate goal is the establishment of a free trade area, through dismantling of non-tariff barriers and free movement of services and capital among members (COMESA, 1993). COMESA members will harmonize their fiscal and monetary policies, to enable a monetary union⁴, by 2025 (FAO, 2000). COMESA's Treaty includes other goals, such as the establishment of a common external tariff, and eventual adoption of a common agricultural policy (COMESA, 1993). Uganda applies COMESA's CET according to the following tariff structure: 10 percent on intermediate products, and 25 percent on finished products.⁵ Under the CET, there is a category for sensitive products⁶, which is to come into force for three to five years during the transition period, when member countries harmonize their tariff structures with COMESA's (COMESA). In 2008, it was decided that COMESA and EAC would share a single customs union and free trade area (COMESA). During the 2011 Secretary General's Speech to the 13th Summit of COMESA Authority Heads of State and Government, it was announced that the EAC and COMESA CETs had been harmonized, and have established one customs territory (COMESA).

Uganda also participates in the AU,⁷ which also seeks to create a free trade area among all the countries on the African continent, through formation of a customs union, dismantling of tariffs

³ The EAC Common External Tariff Handbook notes that there is a "0%" tariff for crude soya bean oil.

⁴ The Treaty established the Eastern and Southern Africa Currency Unit as a reference currency. COMESA Treaty http://about.comesa.int/attachments/149_090505_COMESA_Treaty.pdf

⁵ Finished products are products ready for consumption. Foreign Affairs and International Trade Canada, http://www.international.gc.ca/trade-agreements-accords-commerciaux/goods-produits/ac_link.aspx?lang=en&menu_id=50&menu=R#u

⁶ Sensitive products are products produced by COMESA member countries. New Vision Online Uganda Interview with Richard Kamajugo, the Assistant Commissioner of Trade, Customs and Excise Department at the Uganda Revenue Authority, <http://www.enteruganda.com/brochures/oneeastafrika14.html>

⁷ The African Union's members are: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Rep, Côte d'Ivoire, DR Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Saõ Tome and Principe, Sénégal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Western Sahara (under Morocco's control), Zambia, Zimbabwe.

and NTBs, and establishment of a monetary union (through establishment of a central bank and adoption of a single currency unit) (FAO, 2000).

Annex II. Agricultural Sector Overview

This Annex provides an overview of Uganda's agricultural sector, and covers: 1) the country's agro-ecology; 2) agricultural production base and trends; 3) seasonal crop production calendar; 4) livestock sector; 5) constraints to crop and livestock production; 6) impact of conflict on agricultural and livestock production; 7) imports; 8) exports; 9) policies that impact the agricultural sector.

II.i. Agro-Ecology

Soils in Uganda are either sandy clay loams, volcanic, or alluvial. Most of the soils in the central region are classified as good; soils in the western and eastern regions are classified as good to moderate; and soils in the northern region are classified as moderate to poor (Kranstauber, 2009). These soil characteristics, combined with the country's favorable climate, make Uganda a potentially rich country in terms of agricultural capacity.

Direct rainfall is the most important water source in Uganda, especially for agriculture. Rainfall patterns have greatly influenced and determined Uganda's local land use potential and management, and have also influenced the country's population distribution (DSHC, 2008).

Based on landscape, soils, land use, climate, and cropping systems, Uganda is divided into nine broad agro-ecological zones, as shown in Figure 3 (Kranstauber, 2009).

1. Intensive Banana Coffee Lake Shore system
2. Medium Altitude Intensive Banana Coffee system
3. Western Banana Coffee Cattle system
4. Banana Millet Cotton system
5. Annual Cropping and Cattle Teso system
6. Annual Cropping Cattle West Nile system
7. Annual Cropping and Cattle Northern system
8. Pastoral and some Annual Crop system
9. Montane system

Depending on agro-ecological zones, traditional cash crops include coffee, cotton, tobacco, tea, and sugar cane. The main traditional food crops (based on the most recently available production volumes from FAO in 2009) are: plantains, cassava, sweet potatoes, maize, millet, Irish potatoes, bananas, beans, and sorghum. The central and western regions of Uganda

scope for expansion of acreage under cultivation, land is increasingly becoming a constraint in some parts of the country, particularly in the southern, southwestern, and eastern regions where population density is very high.

Despite the small share of cultivated land relative to total arable land area, crop production volumes are high. The most recently available production data from FAOSTAT show that Uganda's agricultural production is dominated by banana⁹ production and production of tuber crops (over 17 million MT produced annually), which include cassava, sweet potatoes, and Irish potatoes. Cereal production volumes are also very high (over 2.2 million MT produced annually). Unlike many countries in Asia or southern Africa where a single commodity is the dominant food energy source (rice and maize, respectively), Uganda has a relatively diverse mix of staple foods. Depending on each region's production environment, the carbohydrate staple may consist of bananas, cassava, sweet potatoes, maize, millet, Irish potatoes, sorghum, and/or rice. Bananas - specifically, the matooke variety - are the dominant staples in central and western regions, whereas maize, millet, sorghum and cassava are the dominant staples in the eastern and northern regions. Uganda is the only country in Sub-Saharan Africa whose largest carbohydrate staple (by tonnage produced) is bananas.

In addition to high production volumes for tubers and cereals, Uganda also grows cash crops such as coffee and sugar for export (see Sections II.vii and II.viii for further details).

Table 4. Top Cereal, Tuber, and Cash Crops Produced, 2004-2008 (MT)

	2004	2005	2006	2007	2008	Total
Cereals	2,222,700	2,398,100	2,492,800	2,563,400	2,645,700	12,322,700
Maize	1,080,000	1,170,000	1,258,000	1,262,000	1,266,000	6,036,000
Millet	659,000	672,000	687,000	732,000	783,000	3,533,000
Sorghum	399,000	449,000	440,000	456,000	477,000	2,221,000
Rice (milled equiv)	84,700	107,100	107,800	113,400	119,700	532,700
Tubers	18,409,000	17,810,000	17,236,000	17,456,000	17,820,000	88,731,000
Plantains	9,686,000	9,045,000	9,054,000	9,231,000	9,371,000	46,387,000
Cassava	5,500,000	5,576,000	4,926,000	4,973,000	5,072,000	26,047,000
Sweet potatoes	2,650,000	2,604,000	2,628,000	2,602,000	2,707,000	13,191,000
Irish Potatoes	573,000	585,000	628,000	650,000	670,000	3,106,000
Other	1,008,000	1,031,000	994,000	1,006,000	1,013,000	5,052,000
Beans	455,000	478,000	424,000	435,000	440,000	2,232,000
Fresh vegetables	395,000	395,000	395,000	395,000	395,000	1,975,000
Soybeans	158,000	158,000	175,000	176,000	178,000	845,000
Cash crops	2,520,081	2,508,100	2,583,310	2,525,346	2,561,726	12,698,563
Sugar cane	2,350,000	2,350,000	2,450,000	2,350,000	2,350,000	11,850,000
Coffee	170,081	158,100	133,310	175,346	211,726	848,563

Source: FAOSTAT and GoU; subcategories (cereals, tubers, other, cash crops) are the sums of the indented lines underneath each subcategory - BEST/Fintrac's calculations

Note: Plantains are included as tubers in this table, though they are not formally tuber crops.

⁹ For this report "bananas" also includes plantains and matooke.

Uganda may be considered more or less self sufficient in food production, but up to 40 percent of the population may lack access to sufficient healthy food at any given moment (FAO, 2008). A report by FAO states that lack of access to sufficient food is due poorer populations' limited access to cash or credit.

II.ii.i. Cereals

Maize. Regional-level maize production figures from the 2005/2006 Uganda National Household Survey indicate that maize is grown throughout the country, with the eastern region accounting for about 45 percent of maize production (UBoS, Uganda National Household Survey, Agricultural Module, 2006). The districts of Iganga, Kapchorwa, Masindi, Mbale, and Kasese account for the majority of the country's marketed maize surplus. In 2003, the maize sub-sector was estimated to provide a living to about 3.5 million households, 2,000 traders, and 20 exporters (USAID, 2003). Subsistence farmers accounted for 90-95 percent of total maize production in 2003, with commercial farmers making up the remaining small percentage (USAID, 2003). Small subsistence farmers operate on plots smaller than two acres, without fertilizers, herbicides, or pesticides. Maize yields for these farmers average about 10 50kg bags per acre (USAID, 2003). In addition to its contribution to the agricultural sector, maize production in Uganda helps support the animal feed and brewery industries.

Millet. Finger millet production is concentrated in the east, north and south-east parts of the country (DSHC, 2008). Millet is a food security crop and the second most important cereal after maize. In 2009, farmers produced an estimated 841,000 MT of millet, on an estimated area of about 460,000 ha (FAO, FAOSTAT). The average yield of millet is about 18,282 hg per hectare.

Sorghum. Sorghum is the third most important cereal grown in Uganda, after maize and finger millet. It is widely grown in drier, short grass areas in northern, eastern, and southwestern parts of the country. Yields of up to 15,106 hg¹⁰ per hectare were obtained in 2009; total production of sorghum peaked at 497,000 MT in the same year.

Rice. Rice is grown in many parts of the country; however, main production areas are Gulu, Iganga, Tororo, Kitgum, Pallisa, Lira, and Kumi (DSHC, 2008). Total acreage under rice production has risen from 30,000 hectares in the 1940s to over 138,000 hectares in 2009. Since 2005, the average yield of rice has dropped to 13,115 hg per hectare from 15,000 hg per hectare in 2005 according to FAOSTAT. Low rice yields are due to a variety of factors including: low-yielding varieties, traditional production practices, disease, weeds, birds, low moisture, and low fertility. In 1990, total rice production stood at 54,000 MT; in 2009 total production stood at 181,000 MT (FAO, FAOSTAT).

As mentioned in Chapter 5, the GoU, donors, and private sector actors have recently invested in the rice sector, and production is increasing. Interest among donors, including JICA, USAID (through IDEA and A PEP),¹¹ FAO, and A GRA, and investments have focused on capacity

¹⁰ Hg = hectogram, a metric unit of mass equal to one hundred grams.

¹¹ See, for example, the impact described by USAID of its investments in upland rice, which contributed to increases in production as well as vast expansion of milling capacity in country (http://www.usaid.gov/stories/uganda/fp_uganda_rice.html).

building, technical support to newly-established rice farmers in areas of crop, soil and water management), and strengthening input and output market linkages (Mohapatra, 2009). The Kibimba Rice Scheme, known for its Tilda rice brand, is one of Uganda's leading rice growing estates; Uganda is now a supplier of rice for the region. Representatives of the Tilda brand estimate that 75 per cent of their rice is domestically-consumed, and 25 percent exported to Kenya, southern Sudan and DR Congo (Africa News Network).

II.ii.ii. Tubers

Cassava. Cassava ranks second to bananas in terms of area cultivated, total production, and per capita consumption. It is used for food, brewing, animal feed, and as a cementing agent in local construction. Cassava is grown throughout Uganda, with northern and eastern areas accounting for the majority of production. In 1994, an estimated total of 2.0 million MT of the crop was produced from 320,000 hectare of land. In 2009, an estimated 5.1 million MT of cassava was produced from 411,000 hectares of land (FAO, FAOSTAT).

Sweet potatoes. Sweet potatoes are ranked third among Uganda's starchy staple crops, after cassava and bananas. Sweet potato cultivation is spread throughout Uganda, but is mainly concentrated in the densely populated, mid- to high-altitude areas (between 1,000-2,000 m above sea level) (DSHC, 2008). These areas are typically in the southeast and southwest highlands, with Kabale accounting for the most production. Yields are declining due to deterioration in soil fertility.

II.ii.iii. Other Crops

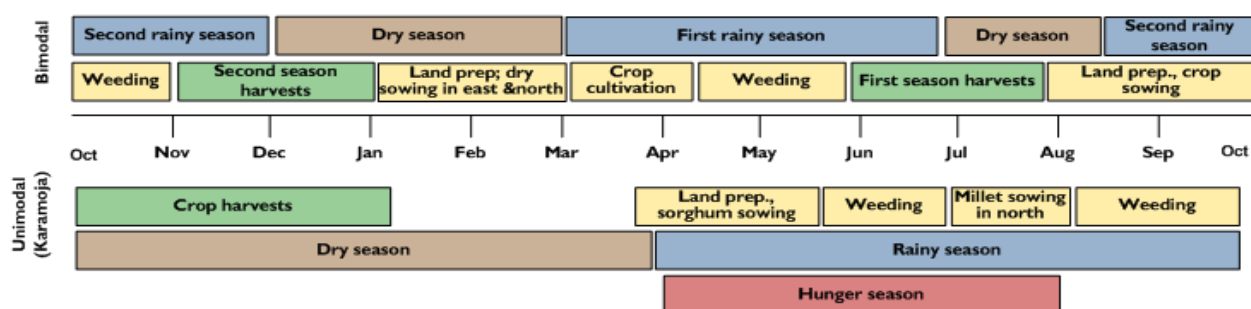
Bananas are grown throughout the country, and are a major food and cash crop. Annual production of bananas is over nine million MT, making the crop Uganda's leading and most important food crop (FAO, FAOSTAT). The estimated area used for banana cultivation in 2009 was about 916,000 hectares, and western areas account for 2/3 of banana production volumes (UBoS, Uganda National Household Survey, Agricultural Module, 2006) (UBoS, Uganda Census of Agriculture, 2009). Almost all bananas produced are consumed within Uganda and not exported to other countries.

Beans are produced in most areas of the country, though the western area has the highest percentage of farmers which grow the crop (78 percent of all farmers grow beans in this area, as compared to a country-wide average of 53 percent). Beans are a part of the traditional Ugandan diet; in 2010, beans accounted for an estimated six percent of total caloric intake of the average Ugandan (Haggblade, Staple Food Prices in Uganda, prepared for the Comesa Policy Seminar on "Variation in Staple Food Prices: Causes, Consequence, and Policy Options", 2010). Yields vary according to rainfall, soil type, and altitude. Beans are often grown alongside maize, and the two commodities are also traded and consumed together locally and regionally (Haggblade, Staple Food Prices in Uganda, prepared for the Comesa Policy Seminar on "Variation in Staple Food Prices: Causes, Consequence, and Policy Options", 2010). About four percent of beans produced are exported formally, though informal trade likely increases this figure (Haggblade, Staple Food Prices in Uganda, prepared for the Comesa Policy Seminar on "Variation in Staple Food Prices: Causes, Consequence, and Policy Options", 2010).

II.iii. Seasonal Crop Production Calendar

Uganda's rainfall systems in the northern part of the country are unimodal, whereas those in the remainder of the country are bimodal (WFP, 2009). The FEWS NET seasonal crop production calendar shows that bimodal rainy seasons last from March through July, and mid-August through December. The existence of two rainy seasons indicates that there are two harvesting seasons, with the first harvesting season taking place between June and August, and the second between November and January. As shown in the following table, Karamoja has one long rainy season, lasting half the year (April through October), followed by crop harvests from October to January.

Figure 4. Uganda: Seasonal Crop Production Calendar



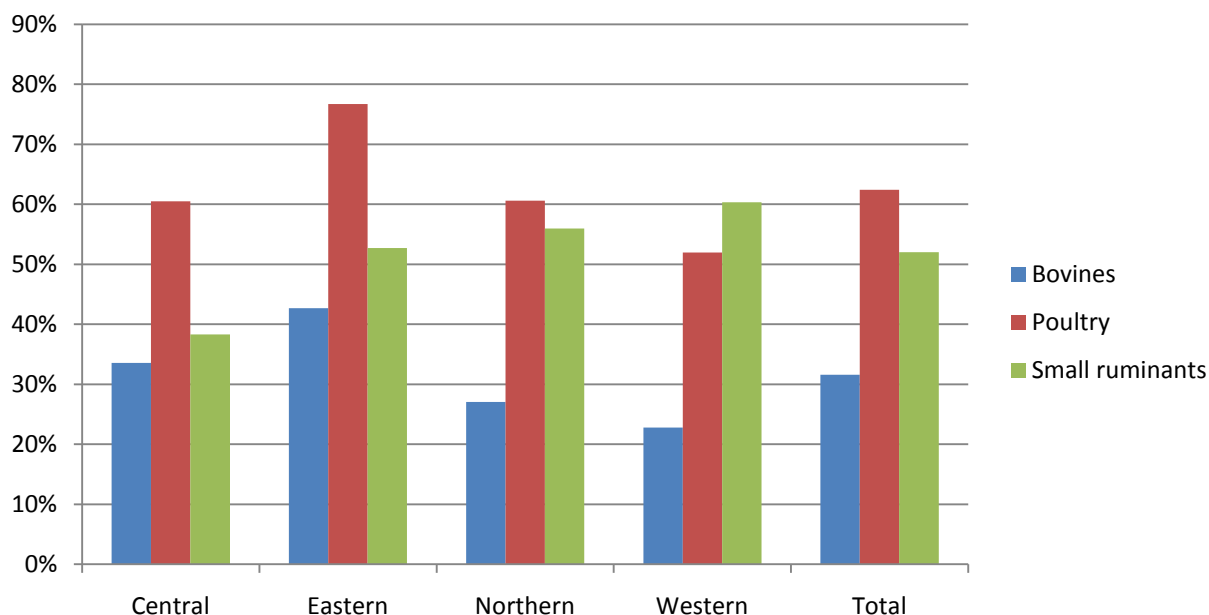
Source: FEWS NET

II.iv. Livestock

Agricultural households raise a variety of livestock, including bovines (local and exotic cattle), poultry (local and exotic chicken), small ruminants (exotic goats, sheep), and pigs. Data from the 2005/2006 UNHS indicate that livestock are important for the food security of agricultural households, with 60 percent of Ugandan agricultural households raising poultry, 50 percent raising small ruminants, and 30 percent raising bovines. The eastern region contains the largest share of agricultural households raising poultry (about 75 percent) and bovines (about 40 percent), while the western region has the largest share of households raising small ruminants (60 percent).

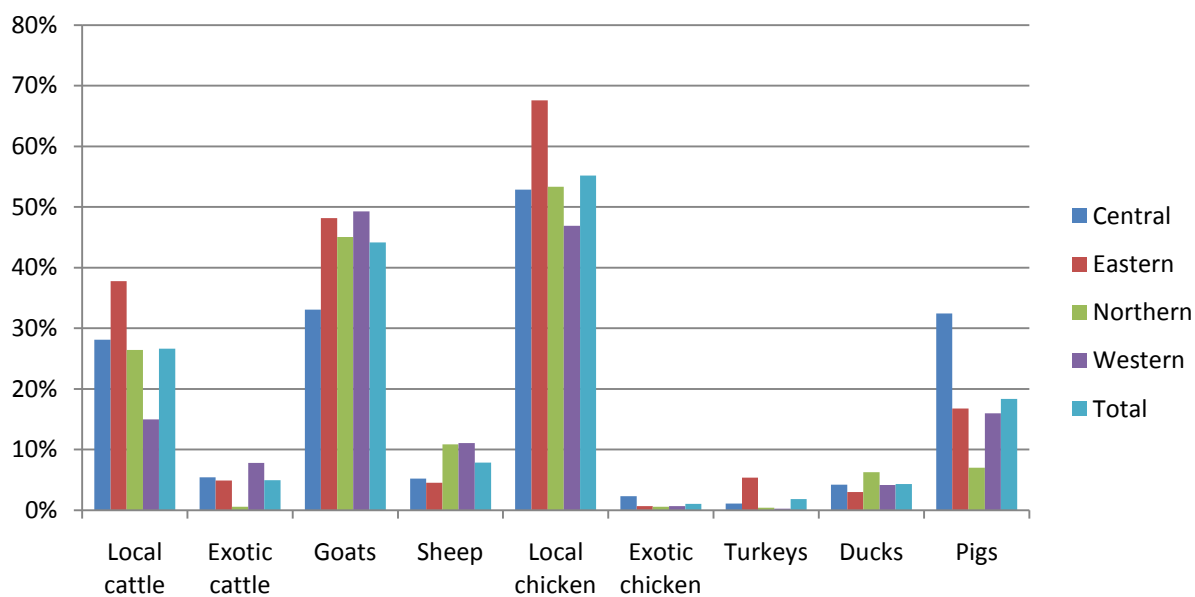
Notably, livestock play an important role, culturally and economically, in the Karamoja region. Households in Karamoja participate the least among regions in terms of agriculture (61 percent of households participate in agriculture, as compared to the national average of 78 percent), and the most among regions in terms of livestock (26 percent of households participate in livestock, as compared to the national average of 16 percent). Interestingly, the 2009 CFSVA cites that only 50 percent of households in Karamoja own livestock.¹² The report authors note their surprise at the lower-than-expected statistic, and accredit it to Karamoja households' under-reporting of livestock ownership due to fear of violence.

¹² Also of note is that Karamoja accounts for the lowest participation in skilled labor, and is among the highest participating in "brewing" and "seller- commercial activity."

Figure 5. Percent of Agricultural Households Raising Livestock, by Category

Source: Fintrac/BEST calculations, based on data in UBoS (2005), UNHS 2005/2006, Report on the Agricultural Module

A more detailed look at the varieties of livestock raised by agricultural households shows that among poultry, local chicken is most often raised; among small ruminants, goats are most common; and among bovines, local cattle is most often reared.

Figure 6. Percent of Agricultural Households Raising Livestock, by Type

Source: Fintrac/BEST calculations, based on data in UBOS (2005), UNHS 2005/2006, Report on the Agricultural Module

II.v. Constraints to Crop and Livestock Production

Uganda's agricultural sector consists predominantly of subsistence farming dependent on rain-fed production. Some of the structural constraints to production include few inputs, very little mechanization, poor soils, and limited access to agricultural extension services (WFP, 2009). The agricultural module of the 2005/2006 UNHS found that only 14 to 35 percent of agricultural households were visited by agricultural extension workers, meaning that technical knowledge of improved farming practices is not widely disseminated. However, work is underway to make agricultural extension services more accessible to subsistence farmers (see Section II.ix).

II.v.i. Land Tenure

Land tenure arrangements restrict access to and ownership of land. The 2009 CFSVA notes that four types of land tenure arrangements exist in Uganda: 1) traditional, where land is owned by individuals or communities; 2) leasing of land, with rental agreements lasting from 49 to 99 years; 3) freehold, which is land owned by individuals which can be inherited and further divided up; and 4) mailo, which is a type of freehold arrangement (WFP, 2009).

Further details on issues related to land tenure and access are examined in the agricultural module of the 2005/2006 UNHS. There are different levels of approval required in each region before a landholder is able to sell either ownership rights or land use rights. The table below reports the seven different relationships: 1) WAAP (without anyone's approval), 2) WASC (with approval from spouse and children); 3) WAEF (with approval from extended family); 4) WALA (with approval from local authority); 5) WALO (with approval from landlord/owner); 6) no rights; 7) an unspecified arrangement (UBoS, 2010). In Uganda, 37 percent of land parcels have no rights to be sold; with the northern region most prone to this issue (UBoS, Uganda National Household Survey, Agricultural Module, 2006). In the central region, 37 percent of land parcels require some type of permission before they can be sold; for the eastern, northern, and western regions, this statistic stands at 48 percent, 33 percent, and 59 percent, respectively (UBoS, Uganda National Household Survey, Agricultural Module, 2006).

Table 5. Rights to Sell Ownership or Use Rights to Land (% of Land Parcels under Type of Approval)

	WAAP	WASC	WAEF	WALA	WALO	No rights	Other	Total
Central	21.5	26	9.3	0.5	1.3	40.9	0.4	100
Eastern	16.3	27.8	17.4	0.9	1.7	35.8	0.1	100
Northern	20.6	11.2	19.8	1.2	0.6	46.3	0.3	100
Western	11.9	50.9	7.1	0.3	0.5	29	0.3	100
Uganda	16.8	31.4	13	0.7	1	36.8	0.3	100

Source: UBOS (2005), UNHS 2005/2006, Report on the Agricultural Module

II.v.ii. Other Constraints

Other constraints to agricultural and livestock production stem from reliance on rainfall, lack of access to inputs, crop and livestock diseases, and years of conflict which resulted in fallow and weed-infested land. Households lack the resources for farming inputs such as fertilizers,

technology, hired labor, agricultural and extension services, and veterinarian services (FANTA, 2010). Poor soil quality and soil fertility degradation have also been identified as production challenges across Uganda. The environmental conditions and poor soils limit crop diversity, with the Karamoja region reporting the lowest diverse cropping patterns (WFP, 2009).

Gender inequality is significantly intertwined with agriculture and food insecurity in Uganda and has been identified as a primary reason for the persistent poverty (FANTA, 2010). While 80 percent of women contribute labor for food production, they own less than eight percent of the land on which to farm. Women are often allocated smaller plots of land that are of poorer quality and are farther from their homesteads, resulting in lower yields, lost time, and higher opportunity costs (FANTA, 2010). The table below provides an overview of the major challenges to agricultural and livestock production by region.

Table 6. Challenges to Agricultural and Livestock Production by Region

Region	Districts	Livestock Challenges	Crop Production Challenges	Environmental Challenges	Additional Challenges
Karamoja	Nakapiripit, Moroto, Kotido, Kaabong, Amudat, Napak, Abim	Parasites and diseases (Contagious Bovine PleuroPneumonia (CBPP)), poor pasture and feeds, lack of support services, poor breeds	Poor soils, pests and diseases (honey dew growth, army worms)	Irregular rainfall, drought	Cattle and oxen theft
Acholi	Gulu, Kitgum, Pader, Agago, Amuru	Parasites and diseases (not specified), poor pasture and feeds, lack of support services	Poor soils, pests and diseases (congress weed infestation)	Irregular rainfall, drought	
Teso	Kaberemaido, Bukedea, Katakwi, Kumi, Palisa, Soroti, Amuria	Parasites and diseases (not specified), poor pasture and feeds, lack of support services	Poor soils, pests and diseases (not specified)	Flooding of fields, irregular rainfall	Lack of diversification of farming practices
Elgon	Kapchorwa, Bukwo, Sironko, Mbale, Manafwa, Bududa, Budaka Tororo, Busia	Parasites and diseases (not specified), poor pasture and feeds, lack of support services	Pests and diseases (not specified)	Irregular rainfall, flooding of fields, mudslides, soil erosion	Conflicts with neighboring regions
Lango	Lira, Apac, Oyam, Amolatar, Dokolo	Parasites and diseases (African Swine fever and Newcastle disease), poor pasture and feeds, lack of support services	Pests and diseases (cassava brown streak disease)	Environmental degradation (wetland encroachment)	Poor infrastructure, especially link roads, which worsen during the rainy seasons
West Nile Region	Adjumani, Arua, Moyo, Nebbi, Yumbe, Nyadri, Koboko	Parasites and diseases (Contagious Bovine Pleuro Pneumonia (CBPP), Black Quarter), poor pasture and feeds, lack of support services, livestock death from diseases and drowning	Pests and diseases (cassava brown streak, bacterial wilt, mealy bugs)	Irregular rainfall, flooding	Conflicts with neighboring regions
East Central	Bugiri, Busia, Namutumba, Iganga, Jinja, Kaliro, Kamuli, Butaleja, Mayuge, Pallisa	Parasites and diseases (Nagana), poor pasture and feeds, lack of support services	Pests and diseases (cassava brown streak disease)	Irregular rainfall	
South Western	Rukungiri, Bushenyi, Kabale, Kanungu, Kisoro, Mbarara, Ntungamo, Isingiro, Ibanda and Kiruhura	Parasites and diseases (foot rot, ephemeral fever and liver flukes), poor pasture and feeds, lack of support services	Poor soils	Hailstorms, wind storms, floods, mudslides	Poor road maintenance
Western	Kasese, Kabarole, Bundibugyo, Kyenjojo, Kyegegwa, Kibale, Hoima, Bulisa and Masindi	Parasites and diseases (not specified), poor pasture and feeds, lack of support services	Pests and diseases (not specified)	Floods, mudslides, soil erosion	

Region	Districts	Livestock Challenges	Crop Production Challenges	Environmental Challenges	Additional Challenges
Central 1	Kalangala, Mpigi, Wakiso, Masaka, Rakai, Lyantonde, Sembabule	Parasites and diseases (brucellosis, heart water, foot and mouth disease), poor pasture and feeds, lack of support services ,	Pests and diseases (cassava brown streak, banana wilt disease, coffee wilt)	Environmental degradation through charcoal burning, wet land reclamation, poor waste disposal and lack of soil and water conservation practices.	Inadequate extension services
Central 2	Nakasongola, Kayunga, Luwero, Nakaseke, Kiboga, Mukono, Mubende and Mityana	Parasites and diseases (not specified), poor pasture and feeds, lack of support services	Pests and diseases (not specified)	Environmental degradation through charcoal burning, wet land reclamation, poor waste disposal and lack of soil and water conservation practices	Poor road maintenance

Sources *Integrated Food Security Phase Classification, Uganda Food Security Brief, November 2010*
WFP, Comprehensive Food Security & Vulnerability Assessment, Uganda, April 2009

II.vi. Impact of Conflict on Agricultural and Livestock Production

The effects of the long conflict in the northern districts of Gulu, Lira, Amuru, Kitgum, and Pader continue to fuel poverty and food insecurity (FANTA, 2010). Households are resettling and farming is slowly being rehabilitated after the cessation of fighting; however, many challenges remain due to landmines, land disputes, and poor land quality in some areas. In other areas of the north where soil quality is higher, these areas present an opportunity for farmers as areas typically have lain fallow for 10 to 20 years, and soils are therefore not nutrient-depleted from continuous cropping.

Overall, the amount of food produced in these northern areas is inadequate and erratic depending on drought. This is mainly due to population displacement and agricultural underproduction over the past 20 years, and households are typically only able to farm small pieces of land. Furthermore, even with improved physical security, families are still uncertain of what land they can access and for how long, resulting in lower long-term investments for improved and increased food production over time (FANTA, 2010).

Displaced households returning home may struggle to reclaim land or learn agricultural strategies that have not been taught in IDP camps. Young re-settlers may not have existing family to teach them agricultural skills, and/or may have learned other non-agricultural skills in IDP camps. Returnees also may struggle to reclaim their former land from interim settlers. Additionally, many pre-conflict boundaries have been lost or forgotten. Fraudulent claims over land threaten legitimate landowners. These landowners have little power due to weak conflict-resolution institutions. Traditional institutions are the only means to resolve conflicts in many rural regions.

Pastoralist and tenure issues related to grazing are receiving growing attention. In Karamoja, expropriation by the state of customary grazing areas is continually a point of contention and conflict can flare up among pastoral and semi-pastoral communities within Karamoja, and from neighboring Kenya and southern Sudan (USAID, 2010). Cattle raiding severely undermines livestock herding in the northern region (this is most true for Karamoja, and largely resolved in bordering areas such as Acholi), and reduces households' capacity to access milk, plow their fields, and trade livestock for other goods. However, raids have slowly decreased since 2006.

Households with sufficient means have tried to re-stock, first by acquiring oxen and/or bulls from Kotido (central Karamoja), followed by purchasing milking cattle. Re-stocking efforts have occasionally been boosted by the government and some agencies have provided breeding stock (FEWS NET, 2010).

II.vii. Imports

The impact of rising food and fuel prices, along with the impact of the depreciation in the Ugandan shilling (see the Economic Overview Annex for details), can be seen in the increases in food and fuel expenditures. From 2006 to 2010, food expenditures increased by 33 percent, and fuel expenditures increased by 73 percent.

Table 7. Food and Fuel Imports (US\$'000)

	2006	2007	2008	2009	2010
Total Imports	2,557,256	3,493,357	4,525,815	4,255,697	4,660,535
Food (excludes live animals)	182,393	203,692	236,514	267,078	243,450
Food, as % of total imports	7%	6%	5%	6%	5%
Fuel	541,833	658,440	865,994	747,569	935,741
Fuel, as % of total imports	21%	19%	19%	18%	20%

Source: Fintrac/BEST calculations, based on data from ITC.

Figures on food imports show that cereals comprise the largest category of food imports. About 3/4 of cereal imports were wheat (Fintrac/BEST calculations, based on data from ITC, 2011).

Table 8. Food Imports (US\$'000)

	2006	2007	2008	2009	2010
Total Imports	2,557,256	3,493,357	4,525,815	4,255,697	4,660,535
Food Imports	182,393	203,692	236,514	267,078	243,450
Beverages	16,600	28,029	52,000	60,432	52,855
Cereals	154,046	155,200	168,434	198,582	179,562
Dairy	3,121	5,421	5,552	3,663	4,046
Fish	134	562	721	577	1,377
Fruit	702	1,150	1,308	2,072	2,459
Meat	26	98	57	104	204
Vegetables	7,764	13,232	8,442	1,648	2,947

Source: Fintrac/BEST calculations, based on data from ITC.

In 2010, in US dollar terms, half of Uganda's cereal imports were from two countries (Ukraine and Russia). All of the cereal imports from Ukraine, Russia and Brazil were wheat; 93 percent of cereal imports from the US were wheat; and all of the cereal imports from Pakistan were rice. Percent of total cereal imports from primary these major source countries are detailed below.

Table 9. Top Five Sources of Cereal Imports, 2010

Country	% of total cereal imports
Ukraine	26%
Russian Federation	25%
Pakistan	9%
Brazil	9%
United States of America	8%

Source: Fintrac/BEST calculations, based on data from ITC

II.viii. Exports

Uganda's largest category of exports, in US dollar terms, is from sales of cash crops. Cash crops account for 1/3 of foreign exchange earnings, with coffee accounting for around half of cash crop export earnings.

Table 10. Major Exports (US\$'000)

	2006	2007	2008	2009	2010
Total Exports	962,170	1,336,628	1,724,256	1,468,459	1,618,555
Cash crops					
Coffee	187,962	253,691	366,307	265,998	267,409
Black tea	49,956	47,059	46,870	57,799	64,102
Sugar	11,291	32,425	37,957	42,886	57,558
Cocoa	10,016	15,936	22,834	27,829	35,121
Tobacco	26,864	65,973	66,056	56,565	61,715
Roses	20,854	22,732	28,611	26,264	22,392
Cotton	20,156	19,423	13,158	22,710	19,890
Vanilla beans	4,808	6,262	3,039	4,908	4,352

Source: Fintrac/BEST calculations, based on data from ITC

II.ix. Policies that Impact the Agricultural Sector

PMA. The Plan for Modernization of Agriculture is contained in the 1997 Poverty Eradication Action Plan, and takes a multi-sectoral approach to poverty reduction among subsistence farmers (MAAIF). Its objectives include: 1) an increase in agricultural productivity; 2) an increase in the share of agricultural products that are marketed; 3) creation of employment opportunities in agro-processing; 4) adoption of environmentally-friendly technologies; and 5) implementation of an environmentally-sustainable land use policy (MAAIF).

Implementation of the PMA program has also been shown to have shortcomings. One 2004 study shows that as of then, PMA had failed to fully achieve its objectives due to weak local

governments and partial implementation. For instance, of the seven pillars of PMA¹³, only NAADS, rural road construction, and agricultural research were implemented to a significant level (Bahigwa, 2004).

NAADS. The National Agricultural Advisory Services is a GoU program which seeks to improve the provision of agricultural extension services to poor subsistence farmers, with the end goal of increasing agricultural production, and is one of the seven pillars under the PMA. The program began in July 2001 and is housed under the MAAIF (MAAIF). NAADS is designed to be implemented over a 25-year period, and is currently being carried out in all 112 districts (MAAIF) (Speech, 2011).

NAADS has supported approximately 487,500 farmers with inputs and advice to enhance food security. Another 22,000 out of the targeted 26,000 farmers received inputs and advice.

NAADS enterprises are apparently selected according to participation, but technology inputs are currently available to only a handful of farmer groups; suggesting that selection may be influenced by farmer group size or specialty. A review of the program states that NAADS targets traditional, longer-standing farmers, and excludes beginner farmers and poorer farmers. The NAADS program is also challenged by costs, efficiency of service delivery, and limited available information (IFPRI, 2008).

Initial evaluation of NAADS showed that direct participation in the NAADS program increased agricultural income by 37 to 95 percent while indirect participation – in which farmers who did not belong to NAADS farmer groups received advisory services from NAADS-affiliated advisory services – led to an increase of agricultural income by 27 to 55 per cent (Benin, 2010). Additionally, the rate of return from NAADS investment was eight to 49 per cent. About 77 percent of NAADS farmer groups reported to be empowered to make their own decisions on the provider of advisory services and to demand specific agricultural technologies. Participation in NAADS also increased the propensity to demand for improved crop varieties, crop management practices, soil conservation, livestock breeds, post-harvest practices and marketing information (Benin, 2010).

Despite these significant achievements, implementation of the NAADS program has failed to achieve some of the key objectives. The impact of NAADS was greater in areas with better market access and among male-headed households (Benin, 2010). The GoU is making efforts to improve the program, and has redesigned a NAADS II program which will be implemented on a village-level.

NDP. Uganda's National Development Plan for the period 2010/11-2014/15 identifies 18 constraints to agricultural development that include inadequate production, inadequate post-harvest facilities, and weak value addition chain linkages, among others (MAAIF, 2010). The NDP virtually replaces the Poverty Eradication Action Plan, Uganda's Poverty Reduction

¹³ PMA's seven pillars include: (i) research and technology development, (ii) agricultural advisory services, (iii) rural finance, (iv) agroprocessing and marketing, (v) agricultural education, (vi) supportive infrastructure, (vii) sustainable natural resource use and management and (viii) local governments – non-conditional grant transfer to local government to support poverty reduction.

Strategy Paper (PSRP), both of which guided Uganda's economy from 2004 to 2008 (and extended until NDP was implemented).

The NDP identifies the following shortages: farm-level storage, cold stores, modern abattoirs, holding grounds, fish fry centers, and fish handling facilities. Key weak points in the value chain are processing (which faces erratic supply levels of raw agricultural goods, and poor quality of raw goods) and producers' limited access to markets (due to lack of information and poor infrastructure). The NDP identifies "increasing the stock and improving the quality of public physical infrastructure" as the second investment priority after human resource development.

DSIP. The Agriculture Development Strategy and Investment Plan (2010/11-2014/15) echoes a similar message as the NDP. The DSIP replaced the Plan for the Modernization of Agriculture (PMA) as the Policy Document to guide interventions in the agricultural sector. Importantly, the DSIP includes the participation of donors, such as the Joint Action Agreement (2009) between the GoU and WFP, which provides support to farmers' use of the WRS and market information.

The DSIP identifies four clusters of challenges to agricultural performance, with market and value addition constraints among them. Under this cluster, lack of value addition and inadequate market infrastructure are highlighted; to address these issues, the plan recommends building public-private partnerships and promoting collective marketing.

CAADP. Uganda signed its CAADP compact in March 2010, which commits the country to spending 10 percent of its national budget on agriculture, and aims to reach six percent annual growth in the agricultural sector. USAID generally supports countries that complete CAADP compacts, and these programs are expected to complement USAID Feed the Future agricultural programming.¹⁴

CAADP calls for priority to be given to restoration of the current degraded stock of rural infrastructure, institutional support for capacity building and training in support of planning, design, construction and continuing operation, maintenance and management of infrastructure. CAADP recommends two approaches to deal with food insecurity in the short-term perspective of induced food and agricultural emergencies that include provision of safety nets (including food aid) and enhancement of production (Mucavele, 2006).

¹⁴ See www.caadp.net for further background for Uganda

Annex III. Household Income and Expenditure

III.i. Income

The 2009 CFSVA¹⁵ for Uganda provides an overview of income sources. Income sources by livelihood zones include agricultural sector activities (sales of crops, livestock and livestock products, fish, sugarcane, alcoholic beverages, bush products, firewood, and charcoal); paid labor (including off-farm employment); and payments from land rental. The most frequently cited sources of income across all livelihood zones are, in descending order, paid labor and sales of crops, livestock or livestock products.

Livelihood zones 21-26 cover the greater Karamoja region. Within the greater Karamoja region livelihood zones, there are fewer income sources than in the rest of the country. Income is earned via the sale of agricultural production (crops, livestock, livestock products), forest products (firewood, charcoal, bush products), and paid labor.

¹⁵ The 2009 CFSVA's data collection methodology entailed a two-stage sample design, whereby enumeration areas in the 25 strata were selected using the Probability Proportional Size sampling method in the first stage. In the second stage, households (Ultimate Sampling Units) were selected via the Simple Random Sampling. Sampling was done from 2 lists of households, one drawn up during the survey and another provided to the UBOS in mid-2008. The survey results were based on questionnaires from 7,271 households on food security, from 20,381 on nutrition and health; 746 from communities; 379 from traders; and 25 from focus groups.

Table 11. Cash Income Sources, by Livelihood Zone (Zones 21-26 are Most Relevant to Greater Karamoja)

Livelihood zone	Crop sales	Livestock and livestock product sales	Labor sales	Natural product sales	Petty trade	Firewood and charcoal sales	Fish sales	Brewing	Land rental	Bush product sales	Off-farm IGAs	Sugar cane sales
LHZ 1: Southwest Highland Irish Potato, Sorghum, and Vegetable Zone	x	x	x									
LHZ 2: Southwestern Midland Banana, Robusta Coffee and Cattle Zone	x	x	x									
LHZ 3: Southwest Rift Valley Tobacco, Bean, and Millet Zone	x		x	x								
LHZ 4: Kazinga Channel Cassava, Maize, Fruit, Vegetable, and Cotton Zone	x	x	x		x							
LHZ 5: Mt. Rwenzori-Mt. Elgon-West Nile Arabica Coffee and Banana Zone	x	x	x									
LHZ 6: Rwenzori Midland Banana, Fruit, Vegetable, and Dairy Zone	x	x	x									
LHZ 7: Western Rift Valley Cocoa, Coffee and Cassava Zone	x		x		x							
LHZ 8: Rwenzori Lowland Maize, Vegetable and Banana Zone	x	x	x									
LHZ 9: Rwenzori Midland Tea and Dairy Zone	x		x	x	x							
LHZ 10: Albertine-West Nile Lowland Cattle Zone		x	x			x	x					
LHZ 11: Kafu-Muzizi Maize, Upland Rice and Cassava Zone	x	x	x									
LHZ 12: Albertine Escarpment Cotton and Cassava Zone	x	x										
LHZ 13: Bwijanga-Pakami Sugarcane, Maize, and Cassava Zone	x	x		x	x			x				
LHZ 14: Karuma-Masinga-Oyam Tobacco, Maize, and Cassava Zone	x	x	x	x								

Livelihood zone	Crop sales	Livestock and livestock product sales	Labor sales	Natural product sales	Petty trade	Firewood and charcoal sales	Fish sales	Brewing	Land rental	Bush product sales	Off-farm IGAs	Sugar cane sales
LHZ 15: West Nile Tobacco, Cassava and Sorghum Zone	x	x							x			
LHZ 16: North Kitgum-Gulu-Amuru Simsim, Sorghum, and Livestock Zone	x	x	x	x	x							
LHZ 17: Amuru-Gulu Rice, Groundnut, Sorghum, and Livestock Zone	x	x	x	x								
LHZ 18: Mid-north Simsim, Maize, and Cassava Zone	x	x	x		x							
LHZ 19: Southwest Gulu Bean, Groundnut, Shoa, and Cassava Zone	x	x	x	x								
LHZ 20: Palabek Tobacco, Simsim, and Livestock Zone	x	x	x	x								
LHZ 21: South Kitgum-Pader-Abim-Kotido Simsim, Groundnuts, Sorghum and Cattle Zone	x	x	x							x		
LHZ 22: Northeast Sorghum, Simsim, Maize and Livestock Zone	x		x							x		
LHZ 23: Karamoja Livestock Sorghum, Bulrush Millet Zone		x	x			x						
LHZ 24: Northeastern Karamoja Pastoral Zone		x	x			x						
LHZ 25: Central and Southern Karamoja Pastoral Zone		x	x			x						
LHZ 26: Eastern Lowland Maize, Beans and Rice Zone	x	x	x			x						
LHZ 27: Eastern Central Lowland Cassava, Sorghum and Groundnut Zone	x	x	x			x						
LHZ 28: Mt. Elgon Highland Irish Potato and Cereal Zone	x	x	x			x						
LHZ 29: Southeastern Lowland Cassava and Cereal Zone	x	x	x									
LHZ 30: Eastern Lowland Rice and Root	x	x	x									

Livelihood zone	Crop sales	Livestock and livestock product sales	Labor sales	Natural product sales	Petty trade	Firewood and charcoal sales	Fish sales	Brewing	Land rental	Bush product sales	Off-farm IGAs	Sugar cane sales
Crop Zone												
LHZ 31: Southeastern Lowland Cassava, Maize, Sweet Potato and Zone	x		x			x						
LHZ 32: Southeastern Maize, Beans, Robusta Coffee and Cattle Zone	x	x	x								x	
LHZ 33: East Central Plantation Outgrower Zone		x	x					x				x
LHZ 34: Kayunga-Masaka Pineapple, Banana, Robusta Coffee and Cassava Zone	x	x	x									
LHZ 35: Midwest Central and Lake Victoria Crescent Robusta Coffee, Banana, Maize and Cattle Zone	x		x			x						
LHZ 36: Kalangala Fishing, Oil Palm, and Cassava Zone	x		x									
LHZ 37: Lakeshore and Riverbank Fishing Zone		x	x				x					
LHZ 38: Central and Southern Cattle, Cassava and Maize Zone	x	x	x			x						

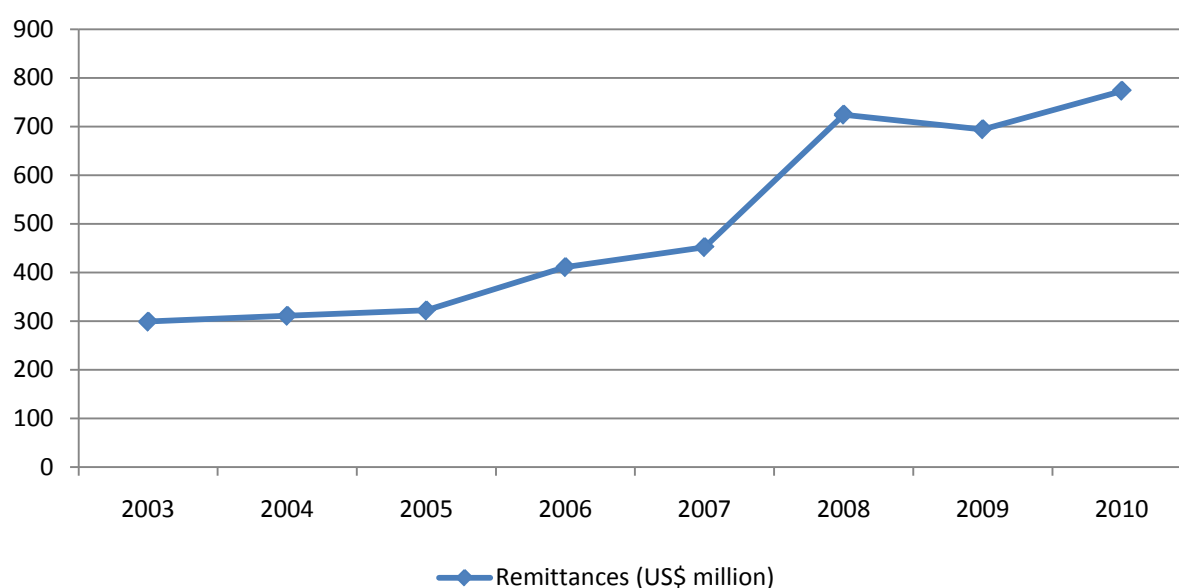
Source: Table compiled by Fintrac/BEST, based on information in: FEWS NET (2010), Livelihood Mapping and Zoning Exercise: Uganda

In terms of how much money Ugandan households earn, according to the 2009/2010 UNHS, average monthly income for Ugandan households is UGX 304,000 (equivalent¹⁶ to US\$149). Average monthly incomes are highest in the capital, Kampala (UGX 959,000, which is equivalent to US\$470), and are about six times higher than average monthly incomes in the poorest region, the north (UGX 141,000, which is equivalent to US\$69) (UBoS, 2010).

III.ii. Remittances

Remittances have comprised around five percent of GDP in recent years. In 2010, inward remittance flows reached US\$773 million, more than double than their levels in 2003.

Figure 7. Inward Remittance Flows to Uganda



Source: Figure compiled by Fintrac/BEST, based on data in Ratha, D., S. Mohapatra, A. Silwal (2011), *The Migration and Remittances Factbook*, The World Bank

In Uganda, remittances have primarily been used to finance recurrent expenditures, such as rent and school fees (The World Bank, 2004). A 2008 household survey on remittances in Uganda revealed a similar result: the most widely cited expenditure was helping finance education-related expenditures (43 percent) (Orozco, 2008). Remittance flows tend to be highest around holidays such as Christmas and Easter, and at the start of the school year (The World Bank, 2004).

Western Union and Money Gram play a dominant role in remittance transactions, with remittances being distributed by agents (banks and foreign exchange bureaux) and subagents (where microfinance institutions and also foreign exchange bureaux are involved) (Orozco,

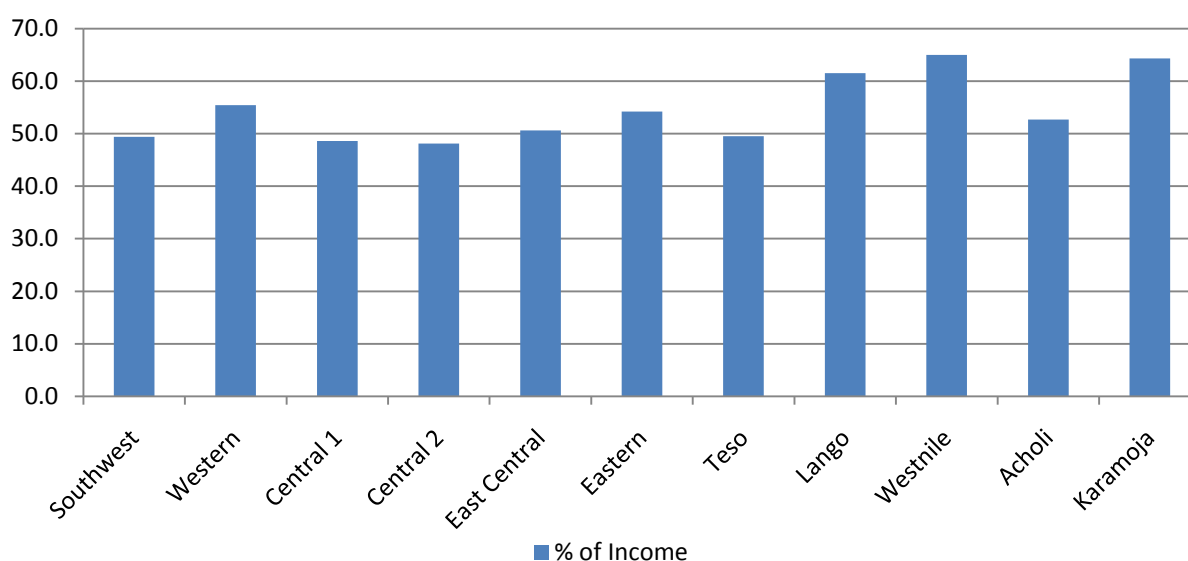
up discussions. The equivalent average monthly household income in US\$ terms was calculated using the average exchange rate during the period of May 2009 to April 2010 (US\$ 1 = 2039 UGX), which was the period during which the 2009/2010 UNHS was conducted.

2008). Western Union's direct agents include: Diamond Trust Bank, Barclays Bank, Centenary Bank, and Crane Bank, while Money Gram's direct agents include Bank of Africa Uganda, Development Finance Company of Uganda Bank Limited Bank, and Stanbic Bank (Orozco, 2008). Some of the microfinance institutions acting as subagents for remittances include Finca International, Uganda Microfinance Limited, and Pride Uganda.

III.iii. Expenditure

The 2005-2006 UNHS reports that 45 percent of households' income was spent on food; with households in rural areas spending more on food (50 percent of income) than those in urban areas (34 percent). The 2009 CFSVA shows that per capita food expenditures comprise over half (54 percent) of income. The poorest spend nearly 60 percent of their income on food (WFP, 2009). However, even the wealthiest have quite high food expenditures (46 percent of income) (WFP, 2009). As the following table shows, at the regional level, Karamoja, West Nile, and Lango (all in northern Uganda) have the highest per capita food expenditures (over 60 percent of income). However, the lowest food expenditures are still quite high (nearly 50 percent of income) in the central regions (WFP, 2009).

Figure 8. Per Capita Food Expenditure, as Percentage of Income



Source: Figure based on data in 2009 CFSVA.

The poor are net purchasers of staples in Uganda (Simler, 2010). In other words, these households buy more food than they sell.

As for the possibility of smoothing income shocks stemming from food price increases, by substituting away from expensive and internationally traded staple foods such as maize, and towards bananas, cassava and sweet potatoes, one study shows that consumers usually substitute towards root crops (i.e., cassava, potatoes) when maize prices rise (Haggblade, Staple Food Prices in Uganda, prepared for the Comesa Policy Seminar on "Variation in Staple

Food Prices: Causes, Consequence, and Policy Options", 2010). However, a different study reveals that the level of substitution among staples is low (Simler, 2010).

III.iv. Poverty

The latest available poverty headcount figures, from the 2009-2010 UNHS, reports that about 1/4 of the population (about 7.5 million people) live in poverty, with poverty levels being higher in rural (27 percent) than in urban areas (nine percent). Regional-level statistics reveal that the northern region of Uganda¹⁷ has the highest incidence of poverty (46 percent), with poverty lowest in the Central Region (11 percent) (UBoS, 2010). Looking at poverty rates in US dollar terms, in 2009, 29 percent of the population subsisted on less than US\$1.25 a day; using the US\$2 a day measure, the share of those living in poverty was over half (55 percent) of the population (The World Bank).

A 2005-2006 study on prices and poverty in Uganda shows that an increase in food prices led to an increase in the number of poor (an estimated 700,000 more Ugandans fell into poverty) (Simler, 2010). The increase in poverty during 2005 and 2006 was greatest in the northern region (Simler, 2010). The study points out that maize price increases are the driving factor behind increases in the number of poor in both urban and rural areas of Uganda. In terms of calorie composition of diet, a different study covering the period of January 2000 to mid-2008 shows that maize is the second most important staple for the poor and third most important staple for the non-poor (Benson, 2008).

¹⁷ The 2009 CFSVA reports an even higher figure (63 percent) for the northern part of the country. (WFP 2009, Comprehensive Food Security and Vulnerability Analysis: Uganda)

Annex IV. Food Security Annex

IV.i. Introduction

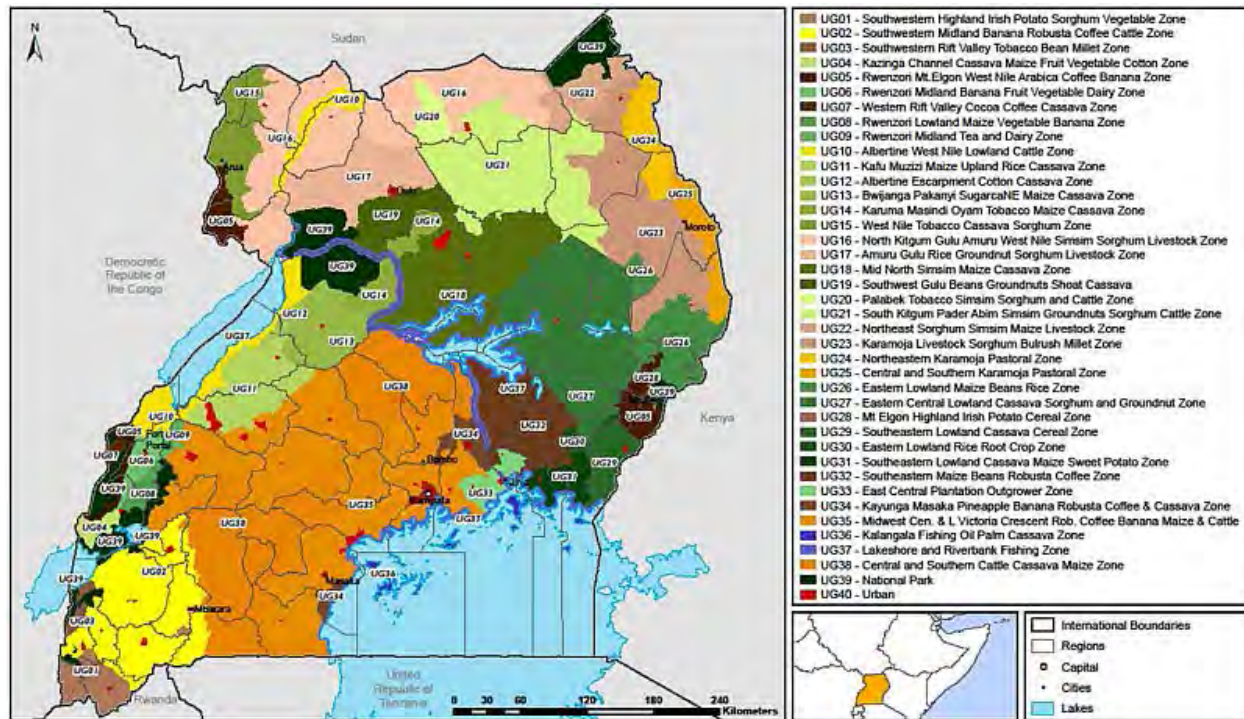
This Annex provides supplementary information on factors that affect food security in Uganda. The Annex is organized as follows: 1) identification and description of livelihood zones; 2) overview of the underlying causes of acute and chronic food insecurity, including typical hazards and shocks; 3) review of the most recent food security assessments; 4) overview of seasonality of commodity prices; and 5) overview of the malnutrition rates, and water, sanitation and hygiene access.

IV.ii. Identification and General Description of Livelihood Zones

Livelihood zones are geographic areas in which households share, on average, similar livelihood patterns, or broadly have access to the same set of food and cash income sources and markets. Uganda has 38 livelihood zones.

The following figure was drafted by FEWS NET, in collaboration with GoU district offices and NGO staff. FEWS NET developed the zones using a combination of quantitative and qualitative data, local expert knowledge, and field verification. These zones provide the foundation for household economy analyses.

In every Ugandan livelihood zone (except Albertine-West Nile Lowland Cattle Zone, Northeastern Karamoja Pastoral Zone, and Central and Southern Karamoja Pastoral Zone), a combination of cereals, pulses, roots and tubers, and bananas are grown. Livestock is reared in all livelihood zones. Better-off households garner income from the sale of livestock, particularly chicken, small ruminants, pigs, and cattle, as well as sale of correlating livestock products and petty trade. Poorer households complement their income from crop sales with cash earned from labor sales - mainly unskilled labor at construction sites, and brick making - and from the sale of natural products such as firewood, thatching grass, and charcoal. As described later in this Annex, livestock also serve as a source of regular and fallback source of income, depending on a household's economic status.

Figure 9. Livelihood Zones of Uganda

Source: FEWS NET (2010), *Livelihood Mapping and Zoning Exercise; Uganda*

IV.iii. Dominant Livelihood Strategies

The role of markets as a part of rural Ugandans' livelihood is increasing as their economy becomes more cash-based (FEWS NET, 2010). Although most Ugandans are primary producers, they also depend on the market, to varying degrees, for household food supply.

Part of this market participation comes from the sale and exchange of livestock, another component of almost all Ugandan livelihoods (even the poorest agricultural households). For pastoralists, livestock is a regular and major source of income to purchase staple foods and cover other expenses; for producers, livestock is viewed more as a fallback option for cash during emergency situations.

Poor producer households are also most likely to earn income (in cash, not in kind), from paid labor, and, as mentioned before, sale of firewood and charcoal and petty trade provide some income. Households located far from agricultural areas are more likely to migrate to agricultural areas for work.

IV.iv. Underlying Causes of Food Insecurity

There are a wide range of factors contributing to the food insecurity found in different areas of the country. Among the factors listed by the 2009 CFSVA are:

- Economic access: Low purchasing power is a significant problem across the entire country and is one of the main explanations behind the high levels of food insecurity in Busoga, Ankole, and south Buganda.
- Poverty: Asset poverty has been identified as forces driving food insecurity in Karamoja.
- Lack of security: An underlying cause of food security. Food security in the Karamoja region is also threatened by cattle raiding, and a steady flow of small arms. Alliances among citizens once served as a coping strategy; however, some of these relationships have weakened in recent years.
- Reduced availability of food in the market: Such reduced availability might be related to the decreased effective demand in some areas, caused by decreased household purchasing power.
- Poor infrastructure: especially roads which worsen during the rainy seasons.
- Lack of diversification of farming practices.
- HIV/AIDS, refugee influx, climate change, environmental degradation, significant increases in population size, and declines in public services (health facilities).

IV.v. Typical Hazards/External Shocks

Hazards to food security in Uganda, as identified in the 2009 FEWS NET Livelihood Zone and Mapping Exercise, are somewhat aligned with those identified in the CFSVA, and include:

- Civil insecurity in Karamoja, which limits access to productive land and may lead to loss of main livelihood (which, for many households, is livestock).
- Limited access to agricultural tools and seeds, water, health, and sanitation, reducing cultivation, as well as utilization of food.
- Karamoja's variable climatic conditions that affect crop and livestock production, as well as affect livestock movement.
- Cattle theft and corollary border incursions from southern Sudan and Kenya in search of pasture and water.
- Endemic hazards to productivity, especially crop pests, livestock diseases, and HIV/AIDS.¹⁸
- In recent years, food prices have become a food security hazard. In February 2011, prices for staple foods such as sorghum, maize, beans, and matooke were on par or

¹⁸ The incidence of Banana Bacterial Wilt affected approximately 24 percent of Uganda's rural population in eastern, western, and south western Uganda where the crop is mostly grown as a key staple or major source of income. To date, the disease has been ably controlled and reduced in many areas to below critical levels, but still needs to be monitored.

above prices of February 2010, as well as on par or above the five-year average in many of the country's major markets.

IV.vi. Summary of Recent Food Security Assessments

A number of food security assessments have been conducted recently: an updated IPC, the WFP CFSVA, Joint FAO/FEWS/FEG Karamoja Seasonal Assessments, and a Karamoja food security analysis by FAO/ECHO. The following is a summary of the most recent assessments, and an outline of the key assumptions underlying the findings of each study.

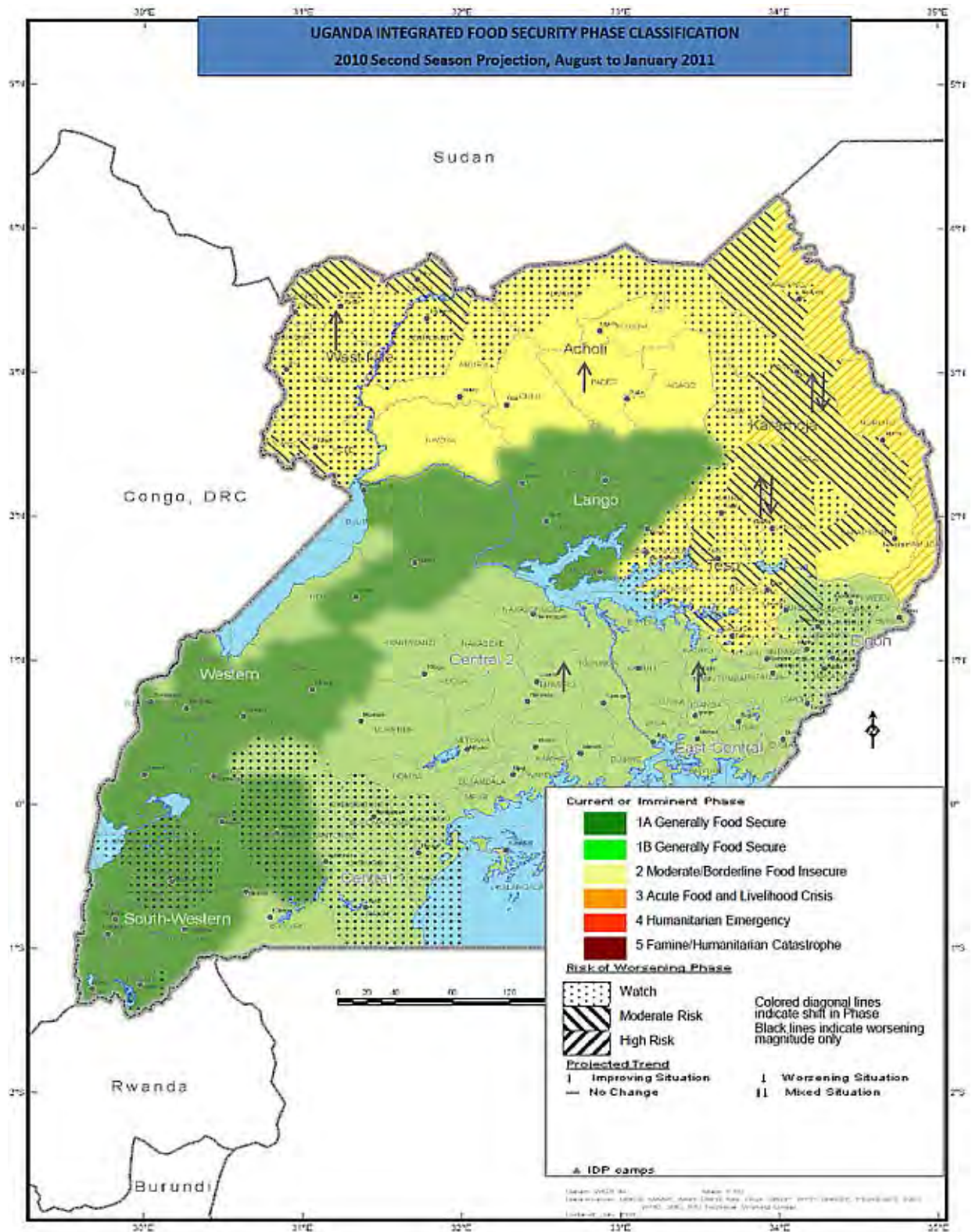
IV.vi.i. Current IPC Assessments

The Integrated Phase Classification scheme represents a collaborative effort of CARE, JRC, FAO, FEWS NET, Oxfam, Save the Children UK and US, and WFP to create a common classification system to represent food insecurity. The IPC scale assesses food insecurity according to: food access and availability, crude mortality rate, acute and chronic malnutrition, water access and availability, dietary diversity, hazards, coping strategies, livelihood assets, and structural hindrances to food security (IPC Global Partners, 2006).

Summary of findings. The most recent IPC report (August 2010-January 2011) notes that first-season rains resulted in an improved food security situation across the country, for the second half of 2010. The situation in northern Uganda was classified as increasingly non-emergency, rather than emergency, as IDPs returned home and Karamoja (which is often prone to drought) received good rains. However, populations in Karamoja, Acholi, West Nile, and Teso remained classified as borderline or moderately food insecure despite these improvements. Low-lying areas in Teso and Mt.Elgon were potentially at risk of floods and landslides (IPC Global Partners, 2010).

See the following figure for the FAO's Integrated Phase Classification map for Uganda's 2010 Second Season Project, from August 2010 to January 2011.

Figure 10. Uganda IPC 2010 Second Season Projection, August to January 2011



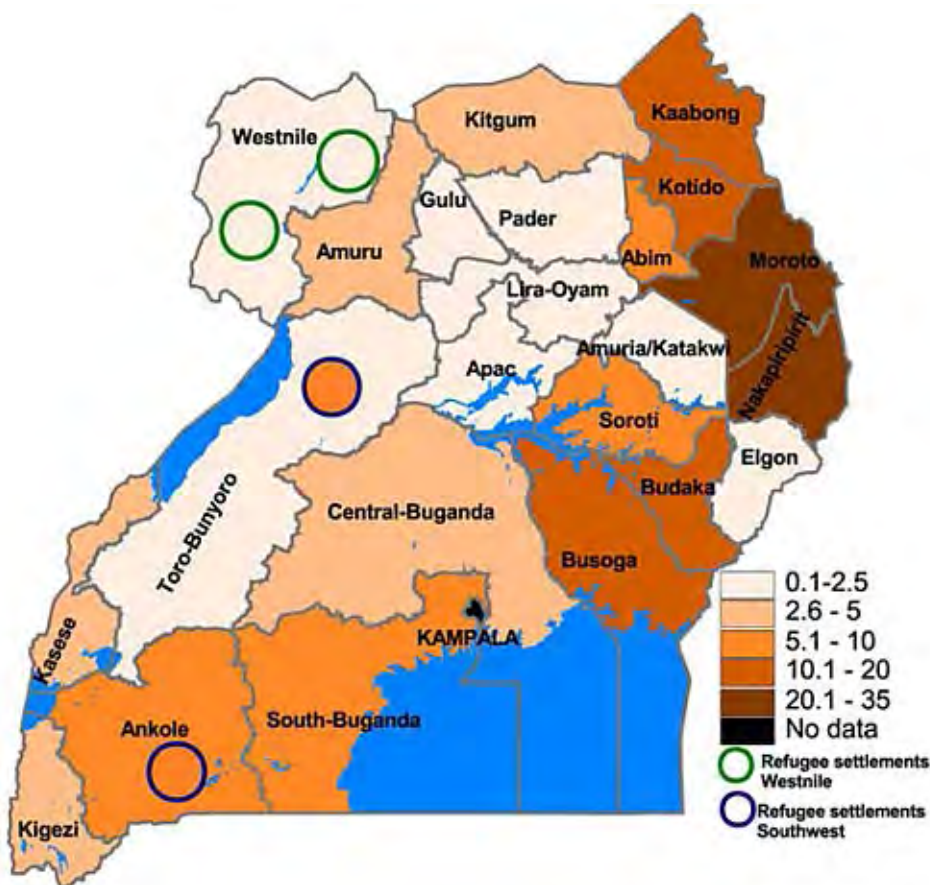
Source: IPC: Uganda Food Security Brief. Special Brief - Post First Season 2010 Analysis

IV.vi.ii. Comprehensive Food Security & Vulnerability Analysis (CFSVA)

WFP conducted its CFSVA in late 2008 and published results in 2009. The CFSVA examines the quantity, profile, and location of Uganda's food insecure population, as well as assesses causes and threats to food insecurity and implications for food security interventions (WFP, 2009). The one-month study was based on questionnaires and focus groups distributed to 7,271 households across the whole country (divided into 25 strata). Most questionnaires targeted household health and nutrition, though some questionnaires were specific to trader groups and community groups.

Summary of Findings. The 2009 CFSVA states that 6.3 percent (1.8 million people) of Uganda's households were food insecure, 21.3 percent of households were moderately food insecure, and 72.4 percent of households were food secure in 2009. Notably, the CFSVA was conducted during a post-harvest period when stock should have been high. According to the study, even moderately food insecure households would need some assistance during lean seasons.

Figure 11. Prevalence (%) of Food Insecure Households by Strata



Source: CFSVA April 2009

Table 12. Estimated Food Insecure Population in Karamoja Region

District	Est. Pop. 2008	Food Insecure	Pop. Food Insecure	Moderately Food Insecure	Pop. Moderately Food Insecure	Total
Abim	54,100	9.6%	5,200	39.7%	21,500	26,700
Kotido	179,300	16.7%	30,000	44.0%	78,900	108,900
Kaabong	301,200	16.0%	48,200	42.0%	126,600	174,800
Moroto	265,300	30.0%	79,600	42.8%	113,600	193,200
Nakapiripirit	217,500	22.7%	49,400	18.5%	40,300	89,700
Karamoja	1,017,400	20.4%	207,600	38.0%	386,600	594,200

Source: CFSVA April 2009

The study determines that Karamoja had the highest prevalence of food insecurity: an estimated 20 percent of its population was deemed food insecure (WFP, 2009). This was especially true in Karamoja's southern areas of Moroto (30 percent of the 2009 population was food insecure) and Nakapiripirit (23 percent of the 2009 population was food insecure). Relatively high levels of food insecurity were also found in Budaka (11 percent of households were food insecure) and Busoga (15 percent of households were food insecure) in eastern Uganda. The report points out that few households appeared to be food insecure in the refugee/IDP hosting areas of Acholi, an area where food insecurity had previously been a problem. This may partly be explained by WFP's food assistance. As of 2011, these camps are now effectively closed.

Populations classified as most food insecure, percentage-wise, are the Natural Resource Dependents (11.7 percent of the households are food insecure) and Fisherfolk (11.4 percent of households which are food insecure).¹⁹ However, these populations combined only accounted for about five percent of the country's total population. Notably, the Agro-Labourers (which accounted for 14.5 percent of total population, making the group the second-most common livelihood group in the country) had a food insecurity percentage of 9.1. The largest population group in the country, the Agriculturalists, had 6.3 of their households categorized as food insecure.

The report concludes the following in regard to underweight children: 1) younger children were more likely to be underweight than older children; 2) males were found to be more likely to be underweight than females; 3) children experiencing diarrhea had higher odds of being underweight; 4) children in households with no access to improved sanitation were more likely to be underweight; and 5) wealth (measured by the wealth index) was found to be inversely related to being underweight.

Key findings regarding market prices include: 1) market prices and food availability was a strong contributor to food insecurity; and 2) perceived access (prices) and availability (amount of food

¹⁹ As their group names suggest, the Natural Resource Dependent group relies mostly on sale of natural resources (e.g., firewood and charcoal), and the Fisherfolks group relies on sale of fish. However, both groups rely to some extent on agriculture (11 percent and 15 percent, respectively). The External Resource Dependent population also was among the top food insecure populations. This group relies mostly on the sale of food assistance, begging, or gifts from relative/friends, with an additional 17 percent of income from remittances and 12 percent from agriculture.

in the markets) were found to be a problem everywhere except for the southwest and western regions of the country.

Recommendations. Key recommendations for humanitarian action include: 1) food insecurity was high in most parts of the Karamoja region and humanitarian interventions are highly recommended for both food needs and service provision; 2) reduction of humanitarian interventions for the Acholi and Lango regions in a manner that considers the need to ensure livelihood and incomes are developed or sustained, without significant humanitarian assistance; and 3) consider targeted nutrition interventions, general rations, and FFW.

Key recommendations for poverty reduction and mid-term strategies include: 1) interventions to address the underlying causes of food insecurity which include both livelihood and income-earning opportunities both for Karamoja and the country as a whole; and 2) interventions should consider a wide variety of modalities, such as micro-financing and micro-credit systems.

Key recommendations for policy and advocacy include: 1) improve access to and quality of water; 2) provide free basic schooling for all and ensure that there are adequate facilities and teaching staff; 3) improvement of agricultural and veterinary extension services, in both quality of service and in coverage; 4) provision of adequate and consistent health care in rural communities; 5) promote the use of existing latrines and how to construct simple, improved latrines; 6) reduce raiding and general insecurity; and 7) provide information on food use, diet diversification, and healthy, affordable eating options.

IV.vi.iii. Joint FAO/FEWS/FEG Karamoja Seasonal Assessment, November 2010

The Karamoja Seasonal Assessment reviews the performance of the 2010 rains and evaluates their impact on crop and livestock production in the Karamoja region, primarily to estimate the need for relief food and/or cash assistance for the next rains/harvests in 2011. Access to other sources of income (e.g., firewood and charcoal) and the impact in changes in market conditions (especially prices) are evaluated. The study took place across seven markets and 51 communities, from mid-October to November 2010. The teams interviewed informants (e.g., government and aid agencies) at district and community levels. Deficit areas, population, and magnitude were determined using HEA.

Summary of Findings. Overall, the study shows that production was better in the 2010 season than in 2008 and 2009 (which were both below-average years), and production of livestock in 2010 fared better than for crops (FAO, Karamoja Seasonal Assessment, 2010-2011, 2011). Still, a total of 121,454 very poor agro-pastoralists were expected to face deficits lasting one to three months, between the November 2010 and July 2011. The study accredits these people's vulnerability to poor crop harvests and lower incomes. The largest deficits were expected in Kotido, Napak, and Moroto.

The study determined that people were most likely to cope with these deficits by: 1) overselling their livestock; 2) over-exploiting charcoal and firewood resources; 3) reducing expenditure on goods and services such as livestock care, seeds, health, education, etc.; and 4) reducing food intake below 2100 kcal per day.

Key findings for crop production include: 1) production was affected by diseases and water logging in some areas; 2) late planted crops and imported seed suffered more from disease than early planted crops and local varieties; and 3) crop production was better in the north, west, and south of the Karamoja, and worse in the center and east (Kotido, Moroto, and Napak districts).

Key findings for the livestock sector include: 1) cattle and shoat herds increased in size in most areas as compared to 2008 (10 to 20 percent in the case of cattle and 20 to 25 percent for shoats); 2) vaccination campaigns in 2008 and 2009 helped reduce disease; 3) a lower percentage of adult female cows gave birth in 2010 than in 2008;²⁰ 4) daily milk yields in 2010 were generally similar to or above those of 2008; 5) insecurity continued to constrain livestock movement and therefore access to grazing and water, especially during the dry season and for agro-pastoral areas; and 5) pastoralists in Kaabong district lost large amounts of cattle to raiding in 2008, and losses of about 15 percent of cattle since 2008 were reported in Kotido district, possibly due to negative effects of kraaling animals together for security.

One key finding regarding sources of income for poor and very poor populations, especially in agro-pastoral and agricultural areas, is that increasing deforestation was leading to decreased ability to depend on sale of charcoal and firewood for income.

Key findings for market conditions include: 1) market conditions have improved since 2008; 2) cereal prices declined, while prices for livestock, labor, firewood, and charcoal all increased; 3) better harvests in the Karamoja areas, and good harvests in other production areas, suggested an adequate supply of grain until July 2011, for most people; and 4) demand for livestock was up, with increased exports within Uganda and to neighboring countries.

Recommendations. Key recommendations to fill deficits in 2010 and into, at least, July 2011: 1) to fill deficits, offer direct transfer of either food or cash, either free or in exchange for labor (FFW, cash-for-work); and 2) other options include direct transfer of non-food items (e.g., seeds), or a market intervention (e.g., reduce the price of staple food or increase the price of livestock), though not recommended.²¹

Key recommendations related to crop production for the future: 1) a main problem in 2010 was disease, which could be ameliorated by proper dressing of seeds, the cultivation of short-maturing crop varieties (those which take two to three months to mature); and 2) crop diversification to reduce reliance on sorghum (which is susceptible to honey dew). Alternative crops include millet, maize, cassava, and sweet potatoes.

Key recommendations related to livestock holdings for the future: 1) increase cattle and overall herd size of the very poor, which requires the addition of just one breeding animal; 2) consider local purchase of breeding animals and re-distribution to very poor households within Karamoja; and 3) continued livestock health interventions (e.g., vaccinations).

²⁰ This can be explained by poor 2009 rains, which would be when births for 2010 were conceived.

²¹ Market interventions are generally appropriate where markets are dislocated or have failed for some reason. According to the report, the Karamoja grain markets were operating normally and this was expected to continue throughout 2011. Likewise, livestock markets were functioning well, with animals in good condition and demand relatively strong.

Key recommendations related to firewood and charcoal production: 1) explore options for regenerating the environment and for promoting sustainable firewood and charcoal off-take in Karamoja; and 2) the establishment of tree nurseries and community-managed wood.

IV.vi.iv. Joint FAO/ECHO "What to do about Karamoja?" A Food Security Analysis of Karamoja September 2010

The 2010 study, conducted by FAO, defends the stance that current perceptions of Karamoja are incorrect. These perceptions are held within the Ugandan government and among the development partners, and include: 1) Karamoja is extremely poor; 2) Karamoja livelihoods are very vulnerable to frequent droughts; and 3) pastoral livelihoods are not viable in the long term.

The report provides evidence to support its stance against these perceptions, and then analyzes the consequences of the fact that humanitarian and development aid policy and practices have been guided by these perceptions.

The methodology entailed field work, study of existing livelihood profiles, further field work/desk study to examine specific questions, data analysis, and an authors' workshop.

Summary of Findings. Key findings include: 1) even in a year with almost complete crop failure, the majority of households in the agro-pastoral and pastoral areas of Karamoja were able to cope without external assistance - only the very poor households in the agro-pastoral and pastoral areas of Karamoja could not cope without assistance, in about the same proportion as in other areas of Uganda; 2) household incomes of different economic groups in Karamoja were broadly comparable with households in the equivalent economic groups in other parts of rural Uganda, particularly once the accumulation of wealth (i.e. increase in herd sizes) was included as income; 3) although crop harvests were unreliable in most of Karamoja, households that were able to rely on semi-nomadic herding as a main livelihood strategy were able to cope with such crop failures. Settled households that depended on rain-fed crop agriculture were not able to cope; 4) development policy which favored encouraging settlement was, perversely, creating artificial disaster emergencies or artificial droughts, because it created a situation where households could no longer survive independently during poor rains, which did not exist when households could survive from their livestock; 5) although erratic weather put a stress on livelihoods in Karamoja, main threats were not from the weather, but from restrictions on movement and insecurity; 6) evidence-based analysis clearly showed that the best livelihood strategies for most of Karamoja, both for income maximization and for resilience, is livestock-based herding; 7) basic support to existing livestock strategies (in particular to animal health and marketing), could dramatically improve livestock productivity. This would both raise income to levels above those of households in many parts of Uganda and would increase resilience, making the even small herds owned by the poor sufficient to support food security (from livestock sales) without depleting herd sizes; 8) settlement programs did not seem attract much support from those among the local population who had an economic alternative; rather, aid settlement programs attracted the destitute, as well as seasonal migrants, rather than the permanent settlement of those with viable livelihoods (i.e., the vast majority).

Recommendations. Key recommendations include: 1) livestock- based livelihoods remain the best economic mainstay of households in Karamoja. Support to settle the agro-pastoral and pastoral households and to transform their livelihoods from semi-nomadic herders to largely crop farmers, is counter-productive, if the objective is to improve their food security; 2) households who cannot cope need long-term social protection systems, rather than protracted humanitarian relief. This support should focus on providing animal health services, improving freedom of movement, supporting livestock marketing, and supporting the complementary livelihood strategies which are already being pioneered by the local population; 3) recognize and respect the land rights of the Karamojong; 4) current policy towards the Karamojong is skewed and it is difficult for humanitarian actors or development partners to work in such a context; and 5) intervention strategies by humanitarian agencies and development partners need to be based on a thorough analysis of livelihoods - including the socio-cultural, political, and legal aspects of livelihoods.

IV.vii. Malnutrition Rates

The WHO classifies Uganda’s nutrition situation as serious for stunting, and poor for both underweight and wasting. Uganda’s most common malnutrition problems are high rates of chronic malnutrition and micronutrient deficiencies, especially of Vitamin A and iron. Malnutrition in all its forms remains largely a “hidden problem” since the majority of children affected are moderately malnourished or have micronutrient deficiencies that are not routinely assessed or easily observed. In 2006, the UDHS stated that 19 percent of the total population was undernourished (FANTA, 2010).

The following table indicates the percentage of children under age five classified as malnourished according to three anthropometric indices for nutritional status: height-for-age, weight-for-height and weight-for-age. The table following that displays the nutritional statuses of children by region.

Table 13. Basic Malnutrition Indicators for Uganda

Malnutrition indicator	Percent of children under age 5
Prevalence of underweight	16
Prevalence of stunting	38
Prevalence of wasting	6

Source: FANTA, *The Analysis of the Uganda Nutrition Situation, May 2010*

Table 14. Regional Distribution in the Prevalence of Severe (-3 z-score) and Moderate (-2 z-score) Stunting, Underweight, and Wasting (WHO Growth Standards)

Regions ²²	Stunting (Height-for-Age) Severe	Stunting (Height-for-Age) Moderate and Severe	Underweight (Weight-for-Age) Severe	Underweight (Weight-for-Age) Moderate and Severe	Wasting (Weight-for-Height) Severe	Wasting (Weight-for-Height) Moderate and Severe
Kampala (urban)	8	22	3	10	4	7
Central 1	15	39	4	13	3	5
Central 2	8	30	2	8	1	3
East Central	11	38	6	23	5	10
Eastern	13	36	2	11	1	3
North	17	40	7	22	2	7
West Nile	15	38	5	17	2	8
Western	18	38	3	15	0	5
South West	23	50	5	19	3	9
North Sub-Regions						
IDP camps	14	37	5	20	2	6
Karamoja	25	54	14	14	4	4

Source: Uganda Demographic and Health Survey 2006, as cited in FANTA, *The Analysis of the Uganda Nutrition Situation, May 2010*

The prevalence of malnutrition among children varies significantly across Uganda. The WHO indices - wasted, underweight, and stunted - are expressed as standard deviation units from the median for the international reference population recommended by the WHO. Children who fall more than two standard deviations below (-2 SD) the reference median are regarded as moderately undernourished, while those who fall more than three standard deviations below (-3 SD) the reference median are considered severely undernourished.

Children whose height-for-age is below two standard deviations from the median of the reference population are considered stunted or short for their age. Children who suffer from chronic malnutrition fail to grow to their full genetic potential, both mentally and physically. The main symptom of this shortness in height compared to others of the same age group; also,

²² Information on the regional divisions:

Kampala: Kampala

Central 1: Kalangala, Masaka, Mpigi, Rakai, Sembabule and Wakiso

Central 2: Kayunga, Kiboga, Luwero, Mubende, Mukono, Nakasongola

East Central: Bugiri, Busia, Iganga, Jinja, Kamuli, Mayuge

Eastern: Kapchorwa, Mbale, Pallisa, Sironko, Tororo, Kaberamaido, Katakwi, Kumi, and Soroti

North: Apac, Gulu, Kitgum, Lira, Pader, Kotido, Moroto, Nakapiripirit (Estimates for this region include both settled and IDP populations.)

Karamoja area: Kotido, Moroto, and Nakapiripirit

IDP: IDP camps in Apac, Gulu, Kitgum, Pader, and Lira districts

West Nile: Adjumani, Arua, Moyo, Nebbi, and Yumbe

Western: Bundibugyo, Hoima, Kabarole, Kamwenge, Kasese, Kibaale, Kyenjojo, and Masindi

Southwest: Bushenyi, Kabale, Kanungu, Kisoro, Mbarara, Ntungamo, and Rukungiri

these children take a relatively long time to develop. The prevalence of stunting (severe and moderate combined) was highest in Karamoja, followed by the southwest and north.

Children whose weight-for-age is below two standard deviations from the median of the reference population are considered underweight. This measure reflects the effects of both acute and chronic undernutrition. The percentage of underweight (severe and moderate combined) children was particularly high in eastern central and the north.

Children whose weight-for-height is below two standard deviations from the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhea, or a rapid deterioration in food supplies. Wasting (severe and moderate combined) is highest among children in the eastern central and southwest regions.

IV.viii. Price Analysis

Analyzing changes in the prices of staple foods is important because increases in staple foods prices make people more vulnerable to food insecurity. The price analysis covers: 1) an overview of price movements; and 2) analysis of seasonal price movements. Below is a brief summary of the conclusions from each section. For further details, see each section.

Price movements overview. For the period covering October 2006 to March 2011, beans and rice were the most expensive staple foods. City-level price data show that beans and rice are the most expensive staples.²³ At the regional level, beans also appear to be the most expensive staple in the country. Staple food prices generally peaked during 2009. Following the food price crisis (2009 to 2011), most staple food prices had fallen (in nominal and real terms), from their levels in 2009.

Seasonal price movements. Generally, price lows corresponded with either the first harvest season (June through August) or the second harvest season (November through January). In Arua and Mbarara, maize grain and flour prices were lowest in late summer²⁴ through early autumn, with rice prices lowest in autumn for the same two cities. In Kampala, maize grain prices were lowest mid-summer. Sorghum grain and flour prices, and beans prices, had no pattern - they were lowest at different times for each city.

IV.viii.i. Price Movements Overview

The price data used for the price movements overview cover the period October 2006 to March 2011.²⁵ Food CPIs for each city, from the Uganda Bureau of Statistics (UBoS), were used to

²³ In nominal terms

²⁴ Summer is defined as June-August; autumn is defined as September-November.

²⁵ Source of city data is primarily FoodNet, with some data from UBoS, MIS, FEWS NET. October 2006 was the earliest date for which the nominal and real price data were most complete. For details on data gaps by cities and commodities, see footnotes throughout this section.

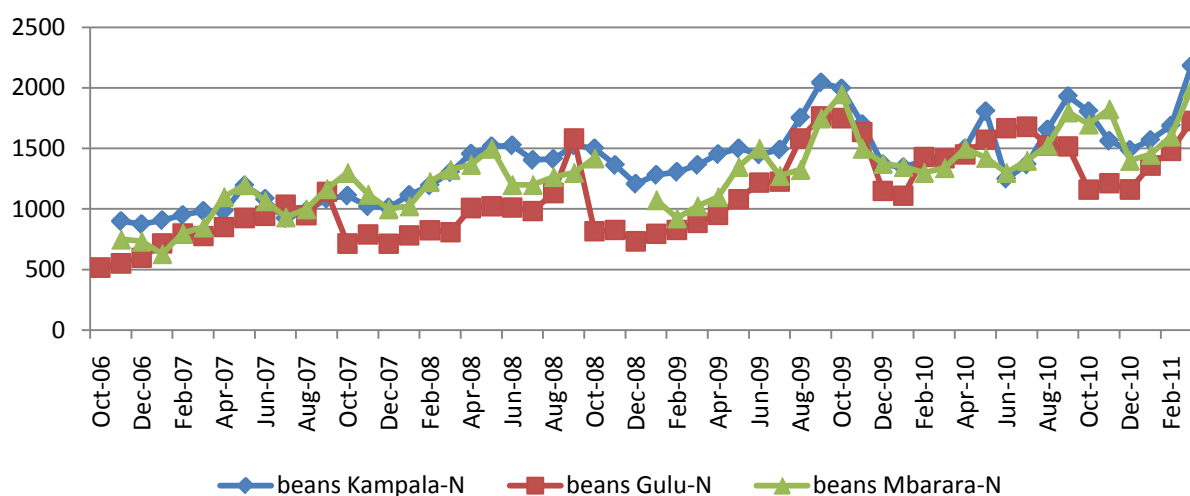
derive real prices. The cities included in the analysis are Kampala, Gulu, Arua, and Mbarara,²⁶ the cities for which the most complete series of price data were available. The commodity prices analyzed are an unspecified variety of beans,²⁷ maize grain and flour, sorghum grain and flour, and rice.²⁸

Summary. As stated above, for the period covering October 2006 to March 2011, beans and rice were the most expensive staple foods. Staple food prices generally peaked during 2009. The differences between the lowest average monthly price and the highest average monthly price during the period were larger in nominal than in real terms. Following the food price crisis (2009 to 2011), most staple food prices had fallen (in nominal terms), from their levels in 2009. The paragraphs and figures below describe these price movements in further detail.

IV.viii.ii. Beans

In nominal terms, beans prices peaked in autumn 2009. By March 2011, prices remained more than triple their level in Gulu, and more than double their level in Mbarara and Kampala, compared to October 2006. Beans prices in nominal terms across the cities ranged from UGX 517/kg to UGX 2,183/kg.

Figure 12. Average Monthly Beans Prices (Nominal), UGX/Kg²⁹, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

In real terms (R), beans prices across the cities ranged from a minimum of UGX 515/kg to a maximum of UGX 1,164/kg.

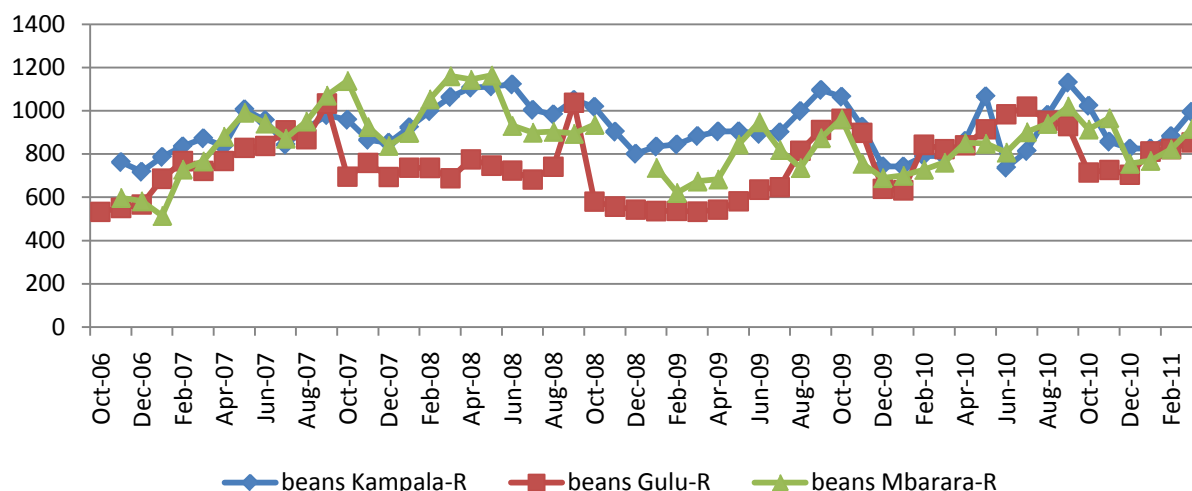
²⁶ Not all cities had price data for each commodity.

²⁷ The data source did not specify the variety of beans.

²⁸ The rice prices are for the "super rice" variety.

²⁹ There were missing observations for beans for: Kampala in October 2006; Mbarara in October 2006, November-December 2008.

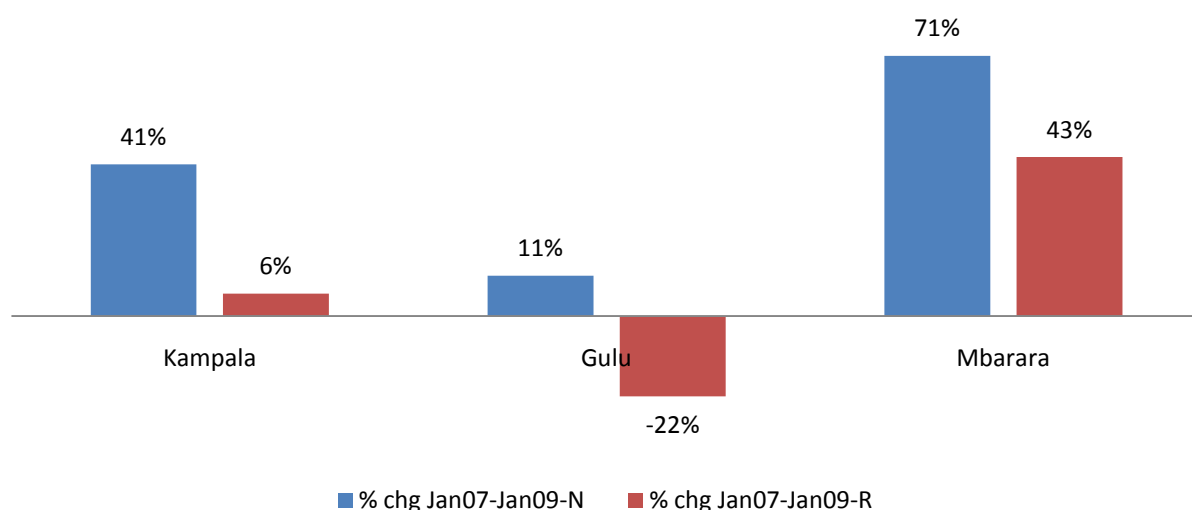
Figure 13. Average Monthly Beans Prices (Real), UGX/Kg³⁰, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of beans increased in Mbarara and Kampala, in both nominal (N) and real (R) terms, however increased only in nominal terms for Gulu, with the price decreasing in real terms. Across the cities, in nominal terms, beans prices increased between 11 percent and 71 percent; in real terms, they increased between six percent and 43 percent.

Figure 14. Average Monthly Nominal and Real Prices of Beans, January 2007 and January 2009, UGX/Kg

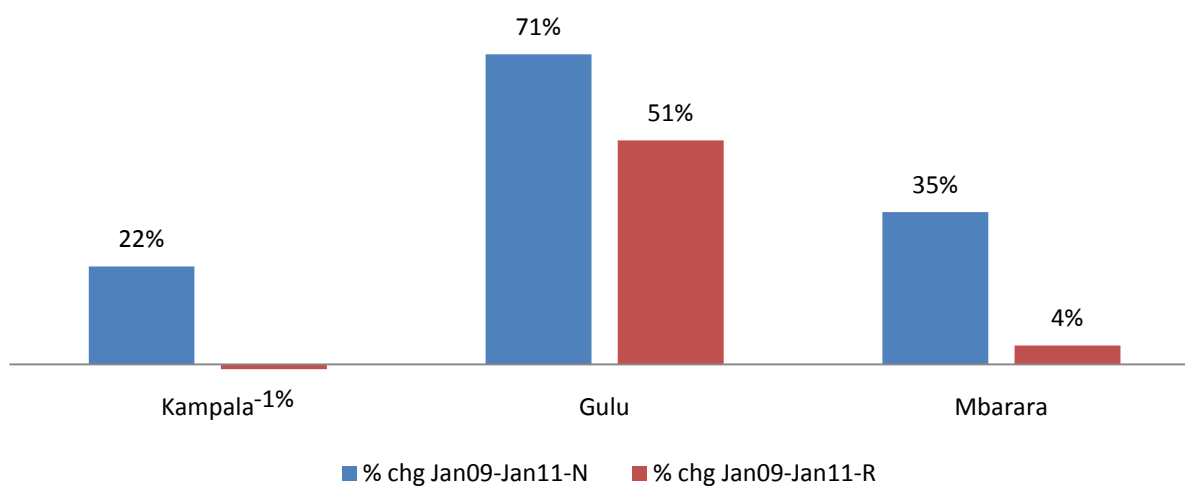


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

³⁰ There were missing observations for beans for: Kampala in October 2006; Mbarara in October 2006, November-December 2008.

A comparison of average monthly prices in January 2009 and January 2011 show the lingering effects of the price spikes, with the price of beans having increased in nominal terms in January 2011 compared to January 2009, in all three cities, and also in real terms, with the exception of Kampala, which experienced a very small decline in real terms. Across the cities, in nominal terms, beans prices continued to increase, 22 percent to 71 percent; in real terms, they increased four percent to 51 percent.

Figure 15. Average Monthly Nominal and Real Prices of Beans, January 2009 and January 2011, UGX/Kg

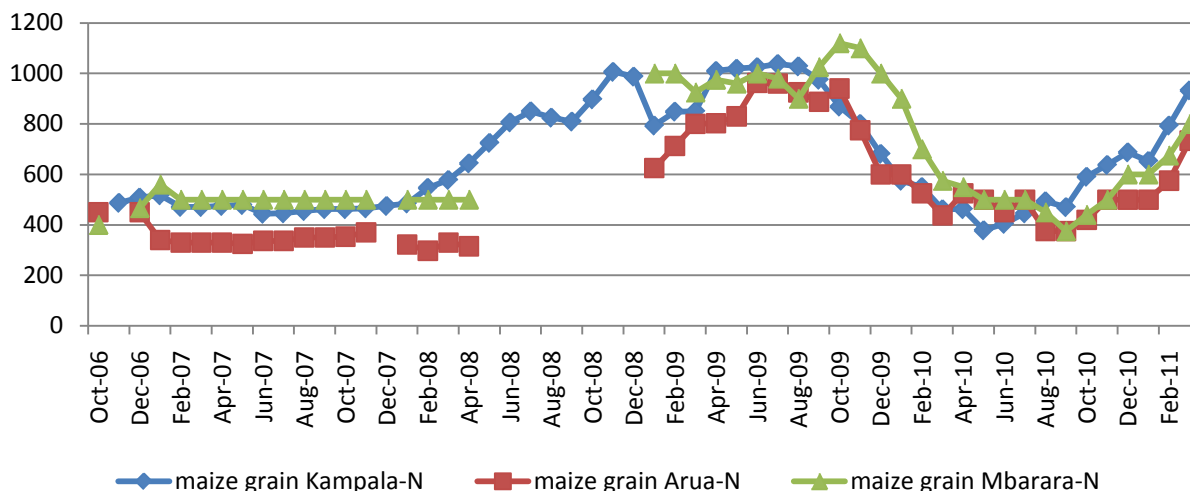


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

IV.viii.iii. Maize Grain

In nominal terms (labeled as "N" in the graphs), maize grain prices peaked in early and mid 2009. By March 2011, prices remained double their level compared to October 2006. Maize grain prices in nominal terms across the cities ranged from UGX 298/kg to UGX 1,120/kg.

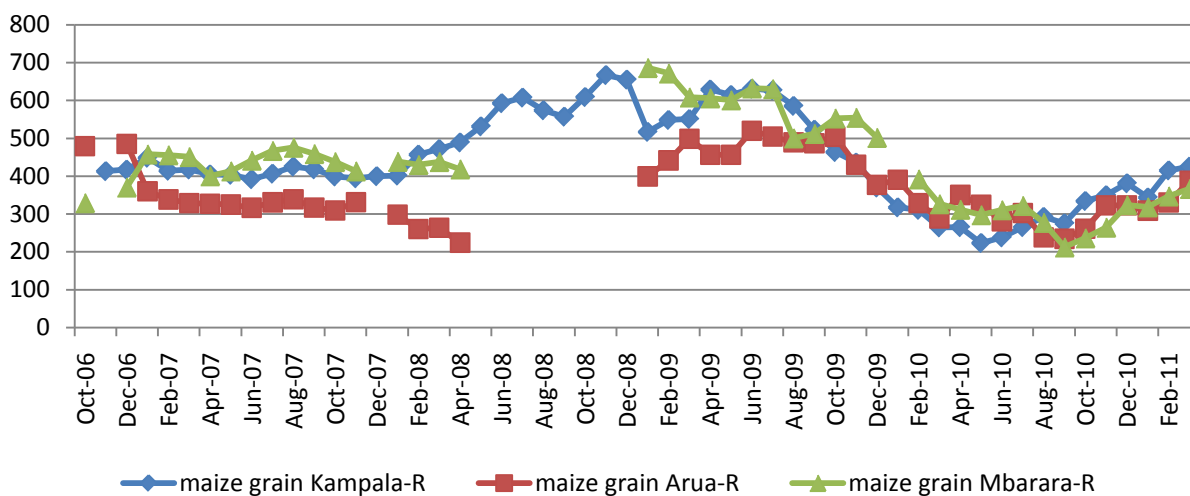
Figure 16. Average Monthly Maize Grain Prices (Nominal), UGX/Kg³¹, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from UBoS, MIS, FEWS NET

In real terms (labeled as "R" in the graphs), maize grain prices across the cities ranged from a minimum of UGX 213/kg to a maximum of UGX 686/kg.

Figure 17. Average Monthly Maize Grain Prices (Real), UGX/Kg³², October 2006-March 2011



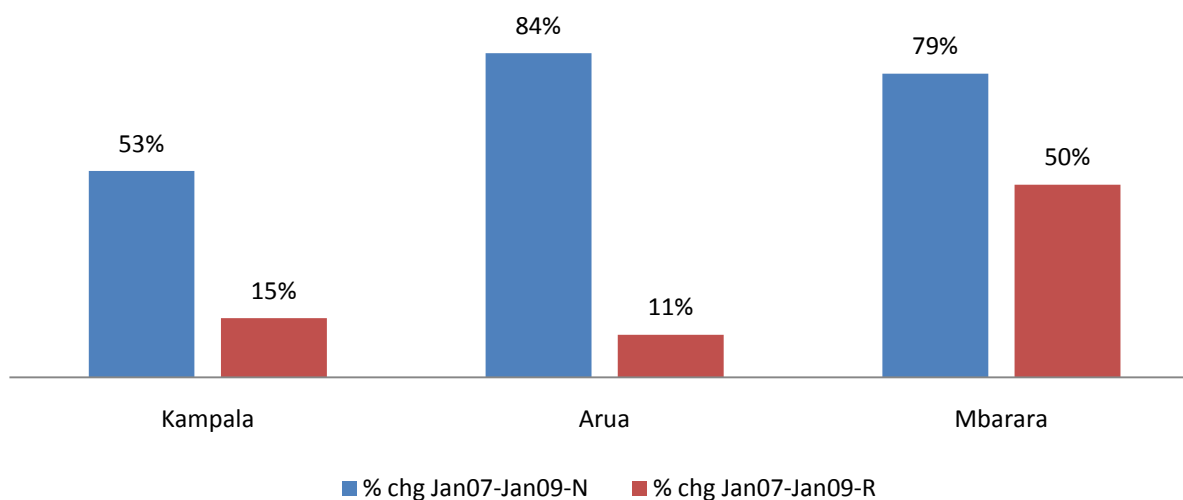
Source: Fintrac/BEST calculations, based on data from UBoS, MIS, FEWS NET

³¹ There were missing observations for maize grain prices for Kampala in October 2006; for Arua in November 2006, December 2007, May-December 2008; for Mbarara in November 2006, December 2007, May-December 2008.

³² There were missing observations for maize grain prices for Kampala in October 2006; for Arua in November 2006, December 2007, May-December 2008; for Mbarara in November 2006, December 2007, May-December 2008.

A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of maize grain increased in all three cities below, in both nominal and real terms. In nominal terms, maize grain increases ranged from 53 percent to 84 percent; in real terms, the price increases ranged from 11 percent to 50 percent.

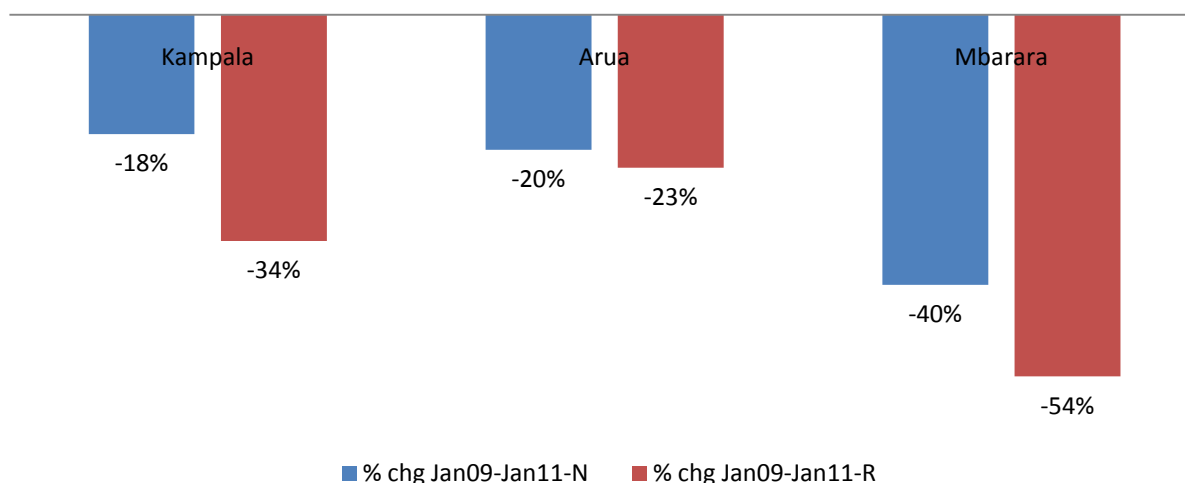
Figure 18. Average Monthly Nominal and Real Price of Maize Grain, January 2007 and January 2009, UGX/Kg



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

A comparison of average monthly prices in January 2009 and January 2011 show the tapering off of the effects of the price spikes, with the price of maize grain having decreased in both nominal and real terms in January 2011 compared to January 2009 in all three cities. In nominal terms, maize grain prices fell between 18 and 40 per cent; in real terms, maize grain prices fell between 23 and 54 percent.

Figure 19. Average Monthly Nominal and Real Prices of Maize Grain, January 2009 and January 2011, UGX/Kg

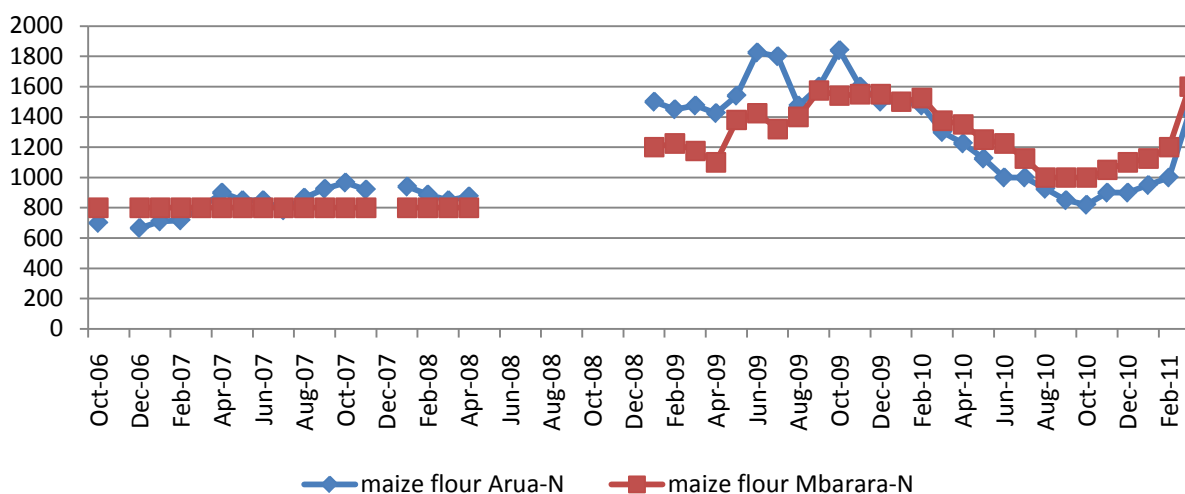


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

IV.viii.iv. Maize Flour

In nominal terms, maize flour prices peaked during 2009. By March 2011, prices remained double their level compared to October 2006. Maize flour prices in nominal terms across the cities ranged from UGX 667/kg to UGX 1,840/kg.

Figure 20. Average Monthly Maize Flour Prices (Nominal), UGX/Kg³³, October 2006-March 2011

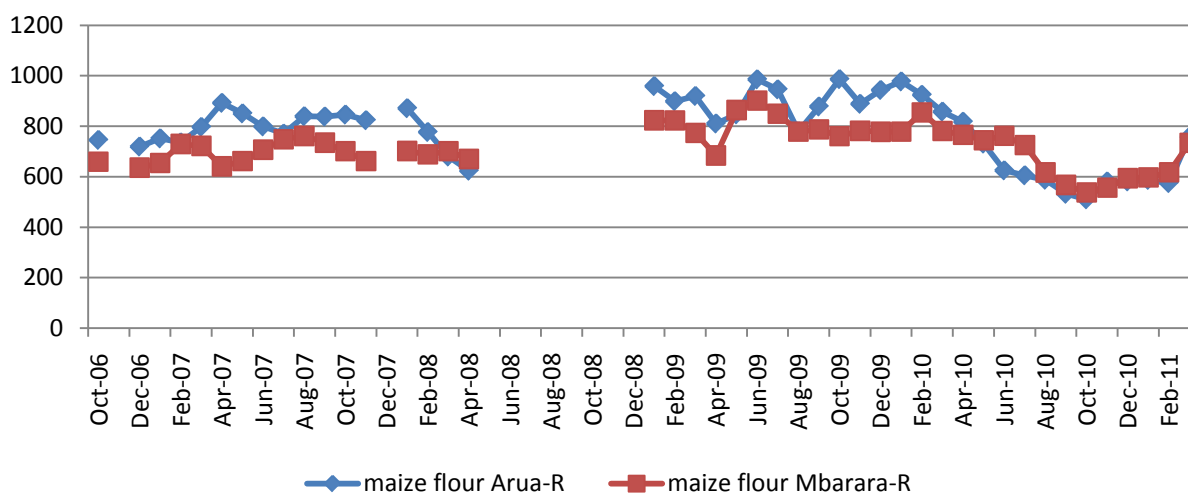


Source: Fintrac/BEST calculations, based on data from FoodNet.

³³ There were missing observations for maize flour prices for: Arua in November 2006, December 2007, May-December 2008; for Mbarara in November 2006, December 2007, May-December 2008.

In real terms (R), maize flour prices across the cities ranged from a minimum of UGX 510/kg to a maximum of UGX 986/kg.

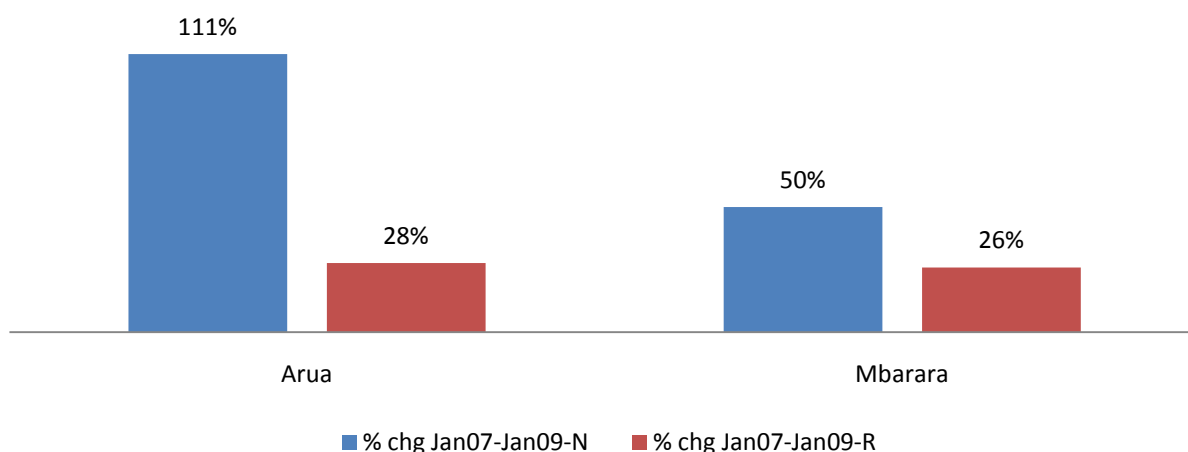
Figure 21. Average Monthly Maize Flour Prices (Real), UGX/Kg³⁴, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of maize flour increased in both cities below, in both nominal and real terms. In nominal terms, maize flour prices increased 50 per cent to 111 percent; in real terms, they increased by only 26 percent to 28 percent.

Figure 22. Average Monthly Nominal and Real Prices of Maize Flour, January 2007 and January 2009, UGX/Kg

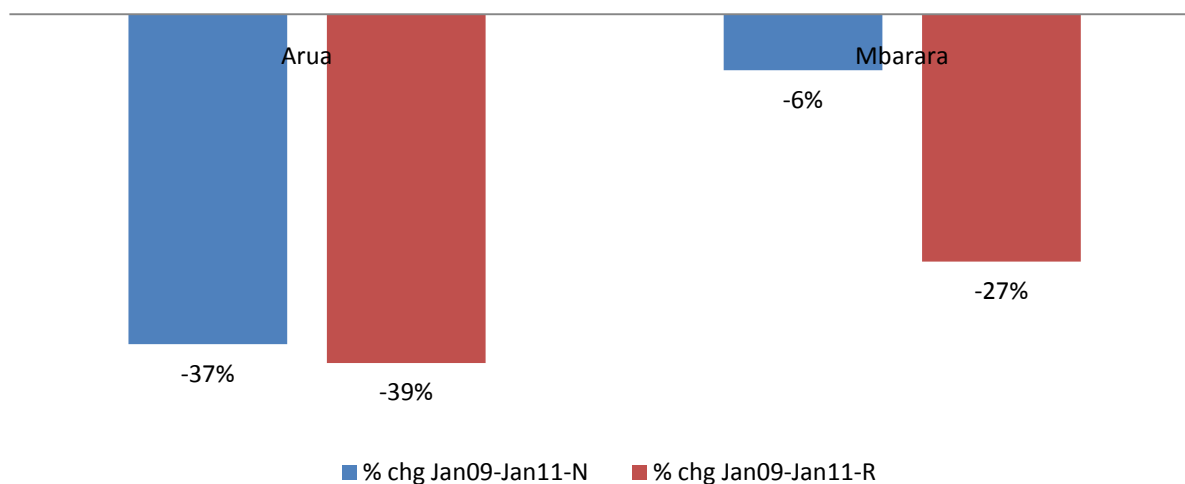


Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

³⁴ There were missing observations for maize flour prices for: Arua in November 2006, December 2007, May-December 2008; for Mbarara in November 2006, December 2007, May-December 2008.

A comparison of average monthly prices in January 2009 and January 2011 show the tapering off of the effects of the price spikes, with the price of maize flour having decreased in both nominal and real terms, in January 2011, compared to January 2009, in both cities. In nominal terms, maize flour prices fell between six and 37 percent; in real terms, they fell 27 to 39 percent.

Figure 23. Average Monthly Nominal and Real Prices of Maize Flour, January 2009 and January 2011, UGX/Kg

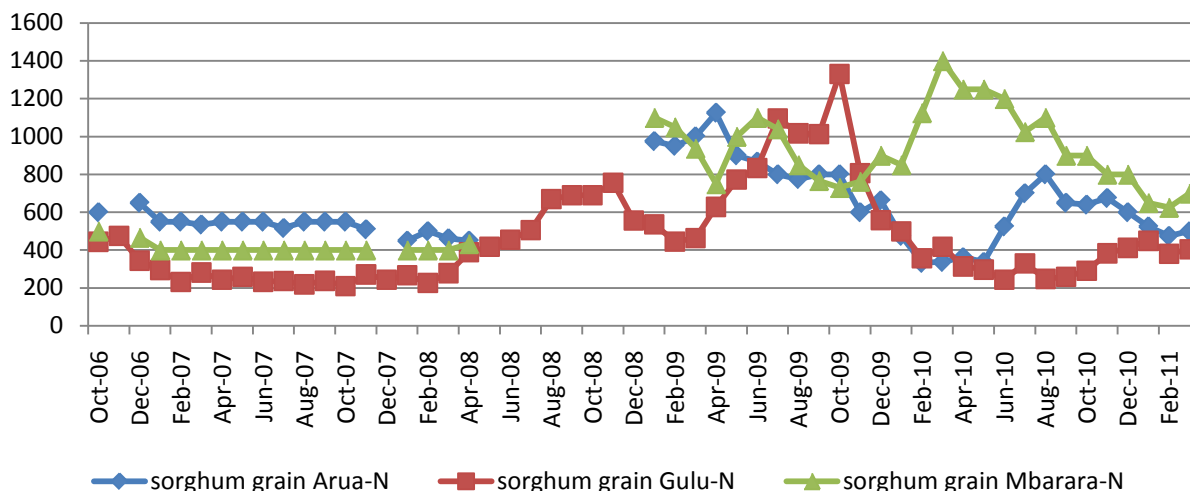


Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

IV.viii.v. Sorghum Grain

In nominal terms, sorghum grain prices peaked during 2009, except for Mbarara, where prices peaked during the first half of 2010. By March 2011, prices remained close to their levels compared to October 2006, with the exception of Mbarara, where prices were about 1.5 times higher. Sorghum grain prices in nominal terms across the cities ranged from UGX 209/kg to UGX 1,400/kg.

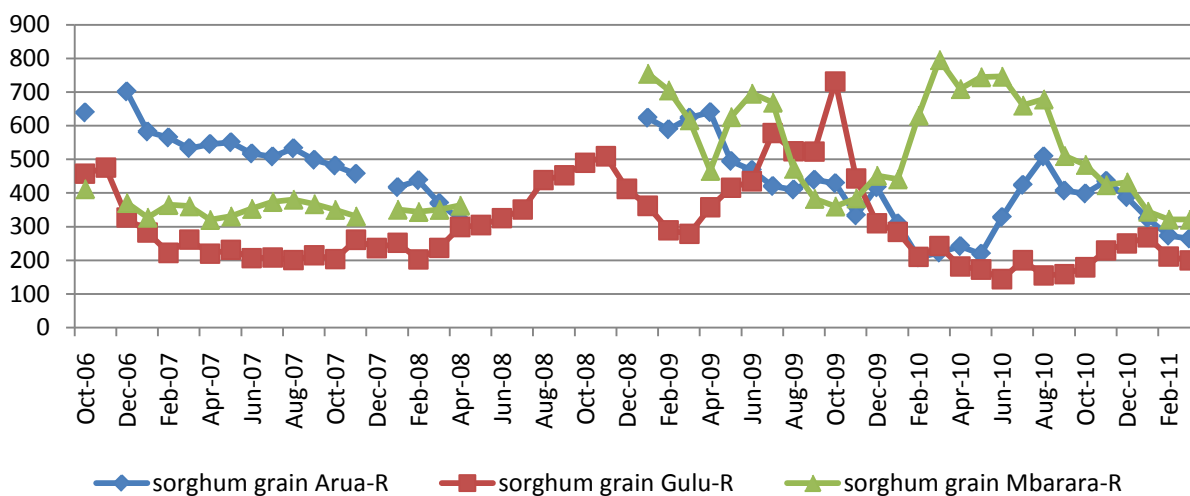
Figure 24. Average Monthly Sorghum Grain Prices (Nominal), UGX/Kg³⁵, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

In real terms (R), sorghum grain prices across the cities ranged from a minimum of UGX 144/kg to a maximum of UGX 796/kg.

Figure 25. Average Monthly Sorghum Grain Prices (Real), UGX/Kg³⁶, October 2006-March 2011



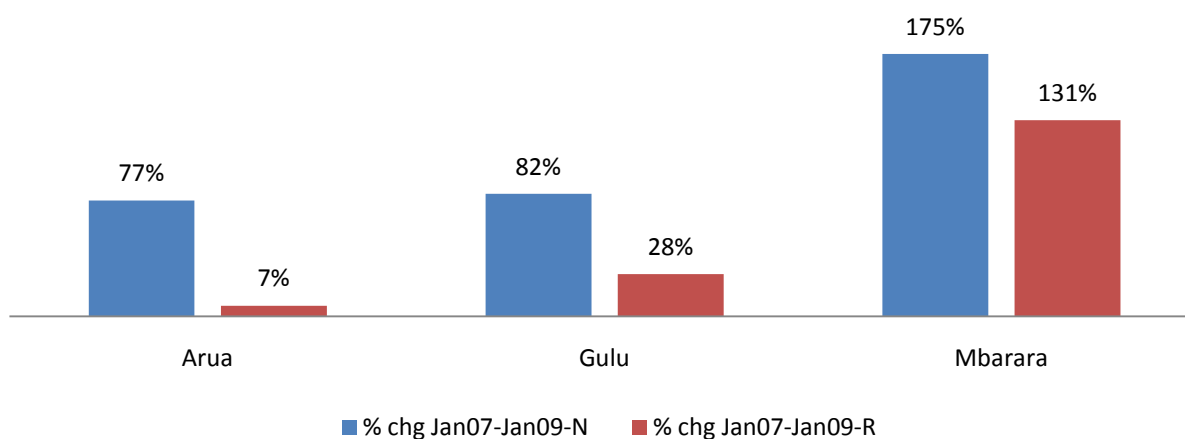
Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

³⁵ There were missing observations for sorghum grain prices for: Arua in November 2006, December 2007, May-December 2008; Mbarara in November 2006, December 2007.

³⁶ There were missing observations for sorghum grain prices for: Arua in November 2006, December 2007, May-December 2008; Mbarara in November 2006, December 2007.

A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of sorghum grain increased in all three cities below, in both nominal and real terms. In nominal terms, sorghum grain prices increased between 77 and 175 percent; in real terms, they increased seven to 131 percent.

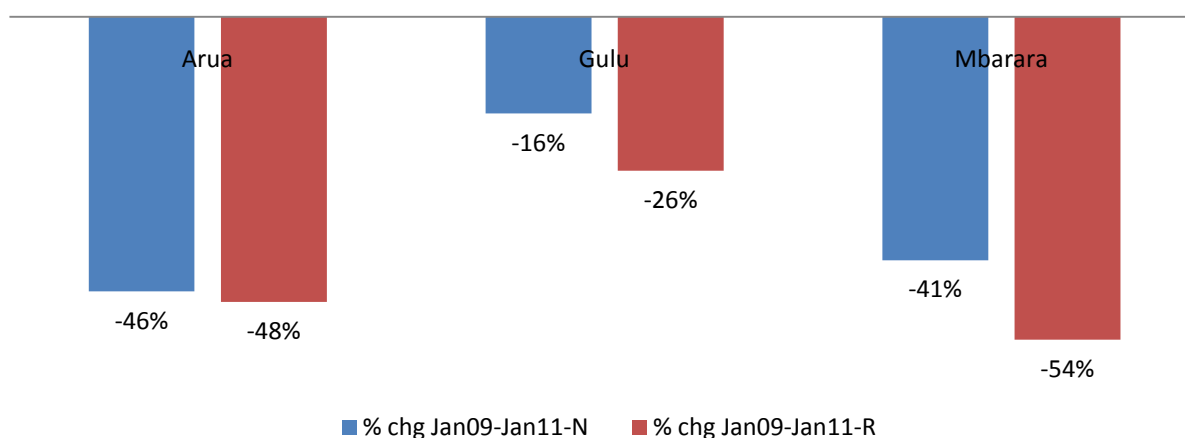
Figure 26. Average Monthly Nominal and Real Prices of Sorghum Grain, January 2007 and January 2009, UGX/Kg



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

A comparison of average monthly prices in January 2009 and January 2011 show the tapering off of the effects of the price spikes, with the price of sorghum grain having decreased in both nominal and real terms in January 2009 compared to January 2011 in all three cities. In nominal terms, sorghum grain prices fell between 16 and 46 percent; in real terms, they fell 26 to 54 percent.

Figure 27. Average Monthly Nominal and Real Prices of Sorghum Grain, January 2009 and January 2011, UGX/Kg

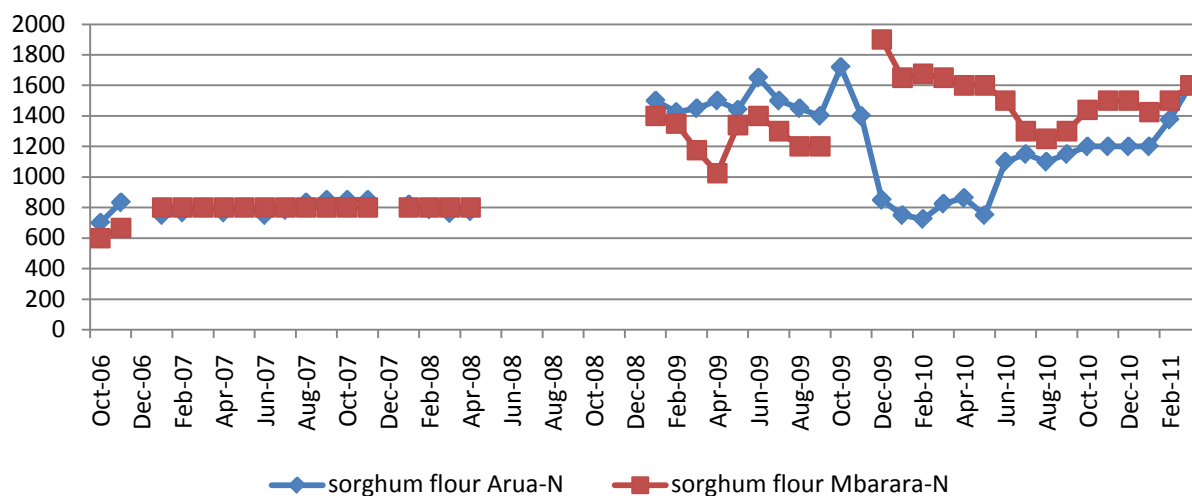


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

IV.viii.vi. Sorghum Flour

In nominal terms, sorghum flour prices peaked during 2009 for Arua, and late 2009 through mid-2010 for Mbarara. By March 2011, prices remained about double their level compared to October 2006. In nominal terms, sorghum flour prices across the cities ranged from UGX 600/kg to UGX 1,900/kg.

Figure 28. Average Monthly Sorghum Flour Prices (Nominal), UGX/Kg³⁷, October 2006-March 2011

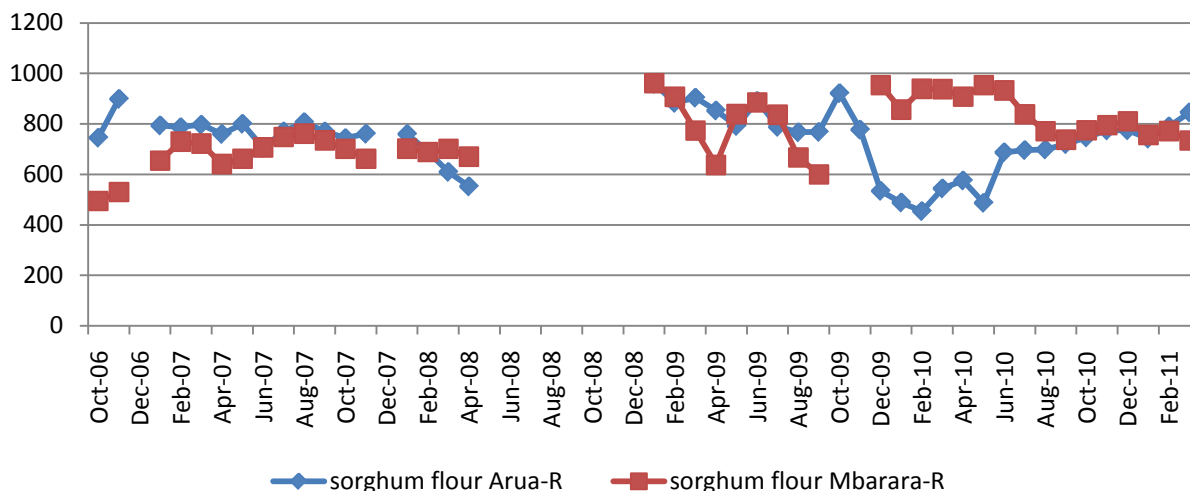


Source: Fintrac/BEST calculations, based on data from FoodNet.

In real terms (R), sorghum flour prices across the cities ranged from a minimum of UGX 454/kg to a maximum of UGX 961/kg.

³⁷ There were missing observations for sorghum flour prices for: Arua in December 2006, December 2007, May-December 2008; Mbarara in December 2006, December 2007, May-December 2008, and October-November 2009.

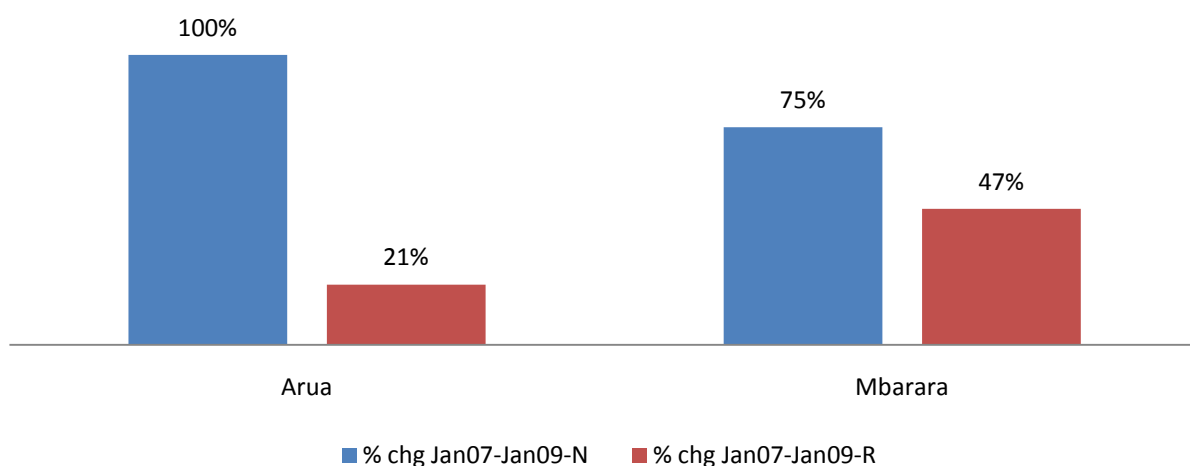
Figure 29. Average Monthly Sorghum Flour Prices (Real), UGX/Kg³⁸, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS.

A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of sorghum flour increased in both cities below, in both nominal and real terms. In nominal terms, sorghum flour prices increased between 75 percent and 100 percent; in real terms, they increased 21 percent to 47 percent.

Figure 30. Average Monthly Nominal and Real Prices of Sorghum Flour, January 2007 and January 2009, UGX/Kg

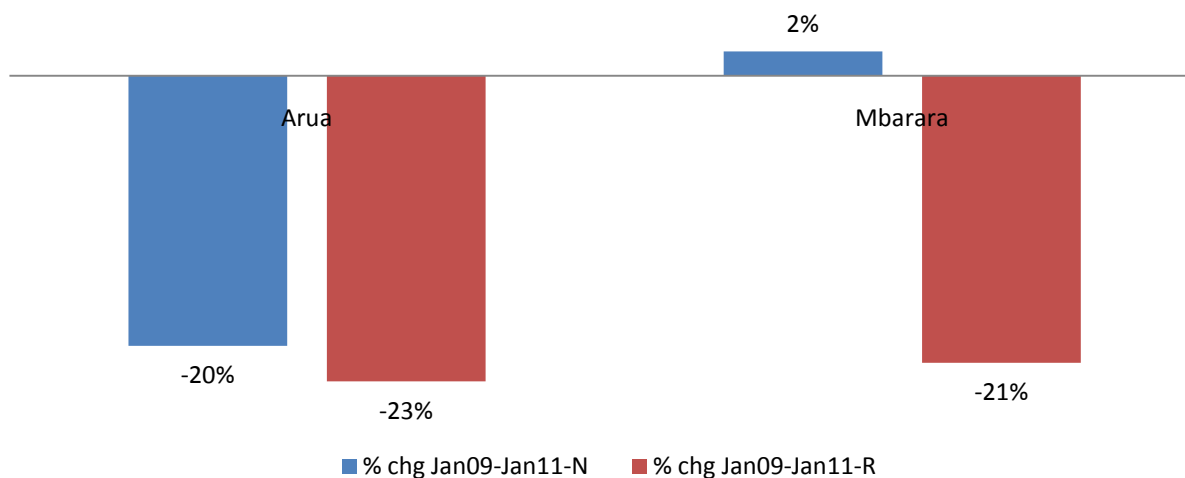


Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

³⁸ There were missing observations for sorghum flour prices for: Arua in December 2006, December 2007, May-December 2008; Mbarara in December 2006, December 2007, May-December 2008, October-November 2009.

A comparison of average monthly prices in January 2009 and January 2011 show the tapering off of the effects of the price spikes, with the price of sorghum flour having decreased in real terms, in January 2011, compared to January 2009, in both cities, and in nominal terms in Arua. In nominal terms, the sorghum flour prices decreased up to 20 percent; in real terms, they decreased by 21 to 23 percent.

Figure 31. Average Monthly Nominal and Real Prices of Sorghum Flour, January 2009 and January 2011, UGX/Kg

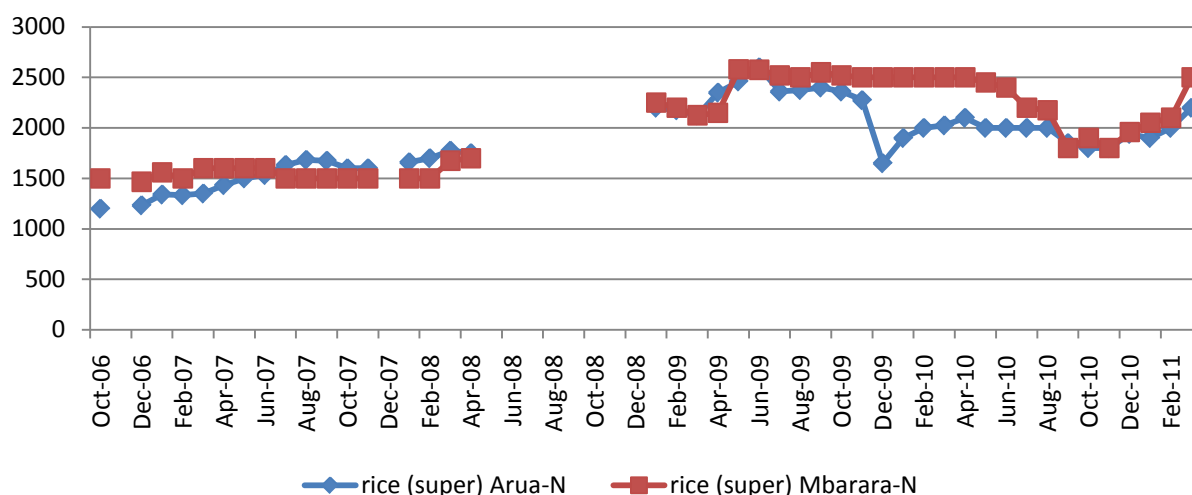


Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

IV.viii.vii. Rice

In nominal terms, rice prices peaked during 2009. By March 2011, prices remained double their level compared to October 2006, in Arua, and more than 1.5 times their level in Mbarara. Rice prices in nominal terms across the cities ranged from UGX 1,200/kg to UGX 2,600/kg.

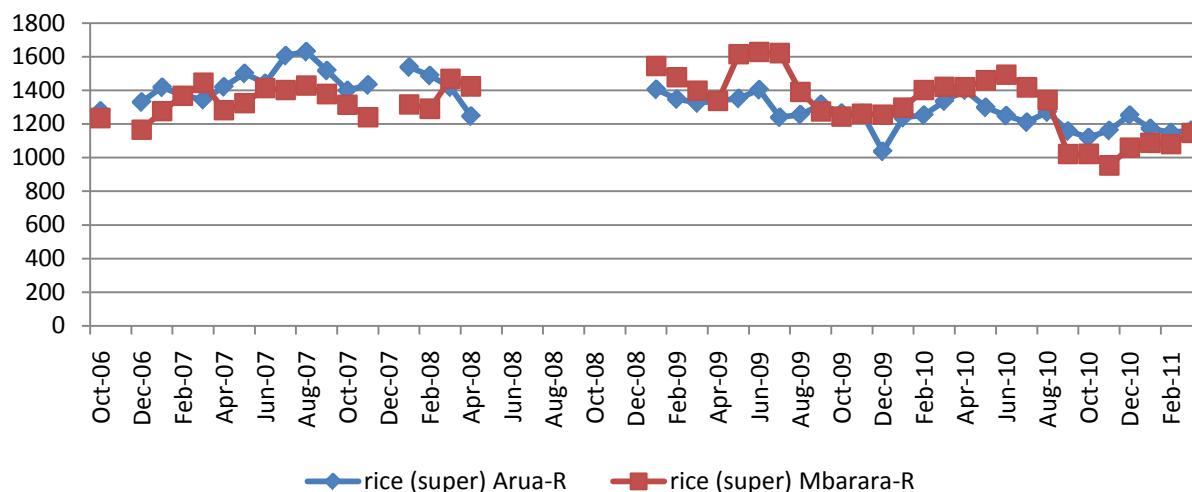
Figure 32. Average Monthly Rice Prices (Nominal), UGX/Kg³⁹, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet.

In real terms (R), rice prices across the cities ranged from a minimum of UGX 954/kg to a maximum of UGX 1,630/kg.

Figure 33. Average Monthly Rice Prices (Real), UGX/Kg⁴⁰, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS.

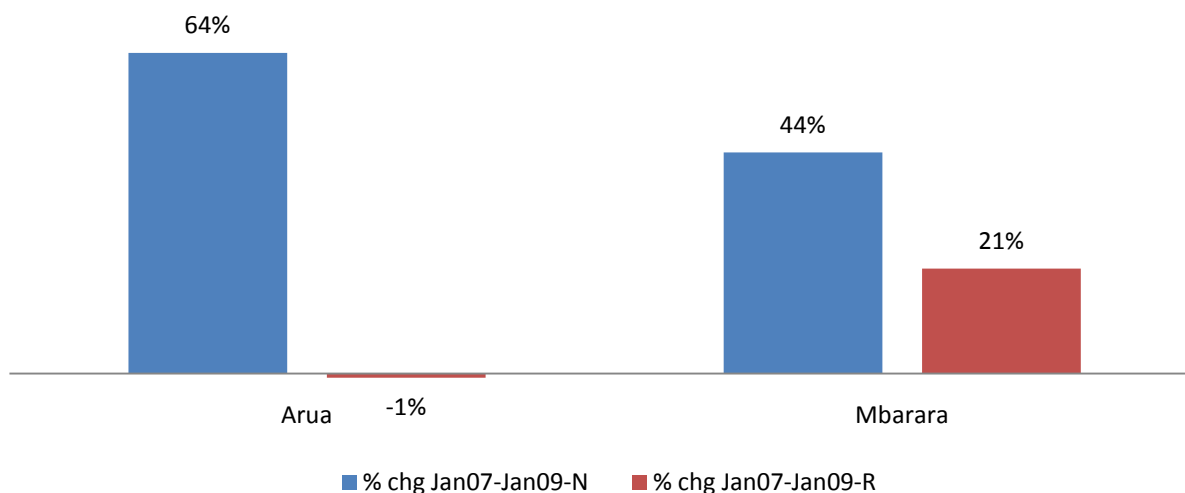
A comparison of average monthly prices in January 2007 and January 2009 shows that during the food and fuel price crisis, the price of rice increased in Mbarara, in both nominal and real

³⁹ There were missing observations for rice prices for: Arua in November 2006, December 2007, May-December 2008; Mbarara in November 2006, December 2007, May-December 2008.

⁴⁰ There were missing observations for rice prices for: Arua in November 2006, December 2007, May-December 2008; Mbarara in November 2006, December 2007, May-December 2008.

terms, however increased only in nominal terms for Arua, with the price barely changing in real terms. In nominal terms, rice prices in both cities increased between 44 and 64 percent; in real terms, they increased up to 21 percent.

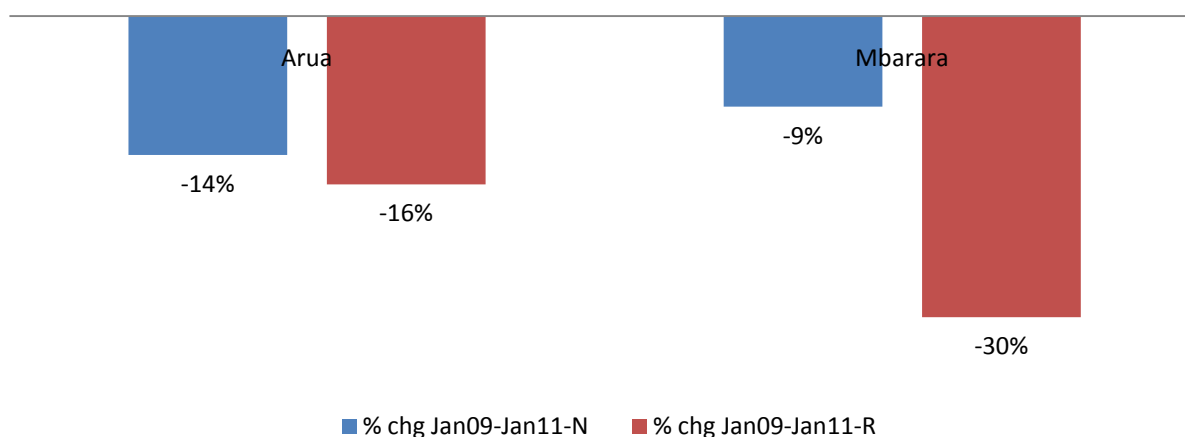
Figure 34. Average Monthly Nominal and Real Prices of Rice, January 2007 and January 2009, UGX/Kg



Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

A comparison of average monthly prices in January 2009 and January 2011 show the tapering off of the effects of the price spikes, with the price of rice having decreased in both nominal and real terms in January 2011 compared to January 2009 in both cities. In nominal terms, rice prices decreased between 9 and 14 percent; in real terms, they decreased between 16 and 30 percent.

Figure 35. Average Monthly Nominal and Real Prices of Rice, January 2009 and January 2011, UGX/Kg



Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS

IV.viii.viii. Comparison of Staple Food Prices: Cities and Regions

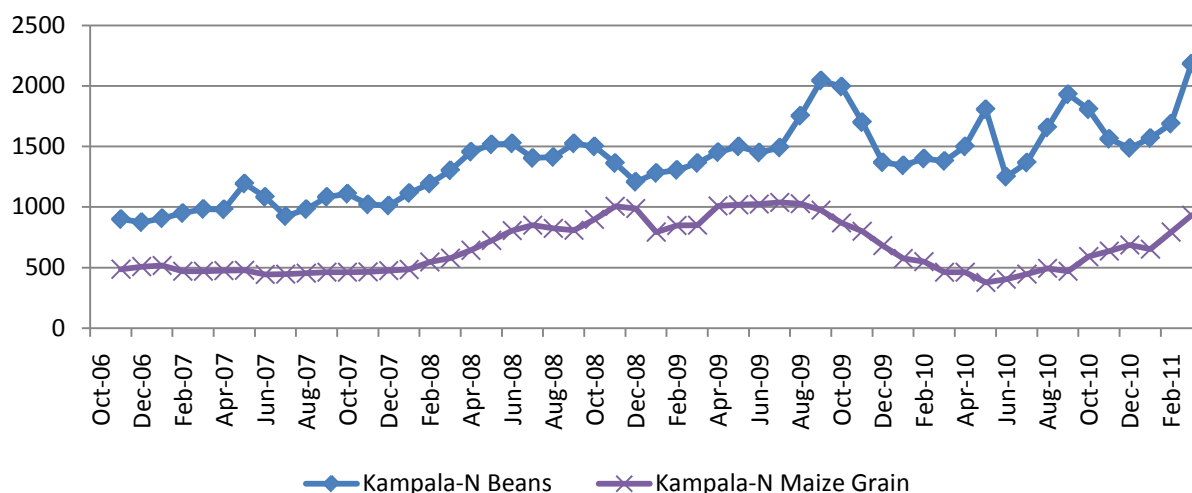
This section compares the prices of staple foods across cities⁴¹ and regions.

The city-level analysis of staple prices examines average monthly prices for staple foods in Kampala, Arua, Gulu and Mbarara, during the period October 2006 to March 2011. The food CPI for each city, from the UBoS, was used to derive real prices. The regional-level analysis of staple prices examines average monthly prices (nominal), covering four regions of Uganda (central, eastern, northern, western), during the period July 2008 to April 2011.⁴² The data are from InfoTrade.

Summary. In sum, city-level price data show that beans and rice are the most expensive staples.⁴³ At the regional level, beans also appear to be the most expensive staple in the country. Bean prices range from a low of UGX 1,013/kg in the northern region to a high of UGX 2,597/kg in the western region. Maize grain, on the other hand, is the least expensive staple in the country. Maize grain prices range from a minimum of UGX 279/kg in the eastern region and UGX 1,009/kg in the western region. The text and figures below examine the data in more detail.

Kampala. Only beans and maize grain prices were available for Kampala. Among the commodities for which price data were available, beans have been the most expensive staple in Kampala, in both nominal and real terms. In nominal terms, beans prices ranged from UGX 875/kg to UGX 2,183/kg, while maize grain prices ranged from UGX 379/kg to UGX 1,038/kg.

Figure 36. Staple Food Prices in Kampala (Nominal), UGX/Kg⁴⁴, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

⁴¹ CPIs were available only for the cities; therefore, only the cities have both real and nominal prices available.

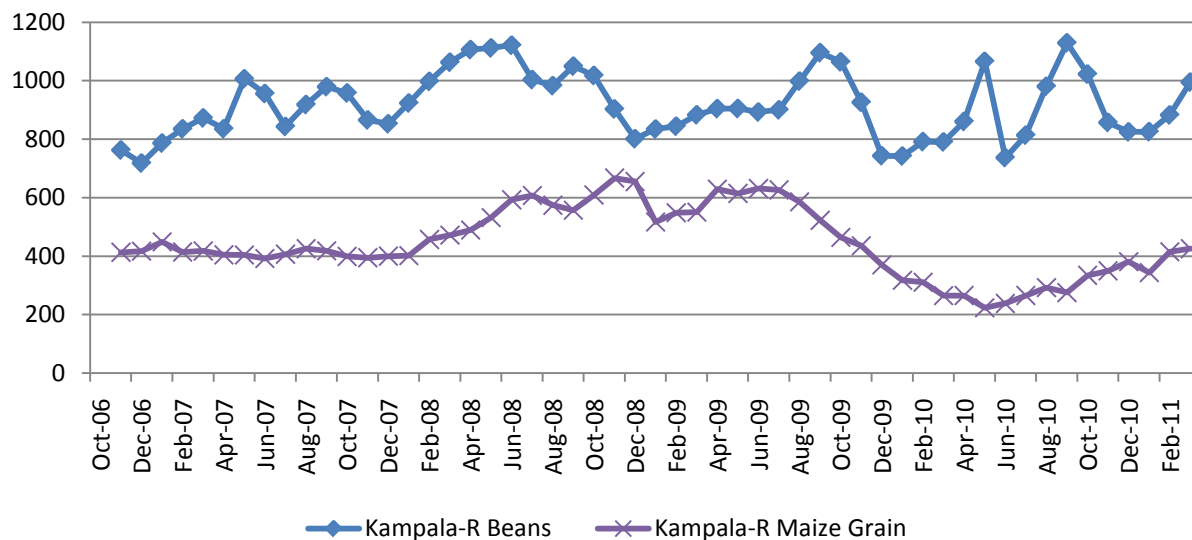
⁴² InfoTrade regional price data covered a shorter time period than the FoodNet city price data.

⁴³ In nominal terms

⁴⁴ There were missing observations for beans and maize for Kampala in October 2006.

In real terms, beans prices ranged from UGX 718/kg to UGX 1,130/kg, while maize grain prices ranged from UGX 224/kg to UGX 667/kg.

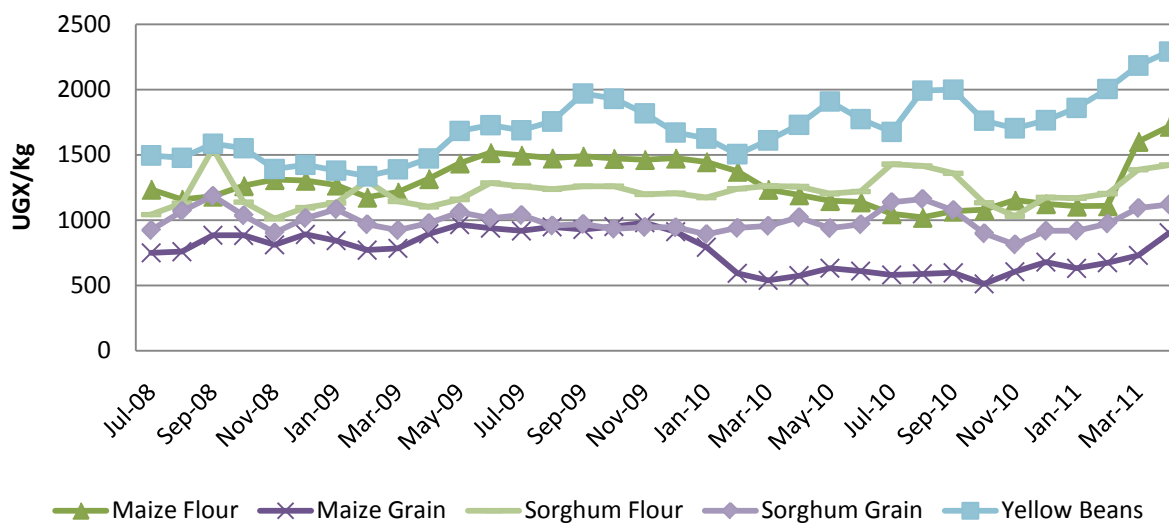
Figure 37. Staple Food Prices in Kampala (Real), UGX/Kg⁴⁵, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

Kampala is located in the central region. Regional-level data show that beans are also the most expensive staple in the central region. Beans prices across the region ranged from a minimum of UGX1,337/kg to a maximum of UGX 2,291/kg. Maize grain, on the other hand, is the least expensive of the staples. Maize prices ranged from a minimum of UGX 513/kg to a maximum of UGX 980/kg. Staple food prices in the central region have been steadily rising from October 2010 to present.

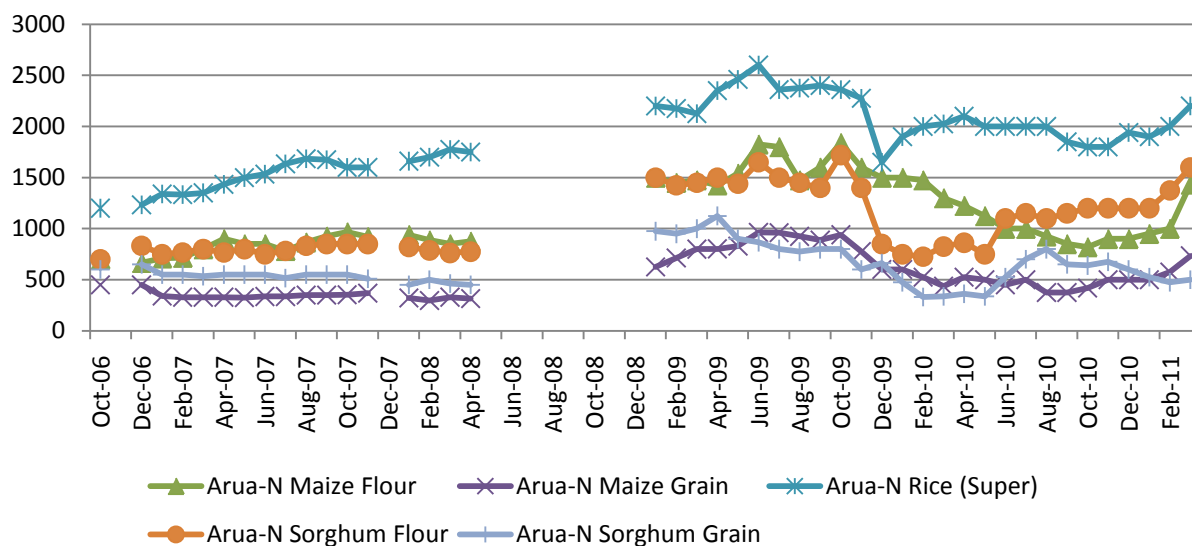
⁴⁵ There were missing observations for beans and maize for Kampala in October 2006.

Figure 38. Average Monthly Prices (Nominal), Staple Foods, Central Region, UGX/Kg

Source: Compiled by Fintrac/BEST, based on data from InfoTrade

Arua. Maize grain and flour, rice, and sorghum grain and flour prices were available for Arua. Among the commodities for which price data were available, since 2009, rice has been the most expensive staple in Arua, in nominal terms.

In nominal terms, maize flour prices from UGX 667/kg to UGX 1,840/kg; maize grain prices ranged from UGX 298/kg to UGX 963/kg; rice prices ranged from UGX 1,200/kg to UGX 2,600/kg; sorghum flour prices ranged from UGX 700/kg to UGX 1,720/kg; and sorghum grain prices ranged from UGX 333/kg to UGX 1,125/kg.

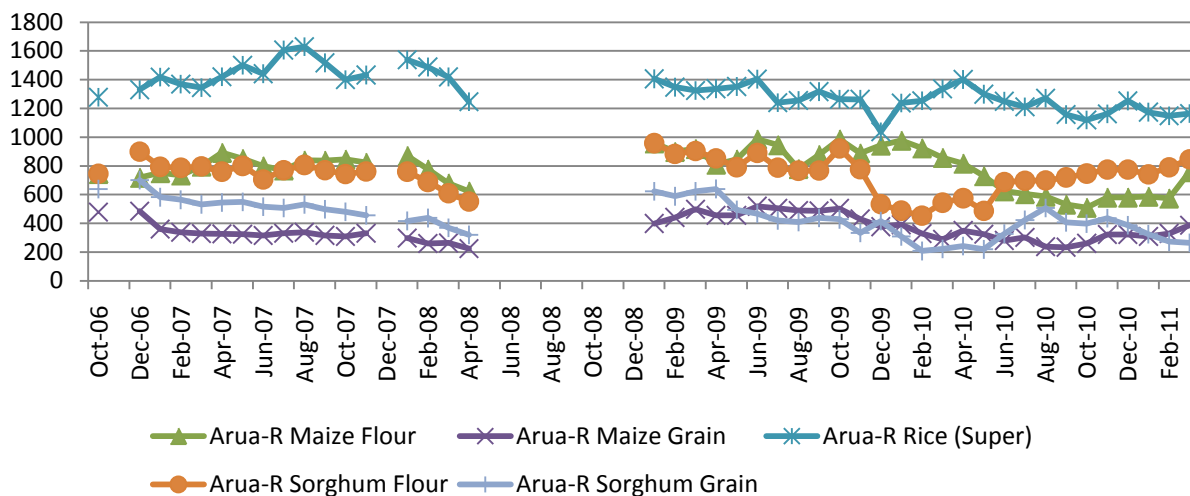
Figure 39. Staple Food Prices in Arua (Nominal), UGX/Kg⁴⁶, October 2006-March 2011

Source: Fintrac/BEST calculations, based on data from FoodNet.

In real terms, maize flour prices ranged from UGX 510/kg to UGX 986/kg; maize grain prices ranged from UGX 224/kg to UGX 520/kg; rice prices ranged from UGX 1,038/kg to UGX 1,630/kg; sorghum flour prices ranged from UGX 454/kg to UGX 959/kg; and sorghum grain prices ranged from UGX 208/kg to UGX 701/kg.

⁴⁶ There were missing observations for Arua for: rice prices in November 2006, December 2007, May-December 2008; sorghum flour prices in December 2006, December 2007, May-December 2008; sorghum grain prices in November 2006, December 2007, May-December 2008; maize flour prices in November 2006, December 2007, May-December 2008; maize grain prices in November 2006, December 2007, May-December 2008.

Figure 40. Staple Food Prices in Arua (Real), UGX/Kg⁴⁷, October 2006-March 2011

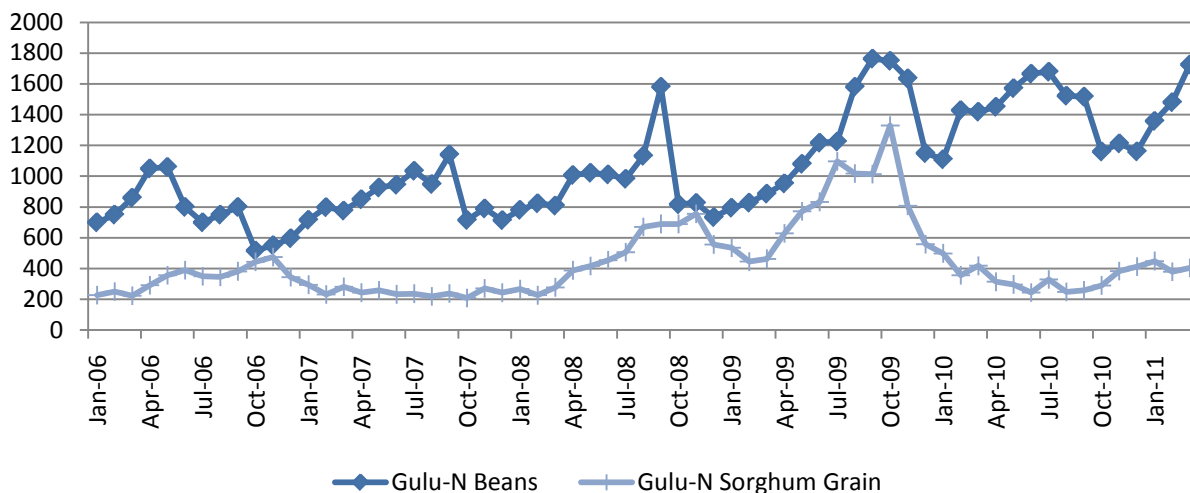


Source: Fintrac/BEST calculations, based on data from FoodNet and UBoS.

Gulu. Only beans and sorghum grain prices were available for Gulu. Among the commodities for which price data were available, beans have been the most expensive staple in Gulu, both in nominal and real terms.

In nominal terms, beans prices ranged from UGX 517/kg to UGX 1,764/kg; sorghum grain prices ranged from UGX 209/kg to UGX 1,330/kg.

Figure 41. Staple Food Prices in Gulu (Nominal), UGX/Kg, October 2006-March 2011

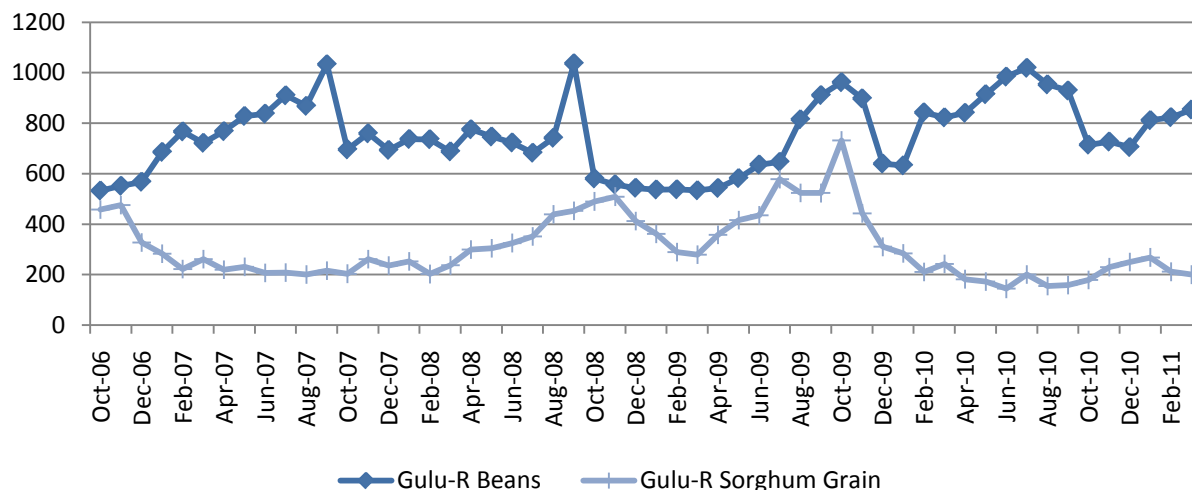


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

⁴⁷ There were missing observations for Arua for: rice prices in November 2006, December 2007, May-December 2008; sorghum flour prices in December 2006, December 2007, May-December 2008; sorghum grain prices in November 2006, December 2007, May-December 2008; maize flour prices in November 2006, December 2007, May-December 2008; maize grain prices in November 2006, December 2007, May-December 2008.

In real terms, beans prices ranged from UGX 532/kg to UGX 1,037/kg; sorghum grain prices ranged from UGX 144/kg to UGX 731/kg.

Figure 42. Staple Food Prices in Gulu (Real), UGX/Kg, October 2006-March 2011

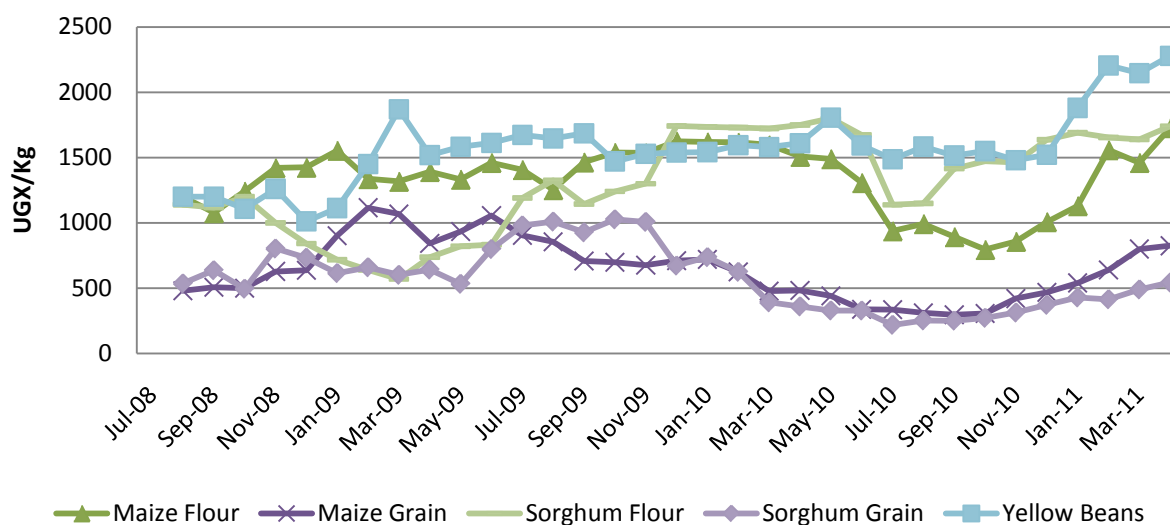


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

Arua and Gulu are located in the northern region. Regional-level data also show that beans are the most expensive. Regional-level data shows that since the end of 2009 up until March 2011, sorghum flour has been the second most expensive staple food in the region. Maize and sorghum grains are the least expensive in the region. Soroti, which lies in the northern region, is one of the main sorghum growing areas in the country, supplying the Nile Breweries with all the sorghum needed for its beer production. The stable demand from the Nile Breweries has ensured a high production and stable prices in the region.⁴⁸ Bean prices range from a high of UGX 1,487/kg to a low of UGX 1,471/kg. On the other hand, sorghum prices range from a high of UGX 1,027/kg to a low of UGX 219/kg.

⁴⁸ IFPRI August 2010, "Price transmission for agricultural commodities in Uganda: An empirical vector autoregressive analysis

Figure 43. Average Monthly Prices (Nominal), Staple Foods, Northern Region, UGX/Kg

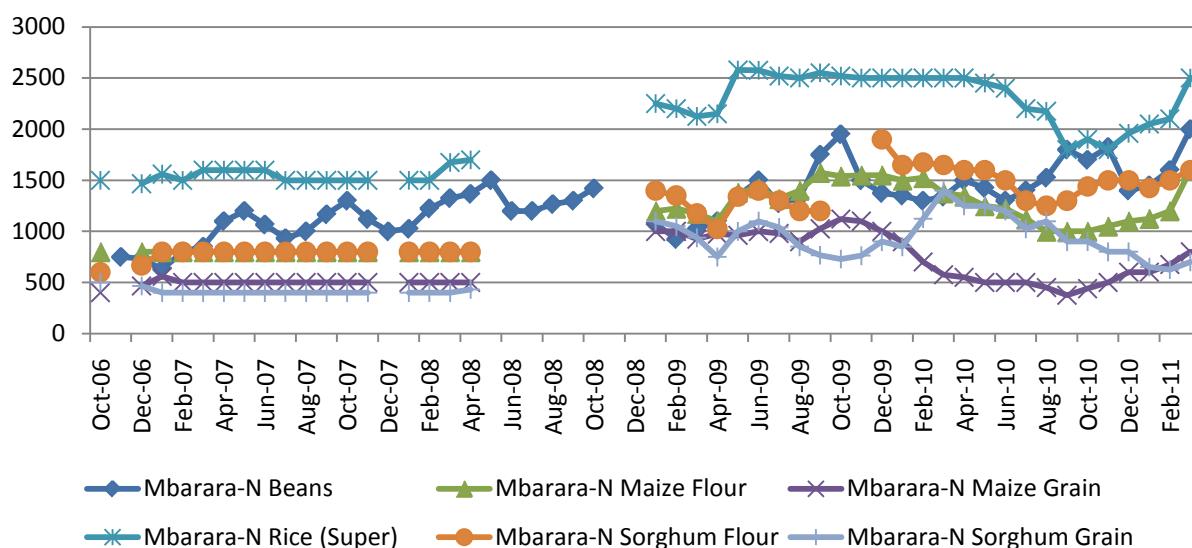


Source: Compiled by Fintrac/BEST, based on data from InfoTrade

Mbarara. Only beans, maize grain and flour, rice, and sorghum flour prices were available for Mbarara. Among the commodities for which price data were available, rice has been the most expensive staple in Mbarara, in both nominal and real terms.

In nominal terms, beans prices ranged from UGX 630/kg to UGX 2,000/kg; maize flour prices ranged from UGX 800/kg to UGX 1,600/kg; maize grain prices ranged from UGX 375/kg to UGX 1,120/kg; rice prices ranged from UGX 1,467/kg to UGX 2,580/kg; sorghum flour prices ranged from UGX 600/kg to UGX 1,900/kg; and sorghum grain prices ranged from UGX 400/kg to UGX 1,400/kg.

Figure 44. Staple Food Prices in Mbarara (Nominal), UGX/Kg⁴⁹, October 2006-March 2011

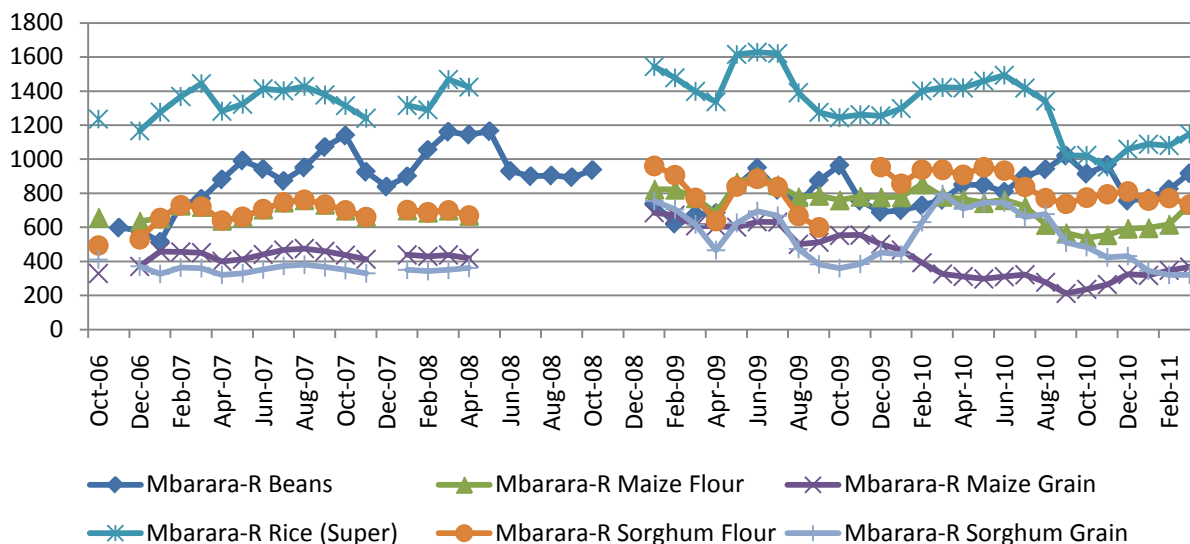


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

In real terms, beans prices ranged from UGX 515/kg to UGX 1,164/kg; maize flour prices ranged from UGX 538/kg to UGX 901/kg; maize grain prices ranged from UGX 213/kg to UGX 686/kg; rice prices ranged from UGX 954/kg to UGX 1,628/kg; sorghum flour prices ranged from UGX 494/kg to UGX 961/kg; and sorghum grain prices ranged from UGX 320/kg to UGX 796/kg.

⁴⁹ There were missing observations for Mbarara for: beans prices in October 2006, November-December 2008; rice prices in November 2006, December 2007, May-December 2008; sorghum flour prices in December 2006, December 2007, May-December 2008, October-November 2009; sorghum grain prices in November 2006, December 2007; maize flour prices in November 2006, December 2007, May-December 2008; maize grain prices in November 2006, December 2007, May-December 2008.

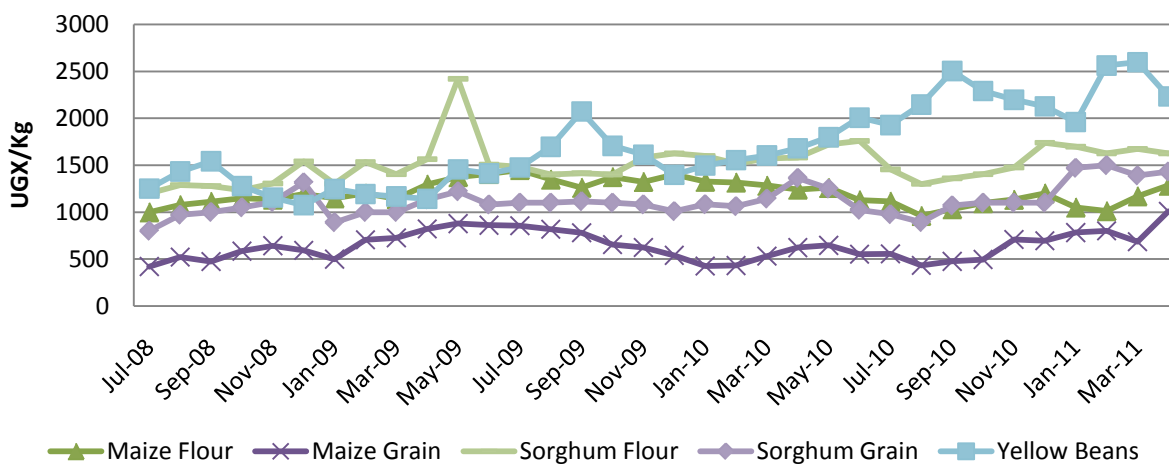
Figure 45. Staple Food Prices in Mbarara (Real), UGX/Kg⁵⁰, October 2006-March 2011



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

Mbarara is located in the western region. Regional-level data show that just like in the northern region, beans and sorghum flour are the most expensive staples⁵¹ in the western region.⁵² Beans prices range from a minimum of UGX 1,075/kg to a maximum of UGX 2,597/kg, and sorghum flour prices range from a low of UGX 1,54/kg to UGX 1,673/kg. Maize prices are the lowest in the region, with the lowest price being UGX 420/kg and the highest price being UGX 1,009/kg.

Figure 46. Average Monthly Prices (Nominal), Staple Foods, Western Region, UGX/Kg



⁵⁰ There were missing observations for Mbarara for: beans prices in October 2006, November-December 2008; rice prices in November 2006, December 2007, May-December 2008; sorghum flour prices in December 2006, December 2007, May-December 2008, October-November 2009; sorghum grain prices in November 2006, December 2007; maize flour prices in November 2006, December 2007, May-December 2008; maize grain prices in November 2006, December 2007, May-December 2008.

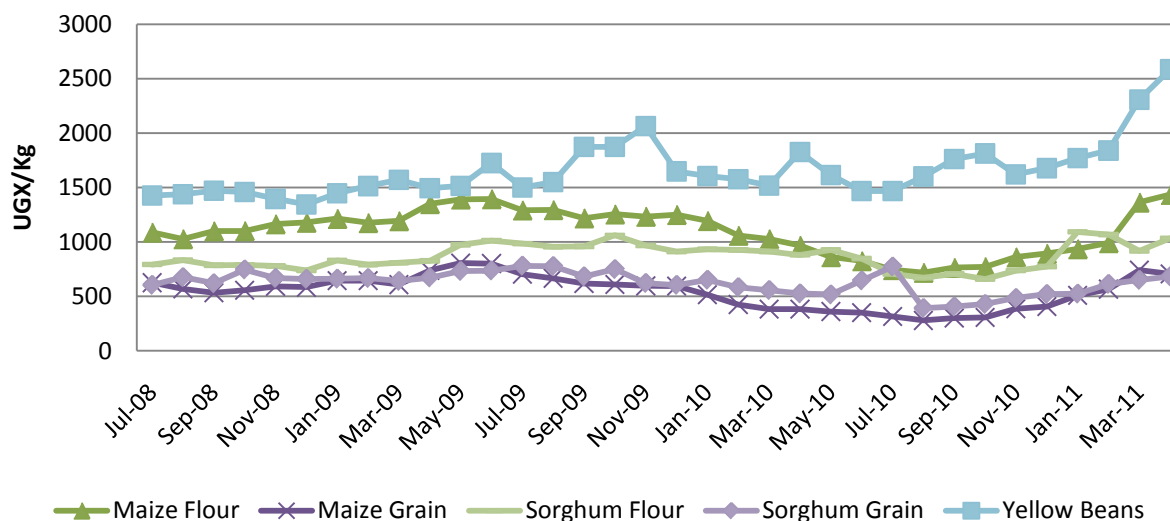
⁵¹ No rice price data was available at the regional level.

⁵² Beans and sorghum flour are the most expensive staples, relative to the other staples for which regional price data were available.

Source: Compiled by Fintrac/BEST, based on data from InfoTrade

At the regional level, bean prices also appear to be the most expensive in the eastern region. The eastern and western regions recorded the highest bean prices in the country. Prices across the region ranged from a minimum of UGX 1,345/kg to a maximum of UGX 2,585/kg. Maize prices are also the lowest in the eastern region. Maize prices range from a low of UGX 279/kg to a high of UGX 806/kg.

Figure 47. Average Monthly Prices (Nominal), Staple Foods, Eastern Region, UGX/Kg



Source: Compiled by Fintrac/BEST, based on data from InfoTrade

IV.viii.ix. Seasonality

The city-level seasonal price analysis data cover January 2010 through December 2010⁵³, the most recently available complete year of data. The commodities covered are maize grain and flour, sorghum grain and flour, rice, and an unspecified variety of beans.

Summary. Maize grain and flour prices were lowest in late summer⁵⁴ through early autumn in Arua and Mbarara, with rice prices lowest in autumn for the same two cities. Maize grain prices were lowest mid-summer in Kampala. Sorghum grain and flour prices, and beans prices had no pattern - they were lowest at different times for each city. Generally, price lows corresponded with either the first harvest season (June through August) or the second harvest season (November through January).

The regional-level seasonal price analysis covers the period of July 2008 through April 2011⁵⁵, for the six major regions of Uganda: Central (C), Eastern (E), Northern (N), Northwestern (NW),

⁵³ Source of city data is primarily FoodNet, with some data from UBoS, MIS, FEWS NET.

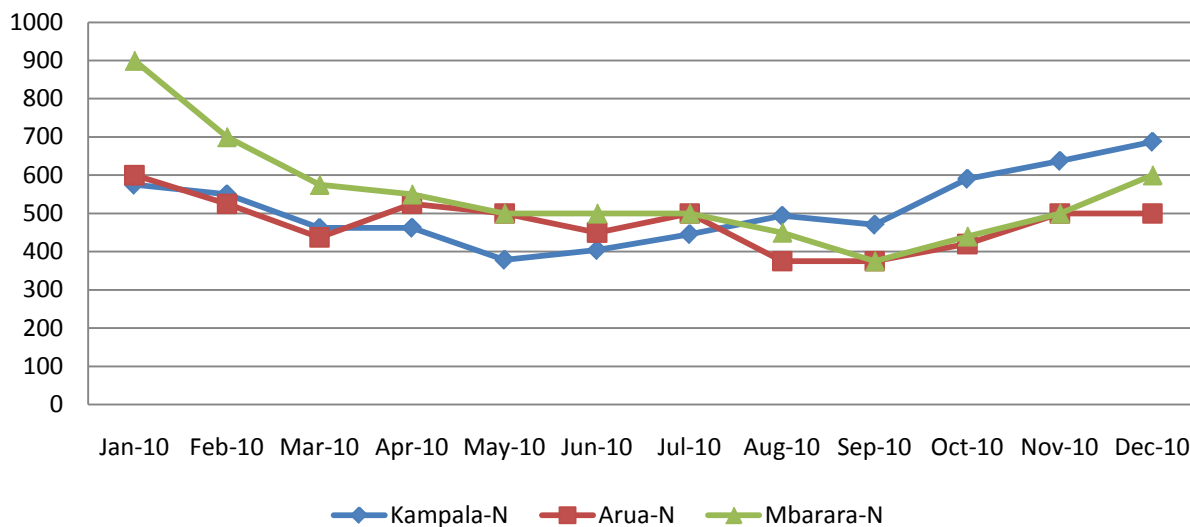
⁵⁴ Summer is defined as June-August; autumn is defined as September-November.

Source of regional data is InfoTrade.

Southwestern (SW), and Western (W), and include the following commodities: maize grain, sorghum grain and yellow beans.⁵⁶ Further details are found in the text and figures below.

Maize grain. Maize grain prices have been lowest in August and September for Arua, September and October for Mbarara, and May and June for Kampala, which coincides with the timing of the first season harvests that last from June through August.

Figure 48. Average Monthly Maize Grain Prices (Nominal), UGX/Kg, January-December 2010

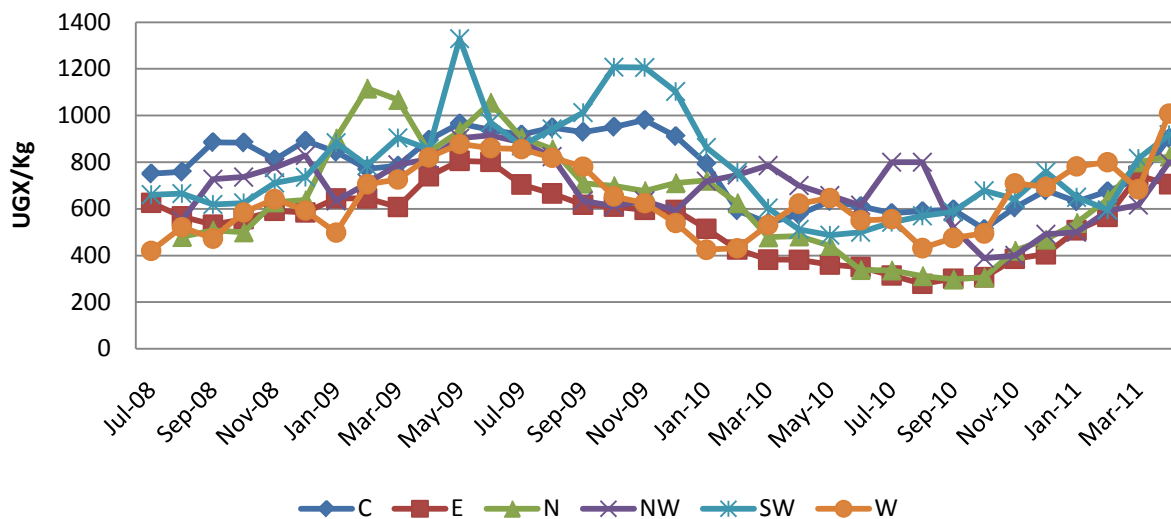


Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

During the months of May and June, the maize prices begin to fall and reach their lowest level in July and August, during the main harvest period of the first season. The maize price dips again in December and January (in some regions), corresponding to the harvest period in the second season as shown in the figures below. Maize prices are relatively low in the east, west, and parts of the northern regions, as these are large inflow markets located close to major production zones. The southwestern, northwestern, and central regions have the highest prices levels.

⁵⁶ No regional price data were available for rice.

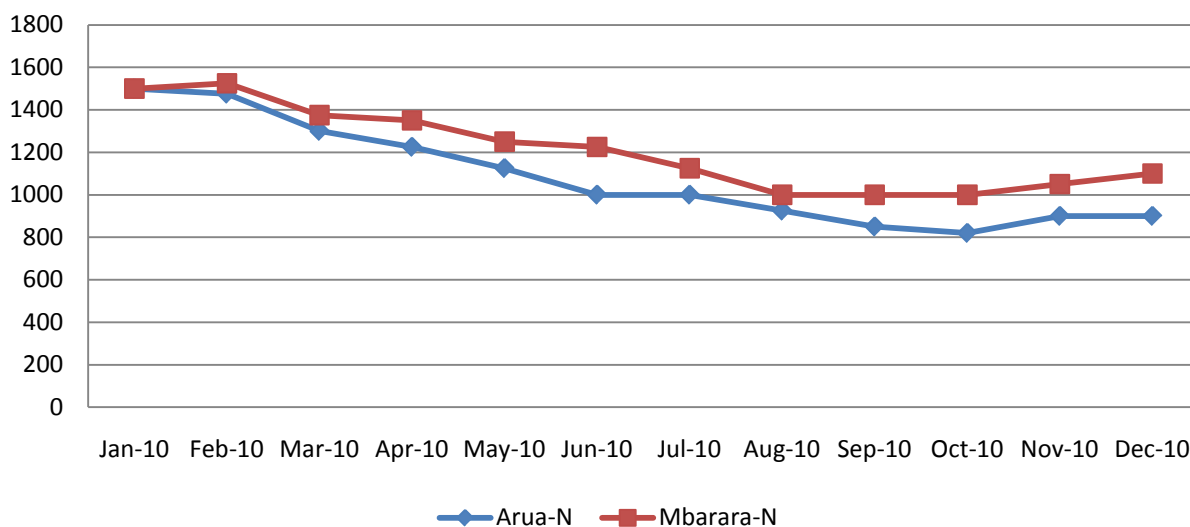
Figure 49. Average Monthly Maize Grain Prices (Nominal), by Region, UGX/Kg



Source: Compiled by Fintrac/BEST, based on data from InfoTrade

Maize flour. Maize flour prices were lowest in Arua in September and October, and in Mbarara during August through October, which coincides with the timing of the first season harvests that last from June through August.

Figure 50. Average Monthly Maize Flour Prices (Nominal), UGX/Kg, January-December 2010

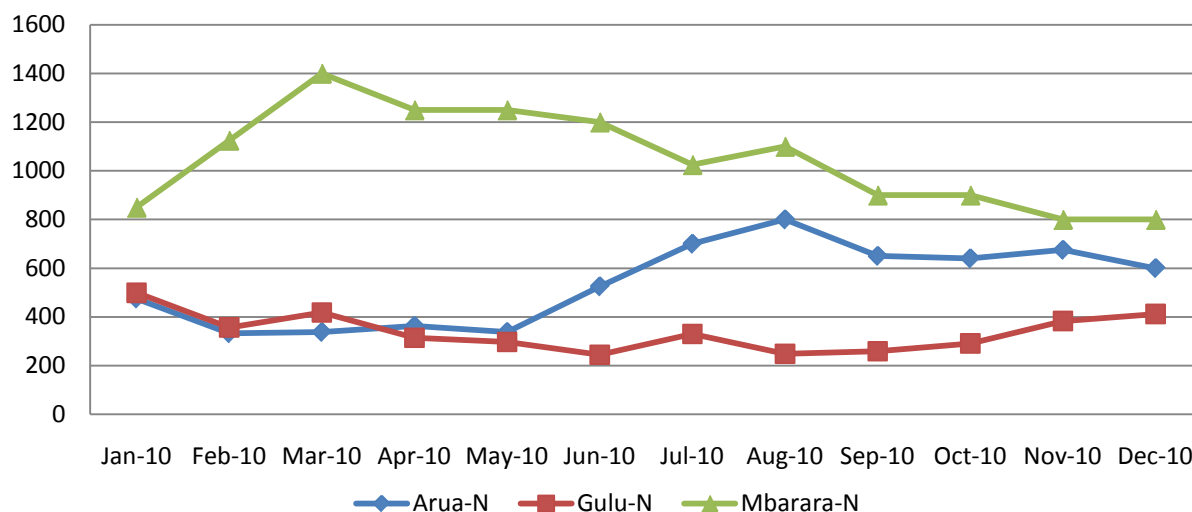


Source: Fintrac/BEST calculations, based on data from FoodNet.

Sorghum grain. Sorghum grain prices were lowest in February and March for Arua, November through January for Mbarara (which coincides with the timing of the second season harvest,

November through January), and August and September for Gulu (which coincides with the timing of the first season harvest that lasts from June through August).

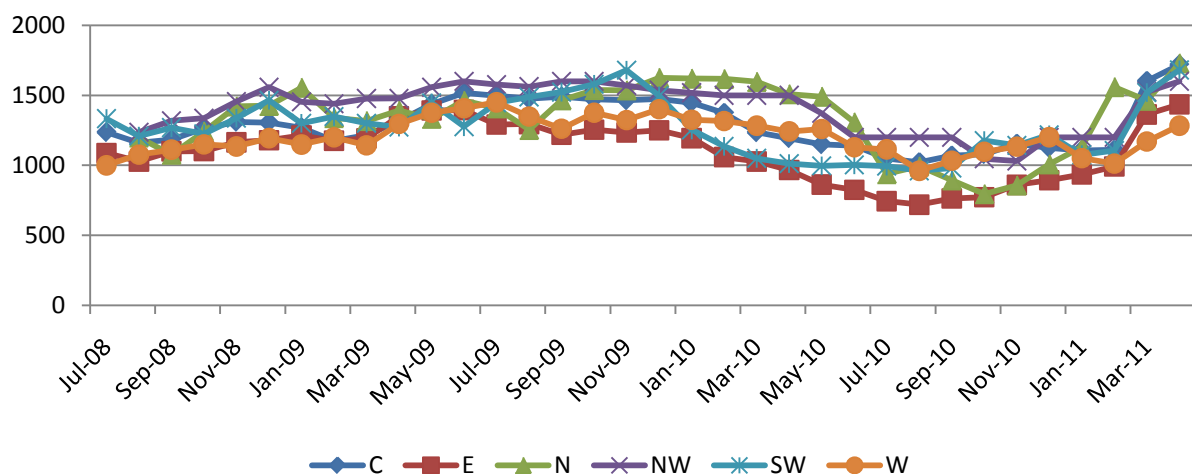
Figure 51. Average Monthly Sorghum Grain Prices (Nominal), UGX/Kg, January-December 2010



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

Prices from the regional level show that sorghum prices fluctuate over the year, depending on availability. The figure below shows that sorghum prices gradually rise from January to February (except for 2010), as the lean season approaches. Above average rainfall made 2010 an exceptional year. This period of time (from January to February) is when farmers have just completed their planting, and sorghum availability in the market is low. From March to June, sorghum prices further rise because of increased scarcity.

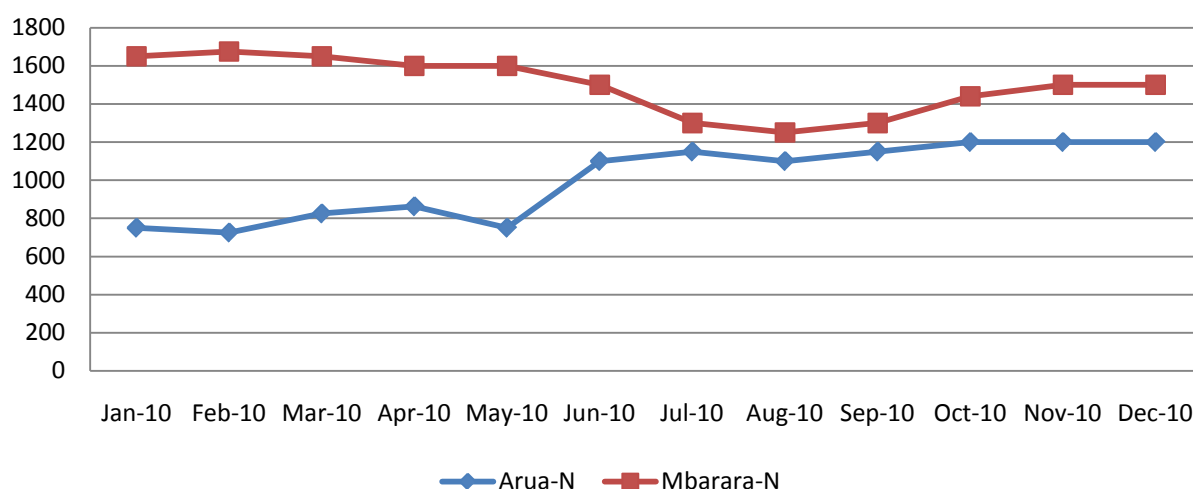
Figure 52. Average Monthly Sorghum Prices (Nominal), by Region, UGX/Kg



Source: Compiled by Fintrac/BEST, based on data from InfoTrade

Sorghum flour. Sorghum flour prices were lowest in January and February for Arua (which coincides with the timing of the second season harvest, November through January), and July through September for Mbarara (which coincides with the timing of the first season harvests that last from June through August).

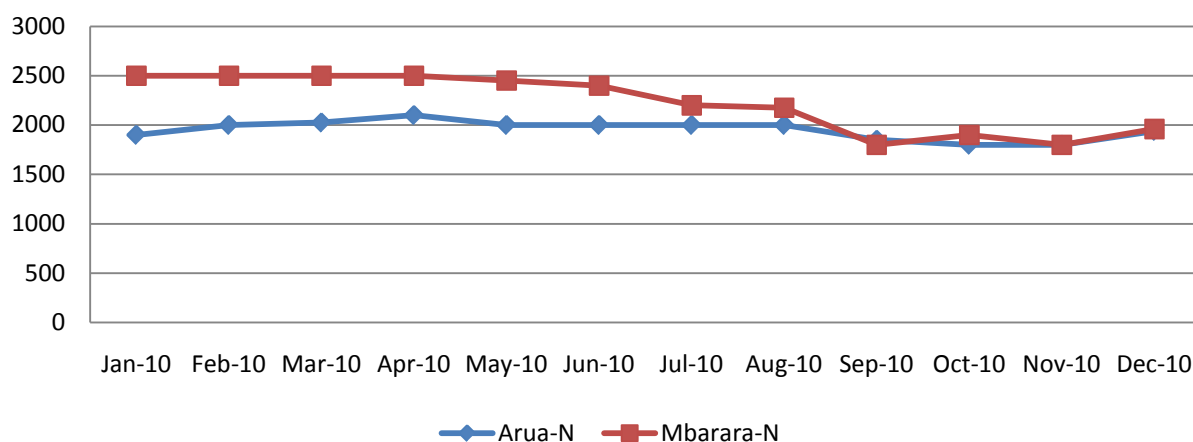
Figure 53. Average Monthly Sorghum Flour Prices (Nominal), UGX/Kg, January-December 2010



Source: Fintrac/BEST calculations, based on data from FoodNet.

Rice. Rice prices were lowest in October and November for Arua, and September through November for Mbarara. Rice price lows appeared delayed during 2010, relative to the first harvest, which occurs during summer months.

Figure 54. Average Monthly Rice Prices (Nominal), UGX/Kg, January-December 2010

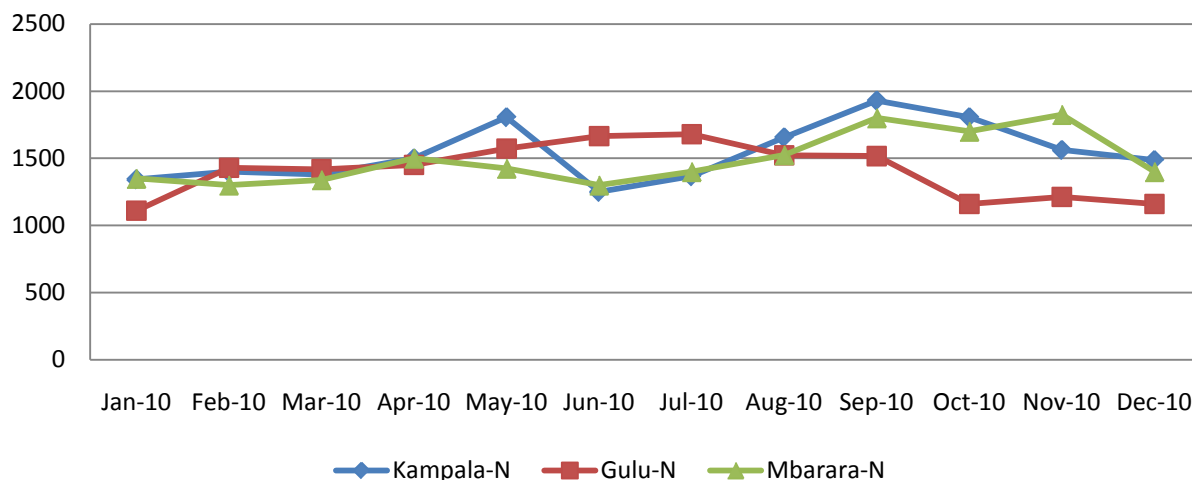


Source: Fintrac/BEST calculations, based on data from FoodNet.

Beans. Beans prices were lowest in October through January for Gulu (which coincides with the timing of the second season harvest, November through January), June and July for

Kampala (which coincides with the timing of the first harvest, June through August), and January through March for Mbarara (which coincides with the timing of the second season harvest, November through January).

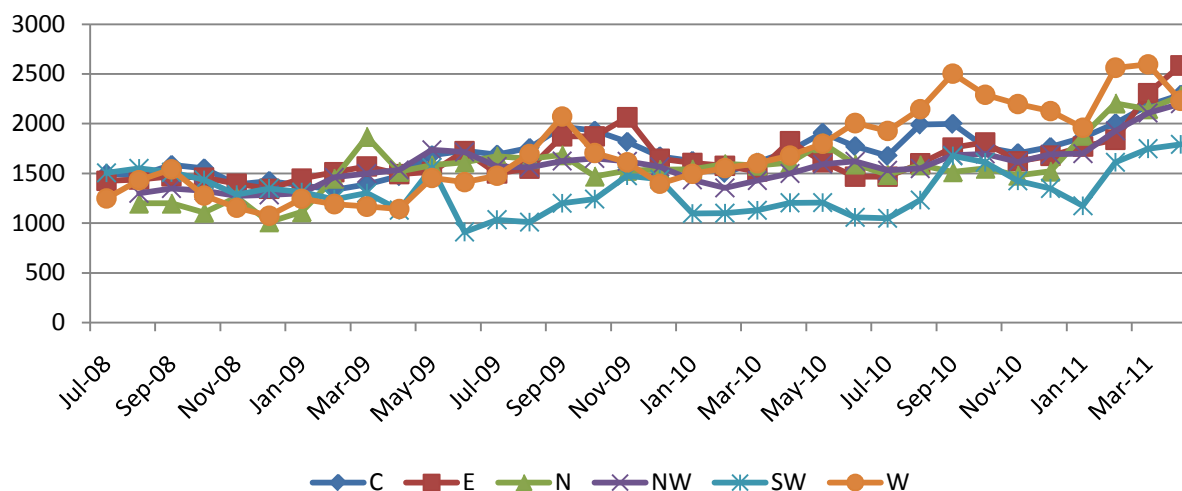
Figure 55. Average Monthly Beans Prices (Nominal), UGX/Kg, January-December 2010



Source: Fintrac/BEST calculations, based on data from FoodNet, UBoS, MIS, FEWS NET

Yellow beans. At the regional level, yellow bean prices exhibit similar price pattern as maize, although the seasonality of bean prices is higher in most regional markets. The prices are lowest in the October to January period during the harvest season. According to FEWS NET, the bean harvests in the central region, Mbale District, and eastern Uganda start in October; the main bean harvest in Kasese district, western Uganda, and other major growing areas begin before the end of November; and the harvest in the northern part of Uganda starts in September in the Lira and Apac districts.

Figure 56. Average Monthly Yellow Beans Prices (Nominal), by Region, UGX/Kg

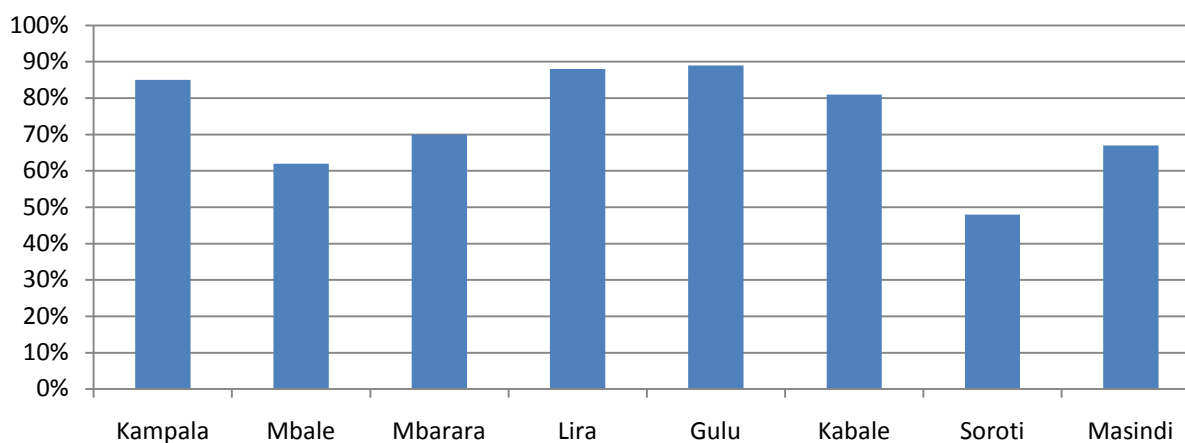


Source: Compiled by Fintrac/BEST, based on data from InfoTrade

IV.ix. Water, Sanitation, and Hygiene Access

In Uganda, water supply coverage averages 66 percent, and is higher in urban (75 percent coverage) than rural areas (64 percent coverage) (Ministry of Water and Environment, 2010). Water supply coverage is highest in Kampala, Lira, and Gulu (85 percent coverage or greater), and lowest in Soroti, Masindi, and Mbale (67 percent coverage or less).

Figure 57. Water Supply Coverage for Selected Cities in 2010 (% of Population)



Source: Ministry of Water and Environment (2010), Uganda Water Supply Atlas 2010

Groundwater (e.g., springs, wells, boreholes) accounts for half of Uganda's water supply, and piped water accounts for 39 percent of water supply sources. Open collection systems (e.g., rainwater tanks, dams, valley tanks) account for the remaining amount (Ministry of Water and Environment, 2010).

Most of the Ugandan population lives within a close distance to the nearest water source: 98 percent of the urban population and 78 percent of the rural population lived no more than one km away from the nearest water source (UBoS, 2010). However, the average amount of time spent waiting for water appears high, at 15 minutes in urban areas and nearly half an hour in rural areas, suggesting inadequate supply of water points to meet current demand for water usage (UBoS, 2010).

Annex V. Details of Past Monetization Sales against Estimated Monthly IPP

Table 15. Comparison of Estimated IPP for Argentine Trigo Pan, versus Sales Prices Achieved

	1	2	3	4	5	6	7	8	9	10	11	12
Month	FOB - Arg	Shipping	Insurance	Offload Bulk and Bag	Port Charges and Clearing	Inland Freight	Est. IPP	IPP Mov. Avg	IPP MA +/- 10%	IPP MA +/- 10%	Sales Price	Sales Price as % of IPP
Jan-07	192	54.0	1.9	15.0	8.0	110.38	381.33	384.98	346.48	423.48		
Feb-07	180	54.2	1.8	15.0	8.0	110.38	369.36	392.29	353.06	431.52		
Mar-07	188	61.0	1.9	15.0	8.0	110.38	384.31	399.30	359.37	439.23		
Apr-07	205	64.5	2.1	15.0	8.0	110.38	404.94	406.70	366.03	447.38	353.34	87%
May-07	210	76.0	2.1	15.0	8.0	110.38	421.51	419.57	377.61	461.53		
Jun-07	226	72.7	2.3	15.0	8.0	110.38	434.35	437.50	393.75	481.24	356.59	82%
Jul-07	238	77.4	2.4	15.0	8.0	110.38	451.15	456.48	410.83	502.12		
Aug-07	249	86.5	2.5	15.0	8.0	110.38	471.37	476.29	428.66	523.92		
Sep-07	266	92.8	2.7	15.0	8.0	110.38	494.84	493.81	444.42	543.19		
Oct-07	274	107.1	2.7	15.0	8.0	110.38	517.18	512.21	460.99	563.43		
Nov-07	293	114.3	2.9	15.0	8.0	110.38	543.65	531.16	478.04	584.27	519.08	95%
Dec-07	296	111.8	3.0	15.0	8.0	110.38	544.10	548.12	493.30	602.93		
Jan-08	314	105.1	3.1	15.0	8.0	118.00	563.20	565.72	509.15	622.29		
Feb-08	345	94.3	3.5	15.0	8.0	118.00	583.75	579.33	521.40	637.27		
Mar-08	347	98.6	3.5	15.0	8.0	118.00	590.10	591.36	532.22	650.50	577.26	98%
Apr-08	372	101.4	3.7	15.0	8.0	118.00	618.08	598.24	538.41	658.06		
May-08	353	114.9	3.5	15.0	8.0	118.00	612.46	603.06	542.76	663.37	555.74	91%
Jun-08	356	127.3	3.6	15.0	8.0	118.00	627.84	599.24	539.31	659.16		
Jul-08	331	116.9	3.3	15.0	8.0	118.00	592.24	582.78	524.50	641.05		
Aug-08	304	106.9	3.0	15.0	8.0	160.00	596.96	552.90	497.61	608.19		
Sep-08	282	89.2	2.8	15.0	8.0	160.00	556.97	520.68	468.61	572.75		
Oct-08	233	56.6	2.3	15.0	8.0	160.00	474.88	494.61	445.15	544.08	461.09	97%
Nov-08	188	36.1	1.9	15.0	8.0	160.00	408.95	475.45	427.91	523.00		
Dec-08	175	27.1	1.8	15.0	8.0	160.00	386.90	455.46	409.91	501.00		
Jan-09	211	25.3	2.1	15.0	8.0	184.00	445.40	431.57	388.41	474.73		
Feb-09	217	31.9	2.2	15.0	8.0	184.00	458.09	419.75	377.78	461.73	402.01	88%
Mar-09	212	35.9	2.1	15.0	8.0	184.00	457.01	421.46	379.31	463.60		
Apr-09	209	35.7	2.1	15.0	8.0	120.00	389.77	427.55	384.80	470.31		
May-09	209	38.0	2.1	15.0	8.0	120.00	392.14	424.79	382.31	467.27	390.09	99%
Jun-09	233	42.6	2.3	15.0	8.0	120.00	420.89	417.50	375.75	459.25		

	1	2	3	4	5	6	7	8	9	10	11	12
Jul-09	240	44.2	2.4	15.0	8.0	120.00	429.56	409.92	368.92	450.91		
Aug-09	235	45.7	2.4	15.0	8.0	120.00	426.05	412.03	370.83	453.24	390.09	92%
Sep-09	219	42.9	2.2	15.0	8.0	120.00	407.08	416.85	375.17	458.54		
Oct-09	217	41.8	2.2	15.0	8.0	120.00	403.93	413.02	371.72	454.32	390.00	97%
Nov-09	217	42.4	2.2	15.0	8.0	120.00	404.59	411.73	370.56	452.91		
Dec-09	230	50.6	2.3	15.0	8.0	120.00	425.86	408.22	367.40	449.04		
Jan-10	232	51.8	2.3	15.0	8.0	85.0	394.08	405.52	364.97	446.07		
Feb-10	225	52.3	2.3	15.0	8.0	118.0	420.54	404.86	364.37	445.34	372.28	88%
Mar-10	215	55.3	2.2	15.0	8.0	106.0	401.45	406.09	365.48	446.70	346.00	86%
Apr-10	220	58.0	2.2	15.0	8.0	85.0	388.16	400.57	360.51	440.63		
May-10	227	62.1	2.3	15.0	8.0	85.0	399.32	405.56	365.00	446.11		
Jun-10	227	55.9	2.3	15.0	8.0	105.0	413.19	410.49	369.44	451.54	350.00	85%
Jul-10	229	48.0	2.3	15.0	8.0	85.0	387.25	418.80	376.92	460.68		
Aug-10	269	49.3	2.7	15.0	8.0	85.0	428.97	428.41	385.57	471.25		
Sep-10	292	52.2	2.9	15.0	8.0	85.0	455.11	436.65	392.99	480.32		
Oct-10	297	51.7	3.0	15.0	8.0	85.0	459.62	446.21	401.59	490.83		
Nov-10	298	46.4	3.0	15.0	8.0	85.0	455.39	463.56	417.20	509.91		
Dec-10	299	47.0	3.0	15.0	8.0	85.0	457.02	474.84	427.35	522.32		
Jan-11	319	49.9	3.2	15.0	8.0	85.0	480.10	485.76	437.18	534.33		
Feb-11	350	47.2	3.5	15.0	8.0	85.0	508.70	490.11	441.10	539.13		
Mar-11	347	49.4	3.5	15.0	8.0	85.0	507.91	497.06	447.35	546.76	500.00	98%
Apr-11	350	50.1	3.5	15.0	8.0	105.0	531.57	507.07	456.36	557.77		

- 1 *FOB Argentina prices from <http://www.minagri.gob.ar/SAGPyA/agricultura>*
- 2 *Argentina - South Africa shipping rate as published by IGC, plus calculated ocean freight rate for Durban to Mombasa, using data from Fearnley's.*
- 3 *1% of 1*
- 4 *per interviews with millers, freight forwarders, Title II Awardees, and data from 2009 Bellmon*
- 5 *per interviews with millers, freight forwarders, Title II Awardees, and data from 2009 Bellmon*
- 6 *per interviews with millers, freight forwarders, Title II Awardees, and data from 2009 Bellmon*
- 7 *sum of 1-6*
- 8 *moving average*
- 9 *moving average - 10% margin*
- 10 *moving average +10% margin*
- 11 *sales prices achieved, per Title II Awardee documentation, AMEX*
- 12 *(11/7) times 100*

Annex VI. Methodology for Determining Impact of Monetized Food Aid⁵⁷

VI.i. Introduction

The Bellmon Amendment requires assurance that a proposed food aid program would not result in a substantial disincentive to or interference with domestic production or marketing. The extent to which monetized food aid has the potential to introduce a production disincentive or market disruption rests primarily on whether the monetized commodity is sold at a fair market price, and in a volume that would not be expected to cause disruption of normal trade patterns.

The objective of the BEST pre-MYAP report is to provide sufficient information to relevant USAID policy decision makers and program managers to allow them to make a determination of whether a proposed food aid program would have a substantial impact on local market and production incentives. If it is determined in the negative, then the proposed Title II food aid program would be compliant with the Bellmon Amendment. The BEST report accomplishes this objective by providing specific guidance as to:

- The appropriateness of monetization in a Title II recipient country
- If appropriate, which commodities might be appropriate to monetize
- The approximate maximum tonnage feasible for monetization
- Any special considerations (such as sales platform) that should be taken into account when undertaking monetization in the study country

VI.ii. Analytical Process

VI.ii.i. Step 1: Initial Commodity Selection

A desk review will identify an initial set of commodities for study. This review will be based on the best available trade statistics and any previous Bellmon studies, and informed by country situational reports and policy reviews. Ideally, each commodity will be selected based on a complete set of objective criteria involving eligibility, freedom from trade and policy restrictions, and, most importantly, the market's ability to absorb a volume of monetized commodity without substantial disruption. In practice, this ideal is constrained by information gaps and varying standards of what may be considered "substantial" in different country and regional contexts. Official trade data is often incomplete, out-of-date, or contradictory.

⁵⁷ This methodology was developed to provide guidance prior to the initiation of a new MYAP/SYAP cycle; however, in the case of monetization, the methodology for the market analysis is exactly the same whether the analysis is conducted mid-MYAP or prior to the beginning of a new MYAP/SYAP cycle.

The field visit will involve triangulating trade figures, filling in data gaps, and discussing with traders and potential buyers to assess 1) interest and ability to purchase commodities in various quantities; and 2) factors affecting demand and supply of commodities with which a monetized commodity would likely compete.

The following set of “tests” is used, in whole or in part, to make an initial assessment of the feasibility of monetization without introducing Bellmon concerns:

Test 1: Purchase and export restrictions. There are various layers of U.S. government policies, regulations, and practices that may restrict the purchase of commodities intended for monetization. In consideration of these restrictions, Food For Peace (FFP) maintains a list of approved Title II commodities that can be used for emergency or development programs (see Annex VI.I). There may also be special policies, such as the FFP Policy on Use of Milk Powder for Monetization (see Annex VI.II), which must also be reflected in sales transactions.

Test: If a commodity is on the FFP list, it is eligible for consideration as a monetization candidate. If it is not on the list, it is ineligible.

Upon special request by FFP, commodities not currently on the FFP list may be selected for review.

Test 2: Recipient country policy, regulation, and practice. Recipient country policies, regulations, and practices may restrict importation of commodities intended for monetization. These may include, but not be limited to, one or more of the following:

- Restrictions on genetically-modified foods
- Political sensitivities to staple crop industries
- National industry promotion or protection favoring local purchase of certain commodities
- Food aid-specific regulation of monetization sales volumes and prices

Test: If potential monetization of a commodity is affected by such barriers, analysis and recommendations will consider each barrier in light of its restrictiveness in practical terms. Extreme barriers to monetization (such as a complete restriction on GMOs, for example) will render a commodity ineligible for monetization. However, government institutions that regulate monetization may set guidelines that have little to no effect on an overall recommendation, but may impact a detail such as minimum sales prices. In this case, a commodity would still be considered eligible for monetization.

Test 3: Significant demand and commercial import activity. To warrant importation and sale of monetized food aid, both local dietary preferences and available market information must strongly suggest that a proposed commodity is consumed in significant amounts (i.e., there is significant demand), and that national production is insufficient to meet demand (i.e., there is insufficient national supply to meet demand). National demand is estimated based on the latest

5-year overall supply trend, equivalent to the sum of domestic production, net trade, and food aid.⁵⁸

Assessment of the 5-year supply trend considers products of the same specification, or those which are the most likely substitutes. Commodity specifications (class and grading) are particularly important for some of the most frequently-monetized commodities, such as wheat, rice, and vegetable oil. In order to compare commodities accurately, the analyst must take into account the exact specifications of normal commercial imports. Processors' requirements and consumer preferences will determine the required and/or desirable specifications. Field visits must include meetings with commercial importers, processors, millers, and large traders because these are the market players who can provide the most accurate information in regards to specific commodities' commercial demand.

Annex VI.III is a survey questionnaire tailored to potential buyers of Title II monetized commodities. This set of questions should form the basic foundation for meetings with millers, traders, and other potential buyers of monetized commodities.

Annex VI.IV is a survey questionnaire form tailored to current NGO Monetization Units, for those countries where these units are operational. This set of questions should form the basic foundation for meetings with Monetization Units to assess their experience monetizing commodities in-country.

In countries with substantial informal trade, the analyst will gather all available market intelligence on the volume and pattern of informal trade where available. This will involve reliance on FEWS NET cross-border trade estimates and discussions with key stakeholders (such as Ministries) in the field. Informal trade may be substantial, because informal trade is generally between two low-income food-deficit countries; disruption of such trade would be considered particularly undesirable. The volume of commodity recommended for monetization will exclude informal trade volumes and rely instead on commercial import and food aid import volumes as a basis for estimating unmet demand.

Test: Generally, the value of the commercial import market must be large enough so that monetization sales would generate at least US\$1 million. This amount is a guideline based on analysis of perceived Awardee funding need, but which is subject to review, especially as funds become available from other sources (e.g., 202(e) funding). Commodities that would generate less than US\$1 million in funds will be considered, particularly where there are only one or two commodities eligible/feasible for monetization and a diversified basket of commodities would be preferable. If sales are expected to displace normal commercial imports, the displaced volume should not exceed 10 percent of commercial import volumes (averaged over five years) per BEST's current guideline. If sales are expected to compete with domestic production, the

⁵⁸

Where supply in the previous years is especially stable, a single-year projected increase in supply is possible using annual population growth figures. In the most recent round of BEST studies, many Title II countries had experienced substantial inter-annual fluctuations in supply during the five-year period under review (on the order of 100 percent change year-on-year), partially due to the food price crisis of 2007. This made projections much more difficult and unreliable. However, as prices and therefore supply stabilize, such projections would be a reasonable basis on which to estimate a recommended volume for monetization.

displaced volume should not exceed five percent of domestic production (averaged over five years) per BEST's current guideline.

VI.ii.ii. Step 2: Market Analysis

Additional market research and analysis are conducted to assess the likelihood of achieving a fair and competitive market price. The analyst will review all available evidence of market structure, level of competition, and available sales platforms, including findings from interviews with traders, producers, potential buyers, and any current monetizing agents. To support a recommendation of commodity monetization, the analyst must conclude that there is a high likelihood of achieving a fair market price in the near-term. Achievement of a fair market price may be expected in the near-term based on the following criteria:

Criterion 1: Structure and composition of the buyer market supports competition. There must be enough potential buyers with sufficient purchasing power and market positioning to absorb the likely volumes of monetized commodities without exerting a negative influence on fair and efficient market function. In some cases, monetizing agents may have long-term relationships with a single buyer. This may or may not indicate a problem. As discussed in the following section, whether Awardees are able to monetize commodities at or near IPP provides strong suggestive evidence of the level of competition.

Test: If there is a single buyer, evidence of a collusive group of buyers, or other indications of a buyer's market that regularly restricts free trade and competition, dominates the market, or exercises anti-competitive practices while purchasing monetized and/or commercial food commodity imports, then it may be expected that a fair market price may not be achieved and monetization may be supporting an uncompetitive industry. If there are many buyers, or there is no substantial evidence to indicate that a single or few buyers are exhibiting this negative behavior, a fair market price may be achieved.

Criterion 2: Likelihood of achieving a fair market price is high. An IPP is the best estimate of a fair market price for commercially-imported commodities. An estimated IPP is based on the sum of a simulated commercial entity's cost to import and sell the same (or very similar) food commodity. If import parity price has been consistently achieved in the past, and can be expected to be achieved in the near future given current market conditions, a commodity may be recommended for monetization.

The estimated import parity price is calculated by adding the following costs:

- Freight On Board (FOB) from exporting location/market (for the same or similar commodity)
- Insurance
- Ocean freight to point of import⁵⁹
- Port charges at port of entry (taxes, handling, packaging, storage, agents' fees, etc.)

⁵⁹ BEST will use CIF at port prices whenever they are available.

- Import duties and subsidies
- Taxes (including VAT if applicable)
- Inland transportation
- Any other costs that bring the per unit cost into a parity estimate with the reference price, such as a price adjustment for a difference in commodity quality

Given that each of these components of IPP is estimated, and that certain components, such as freight charges, are likely estimated with some error, BEST analysis allows for a margin of error of + / - 10 percent. Monetized sales transacted at prices above or below the margin of error can be reasonably attributed to profit or loss, respectively.

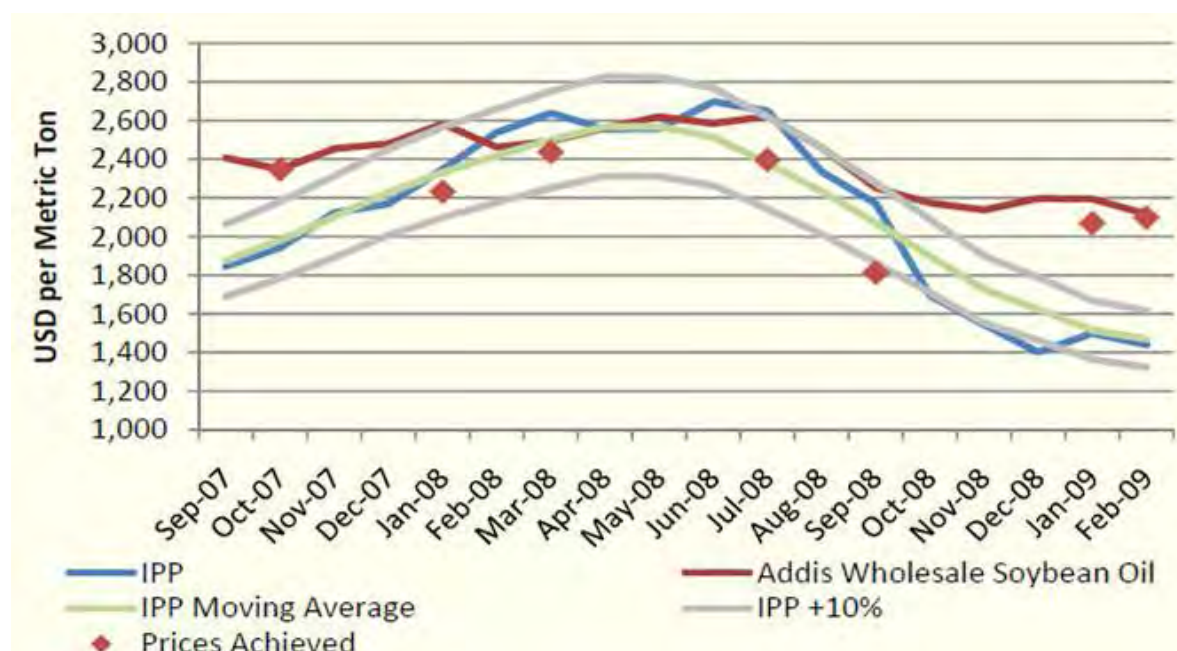
Test: If IPP analysis reveals a consistent pattern of pricing below IPP, and there are no substantial prospects for improvements in the negotiating capacity of the Awardee(s) (e.g., no significant increase in the number of potential buyers), future monetizations of that commodity would not be recommended since such sales would be unlikely to obtain a fair market price.

If there is little or no history of monetization sales transactions to compare with IPP, then market structure and conduct must be assessed as indicators of the potential for achieving a fair market price.

Example of IPP calculation and use in monetization analysis: The following is an example of an IPP calculation and a comparison of achieved sales prices relative to IPP. The table below shows an individual import parity price calculation for soybean oil for possible sale in Addis Ababa. The figure below shows historical IPP charted against actual monetization sales price achievements for soybean oil monetized in Addis Ababa.

Table 16. Soybean Oil Import Parity Price Calculation Template

No.	Item	Source	US\$/MT
1	Refined Soybean Oil Ex Rotterdam	USDA FAS Data	748
2	Ocean Freight	Marill Freight	50
3	Insurance	1% of #1	7.5
4	CIF Djibouti	#1+#2+#3	805.5
5	Customs Duty	30% of #4	241.6
6	VAT	15% of (#4+#5)	157.1
7	Withholding Tax	3% of #4	24.2
8	Port Charges, handling etc.	Axis Transit Services	39.5
9	Inland Freight	Axis Transit Services	41.1
10	Storage	ECEX	7.5
11	Packaging	Whey Consulting Ltd.	119.5
12	Administration	World Bank Salary Data	4.0
13	Total Import Parity Price	Sum(#4:#12)	1440.1

Figure 58. Comparison of Addis Wholesale Soybean Oil Prices and Calculated IPP

Criterion 3: Other Key Considerations for Monetization Transactions

There are a number of other important factors that should be considered when assessing the feasibility of monetizing commodities. These factors include, but are not limited to:

Price responsiveness of local production. General characteristics of the agricultural sector, such as average farm size, access to agricultural inputs (labor, seeds, fertilizer, etc), and average crop yields, provide an indication of how responsive local producers may be to changes in output prices (i.e., how elastic supply is). For example, if farm sizes are relatively small and farmers lack access to inputs, domestic production is likely to be relatively less responsive to changes in output prices (i.e., relatively inelastic) simply because producers lack the capacity to make large changes in their production plans in response to price incentives. If production is inelastic, the disincentive effects from additional Title II food aid will therefore be minimized. Domestic supply is often price inelastic in developing countries.

Conversely, if local production is extremely price responsive (or elastic), a small price change on the local market will result in a large percentage change in local production. While a drop in output prices may benefit consumers, such a drop could create disincentives to produce as well as cause a drop in traders' incomes.

Monetization may affect the marketing or production of substitute commodities. If commodities considered for monetization are highly substitutable with other commodities in the local diet, the analyst must assess market conditions to reveal the likely cross-price effects on those substitute commodities. As an example, suppose consumers typically consume black beans, but view pinto beans as a very close substitute. If pinto beans are monetized, resulting

in an increase in the supply of pinto beans and therefore a drop in the price of pinto beans relative to black beans, consumers may substitute away from black beans and increase pinto beans in their diets. Depending on how easily consumers substitute the two goods (as reflected in the cross-price elasticity between black beans and pinto beans), monetization of pinto beans could result in a decrease in demand for black beans, which could affect production incentives and markets for black beans.

Estimates of elasticities are generally not available. Qualitative assessments of factors which determine demand and supply, however, are fairly easy to undertake during field visits, particularly with the insights of local agricultural marketing specialists.

The willingness to substitute commodities in the local diet often follows a socioeconomic gradient and differs in urban versus rural areas. Understanding these dynamics is important to strengthening market intelligence and providing appropriate guidance regarding the likely effects of food aid (both monetized and distributed) on local markets. As an example, there may be very strong preferences for rice in an urban area which makes consumers relatively nonresponsive to price changes (i.e., the own price elasticity of demand for rice is inelastic), whereas rural consumers may have a preference for sorghum but are willing to substitute sorghum with millet as the price of sorghum increases relative to millet.

Monetization sales platform may support competition. The monetization sales platform may provide insight into the level of competitiveness and the monetization agents' ability to achieve a fair price. In most cases, the most common platforms available are direct negotiation and auction. Though it is entirely possible to realize a competitive or non-competitive process under each sales platform, some platforms are more likely to result in a competitive bid. For example, while it is possible to obtain a fair market price through large lot sales, small lot sales will promote greater competition (which increases the probability of achieving IPP) and may help promote the trading sector. Details to consider regarding sales platforms are discussed in Annex VI.V.

Timing of sales is critical. When supplies are relatively low (e.g., during lean season), prices are relatively higher. A monetization sale timed to coincide with normal seasonal supply shortfalls has the potential to yield a higher price for the monetized commodity. Although it is not the intent of the monetization program, well-timed sales can help also help stabilize market supply and dampen seasonal price spikes which harm consumers in recipient countries.

Tests: A monetization program would generally be considered positively if a sale takes place:

- During the lean or hunger season(s), and up to the seasonal or annual harvest(s)
- In avoidance of another substantial monetization sale
- In avoidance of a major food aid distribution⁶⁰

⁶⁰ Depending on demand and supply dynamics for the specific commodity recommended for monetization, it may be more important that the monetized commodity is sold in an urban area while the distributed commodity is targeted in rural areas.

Awardees should demonstrate awareness of any other monetizations planned (e.g., through USDA) during the same season as their proposed monetization, and should seek to avoid overlap of transactions. Likewise, Awardees should seek to avoid major monetizations during large food aid distributions.

However, as emphasized in the 1998 Food For Peace Monetization Field Manual, timing sales during lean seasons can, over the longer-term, create a disincentive for traders to engage in normal intra-annual price arbitrage. Based on discussions with traders in-country, the analyst will only recommend a practice of timing monetizations during in the lean season if the analyst can demonstrate that such timing will have little impact on incentives for traders to engage in intra-annual storage.

Monetization should avoid disrupting trade between two Low-Income Food-Deficit Countries (LIFDCs). Typically, commercial import markets in LIFDCs are dominated by large non-food deficit exporting countries. Occasionally, however, LIFDCs may dominate a particular commodity markets (e.g., the maize market in Zambia may be dominated by Malawi, though this market dominance will vary from year-to-year since South Africa is a strong regional supplier). Monetization of a commodity typically imported from another LIFDC would be considered highly undesirable.

Regional monetization can offer a legally-compliant alternative for Awardees operating in a country with less than fully competitive domestic commodity markets or insufficient commercial demand to meet Awardee funding requirements. Regional monetization provides Awardees with the option of selling into a market where there is sufficient competition among buyers in order to increase the likelihood that bids will be at or near import parity. Competition increases assurance that monetization will not distort the market and will generate higher revenues than if the monetization is conducted in a domestic market with limited or no competition. Regional monetization can generate greater revenue for food security activities and thereby increase the efficiencies of the FFP program. It also provides the Awardees with a fallback position if a commodity that was initially recommended for monetization becomes unviable at a later date due to changing market or policy conditions. In countries with highly limited competition and/or limited import volumes of available Title II commodities, the BEST team will analyze the feasibility of regional monetization of specific Title II commodities.

VI.ii.iii. Step 3: Conclusions and Recommendations

The BEST team does or does not recommend a commodity for monetization. If recommended, a maximum volume is recommended based on either a threshold of 10 percent of the commercial import market, or five percent of domestic production, averaged over five years, per BEST's current guideline.⁶¹ Anticipated proceeds from such a sale are presented.

⁶¹ A threshold of 10 percent of commercial imports (5 percent of domestic production) has been used, but is be subject to review on a case-by-case basis, and may be adjusted downwards or upwards based on the findings of the market analysis.

Hypothetical Example. The figure below summarizes the basic steps in a decision-tree for a hypothetical monetization analysis in Country X in which five initial commodities are reviewed for potential monetization: CDSO, HRWW, NFDM, rice, and pinto beans.

Figure 59. Decision Tree

5 initial commodities considered for Monetization in Country X:

- CDSO
- HRWW
- NFDM
- Rice
- Pinto Beans

No policy restrictions prevent the importation of HRWW, NFDM, Rice, or Pinto Beans, but there are restrictions for CDSO.

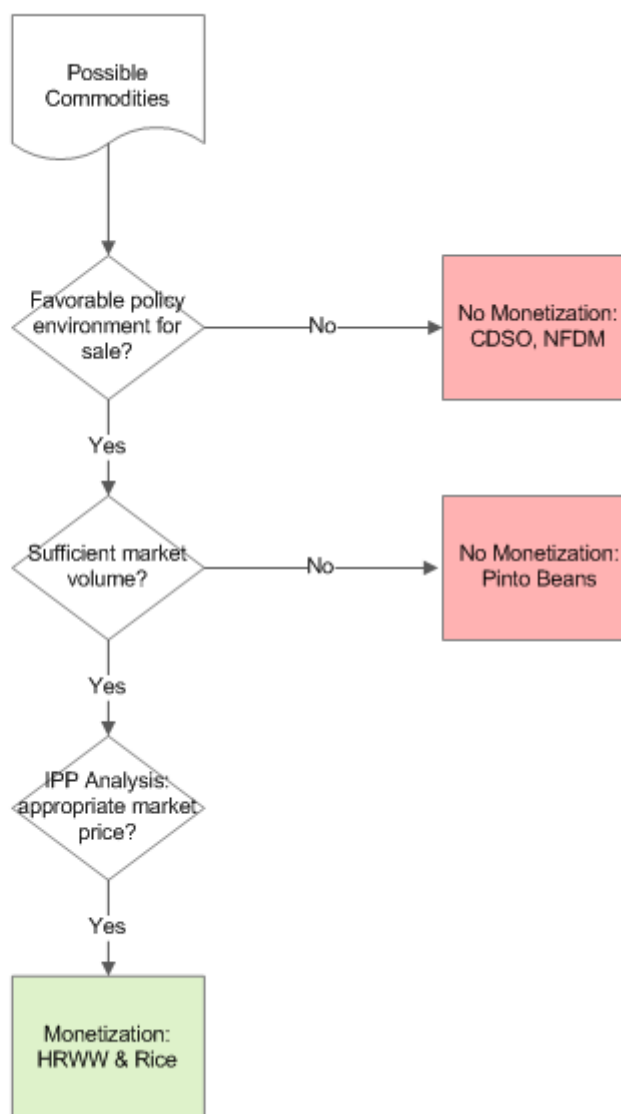
BEST research also indicates that the buyer for NFDM would probably use it to manufacture breast milk substitute, which preclude its monetization.

Based on trade data, HRWW, Rice and NFDM have an import market value of approximately \$60 million each.

The market for Pinto Beans is estimated to be only \$2 million however – this market is thus too small to be cost effective to generate monetization proceeds.

Import Parity Price calculations estimate that HRWW and Rice would be sold at appropriate local market prices.

Based upon market volume trade data, BEST analysis would recommend selling HRWW and Rice at 10% of their respective market volumes in Country X. This would generate an expected \$6 million in proceeds for each commodity.



Annex VII.I FFP FY12 Commodity Availability List

Packaged

A-20 Paste
A-28 Rice Bar
A-29 Wheat Bar
Aseptic Sweet Potato Puree
Beans, Black
Beans, Great Northern
Beans, Kidney (dark & light)
Beans, Navy
Beans, Pink
Beans, Pinto
Beans, Small Red
Buckwheat Farinetta
Buckwheat Grits
Buckwheat Groats
Buckwheat Supreme Flour
Bulgur
Bulgur - SF
Chickpeas/Garbanzo Beans - Desi (small, dark)
Chickpeas/Garbanzo Beans - Kabulis (large, white)
Corn Soy Blend
Corn Soy Blend +
Corn Soy Masa Flour
Corn Soy Milk
Corn Soy Milk (Instant)
Corn, bagged
Cornmeal
Cornmeal - SF
Instant Corn Soy Blend
Lentils
Mainstay 3600
Mainstay Complete
Non-fat dry milk
Nutrition Bars
Nutritional Supplementary Paste
Peanut Butter Paste
Peas, Green
Peas, Split Green
Peas, Split Yellow
Peas, Yellow
Potato, Dehydrated Flakes
Potato, Dehydrated Granuals

Raisins (California)
Ready to Use Therapeutic Food (spread)
Rice X
Rice, bagged
Rice, bagged (par-boiled)
Salmon (canned)
Sorghum Grits - soy fortified (SF)
Sorghum, bagged
Soy Flour, Defatted
Soy Protein, Concentrate
Soy Protein, Isolate
Soy Protein, Textured
Soybeans, bagged
Sunflower Seed oil, refined, 4 Ltr
Sweet Potatoes, #10 cans
Sweet Potatoes, 29 oz cans
Sweet Potatoes, 40 oz cans
Vegetable oil, 20 Ltr
Vegetable oil, 208 Ltr
Vegetable oil, 4 Ltr
Vitameal
Wheat Flour, AP
Wheat Flour, bread
Wheat Soy Blend
Wheat Soy Milk
Wheat, Hard, Red, Spring, bagged
Wheat, Hard, Red, Winter, bagged
Wheat, Hard, White, bagged
Wheat, Northern, Spring, bagged
Wheat, Northern, Spring, Dark, bagged
Wheat, Soft, Red, Winter, bagged
Wheat, Soft, White, Winter, bagged
Whey Protein Concentrate #34
Whey Protein Concentrate #80
Whole Milk Replacer

Bulk

Corn, bulk
Corn, bulk, w/bags
Rice, bulk, w/bags
Sorghum, bulk
Sorghum, bulk, w/bags
Soybean meal, bulk
Soybean, bulk

Sunflower Seed oil, (crude), bulk
Vegetable oil, (CDSO) bulk
Vegetable oil, refined bulk
Wheat, Hard, Red, Spring, bulk
Wheat, Hard, Red, Spring, bulk, w/bags
Wheat, Hard, Red, Winter, bulk
Wheat, Hard, Red, Winter, bulk, w/bags*
Wheat, Hard, White, bulk, w/bags
Wheat, Northern, Spring, bulk
Wheat, Northern, Spring, bulk, w/bags
Wheat, Northern, Spring, Dark, bulk
Wheat, Northern, Spring, Dark, bulk, w/bags*
Wheat, Soft, Red, Winter, bulk
Wheat, Soft, Red, Winter, bulk, w/bags
Wheat, Soft, White, Winter bulk
Wheat, Soft, White, Winter, bulk, w/bags

Annex VI.II FFP Policy on Use of Milk Powder for Monetization

USAID's Office of Food for Peace (FFP) will consider proposals for monetization of Non-Fat Dry Milk (NFDM) under the following conditions:

The Awardee will provide FFP a written policy for the monetization of NFDM. This policy must comply with the International Code of Marketing of Breast-Milk Substitutes and all subsequent relevant World Health Assembly (WHA) resolutions pertinent to the sale or distribution of breast milk substitutes. Awardee will include a statement under "special provisions" which states, "It is the intention of the U.S. Government that the NFDM commodities provided herein are not to be used as breast milk substitutes, nor in their production or manufacture."

Preference will be given to countries that have current laws or policies implementing the International Code of Marketing Breast-Milk Substitutes.

NFDM may be sold for industrial use as an ingredient in processed foods, baked goods, yogurt, etc. NFDM must not substitute for breast milk or be used for products represented or locally perceived as breast milk substitutes. It must not be sold for direct market distribution, for example, in small tender sales, and should not be sold directly to the consumer.

Awardee will not sell NFDM to known manufacturers or marketers of breast-milk substitutes or replacement foods with breast milk substitute production facilities in the program country. The sales contract will have a written commitment from the buyer that the product will not be sold or freely distributed as a breast milk substitute, nor used to manufacture breast milk substitutes and that the sellers name or the name or logo of USAID will not be used in marketing, advertising, product promotion, or any implied relationship to any of the manufacture's products. Furthermore, the Awardee shall make it clear to the buyer that failure to comply with this clause will constitute a material breach of the contract.

The Awardee will submit to FFP, as part of the proposal, a plan to monitor the end-use of the product for a reasonable period of time. The plan should include sensitivity to problems in countries with high lactose intolerance, proper storage and handling information, and information on possible leakage from the buyer to the general market. This monitoring plan must be in place prior to the arrival of the commodity in the country.

The buyer agrees in writing that the uses of NFDM will be accessible for monitoring by USAID personnel to ensure that the use of NFDM adheres to the above policy and does not violate the International Code of Marketing of Breast-Milk Substitutes.

NFDM commodities for monetization must be labeled, "Not for feeding children under one year of age." If repackaged for any reason, any such package should also be so labeled.

To ensure market parity, all Title II and FFP policies and regulations, including cost-recovery, Bellman and Usual Marketing Requirement (UMR) considerations, shall apply.

The Director of the Office of Food for Peace must approve in writing any exceptions to the above policy.

Annex VI.III Survey Questionnaire for Potential Buyers of Title II Monetized Commodities

The purpose of this questionnaire is to provide BEST team members with a practical approach to assessing the market's prospects for monetization of Food for Peace commodities. These questions are designed to act as an informal but standardized survey questionnaire, as most traders are unlikely to provide a detailed and structured dataset to suit our analysis.

Potential buyers are typically private industry representatives, many of whom may hold the public interest and food security in high esteem, but by nature of their business should be expected to be motivated by profit. Levels of interest, honesty, and forthrightness will vary from person to person. On the one hand, a potential buyer may be motivated, honest, and open, expecting that monetization will facilitate a transaction favorable to his or her business. On the other hand, potential buyers may attempt to manipulate or misguide the analyst in an unfair or dishonest fashion.

Key questions that should be addressed to potential buyers include:

1. What commodities do you typically trade in? In what volumes?
2. What is the current fair market price for these commodities?
3. Do you prefer local or imported product? What drives these preferences? Milling or processing requirements? Consumer preferences? Is local or imported product cheaper than the other in general?
4. If offered on or around <date 1>, would you buy X, Y, and/or Z volumes/values of Food For Peace commodities A, B, and C?
5. What is the fair market price for the volumes suggested?
6. If no to question #4, is there a variation of, or substitute for, one or more of these FFP commodities that you would buy?
7. If yes to #6, what degree of substitution might be normal?
8. Would you participate in a direct negotiation, auction, or—if one were available—purchase through a commodity exchange?
9. Are you aware of any policy and/or trade barriers that might impact importation of FFP commodities?

Annex VI.IV Survey Questionnaire for Current NGO(s) Monetization Unit

1. How many years have you been monetizing in-country?
2. Do you monetize for a single NGO or as a consortium?
3. What is the professional background of the negotiators? (i.e., do they have prior commodities trading experience?)
4. Who calculates IPP? What is their source of data? How often is IPP updated (e.g., monthly, only immediately prior to a call-forward or anticipated monetization transaction)?
5. Has the unit changed its approach (e.g., choice of commodity or preferred sales platform) as a result of past experience?
6. What are the greatest constraints to successful monetization in this country? Put another way, if you could change one just thing about the way monetization occurs in country, what would that one change be?
7. We understand rice, wheat, wheat flour, and vegetable oil (or commodity X) have been monetized in the last X years. Can you confirm?
8. Could you provide the following data for each transaction?
 - Date of transaction
 - Commodity (and specs if available)
 - Buyer
 - Price paid per MT or for whole lot (in local currency and US\$)
 - Volume
 - Sales platform (auction, direct negotiation, exchange)
 - Which companies import the largest volumes of [cereals], [oil], [commodities on top ten list of commercial imports for country under study]?
9. Which imported and local commodities do FFP commodities compete against?
10. Could you describe the effect in terms of consumer preferences?
11. Are there any policy constraints or political sensitivities?

Annex VI.V Monetization Sales Platforms

Careful selection of a monetization sales platform may enhance the monetization agents' ability to achieve a fair price. In most cases, the most common platforms available are direct negotiation and auction, although commodity exchanges, while generally limited in overall availability to monetization agents, are also an option and have particular advantages.

Direct negotiation is the only option if auction or commodity exchange is not available or otherwise feasible. It is most appropriate when there are few buyers (less than 10) and/or where there is high likelihood of collusion. Direct negotiators must have a deep knowledge and understanding of international costs, current and historical volumes and prices—domestic and import—and have a keen sense of what the market will bear in terms of supply, demand, and price. Historical local price and volume information may indicate what the market will bear, and international costs will show the price traders and other buyers may have to pay if they were to purchase/import from another source. The advantages generally present themselves in smaller markets and where monetization agents are highly skilled, experienced, and plugged into local and international information sources over a long period of time. Options include:

- Monetization at the border, or in the main urban centers (or wherever the mills are located)
- Small lots/many sales, or large lots/fewer sales
- Monetizing as single agents or within a consortium

Auctions are an option if there are many buyers present and have the advantage of playing the market against bidders who will compete with open knowledge of what their rivals will pay. Monetization agents who manage sales through auctions need not necessarily have the same set of skills direct negotiators need, but they must identify and manage the auction process. In general, it is advantageous to maximize the number of participants at each auction to stimulate competition and increase price pressure. To ensure maximization of participants, monetization agents should identify the lot size that will attract the largest number of buyers, and therefore agents must have a knowledge of the potential buyers' capacities and financial capabilities (i.e., access to credit). A disadvantage is that collusion and speculation are still possible, as in direct negotiation, although the more buyers are involved, the less likely this is to occur. Another disadvantage may be that if small lots and traders are chosen, then many buyers may not have credit, transport, or VAT registration. Large and/or monopolistic corporations or para-statal may be challenging to work with as they may wield unfavorable influence on the terms. Options include:

- Monetization at the border or in main urban centers
- Smaller lots will involve more auctions and higher administrative costs; larger lots suggest less on both accounts

Sale on a commodity exchange is an option where available, and brings the advantage of eliminating risks of collusion, involves very low costs (brokers fees only), and reduces risk of failing to achieve a market price (assuming the exchange represents the market). If trading is done on the basis of warehouse receipts, then the exchange should absorb storage costs, perhaps for as long as six months. Furthermore, futures may also be an option. A disadvantage is that lot sizes and conditions may be pre-determined and fixed.

Recommended Reading

USAID Monetization Field Manual. 1998

FEWS NET Markets Guidance No 1. May 2008. "Import/Export Parity Price Analysis"

Barrett, Christopher and Erin Lentz. Dec 2009. "U.S. Monetization Policy: Recommendations For Improvement"

Tschirley, David and Julie Howard. 2003. "Title II Food Aid and Agricultural Development in Sub-Saharan Africa: Towards a Principled Argument for When, and When Not, to Monetize"

Simmons, Emmy. June 2009. "Monetization Of Food Aid: Reconsidering U.S. Policy and Practice"

Oxfam. 2005. "Food aid or hidden dumping?"

Statz, John, Pat Diskin, and Nancy Estes. Dec 1999. "Food Aid Monetization In West Africa: How To Make It More Effective."

Annex VII. Methodology for Determining Impact of Distributed Food Aid⁶²

VII.i. Introduction

The Bellmon Amendment requires assurance that a proposed food aid distribution program would not result in a substantial disincentive to or interference with domestic production or marketing. The extent to which distributed⁶³ food aid has the potential to introduce a disincentive to production or disruption of markets rests fundamentally on whether proposed food aid will represent "additional consumption" for beneficiary households, i.e., food consumption which would not have occurred in the absence of the food aid distribution program.

The objective of a BEST report is to provide sufficient information to relevant USAID policy decision makers and program managers to allow a determination of whether a proposed distributed food aid program would have a substantial impact on local market and production incentives. If it is determined in the negative, then the proposed Title II food aid program would be compliant with the Bellmon Amendment.

Why might distributed food aid introduce a substantial disincentive to local production and markets?

Beneficiaries of food aid receive an exogenous positive income shock: they are given free food (a good with non-negative monetary value).⁶⁴ The provision of in-kind food aid effectively increases the beneficiary's purchasing power. The changes in demand for food and non-food goods resulting from that increase in purchasing power will determine the ultimate impact of the food aid on prices and therefore supply.

Although food aid beneficiaries are expected to consume the food provided, households may respond to the receipt of food aid in a number of ways depending on prices, local diet preferences, perceived needs for non-food goods, and access to local markets. A beneficiary household may:

- Consume the food aid without reducing its regular market purchases or small-scale production to compensate for a food deficit in the normal diet caused by insufficient purchasing power, in which case the food aid represents additional consumption;

⁶² This methodology was developed to provide guidance prior to the initiation of a new MYAP cycle; however, the methodology is essentially the same where the BEST team undertakes special studies mid-MYAP, for example, to inform future programming.

⁶³ Please note that this methodology covers only the potential impact of distributed food aid. While some of the data and analysis of market dynamics, such as substitutability of staples and level of market integration, is relevant for both analyses, a separate methodology has been developed to assess the potential impact of monetized food aid. The monetization analysis focuses primarily on commercial markets rather than the behaviour of beneficiary households.

⁶⁴ Occasionally, food aid rations are provided to beneficiaries in exchange for their labor or time, in which case the ration is not provided entirely free. For example, some Maternal Child Health/Nutrition interventions require attendance at a clinic; Food for Work beneficiaries are provided food in exchange for work, in which case the food acts as an in-kind wage.

- Use a portion or all of the food aid to displace market purchases that otherwise would have been made;
- Use a portion or all of the food aid to substitute for the home consumption of a household's own production and sell the released production in the market; or
- Consume some portion (or none of) the food aid and sell the other portion (or all) on the market, and use the income generated from that sale to purchase other food and/or non-food goods.

Distributed food aid also has the potential to change household labor supply decisions, particularly when food is distributed under a Food for Work program.

If enough beneficiaries (intended and/or unintended beneficiaries) within a given geographic area react to food aid by altering their decisions about market purchases, small-scale production, or own labor supply, distributed food aid has the potential to cause a number of negative impacts. The most frequently alleged problems include:

- Depressed producer prices (production disincentive)
- Dependency
- Labor supply disincentives
- Disruption of markets (especially traders)

Targeting. The BEST methodology begins with the assumption that a well-designed and executed food aid program, whose transfers correspond to the needs of the household, will have minimal to no impact on the market or local production incentives.⁶⁵ Effective application of criteria which accurately identifies those households in need of food assistance is the first, and arguably the most important, condition to ensure Title II resources are used effectively and efficiently and yield the maximum food security impact. Once households are well-identified, maximum food security impact and minimum leakages are ensured when the size, frequency, and commodity composition of rations correspond most closely to household food needs. Similarly, distribution modalities and any associated conditionality of participation (such as Food For Education, Food For Work/Assets, or Maternal Child Health activities), play an important role in maximizing food security impact through effective targeting.

Two concepts are fundamental to targeting. Exclusion errors occur when food aid fails to reach the needy. Errors of exclusion are a humanitarian concern. Inclusion errors occur when food aid is provided to the non-needy. Errors of inclusion ("leakage") are a Bellmon concern. Errors of inclusion are also a humanitarian concern because, by definition, leakage involves the inefficient use of scarce resources. Improvements in targeting (reductions in inclusion errors) achieves three simultaneous objectives: 1) increases efficiency of food of food aid in

⁶⁵ For a review of the economic rationale, see Christopher Barrett, 2002, "Food Aid Effectiveness: It's the Targeting, Stupid!"

accomplishing humanitarian and development goals; 2) maximizes efficiency of Title II resources; 3) ensures compliance with the Bellmon Amendment.

While the BEST approach to assessing the potential impact of food aid starts with this assumption, it also recognizes that effective targeting is both expensive in terms of human and financial capital and extremely difficult to implement and sustain. Even the most effectively-targeted programs can never prevent all leakage.⁶⁶ Even where targeting reaches the most food insecure households, precisely because poor people are both food-poor and cash-poor, beneficiary households will always face an incentive to sell some of the food aid to meet cash needs. In the absence of food aid, many food insecure households may suffer by not getting enough food (quantity and quality) or may use coping strategies that adversely affect their health, productive capacities, etc. Therefore, decision-makers inevitably have to strike a balance between exclusion and inclusion errors. Inclusion errors are particularly important for Bellmon considerations because they impact markets.

How can we determine whether a specific proposed food aid distribution program would introduce a substantial disincentive?

The goal of the BEST study is to present USAID decision-makers with sufficient information to allow determination of whether or not inclusion errors will substantially impact markets.⁶⁷ As noted above, the extent to which distributed food aid has the potential to disrupt private markets or introduce production disincentives rests fundamentally on whether food aid will represent "additional consumption" for beneficiary households, i.e., food consumption which would not have occurred in the absence of the food aid distribution program. Unfortunately, the only certain method to determine whether food aid represents (or would represent) additional consumption is to conduct household surveys to determine whether a household would consume the food aid rations without changing its household production and market purchasing behavior. However, because household surveys are expensive and time-consuming, proxy indicators of 'additionality' must be used to assess the potential for leakage. Further details about each of these possible proxy indicators are discussed in Annex VII.II.⁶⁸ This makes assessing the impact of food aid on markets and producer incentives an inherently problematic undertaking, even in relatively stable economies.

With that caveat in mind, combined with basic information about the current state of a country's agricultural markets – how strong consumer preferences are for various foodstuffs, how responsive producers are to price changes, how well-integrated local markets are with one another, and how sensitive traders are to changes in market conditions, among other indicators – well-selected indicators of additionality typically provide sufficient information to allow some

⁶⁶ For more background on targeting, see Hoddinott (1999), Barrett (2002), and EU/FAO (2008).

⁶⁷ Importantly, whether the effect is substantial is quite subjective and will likely vary quite widely across contexts. While the BEST study will strive to provide adequate information about the type and proportion of market players that may be affected by distributed food aid, ultimately the determination of whether the impact might be "substantial" will be up rest with the informed judgment of the relevant USG decision-maker (typically the USAID Mission Director).

⁶⁸ Additional qualitative indicators provide critical context to a discussion of potential household responses to the receipt of food aid. These include descriptive analyses of the ways in which households secure their livelihoods (main sources of food and income), particularly among the most food insecure households, and varying degrees of vulnerability to external shocks.

generalizations to be made about the type, form, timing, and geographic targeting of food assistance that would unlikely harm markets and production incentives.

The BEST analysis will, therefore, combine the highest quality of quantitative and qualitative information available about demand and supply characteristics which are likely to influence the production and market responses to food aid. The analysis focuses on three inter-related subject matters: needs assessments, effectiveness of targeting, and analysis of markets which are critical for food security. An overview of a standard analytical process follows.

VII.ii. Analytical Process

The sub-national distribution analysis will be based primarily on secondary data from all available food security and vulnerability assessments, livelihoods baselines or profiles, relevant country situation reports, and any direct FFP guidance regarding geographic or beneficiary-characteristic targeting (including FANTA's Food Security Programming Framework). The amount of reliable, available data will vary somewhat from country to country; under these conditions, BEST will analyze the highest quality and most relevant data available. BEST field visits and discussions with stakeholders will provide key information as well as validate findings from secondary data analysis.

An initial desktop study will focus on review and analysis of secondary data and reports, and discussions with Food For Peace and FANTA in Washington, DC. This portion of the study will involve the following steps:

Step 1: Review Relevant Background Materials

Research and review all background materials relevant for a potential distributed food aid program including food security assessments (e.g., CFSAM, CSFVA, VAC reports, and FANTA's Food Security Country Framework, if available), previous Bellmon Analyses or Updates, reports of Awardees' previous and ongoing food aid programs, livelihoods reports, and reports of production, trade, and food aid flow.

Step 2: Determine Most Likely Modalities for Distributed Food Aid for Upcoming MYAP Cycle

Review the country Food Security Country Framework along with any other official USAID/FFP guidance relevant for future Title II programming. Based on this review, as well as discussions with stakeholders in Washington and the field, determine most likely distribution modalities (Food For Work/Assets, Food For Education, Maternal Child Health Nutrition, etc).

Step 3: For Each Modality, Provide Bellmon-Relevant Guidance

For each of the most likely distribution modalities, provide Bellmon-relevant guidance and scenarios of possible coverage, where appropriate, that will help ensure potential impact on production and markets of such food aid distributions are minimized, and therefore Bellmon-compliant. Given that potential Awardees' MYAP proposals will not yet be final (and are

therefore unavailable to inform the analysis), this Bellmon-relevant guidance will be necessarily general but should discuss each of the following:

- Ration size
- Ration composition
- Timing of delivery with an emphasis on the months of lowest food availability (lean season)
- Any special targeting considerations
- Balance between cash and food resources to ensure effective program implementation and thereby avoid potential leakages

Regarding ration composition, BEST will provide general guidance as to which Food For Peace commodities might be appropriate for distribution to potentially targeted beneficiary groups. This requires both secondary and primary research of local diets, including preferences and substitutes, among different socioeconomic groups and in rural versus urban areas.⁶⁹ The main staples consumed by poorest households in each potential target area will be outlined, with any seasonal differences noted.

Where current Awardee Mid-term or Final Evaluations are available, BEST will review evaluations to summarize any 'lessons learned' for each modality.

Step 4: Review All Food Security Assessments to Identify an Appropriate Proxy Indicator of Additionality

USAID/Food For Peace development programs focus on chronically food insecure regions within Title II recipient countries. By definition (or default), program activities will be geographically targeted within a subset of sub-national units (e.g., districts/countries/provinces). Because of the localized nature of the impact of distributed food aid, the vulnerability of small markets to disruptions, and the sensitivity of small farmers to production disincentives, quantities which may appear insignificant compared to a country's total food staple consumption can nonetheless have a major impact on markets and production at the local level. Therefore, while previous Bellmon analysis have often used an estimated national food deficit to determine

⁶⁹ If commodities considered for distribution are highly substitutable with other commodities in the local diet, the analyst must assess market conditions to reveal the distributed commodity's likely cross-price effects on those substitute commodities. As an example, suppose consumers typically consume black beans, but view pinto beans as a very close substitute. If pinto beans are monetized, resulting in an increase in the supply of pinto beans and therefore a drop in the price of pinto beans relative to black beans, consumers may substitute pinto beans for black beans. Depending on how easily consumers substitute the two goods (as reflected in the cross-price elasticity between black beans and pinto beans), monetization of pinto beans could result in a decrease in demand for black beans, which could affect production incentives and markets for black beans. The willingness to substitute commodities in the local diet often follows a socioeconomic gradient and differs in urban versus rural areas. Understanding these dynamics is important to strengthen the market intelligence, and provide appropriate guidance regarding the likely effects of food aid (both monetized and distributed) on local markets. As an example, there may be very strong preferences for rice in an urban area which makes consumers relatively nonresponsive to price changes (i.e., the own price elasticity of demand for rice is inelastic), whereas rural consumers may have a preference for sorghum but remain willing to substitute sorghum with millet as the price of sorghum increases relative to millet.

the appropriate level of distributed commodities, the BEST analysis explicitly recognizes that distributed food aid will be concentrated in only select areas within a country, and therefore must assess the volume of commodities suitable for distribution at a more localized level in order to provide Bellmon guidance.

Through review and application of appropriate indicators of additionality, an assessment of the relatively absorptive capacity of sub-national administrative units (typically at the first administrative unit such as province or district), based on proxy indicators of additionality, can further refine geographic targeting guidance and provide estimates of the populations that may be targeted for future food aid programs. While geographic targeting may not always be the most preferred or appropriate targeting criteria, in most cases it will be the easiest and least costly to administer and, of course, can be followed by application of other administrative or self-targeting criteria.⁷⁰

In the case of a distribution modality such as PM2A, which targets households with pregnant and lactating women and children under two years old for preventive nutritional supplementation, regardless of household wealth or food deficit, initial geographic targeting is critical as it represents the key program parameter to avoid potential Bellmon concerns. Effective targeting of a PM2A program, from a Bellmon perspective, therefore involves further refinement of initial geographic targeting based on estimated household food deficits on a relative basis, followed by targeting households based on PM2A program eligibility (i.e. all children 6-23 months and all pregnant/lactating women).

See Annex VII.II for a description of possible proxy indicators of additionality.

Step 5: If Possible, Assess Potential Beneficiary Coverage Using Country Budgetary Guidance

If applicable, when likely program dimensions are available (such as program budget and proposed ration), the analysis will assess the absorptive capacity of potential target districts. This assessment will be based on comparing the number of potentially-eligible food insecure households with the estimated number of rations available for distribution under the given program.

For modalities with fairly standard rations in terms of both size and composition (e.g., Food For Work/Assets or Food For Education), BEST will provide basic cost comparisons of ration by modality, which will provide some guidance as to total beneficiary coverage possible, and therefore total volume of distributed commodities possible given budget constraints.

For modalities with (at present) less-standard rations in terms of both size and composition (e.g., PM2A), BEST will base ration scenarios on guidance from FFP/FANTA and review of current Awardee MCHN experience, if applicable. Likely parameters of a PM2A program (including ration size and composition) will be used to estimate the number of household rations available under various levels of funding.

⁷⁰ Hoddinott, John. 1999. "Targeting: Principles and Practice," IFPRI Technical Guidance No 9, Washington, DC: International Food Policy Research Institute, accessible via <http://www.ifpri.org/sites/default/files/publications/tg09.pdf>.

For PM2A, BEST will use the most current and reliable demographic data to estimate the number of households with either a pregnant or lactating mother or a child under two. Based on these figures, BEST will estimate the number of households who are both PM2A-eligible and for whom PM2A rations would most represent additional consumption (using the proxy indicator(s) of additionality), to estimate the number of households that could be targeted for year-round individual and household rations within each district without introducing Bellmon concerns.

BEST will then rank sub-national administrative units according to those in which PM2A rations would:

1. Most likely represent additional consumption, and therefore be unlikely to pose any negative Bellmon impact;
2. Address the highest rates of malnutrition at the district level; and
3. Target the largest total number of PM2A-eligible households, an important efficiency consideration when implementing an integrated development program.

Step 6: Review Food Security Assessments and Livelihoods Reports to Inform Sub-National Analysis

Descriptive analyses of the ways in which households secure their livelihoods, and their varying degrees of vulnerability to external shocks, provide critical context to a discussion of potential household responses to the receipt of food aid.

Assessed food insecurity. Whenever possible, BEST will list the relative ranking of administrative units' levels of food insecurity (e.g., high, medium, low) for each target area. The ranking may be based on measures of poverty (for example, from available Demographic Health Survey (DHS), poverty mapping, and/or census data) and the prevalence of stunting in children under five. Such a ranking would provide a measure of both food access and utilization. This assessment will be derived from the Food Security Country Framework whenever available.

The data available to assess food insecurity levels will vary from country to country, depending on the types of surveys and assessments conducted within a relevant time period. The BEST team, including all consultants, will undertake careful review of all alternative sources of food security assessments to determine the best available data for the distribution analysis.

Livelihoods. Based on a review of all available livelihood assessments and consultation with relevant experts in the field, BEST will provide an overview of livelihoods including key characteristics of food insecure households within each target area such as sources of food, sources of income, and possible impediments to utilization (for example, a high prevalence of diarrheal disease within the district which prevents proper absorption of nutrients).

Key vulnerable populations. Whenever possible, key vulnerable populations will be identified and latest available population figures will be provided.

Step 7: Report On-Going Food Aid and Cash Transfer Programs

To properly assess the expected level of ‘additionality’ with the introduction of a new food aid program, BEST must first account for all pre-existing programs which affect households’ cash and food receipts including in-kind and/or cash transfers households receive through a variety of government and non-governmental sources, which contribute to households’ current level of food insecurity. Both the amount of in-kind aid and the timing of distribution must be considered to properly account for the volume of food deficits throughout the year. Whenever possible, BEST will report:

- NGO or government agency
- Location
- Modality
- Expected duration of activity
- Ration (size, composition, kcals)
- Planned and actual beneficiary coverage

Combined with food insecurity measures and estimated district-specific nutrition gap (or other proxy indicators of additionality), this overview of existing food aid and cash transfer programs will provide relevant USAID decision makers a more accurate measure of the ‘food gap’ a proposed food aid distribution program should fill. This overview will allow both a spatial and temporal assessment of a potential food aid disincentive effect.

Step 8: Review All Available Baseline Market Analyses

Whether a donor provides food aid rations to food insecure households across the breadth of a country or only in a localized area, the donor must have an understanding of the current functioning of agricultural markets critical for food security, as those are the markets most likely to be impacted by the introduction of food aid.

When attempting to assess the potential impact of food aid in a localized area (whether distributed in kind, in cash, or through subsidized food sales), it is especially important to understand 1) the functioning of local markets and 2) how well-integrated local markets are with markets outside of the food aid intervention area, and therefore how any changes in food prices might be transmitted to other markets.

A unique challenge in attempting to assess the impact of food aid on markets and incentives in many LIFDC countries arises due to the lack of available high-quality and disaggregated baseline market information. Markets and market players have often been impacted by a series of complex changes; these changes reduce the utility of any but the most recent thorough market assessments. Production and market data is often scarce and of very poor quality, and/or is tainted by concerns about politicization of the data. That said, while market analysis is often thought of as a highly quantitative exercise, much can be gained from a descriptive analysis of the structure, conduct, and performance of markets. Analysis using a SCP

framework can be well-suited to low-cost rapid appraisal techniques, such as those used in BEST market analyses.

Step 9: Determine Key Commodities Markets and Set of Physical Markets for Field Visit

Without an understanding of how markets are currently functioning, it is not possible to provide guidance on the type, form, timing, or geographic targeting of food aid that is not likely to negatively impact markets or producer incentives. To address this initial gap in knowledge, the study team may be required to undertake a baseline Market Analysis, using a Rapid Assessment Tool, (see Annex VII.I) to assess the current state of agricultural markets as of the study date. The baseline will be accomplished through a combination of desk study, key informant interviews, and intensive field work.

The choice of commodity markets for assessment will be determined by the food aid commodities typically distributed in-country, commodity markets likely impacted by such distribution, and any commodities critical for food security whose prices may be impacted by a sudden increase in the supply of food in food insecure areas. These commodity markets will generally involve the major cereal markets (e.g., wheat, maize, small grains), major pulses, edible oils, and livestock markets.

The choice of physical markets to include in the field visit will likely include those major markets currently monitored by, for example, FEWS NET, WFP, and/or recipient country Ministries or Central Statistics Office, along with a host of other markets throughout the country which are critical for food security. The BEST team will consult with the USAID and FFP missions to develop the field visit itinerary, and incorporate any specific Mission objectives. For example, the Mission and/or the BEST team may deem local markets in remote food insecure areas not covered by regular monitoring appropriate to cover during the field visit.

To maximize coverage of the broadest cross-section of markets possible, the study team will typically split into separate teams. Teams will employ a Rapid Assessment Tool (see Annex VII.I) and use a Structure-Conduct-Performance (S-C-P) Framework as a lens through which to investigate the state of markets across the country. Team members will conduct interviews with subsistence farmers, small-scale and large-scale producers, traders, small and large processors and millers, wholesalers, and retailers. In geographic areas where food aid interventions are currently taking place, team members will also interview a sample of beneficiaries and non-beneficiaries of food aid.

Commodity markets and physical markets will be assessed using Structure-Conduct-Performance (S-C-P) model, as adapted by FEWS NET from Industrial Organization Theory⁷¹ to the realities of markets in developing countries.⁷²

According to traditional neo-classical economic theory, a market is “performing” if an increase in demand or a decrease in supply results in a new equilibrium characterized by a higher price

⁷¹ See Bain (1959).

⁷² Readers interested in more details about a Structure-Conduct-Performance framework for analysis in the context of food security in developing countries, please see FEWS NET (2008b).

which clears the market by equating quantity supplied and quantity demanded. This definition of market performance is insufficient from a food security perspective because a price increase which substantially diminishes the purchasing power of households, though an equilibrium, has undesirable social outcomes which threaten food security. For this reason, we turn to the S-C-P concept of market performance.

Within the S-C-P framework, markets are said to perform well if they achieve socially-desirable goals such as availability of a sufficient quantity, diversity, and quality of goods to satisfy demand at prices which are “fair” to traders, producers, and consumers. Fair prices ensure reasonable margins to traders, enabling them to continue engagement in that market. Fair prices to consumers assure that a cross-section of the population is able to access goods via the market. Short and long-term price stability, as well as market efficiency, are indicators of market performance. **Market performance is derived from basic conditions, market structure, and market conduct.**

Basic conditions broadly describe basic traits of the country and economy, including seasons and seasonality, infrastructure, consumption characteristics such as elasticities⁷³ and income distribution, stability, government policies, and incentives for producers and traders.

Basic conditions set the parameters for **market structure**, which comprises the relatively stable features that influence the behavior of market participants. Features of market structure include the number and concentration of buyers and sellers, barriers to entry and exit, vertical and horizontal coordination, and licensing requirements.

In conjunction, basic conditions and market structure influence **market conduct**, or the behavior of market actors. Price setting behavior, buying and selling practices, informal norms of trade, and information use are all aspects of market conduct.

As part of the market analysis, BEST will perform an assessment of the level of market integration. Where markets are well-integrated, price changes due to supply and demand shocks in one market are more easily transmitted to other markets. By dissipating the price effects, such shocks will have less of an impact on any one local market. Any effect of temporarily increasing the local food supply through localized food aid distribution will therefore be dampened wherever markets are well-integrated. Conversely, where markets are poorly integrated, prices are likely to decrease more significantly when food supply is increased with the addition of distributed food aid. Where time-series of market prices for key commodities relevant for food security are available or obtainable, BEST will assess the level of market integration through analysis of covariance of prices over time and across markets. These data

⁷³ Elasticities are a common way to describe the responsiveness of demand or supply to changes in prices or income. For example, the price elasticity of demand describes the percentage change in quantity demanded resulting from a percentage change in the price of a good, while the price elasticity of supply describes the percentage change in quantity supplied resulting from a percentage change in the price of a good. The income elasticity of demand describes the percentage change in quantity demanded in response to a percentage change in income. Importantly, price and income elasticities are very rarely available, and extremely difficult to collect. Elasticities are mentioned here solely for the purpose of tying these important concepts of supply and demand price responsiveness from economic theory to the qualitative indicators often relied upon in practice. For more details, please see Annex I and FEWS NET (2008b).

are generally, though not always, available by request to WFP and/or FEWS NET within the study country.

Step 10: Field Visit

The BEST field visit will involve filling in data gaps, triangulation of secondary data, and discussions with all key stakeholders to ensure an accurate and thorough analysis. Upon arrival, the BEST team shall first meet with USAID/FFP Mission personnel to come to a common understanding of the purpose of the assignment and outline the activity timetable.

Following the meeting with the mission, the BEST team will seek insights, data, studies, and reports through meetings with key government ministries, aid and development project offices, assessment committees and networks such as FEWS NET, United Nations offices (WFP/VAM and FAO), universities, and others. Insights into future initiatives that may impact food security in potential Title II intervention areas (e.g., a World Bank, Millennium Challenge Corporation, or other donor's planned program affecting agriculture) are more likely to be gained through these meetings than through desk review prior to the field visit.

In-depth meetings with the private sector—producer/farmer groups and associations, traders and other middlemen, processors, importers and exporters, and shippers—will be critical. Formal and informal intelligence gathered through these meetings will be key to understanding the latest market dynamics and future trends. Discussion with producers, processors, and traders⁷⁴ will provide an understanding of the factors affecting demand and supply of commodities with which a distributed commodity would likely compete. The overarching goal of such meetings in regards to the BEST analysis is to gain an understanding of the price responsiveness of supply and demand of select commodities, constraints to expansion, and inter-temporal arbitrage practices of traders that may be impacted by a supply increase via distributed food aid.

Travel to current and/or potential sites for Title II program implementation is an integral part of assessing potential impact of distributed food aid. Assessing conditions 'on the ground' allows a detailed contextual knowledge of demand and supply dynamics affecting local markets. It is generally not possible to gain such knowledge through desk review and, therefore, travel to the specific sites in the study country will be an essential component of every BEST study. In addition to meeting with current and potential Title II Awardees, informal discussions with current or potential beneficiaries can offer insights into the appropriateness of specific Title II commodities for distribution, including palatability, ease of preparation, and price and quality factors relevant to demand responsiveness.

The BEST study is not intended to evaluate current food aid programming, but may nonetheless make observations during field visits which can be instructive for future food aid programming. BEST will report general observations about current food aid distributions and any challenges to improving targeting effectiveness reported by current Awardees.

⁷⁴When combined with a monetization analysis, discussions with traders and potential buyers will also involve assessing their interest and ability to purchase commodities in various quantities.

Inspection of a sample of storage facilities in current use is required to assess the adequacy and cleanliness of storage facilities for distributed food aid. During inspections, the average storage time and frequency of fumigation will be noted.

In all cases, the visit should be completed with a private and candid briefing to relevant Mission personnel.

Step 11: Report Production

BEST will report results according to the agreed-upon report outline as detailed in the country study SOW. BEST team members should anticipate submission of an initial draft within approximately four to six weeks after conclusion of the field visit. FFP/W and the Mission will generally reply with comments, questions, and requests for clarification within two to three weeks of receipt of the initial draft. A final 508-compliant report must be submitted to FFP/W generally within two to three weeks of receipt of all FFP/W and Mission comments.

Annex VII.I BEST Rapid Assessment Tool

Producers

(If possible, speak with both small-scale and larger-scale producers.)

Agricultural

When did you settle?

How many acres (ha) do you have access to?

How many acres (ha) do you cultivate?

How many acres of maize? Wheat? Other grains (if appropriate)?

What other crops do you grow?

Which crops are you increasing? Which are you decreasing? Why?

How do you decide how many acres (ha) to devote to maize/wheat/small grains?

Are seeds and fertilizers available? Are they accessible? How much did you use/plan to use this year and how much did/will it cost?

What does your household need cash for?

How do you raise this cash?

How much maize/wheat/other grains did you produce for selling from the last harvest? How this did compare to other years?

How many months of household stocks do you currently have?

Who do you sell your maize/wheat/other grains/other crops to? Where do you go to sell? How do you get there, and how much does it cost?

What price do you receive when a trader comes to your farm to buy? When you travel to the market?

Are prices based on grades and standards? What are the prices for different grades?

Do you contract with any companies? If YES:

What company and for what commodity?

What do you receive and what do you give?

Are there problems with contract enforcement?

Are you a member of a farmer's cooperative? If so, what are the terms of membership and benefits?

Do you ever sell on credit? If yes, to whom do you provide credit and on what terms?

Do you ever buy inputs on credit? If yes, where do you receive this credit from?

Livestock

What is the size of your herd?

Have you utilized dipping services this year?

What are the current range conditions? Water conditions?

How many heads (large/small) did you sell last year? This year?

Food aid

Do you receive food aid? If so, how much? Do you know why you were chosen?

What is your household eating? How many meals a day are you taking?

If you don't have maize/wheat/other grains, what do you eat? How do you obtain this substitute food?

Does the community believe that the distribution reaches the people who need it most? Do you?

Do you ever sell/exchange food aid on the market for something you need more than food aid?

If there was no food aid, how would your farm change? More land cultivated? More staple crops?

Traders

(If possible, speak with small, medium, and large-scale traders.)

Background

What are the main agricultural commodities traded on this market?

What are the main cereals traded in this market?

When are grains/pulses plenty? What are the [standard unit, e.g., 1kg or 20kg] prices after harvest?

When are grains/pulses in short supply? What are the [standard unit] prices in the lean season?

What commodity do you trade, and how long have you been trading?

Structure

How many other traders are selling similar goods in this location?

Who are the big traders in grains/pulses/oils/livestock, and how what volumes do they transact?

Who are the market authorities, and what role do they play in the market?

Where do you get your grains/pulses/oils/livestock from? How far away is the source?

How many bags/liters/heads do you buy at a time? How often do you buy? Who do you buy from? How much does it cost to transport?

What is the condition of the roads between your source and destination markets? What are your transportation options?

Where do you store your goods? Where do big traders store their goods? What are the costs of storage?

Conduct

How do you know where to go to get low cost stock?

If the cost in your source market increases, what do you do?

What prevents more traders from entering into this market?

Does anything prevent traders from dropping out of this market?

How do you determine the price?

Do you ever buy on credit? If yes, from whom and on what terms?

Do you ever extend credit to buyers? If yes, to whom and on what terms?

Do your buyers want high quality or low prices? Why?

Performance

Costs: transport, loading/offloading, market fees, license fees, taxes, electricity, rent,...

How much profit can you find in [standard unit]?

What risks do traders have in grain/pulse/oil/livestock trade?

What prevents you from doubling the volume of your business?

Food Aid

If households had more purchasing power, could you increase your stocks? How long would it take to organize?

Do households ever sell or trade food aid? If so, which commodities do they sell/trade and for how much?

How does food aid affect your business?

Wholesalers/Retailers

If possible, speak with several wholesalers and retailers in each urban area.

What percentage of this market (local or regional) does your company supply?

How many other wholesalers / retailers of are there in this market? (if known, name them)

Where is the major source of commodity X (local, regional, import)?

Do you prefer to stock local or imported product? Why? Higher marketing margins? Less competition? Niche market?

What are current barriers to expansion of business? Access to credit? Lack of effective demand? Transportation costs that restrict possible geographic coverage?

In your opinion, has your business been affected by the food aid distribution program conducted in this area? If so, has it increased or decreased?

Local market spot checks

Observe whether there are any food aid commodities for sale. Title II? WFP?

If you suspect the food aid is Title II, copy down lot number from the back of can, or bottom of milled bag between the bottom seam and USAID label.⁷⁵

Ask for basic information from traders and wholesales in the local markets, including:

Normal prices

Consumers' preferences for different commodities, and grades of commodities

Do they notice any impact on their business from food aid distributions?

NGOs distributing food aid

What is targeting criteria (geographic targeting, household targeting, food delivery mechanisms)?

Do you have the capacity to implement and enforce the selection criteria?

Do you think households understand the targeting criteria?

⁷⁵ The lot number will tell you (1) something about market integration because you can trace back to origin and; (2) something about modality (if came from a MCJH, VGF, FFW etc) beneficiary, which can signal that you should investigate possible causes of inclusion errors associated with that specific intervention to see if it sheds light on necessary adjustments in targeting.

Do you have any 'lessons learned' from your own past programs or other NGOs' programs?

What are the greatest constraints to improving targeting?

If there is one thing you could change about the targeting process, what would it be?

How appropriate is the food aid program in terms of commodity type, ration size, delivery schedule, and venue?

Is the distributed food likely to be an "inferior good," one consumed in disproportionately greater quantities by the poor?

Annex VII. II Description of Proxy Indicators of Additionality

Among the possible proxy indicators of additionality are food consumption scores (or some other measure of actual consumption), a composite indicator of food security (such as through food security and vulnerability assessments), sources and levels of income (particularly extreme poverty), malnutrition rates, an estimated nutrition gap, or some combination of these indicators. Proxy indicators are typically available at the first administrative unit (e.g., province or district) and provide a gross measure of the relative additionality across sub-national administrative units. Thus, the proxy indicators can provide guidance on initial geographic targeting and volume of commodities that might be appropriate for distribution.

Nutrition or food gap

A nutrition or food gap estimate provides a measure of the difference between available food (proxied by domestic food production) and the amount of food needed to support a specific per capita daily nutritional standard (generally 2100 kcal per person per day, although FAO estimates have been revised and are now country-specific). If estimated on a more localized level (i.e., at the level closer to the communities in which a cooperating sponsor would implement a distributed food aid program), a nutrition or food gap can provide a very useful measure of that volume of food which is not currently supplied by local production and/or markets, and which would represent an appropriate volume under a proposed Title II non-emergency food aid distribution program to assure minimal to no disincentive effect. In order to estimate a sub-national food or nutrition gap, it is necessary to collect data on population, production and trade flows within relevant catchment areas. Collection of trade flow data at a sub-national level is an extremely time-consuming and expensive undertaking and outside the present BEST scope of work. For the purposes of the distribution analysis, one or more proxy indicators of ‘additionality’ are used to characterize the relative food or nutrition gap at the sub-national level.

One source of estimated food deficits is FAO’s new “depth of hunger” estimates, which provide national averages for the estimated food deficit of undernourished populations in countries across the globe. These figures provide a useful national benchmark which can be used prior to conducting formative research in proposed target communities to determine in more precise detail the average household deficits of beneficiary households. While the BEST report may make use of these figures to develop an illustrative household ration under PM2A, for example, the analysis will nevertheless maintain the use of proxy indicators of ‘additionality’ to characterize the relative food or nutrition gap at the sub-national level in order to provide initial geographic targeting guidance.

Food Consumption Scores/Composite indicators of food security

A Food Consumption Score⁷⁶ (FCS) is collected via household surveys, and is generally based on a 7-day recall of food consumption. The weighted score reflects both dietary diversity and

⁷⁶ For details on the calculation, use and validity of food consumption scores and other measures of dietary diversity in food security analysis, please see (1) WFP’s “Technical Guidance Sheet - Food Consumption Analysis: Calculation and Use of the Food

frequency of consumption of food items. Depending on whether the survey is implemented during a typical harvest or typical lean season will affect the validity of the FCS as a measure of average household food consumption. If, for example, the survey which derives the FCS is conducted during a favorable harvest period, households identified as food insecure using “poor FCS” as an indicator may reasonably be considered as chronically food insecure, since these households consumed very poor diets in favorable harvest periods.”

FCS is not a quantitative measure of a nutrition gap, and cannot be compared with the ration under the proposed food aid program to determine the extent to which the program fills (or potentially overfills) the ‘nutrition gap.’ However, a FCS does provide a snapshot of both the frequency and diversity of household staple consumption and is therefore a reasonable proxy indicator of the availability and access dimensions of food security and, to a lesser extent, the utilization dimension.⁷⁷

Composite indicators of food security, which encompass measures of both food consumption and food access, may be available instead of or in addition to a food consumption score. The food access measure provides an indicator of a household’s ability to produce or purchase food.⁷⁸

Extreme poverty

Extreme poverty is an indicator of a household’s inability to meet its basic nutritional requirements. Households living under conditions of “food poverty” lack enough income to purchase foods necessary to meet the energy and nutrient needs of all of their members, which is an indicator of poor access to food. Depending on intra-household distribution of food, it is typically assumed that at least one member of a food-poor household is always hungry, and potentially all members are hungry.⁷⁹

Extreme poverty is not a quantitative measure of a nutrition gap, and cannot be compared with the ration under the proposed food aid program to determine the extent to which the program fills (or potentially overfills) the ‘nutrition gap.’ is not a quantitative measure of any nutrition gap, which could then be compared with the ration under the proposed food aid program to determine by how much the ‘nutrition gap’ might be filled (or potentially overfilled) under the program. However, poverty is the best indicator of the access dimension of food security.

Consumption Score in Food Security Analysis”, accessible via http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197216.pdf; (2) Wiesmann, Doris. June 2009. “Validation of the World Food Programme’s Food Consumption Score and Alternative Indicators of Household Food Security,” IFPRI Discussion Paper 870, Washington DC; and (3) Hoddinott, John and Yisehac Yohannes. 2002. “Dietary Diversity as a Food Security Indicator,” IFPRI Discussion Paper 136, Washington DC: IFPRI.

⁷⁷ The recent BEST analysis for Burundi’s FY2009-2014 PM2A initiative relied on Food Consumption scores as reported in the 2008 CFSVA. As reported in Wiesmann (2009) (see footnote 2 above), the FCS in Burundi was found to be well correlated with food security status.

⁷⁸ The recent BEST analysis for Liberia relied upon the “food insecure” and “highly vulnerable” categories of food insecurity as defined in Liberia’s 2006 Comprehensive Food Security and Nutrition Survey. This composite indicator of food consumption and food access was the best available indicator of the relative absorptive capacity of food aid on a county-level basis for Liberia.

⁷⁹ DeRose, Laurie, Ellen Messer and Sara Millman. 1998. Who’s hungry? And how do we know? Food shortage, poverty, and deprivation. United Nations University Press.

Though extreme poverty is not a quantitative measure of any nutrition gap, which could then be compared with the ration under the proposed food aid program to determine by how much the 'nutrition gap' might be filled (or potentially overfilled) under the program, extreme poverty is an indicator of a household's inability to meet its basic nutritional requirements; therefore, households living in extreme poverty can reasonably be considered households for whom food aid would likely represent additional consumption.

Prevalence of malnutrition in children

Chronic malnutrition (stunting, or low height-for-age) in children under five is an additional potential indicator of chronic food deficits. Malnutrition rates may reflect either inadequate intake, malabsorption due to infectious disease, or some combination of both. To the extent malnutrition rates reflect disease prevalence more than inadequate intake; any conclusions about food deficits drawn from malnutrition rates will be an inaccurate reflection of household food deficits. To the extent the prevalence of stunting reflects poor availability and/or poor access, such prevalence rates can appropriately inform geographic targeting from a Bellmon perspective.

Where a high percentage of households report both poor food consumption and poor food access, and surveys show high rates of chronic malnutrition in children under five, poor nutritional outcomes will likely be more responsive to food aid intended as supplemental nutrition. By geographically targeting areas where these indicators coincide, a PM2A program will help ensure that any given PM2A beneficiary household will more than likely increase overall household food consumption, and therefore represent additional consumption, relative to households in other geographic areas with lower rates of poverty and chronic malnutrition.

The most recent and reliable source of reliable district-level malnutrition rates is often available from Demographic and Health Surveys.

Recommended reading

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