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USAID OFFICE OF FOOD FOR PEACE NIGER BELLMON ESTIMATION

OCTOBER 2011
This publication was produced for review by the United States Agency for International Development. It was prepared by Fintrac Inc.

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Preface

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

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Acronyms and Notes

ACP	African, Caribbean and Pacific [Countries]
AfDB	African Development Bank
AQIIM	Al Qaeda in the Islamic Mahgreb
ATTFSI	Africare's Agadez/Tillaberi/Tahoua Food Security Initiative
BCC	Behavior Change/Communication
BEST	Bellmon Estimation Studies for Title II
BMI	Body Mass Index
CAADP	Comprehensive Africa Agricultural Development Program
CAF	Cost and Freight
CCA	*Cellule Crise Alimentaire* (GoN)
CDMT	*Cadre de Depenses a Moyen Term du Sector Rural (*Medium Term Expenditure Framework for the Rural Sector)
CDSO	Crude Degummed Soy Oil
CED	Chronic Energy Deficiency
CFSAM	Crop and Food Security Assessment Mission
CFSVA	Comprehensive Food Security & Vulnerability Analysis
CIF	Cost, Insurance, Freight
CILSS	*Comité Inter-Etate pour la Lutte contre la Sécheresse au Sahel* (Permanent Inter-State Committee for Drought Control in the Sahel)
CNPC	Chinese National Petroleum
CONACOOP	Confederation Nationale des Cooperatives(National Confederation of Cooperatives)
CPI	Counterpart International
CRS	Catholic Relief Services
CSB	Corn-Soy Blend
DHS	Demographic Health Survey
DNPGCA	*Dispositif National pour la Prevention et la Gestion des Crises Alimentaires*
DR Congo	Democratic Republic of the Congo
DRKB	Dark red kidney beans
ECHO	Educational Concerns for Hunger Organization
ECOWAS	The Economic Community of West African States
EFSP	Emergency Food Security Program
EU	European Union
FANTA	Food and Nutrition Technical Assistance [Project]
FAO	Food and Agriculture Organization of the United Nations
FCS	Food Consumption Score
FCFA	*Franc Communauté Financière Africaine* (West African Franc)
FDI	Foreign Direct Investments
FEWSNET	Famine Early Warning Systems Network
FFA	Food for Assets
FFP	Food for Peace
FFW	Food for Work
FOB	Free On Board

FUCORI	Association of Local Rice Producers
FY	Fiscal or Financial Year
GAM	Global Acute Malnutrition
GDP	Gross Domestic Product
GMO	Genetically Modified Organisms
GoN	Government of Niger
HCFFPA	Host Country Food for Peace Agreement
HDI	Human Development Index
HIPC	Heavily Indebted Poor Country
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HRWW	Hard Red Winter Wheat
IDA	International Development Association
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
INS	National Institute of Statistics
IPP	Import Parity Price
IRD	International Relief and Development
IRIN	Humanitarian News and Analysis [news agency]-UN Office for Coordination of Humanitarian Affairs
ITC	International Trade Commission
JAICAF	Japan Association for Interntational Collaboration of Agriculture and Forestry
KKM	Kano-Katsina-Maradi [Corridor]
LDC	Least-Developed Country
LIDR	Localized Immediate Drought Response
LIFDC	Low-Income Food-Deficit Country
LOA	Life of Activity
LRP	Local and Regional Purchase, or Local and Regional Procurement
MCC	Millennium Challenge Corporation
MCHN	Maternal Child Health and Nutrition
MDG1	Millennium Development Goal 1: Eradicate extreme poverty and hunger
MDS	*Moulins du Sahel* (former wheat milling monopoly in Niger)
MT	Metric Ton = 2,204.62 pounds
MYAP	Multi-Year Assistance Program (PL-480 Title II)
NAIP	National Investment Agricultural Program (GoN)
NBER	National Bureau of Economic Research
NFDM	Non-Fat Dry Milk
NGN	Nigerian naira (unit of currency)
NGO	Non-Governmental Organization
NRM	Natural Resource Management
OCHA	Office for the Coordination of Humanitarian Affairs (United Nations)
OECD-DAC	Organisation for Economic Co-operation and Development-Development Assistance Committee
OFDA	Office of Foreign Disaster Assistance
OPA	*Observatoire des Pratiques Anormales* (Observatory of Abnormal Practices)
OPVN	*Office des Produits Vivriers du Niger*

PL 480	Public Law 480
PM2A	Preventing Malnutrition Among Children Under the Age of Two Approach
PRB	Population Bureau
PROSAN	CRS' *Programme de Sécurité Alimentaire et Nutritionelle*
PRSP	Poverty Reduction Strategy Paper
PVO	Private Voluntary Organization
RDS	Rural Development Strategy
RM	Regional Monetization
RON	Republic of Niger
SAP/GC	*Systeme d'Alerte Précoce* (Early Warning System)/Gestion des Catastrophes(Disaster Management)
SCP	Structure/Conduct/Performance [Framework]
SD	Standard Deviation
SFB	Soy-fortified Bulgur
SIMA	*Système d'Information sur les Marchés Agricoles*
SIMC	*Système d'Information sur les Marchés de Céréales*
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SONACOP	Société Nationale de Commercialisation des Produits Pétroliers
SYAP	Single-Year Assistance Program
TIFA	Trade and Investment Framework Agreement
TOT	Terms of Trade
TVA	Value-Added Tax
UEMOA	Union Economique et Monetaire Ouest-Africaine-West African Economic and Monetary Union
UN	United Nations
UNHDR	UN Human Development Report
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
USM	Usual Marketing Requirement
VAC	Vulnerability Assessment Committee
VAT	Value-Added Tax
VOICE	Vouchers Offering Incentives for Communities During Emergency [Project]
WAMIS NET	West-African Market Information Network
WB	World Bank
WFP	United Nations World Food Programme
WHA	World Health Assembly
WHO	World Health Organization
WTO	World Trade Organization

Chapter 1. Executive Summary

This Executive Summary provides summaries of the Niger Bellmon Estimation for Title II (BEST) Analysis Chapters.

Please note:

- At the time of report completion (October 2011), concerns have been raised over Niger's expected 2011 harvest production totals, due to poor and intermittent rain in the country over the past 4-5 months (especially in western Niger). Currently, the Government of Niger (GoN) has sent ministers to all 8 regions to discuss conditions with local communities. Emergency solutions, including potential price controls on cereals, are expected to be considered based on past GoN actions, for short-term and longer-term solutions.
- At the time of report completion (October 2011), Niamey newspapers (e.g., Le Temoin 10/21-11/25) report that Benin authorities may be raising taxes and adding new taxes on Nigerien importers. Benin authorities are proposing to place these taxes on containers at the port of Cotonou and on the Niger/Benin border. Title II applicants and Awardees should closely monitor these conditions, and consider these potential changes for programming using either Cotonou or Lome port. —
- The term "Konni" will be used for the town Birni N'Konni in the Tahoua region; the term "Doutchi" will be used for the town Dogondoutchi in the Dosso region
- The term "Nigeriens" will refer to people from Niger; "Nigerians" will refer to people from Nigeria.
- The exchange rate of *Franc Communaute Financiere Africaine* (FCFA) 464=USD1 will be used in this report.

Figure 1. Map of Niger

Source: UN OCHA/Niger.

1.1. Country Background

1.1.1. Agriculture

The agricultural sector accounts for 40% of Niger's Gross Domestic Product (GDP), and more than 80% of the country's population is involved in agriculture and livestock. Cereals are Niger's primary subsistence crops, especially millet and sorghum. Small quantities of fonio, wheat (in the eastern part of the country), and rice (along the Niger River) are also grown in small quantities, for home consumption. Cowpeas, beans, onions, sesame, carrots, tiger nuts, spices, and peanuts are grown for export.[1]

Niger suffers from chronic food insecurity, and production levels vary according to reoccurring shocks. The country's most recent shock, (due mostly to poor and irregular rainfall,) contributed to the below-average 2009 harvest. Ironically, Niger's 2010 harvest was its best ever, at 5.154 million metric tons (MT) of cereals (much higher than the country's average 2006-2010 annual production of 4.250 million MT).[2]

Lying south of the Tropic of Cancer, Niger is considered one of the hottest areas in the world. It is a vast (490,000 square miles), landlocked country, about three times the size of California and twice the size of France. Apart from natural disasters, the agriculture sector faces other challenges, including lack of public and private investments, threats from numerous pests and crop diseases, lack of subsidies to farmers, lack of technical support to farmers whenever new technologies are adopted, soil degradation from erosion, and a surging population, growing at 3.5% per year.

1.1.2. Economic Overview

According to the International Monetary Fund (IMF), the Nigerien 2011 per capita GDP is US$416, with annual growth of 5.4% and an inflation rate of 3.8%. Despite this noted economic growth and other positive factors, Niger is still one of the poorest countries in the world. It ranks 167th out of 169 countries in the UN 2010 Human Development Report. Niger has an estimated population of 16 million (Population Reference Bureau, 2011), and the majority of Nigeriens live along a narrow band of arable land (15% of Niger's land) in the southern part of the country.

Niger's economy relies on subsistence crops, livestock, official development assistance (e.g., the European Union (EU), USAID, and other donors), and some of the world's largest uranium deposits. Subsistence farming, small trading, seasonal migration, and informal markets provide the majority of income for its population; few formal sector jobs exist. Livestock production represents 14% of Niger's GDP, and includes camels, goats, sheep, and cattle. However, recurring drought, desertification, and high population growth rates have halted or delayed much of the country's potential economic growth.

Niger is landlocked and therefore economically dependent on its regional neighbors for trade and access to ocean ports. Its economy is very dependent on currency fluctuations between Niger's FCFA and the Nigerian Naira.

Niger was negatively impacted by the high global food prices, high fuel prices, and financial crises of 2008. With a large percentage of Nigeriens living near or below the poverty line—estimated at 60.8% in 2008[3]—negative shocks have led to hunger, malnutrition, and the inability to build human capital through education and adequate health care/nutrition. Furthermore, a

[1] Niebe is the local term for cowpeas in Niger, and Souchet refers to tiger nuts.
[2] WFP/Niger Niamey office
[3] World Bank/IFPRI Niger: A Poverty Assessment, April 2011, p.7.

prolonged political crisis (a military coup in February 2010, followed by successful democratic elections at the end of 2010) threatened the continued flow of much-needed donor assistance.

1.1.3. Policy

The following policy issues will be relevant for the next USAID/FFP Title II development program cycle in Niger, from 2012–2017, and are discussed further in Chapter 2:

- The Host Country Food for Peace Agreement (HCFFPA)
- Genetically Modified Organisms (GMOs)
- The Comprehensive Africa Agricultural Development Program (CAADP)
- The 3N Program: Les Nigeriens Nourissent les Nigeriens ("The Nigeriens Feed the Nigeriens")

1.2. Food Aid Overview

1.2.1. Background

The three current Multi-Year Assistance Program (MYAP) partners are Africare, Catholic Relief Services (CRS) and Counterpart International (CPI). Africare and CRS began their MYAPs in 2006, and CPI began their off-cycle MYAP in 2008. Africare has led the monetization consortium for the past five years, and rice has historically been the selected commodity for monetization. CRS and CPI both implemented emergency Single-Year Assistance Programs (SYAPs) in 2010 to respond to a food security shock.

1.2.2. Previous and Current Initiatives

During 2006–2011, USAID provided significant quantities of emergency and developmental food aid to Niger each year, averaging 9,737 MT annually of developmental food aid. However, overall US Government (USG) food aid tonnages varied significantly from year to year, depending on annual food insecurity levels. Overall food aid tonnage was highest in Fiscal Year (FY)10, at 45,880 MT (emergency and development aid). This tonnage reflects the response to Niger's poor harvests in 2009.

Current food aid programs include:

Africare. The goal of Africare's ATTFSI (Agadez/Tillaberi/Tahoua Food Security Initiative) (2007-2012)[4] is to reduce food insecurity and vulnerability for chronically food insecure households. The program targets departments within the regions of Agadez, Tahoua, and Tillaberi, which are areas north and east of Niamey.

Catholic Relief Services (CRS). The goal of CRS' PROSAN (*Programme de Securité Alimentaire et Nutritionelle*) MYAP (2007-2012) is to reduce food insecurity for rural families in vulnerable communities within certain departments of the targeted regions of Dosso, Tahoua, and Zinder, covering roughly the east-west axis of the country. Helen Keller International and CARE serve as partners under CRS' MYAP.

CPI. The goal of CPI's MYAP (2008-2013) is to strengthen community and household resiliency to food insecurity in Goure and Maine Soroa departments, located in the remote southeast of the country. CPI's strategic objectives include: 1) enhancing community livelihood capacity and resiliency; and 2) building human capacity through improved health and nutrition.

[4] Africare's MYAP program (2007-12) end date was extended by 9 months.

WFP. WFP/Niger has provided an average of 62,742 MT per year of food aid. Similar to USAID, WFP distributed the most food aid to Niger in 2010, at 148,752 MT.

US Department of Agriculture (USDA). Over the past five years, USDA has provided various commodities (roughly 6,000 MT/year) under its Food for Progress (FFPr) and Food for Education (FFE) programs to support food security programming (monetized and direct distribution commodities).

1.2.3. Planned Initiatives

The new 5-year Title II development program for Niger is expected to be funded in the range of US$15 million per year, depending on availability of funds and evolving needs. This program would cover the period of FY12–FY17 and may include awards for up to two private voluntary organizations (PVOs). Likely geographic areas of focus for the new development programming include Maradi, Zinder, Diffa, Tillaberi, Dosso, Tahoua, and/or Agadez.

1.3. Adequacy of Ports, Storage, and Inland Transport

Transporting and storing food aid commodities has been successfully accomplished in Niger over the past decade. Roads and donor warehouses can readily handle current and projected food aid tonnages. Furthermore, private investors are continually increasing storage capacity throughout the country.

1.3.1. Ports

The two main ocean ports for imports to Niger are located in Cotonou, Benin and Lome, Togo. A comparison of the two in regards to shipping food aid to Niger shows that Cotonou is the preferred choice of port. Lome is a less-preferred, but still available, option for importing commodities to Niger, should the need arise.

The port of Cotonou is located closer to Niamey, has a larger truck fleet, and has lower transport costs than the port of Lome. Furthermore, importing through Cotonou only requires passage through one international border (whereas Lome to Niamey includes two crossings). Cotonou does have more difficult customs and clearing procedures than Lome.

In May 2010, Nigerien importers and exporters boycotted the port of Cotonou because Beninese authorities were imposing excessive tariffs on vegetable oil imports transiting to Niger. Diplomatic negotiations resolved these differences, thus ending the boycott in April 2011.

1.3.2. Storage

The Government of Niger (GoN)'s OPVN (Office des Produits Vivriers) currently has national storage capacity of 154,700 MT, with its largest capacity in the regions of Zinder, Niamey, Tahoua, and Maradi (which all store over 20,000 MT each). WFP/Niger's current storage capacity nationally is 57,600 MT, with a distribution capacity similar to OPVN's.

Africare, CRS, and CPI all have adequate storage capacity for their respective Title II MYAP commodities. Current reported capacity: Africare (1,360 MT), CRS (2,000 MT, including space from sub-grantees), and CPI (4,255 MT). Both CRS and CPI handled additional commodities for SYAPs in FY10 without difficulty.

Africare, the current MYAP monetization partner, generally[5] does not own or rent a warehouse in Niamey. All of its monetized commodities are transported to the buyers' facilities directly from the port of Cotonou or Lome.

1.3.3. Inland Transport

Roads are currently able to handle food aid tonnages. Tarmac along the east/west axis of Niamey, Dosso, Tahoua, Maradi, Zinder, and Diffa is in good condition, with the exception of areas between Madoua and Maradi and between Zinder and Goure. Roads in the southern region can be travelled without security escort.

Outside Niger, the road network in the Economic Community Of West African States (ECOWAS) sub-region is plagued by many unauthorized checkpoints (customs, police, gendarmes, or other units). These checkpoints were established mainly to receive unofficial payments from truckers, which increases the cost of transportation. USAID and the EU are financially supporting the Observatoire des Pratiques Anormales (OPA) to facilitate more efficient transport.

1.3.4. Government Policy on Taxing of Imported Commodities

Recognizing that monetization of Title II commodities competes with regular commercial sales, payment of tax is authorized by USG regulation. For Title II monetized commodities, the GoN has agreed on a taxation mechanism which consists of paying 29% of Cost and Freight (C&F), of which 95% is rebated to the PVOs in support of their activities and 5% is destined for the Nigerien Treasury.

Title II distributed commodities are 100% exonerated from taxes (i.e., are duty-free), per the Host Country Food For Peace Agreement (HCFFPA), renewed in 2010 by Africare.

1.4. Monetized Food Aid

The monetization chapter is broken into three sections: initial commodity selection, commodity-specific market analysis, and monetization recommendation. Rice and edible oil passed the first four (of six) tests for consideration for monetization, and are then tested for market competition (which must be adequate, according to Test 5) and prices (which must be fair, according to Test 6). Recommendations are also provided for wheat grain, wheat flour and milk powder.

1.4.1. Rice

Rice demand is increasing in Niger, and domestic production represents about 34% of total rice supply. Domestic needs for rice are estimated at 250,000 MT per year. Niger's rice imports come primarily from Thailand (31%), Pakistan (27%) and India (13%). According to the International Trade Commission (ITC), FAOSTAT, and Comtrade, an annual average of 190,000 MT of rice was imported during the past five years, with annual volumes ranging from 149,074 MT to 246,840 MT.

The importation and commercialization of rice is somewhat liberalized in Niger, with occasional GoN intervention to control prices in certain markets (e.g., Niamey). There is a network of marketing facilities in Niamey and the regional capitals, although transportation to some places during the rainy season may limit transactions on rural markets. There are at least four large importers of rice, and at least ten large wholesalers, which together suggest there is some competition in the imported rice industry in Niger. Information on importers' market share was

[5] Africare has obtained storage from WFP and the private sector as exceptional cases, but the above statement remains true for most cases.

not readily obtainable. Notably, some of the importers/wholesalers are entities related either under one parent company, or less formally by personal relationships, which appears to influence the degree of competition in the market. For example, Baba Hamed, Rimbo Sarl, and Rissa Ali Boubacar all appear to operate under Groupe Baba Ahmed. There are numerous semi-wholesalers, some serving more distant markets such as Agadez.

The chapter measures MYAP rice monetization sales prices versus estimated Import Parity Price (IPP) (Cost, Insurance, Freight (CIF) Niamey, ex-Thailand via Cotonou), by analyzing 12 monetization sales. The result:

- The average sales price was 91% of the calculated IPP.
- Sales were less competitive in 2007 and June–August 2010, and very competitive in 2009, February 2010, and in the three recent sales of 2011. Specifically, the 2007 transactions were approximately 21% below IPP; in 2009, the monetization sale was approximately at IPP; the 2010 monetization transactions averaged 11% below IPP; and the 2011 transactions to date have been very close to IPP, at 5% above the calculated price.

Annex V provides market background and further information and analysis for the conditions around these sales.

This study team recommends the monetization of up to 19,000 MT[6] of non-parboiled rice, US grade No. 3 or better, 15% broken, for the upcoming Title II development program cycle. Monetization of rice is recommended for the following reasons:

1. Commercially imported rice is in high demand, and currently meets nearly two-thirds of Niger's demand for rice.
2. According to Nigerien wholesalers, Nigerien consumers prefer the US rice when it is available. Consumers' perception of US rice quality creates demand for it in Nigerien markets.
3. The rice market appears to be relatively competitive, with many large and small wholesalers capable of handling monetized rice and regularly participating in sales given appropriate timing.
4. Past 12 monetization average sales performance was 91% of the calculated IPP. This average reflects two periods of poor performance, one of which appears to have been due to an unintended surplus of Title II rice on the market due to a shipping delay and unsold quantities of rice from the previous year. The average was higher for the three most recent monetization sales in 2011, which were all basically at par with the calculated IPP. Although there is some evidence that bidders occasionally collude, or attempt to collude, this shows that monetization sales can be very competitive in Niger via the current sales system. If Title II rice comes in multiple shipments throughout the year, chances that imported rice will flood the Niamey market will be decreased.
5. Title II commodities are purchased with local currency, freeing up foreign exchange resources to be used for Niger's other economic and human development needs. Sales made to local merchants and small traders through an open and transparent tender bid process appear to promote competitive marketing practices, and are the best approach for encouraging private enterprise and democratic participation in the rice business in Niger.

[6] This is equivalent to 10 percent of the average 5-year commercial imports.

1.4.2. Edible Oil

Edible oil imports averaged 36,242 MT per year over the last five years. Imports fluctuated during this period and peaked at 46,763 MT in 2006. Commercial imports represent approximately 66% of total supply, of which food aid represents 5%. Niger imports edible oil mainly from Malaysia (50%) and Cote d'Ivoire[7] (37%).

Olga Oil is the only large-scale edible oil processing plant in Niger, which makes it a monopoly. It has a 45,000 MT capacity to process ground nut oil per year. Olga would like to import crude degummed soy oil (CDSO) for its plant, while other actors in the edible oils market do not have a processing facility, and thus would prefer refined vegetable oil.

Many of the commercial importers and wholesalers involved in the rice market also trade in vegetable oil. The wholesalers interviewed have existing marketing channels throughout the country to move monetized commodities to remote locations inland. However, the porosity of the border between Nigeria, ethnic bonds (in particular among the Hausa on both sides of the border), and the potential of trans-border markets, make the oil market and other commodities competitive.

Refined or crude vegetable oil has not been monetized during the 2006–2011 MYAP cycle in Niger. Title II vegetable oil was last monetized in 2003 by Africare; sales of refined vegetable oil were halted after pressure from the GoN and the private sector.

Refined vegetable oil is a suitable commodity for monetization, though cost recovery rates could be compromised by competition from Malaysian imports. Nonetheless, the other advantage of vegetable oil as a monetization commodity is that it is covered under the current Africare Host Government Agreement, which takes into account the interests of all the MYAP PVOs.

Olga would likely be the only buyer for CDSO, because it has the only refinery for edible oil in Niger. The BEST study team recommends monetization of CDSO in small volumes—in the range of 6,000-8,000 MT. This would yield between 3,965–5,200 MT of refined oil, approximately 10% of commercial imports. However, CDSO should only be seen as a second option to rice because there is less competition for CDSO than for rice, and because the market typically demands other, less expensive types of edible oil. Specifically, if oil monetization is undertaken, it should be implemented with the understanding that because of the current market structure, monetized CDSO would likely be sold for a lower price than fair market value for soybean oil (roughly 20%–25% lower), similar to the price paid for CIF palm oil from East Asia because the Nigerien market is dominated by palm oil. The current calculated IPP for American CDSO, based on imported palm oil (CIF Maradi, ex-Thailand, via Cotonou port for off-loading) is US US$1270.62 per MT.[8]

1.4.3. Wheat and Wheat Flour

Wheat. Niger produces very little wheat domestically. Annual production is estimated at 8,142 MT out of the 11,592 MT total supply. Wheat imports averaged 3,476 MT per year over the last five years. Commercial imports represent approximately 30% of total supply.

The study team recommends against monetizing wheat since the only large-scale milling company is currently not in operation, and for other supporting reasons detailed in Chapter 5.

Wheat flour. Niger's market for wheat flour is relatively small, although demand for wheat flour has grown significantly in the last two decades, particularly with increasing urbanization.

[7] In English, Ivory Coast. Both versions appear in this report.
[8] See IPP calculation details in Annex V.

Attracted by the cities, more and more Nigeriens have left their villages and are becoming increasingly urbanized on the outskirts of the main capitals.

When Moulins Du Sahel (MDS) was operational, it produced Niger's wheat flour, but that output constituted only 2% of Niger's total wheat flour requirement—the remaining 98% was imported. There are at least 10 wheat flour wholesalers who are potential buyers of wheat flour throughout Niger. The majority of wheat flour buyers are in Niamey and Maradi and include leading bakers who also import flour from France. Others are in Zinder and Gaya. This suggests that there is some competition in the imported wheat flour industry in Niger.

Given the present level of demand and current prices for wheat flour, monetization of a small volume has potential to generate slightly over US$1.3 million.[9] Based on the following points, the BEST team recommends that PVOs monitor the wheat grain and wheat flour markets to assess the potential viability of monetization of wheat flour in the future.

- Demand for wheat flour is very sensitive to changes in price (demand is relatively elastic). When households suffer negative income shocks, they often switch from the consumption of bread and other wheat-based products to cheaper foods like millet.
- GoN interventions in the wheat flour market via subsidies could create an uncompetitive environment.
- MDS only recently closed due to bankruptcy; if the mill does reopen in the near future, wheat flour would be less appropriate as a commodity for monetization.

1.4.4. Milk Powder

Dry milk powder imported into Niger is used to manufacture yogurt, ice cream, and condensed sweetened milk. Imports of milk powder are in long-term decline, from nearly 48,000 MT in 2002 to only 12,889 MT in 2009. Most of the national local milk production, nearly 400,000 MT, is consumed on the farm and represents about 75% of total milk consumption. Only a small fraction of locally produced milk enters into the formal commercial channels to be sold to the larger industrial users.

This study does not recommend monetization non-fat dry milk (NFDM) in Niger for the following reasons:

- *Insufficient demand.* Per information received from stakeholders in Niamey, the country overall would have insufficient demand for powdered milk, due mostly to cultural preferences for other commodities.
- *Breast milk substitute*. NFDM could easily be a breast milk substitute, which would be contrary to FFP policy.
- *Potential export of unprocessed commodity to Nigeria*.[10] NFDM is a high value commodity that could easily be exported into Nigeria in powder form, given the high cross-border trade.

1.4.5. Third-Country Monetization

Potential Awardees are also encouraged to also seek alternative opportunities through Third-Country Monetization (TCM), as appropriate.

[9] Estimate is based off FOB Rouen price for French bakers flour, as of October 27, 2011. Source: Les Moulins d'Haiti
[10] Per USC Title 7, Chapter 41 Agricultural Trade Development Assistance, IV, Section 1733.

1.5. Distribution Analysis

1.5.1. Introduction

The Bellmon Amendment requires assurances that a proposed food aid distribution program in any country would not result in substantial disincentive to or interference with domestic production or marketing in that country.

Proposals for USAID/Niger for FY12–FY17 Title II Development Programs are expected to address two priority components:

- Reduce chronic malnutrition among pregnant and lactating women and children under 5 years of age with an emphasis on children under 2 years of age; and
- Increase the local availability and households' access to nutritious food by diversifying agricultural productivity, diversifying rural households' income, and increasing resilience to shocks.

Governance, gender, vulnerability reduction, emergency preparedness, and program integration are also cross-cutting themes that must be addressed.

Proposals are expected to target the regions of Maradi and Zinder as primary priorities, and Tillaberi, Dosso, Tahoua, Agadez, and Diffa as secondary priorities. The most likely modalities for distributing food aid to the priority regions would include the "1000 day approach," Maternal Child Health and Nutrition (MCHN),[11] Food For Work (FFW) and/or Food For Assets (FFA) activities, as best determined by the applicant.

1.5.2. Localized Food Deficits

Since the 1980s, Niger has struggled to feed its population, becoming highly dependent on imports and international food assistance. On an annual basis, 22% of Niger's population suffers from chronic food insecurity (per capita consumption of <1,800 kcal/person/day). Droughts, floods, pest invasions, and poverty all exacerbate the country's persistent food insecurity.

Furthermore, chronic malnutrition persists in Niger. The causes of chronic malnutrition are many:

- Lack of food availability at the local level, and poor household access (both physical and economic) to food markets.
- Poor sanitation and health practices.
- Limited dietary diversity, with deficiencies in micronutrients.
- High fertility rate: in Niger, women have an average of 7 children.
- Low education levels among females.

1.5.3. Private Market Capacity to Meet Localized Food Deficits

The typical household in Niger depends on market purchases for 90% of its food; thus, the private market's capacity to meet localized food deficits is an essential part of the country's food security. As a landlocked country, Niger depends on its own production, as well as on trade with its contiguous neighboring countries, such as Nigeria, Benin, Burkina Faso, and Mali.

[11] 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.

Commodities such as cowpeas, peanuts, onions, and other vegetables are traded between Niger and its neighboring countries.

Niger's regional trade with neighboring countries is well-developed, officially (ECOWAS or Union Economique et Monetaire Ouest-Africaine (UEMOA)) and unofficially. Niger depends on this trade to offset its persistent food deficit and land-locked status. Theoretically, export taxes no longer apply among member countries of ECOWAS or UEMOA, but custom duties still do, and can make this trade very difficult and reduce the volume of cereals available for trade.

External forces also impact commodity flows within and outside of the country, including: 1) official and unofficial cross-border hindrances; 2) currency fluctuations between the FCFA and the Nigerian Naira; 3) uneven security; and 4) poor road conditions, especially during the rainy season.

1.5.4. Market Integration

The study team reviewed market analyses, and conducted price analysis to assess the level of integration of Niger's markets. All reveal that all the commodities considered (imported rice, maize, millet, and sorghum) show fairly well-integrated markets, and thus fairly good price transmission across space. Thus, food aid stakeholders should acknowledge that food aid programs will have greater potential to impact both target markets and also markets in the local market catchment area; however, this impact will be lower overall as any effects are dissipated across multiple markets.

Although this Bellmon study does not include price data from Nigerian towns, many other studies have shown well-integrated markets between Niger and Nigeria, and at key border points (e.g. Malanville, Illela, Jibiya, Mai Adoua, and Damasak).

1.5.5. Cereal Banks

Cereal banks have a history of poor management in Niger. To improve their performance and thereby improve village-level food security, the following steps are recommended:

- Adequate overall monitoring systems and training of management committees.
- Better information and awareness-building in the villages regarding the establishment of a cereal bank.
- Strong community cohesion and motivation.
- Recruitment of literate committee members.
- Greater involvement of women.
- Availability of a community building with sufficient storage capacity and quality standards.
- Strong communication and coordination among sponsors.

1.5.6. Key Considerations

Geographic targeting. The BEST field team does not believe that initial geographic targeting at the department level within the following regions would create Bellmon concerns: Maradi and Zinder as first priority, and Dosso, Tahoua, Tillaberi, Agadez and Diffa as second priorities. This prioritization of regions is based on: 1) stunting, wasting, and underweight statistics; 2) the past history of shocks in-country; and 3) poverty levels (FANTA, 2011).

Seasonal targeting. The timing of ration delivery is very important. Food distributed during the lean season (*soudure*), typically June through September/October (FEWSNET, 2011) is more likely to be consumed by beneficiaries. Thus, food aid distributed during this time will likely have

minimal, if any, market impact, due to the combination of shortages in household stocks and high market prices.

Household/Individual targeting. In years of poor rainfall, food security availability, access, and utilization are all important and relevant throughout Niger. However, poor access and utilization are particularly pronounced in years when shocks occur along the southern Nigerien border with Nigeria. Interviewees during the BEST team's field visit to Niger indicated that food aid (at the current minimal tonnages) is likely appropriate for areas currently targeted by the MYAP. However, targeting can always be improved.

Evidence of leakage in local markets. No food aid was observed in local markets of Filingue, Doutchi, Konni, Maradi, Zinder, and Goure. Current MYAP Awardees report that Title II food assistance was not appearing on local markets in their target areas; however, note that developmental food aid tonnages are quite low for this past 5-year MYAP cycle. Awardees also noted that the primary cereal used for direct distribution, soy-fortified bulgur, is the least-preferred cereal for Nigeriens.

1.5.7. General Considerations to Ensure Bellmon Compliance

USAID has indicated that applicants should focus maternal and child nutrition services on pregnant and lactating women, and on children under the age of 2 years (the ~~"fi~~rst 1,000 days"). To minimize any potential negative market impact, MCHN and PM2A programming should be designed according to expected effectiveness, past experience, and lessons learned, and should also be appropriate to the particular region/department for implementation. Please see the USAID/FFP FY12 RFA for Title II Development Programs for further programming details.

Other final considerations include: 1) physical security for programming (particularly in Agadez, Tahoua, Tillaberi, Niamey, and in the southeast, along the border with Nigeria); 2) corruption; and 3) lessons learned from previous MYAPs.

1.6. Local and Regional Procurement (LRP)

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 that has been purchased in a neighboring country within the region.

The major risks associated with local purchase of food for distribution include the following:

- Inflationary pressure at the local market level.
- Upholding food safety standards, causing delayed or non-delivery of foodstuffs.

The major risks associated with cash transfers and/or vouchers, from the perspective of local markets and consumer welfare, are inflationary pressure and opportunities for corruption.

1.6.1. Current Initiatives

Cash or voucher programming was used in 2010 to respond to shocks. The total number of families receiving cash or vouchers in 2010 reached 165,000 individuals, or roughly 1,000,000 beneficiaries, including all family members (Cash Learning Niger).[12] Approximately 15 different agencies used cash and/or vouchers in response to the 2010 shock.

[12] See www.cashlearning.org/where-we-work/niger for further information, and Annex III.

USAID/FFP's Emergency Food Security Program (EFSP) supported LRP in Niger in 2010. The EFSP program disbursed US$25 million in total for LRP grants to WFP (US$17.6 million), Mercy Corps (US$4.6 million) and CRS (US$4.4 million).

WFP's large LRP grant targeted areas within the regions of Tillaberi, Tahoua, Maradi, and Zinder. Mercy Corps' smaller LRP grant targeted parts of the Filingue department, in the western Tillaberi region. CRS' smaller LRP grant targeted the Ouallam and Tillaberi departments within the western Tillaberi region.

In addition to its USAID-funded LRP program, WFP/Niger also implements cash programs which will disburse US$18 million from July 2011–December 2012, representing the third-highest sum of cash operations for any WFP country program. Parts of Maradi, Tahoua, and Zinder regions are targeted.

1.6.2. Potential for Expansion

The 2008 paper by Dr. Jenny Aker[13] provides valuable lessons from the 2004–2005 shock, and a cautionary tale, for PVOs undertaking LRP activities in Niger and elsewhere. The paper makes the following LRP recommendations:

- Study and apply best practices/lessons learned.
- Establish specific criteria and/or conditions to assist international agencies, donors and host country governments in determining whether local purchases are appropriate during a particular year.
- If local purchases are appropriate, apply criteria for determining the appropriate quantity, geographic location, and purchase prices.[14]

Overall, the LRP and voucher programming described in this analysis (and supported by USAID and other donors) has helped Nigeriens improve their food security levels in the short-term, as intended. However, the success of this pilot programming is small compared to the overall, enormous needs for Niger to combat its long-term poverty and food security challenges. Further longer-term development programming, based on effective collaboration between the government and the donor community, is required, if Niger is to improve the overall food security for its dispersed and vulnerable populations.

[13] Aker, J. (December 2008). *Rainfall Shocks, Markets and Food Crises: Evidence from the Sahel*. Washington, DC: Center for Global Development.
[14] Aker, 2008, p.24.

Chapter 2. Country Background

2.1. Agriculture

Niger is a vast, land-locked country which lies south of the Tropic of Cancer. The majority of Nigeriens live on a narrow band of arable land (15% of Niger's total land) along Niger's southern border (US Department of State, 2011). Niger is considered one of the hottest areas in the world. The country has an area of 490,000 m^2, about three times the size of California and twice the size of France. The country is divided into four ecological areas:

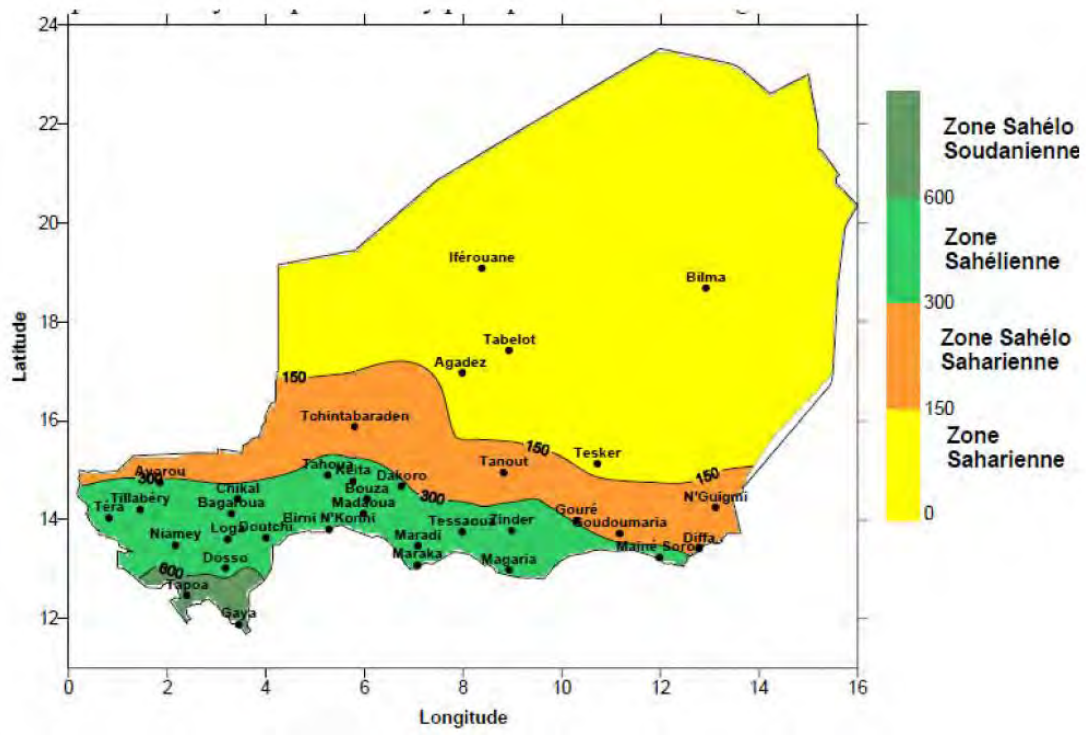
Area 1 – Sahel and Sudan Zone: Annual rainfall ranging from 600 to 800 mm, represents about 1% of the country with savanna vegetation, and may be considered the country's most suitable area for agriculture.

Area 2 – Sahel Zone: Annual rainfall of 300-600 mm, covers about 10% of the country, is suitable for agriculture, highly-concentrated human population.

Area 3 – Sahel and Sahara Zone: Annual rainfall of 150-300 mm, covers about 12% of the country, vegetation suitable for pasture.

Area 4 – Sahara Zone: Annual rainfall less than 150 mm, covers about 77% of the country, vegetation limited to valleys and oases. Vegetables are grown by small-scale farmers.

Figure 2. Niger's Ecological Zones



Source: GoN Department of National Meteorology.

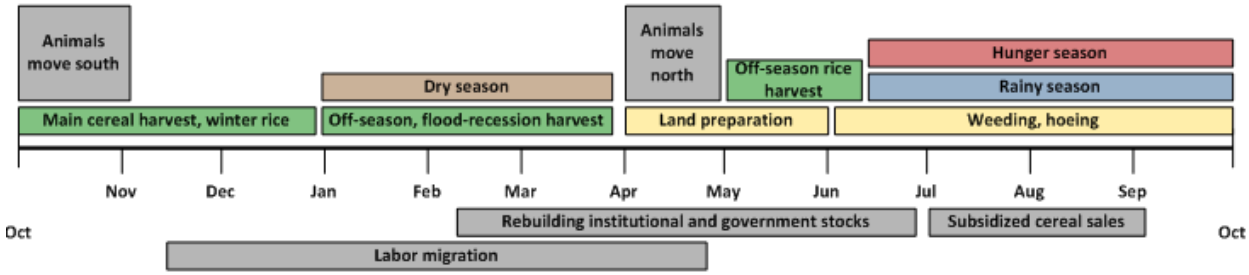
Table 1. Agro-Ecological Zones of Niger

Zone	Land Area (%)	Avg Annual Rainfall	Crop type	Crops
Sahel Sudan	1	>600 mm	Rain-fed	Millet, sorghum, maize, groundnuts, legumes, cassava, sweet potato
Sahel	10	350 to 600 mm	Rain-fed	Millet, sorghum, rice, cowpeas, vegetables, fruit
Sahel Sahara	12	150 to 350 mm	Oasis, rain-fed	Cereals, legumes, date palm, citrus; gardening
Desert Sahara	77	<150 mm	Oasis	Palm, citrus; gardening

Source: Table compiled by Fintrac/BEST, based on information from FAO.

As the table above shows, most cereal crops are harvested during autumn and early winter, with the exception of spring and autumn maize harvests in the Sahel Sudan and Sahel zones. Figure 3 below summarizes the country's production season and various events that affect the availability of agriculture and livestock.

Figure 3. Niger Seasonal Calendar and Critical Event Timelines



Source: FEWSNET available, at http://www.fews.net/Pages/timelineview.aspx?gb=ne&tln=en&l=en.

The agricultural sector accounts for 40% of Niger's Gross Domestic Product (GDP). More than 80% of the population is involved in agriculture and livestock. Cereals are Niger's primary subsistence crops, especially millet and sorghum. Also grown for household consumption are small quantities of fonio, wheat (in the eastern part of the country), and rice along the Niger River. Cowpeas, beans, onions, sesame, carrots, tiger nuts, spices, and peanuts are grown for exportation. Cowpeas and peanuts are primarily planted as intercrops alongside millet and sorghum (JAICAF, 2009).

Maize and rice are cultivated in areas where water is relatively available, including the areas along the Niger River and in the southern regions where rainfall is typically abundant (JAICAF, 2009).

The table below shows historical production levels for major crops during the last decade.

Table 2. Annual Production of Major Crops, 2000-2010 (MT)

Year	Millet	Sorghum	Cowpea	Peanut	Rice	Maize	Wheat	Total production
2000	1,678,631	370,746	262,657	113,216	11,617	3,784	10,946	2,451,598
2001	2,358,741	663,609	509,469	82,006	9,734	2,325	6,300	3,632,185
2002	2,567,219	669,709	654,232	153,729	19,489	2,907	3,500	4,070,783
2003	2,744,908	757,556	549,035	209,369	5,428	2,216	3,500	4,272,012
2004	2,037,714	599,528	339,499	159,079	18,377	3,970	9,000	3,167,166
2005	2,652,391	943,941	586,078	139,035	3,222	979	9,000	4,334,646
2006	3,008,584	929,265	712,031	152,561	6,781	19,085	7,796	4,836,103
2007	2,781,928	975,223	1,001,139	147,676	6,455	19,324	7,000	4,938,745
2008	3,521,727	1,226,251	1,543,943	308,510	32,475	7,968	8,775	6,649,649
2009	2,677,855	738,661	787,472	253,497	20,117	1,389	8,500	4,487,490
2010	3,843,351	1,304,832	1,773,423	406,245	29,963	9,381		7,367,195

Source: Data compiled and summarized from SIMA (note MinAg. statistics for annual cereal production will vary slightly due to accounting of other small grain production (maize, fonio and other), and FAO .
***Annual cereal production figures from the Ministry of Agriculture only count millet, sorghum, fonio and/or maize, and may have slightly different totals. Statistics appearing in the executive summary are based on the following annual totals: 2006-4,055,984 MT; 2007-3,856,800 MT; 2008-4,760,820 MT; 2009-3,421,122 MT; 2010-5,154,214 MT.*

The farming system in Niger is very traditional (requiring subsidiary tools and manual labor), and is essentially input-output because of the impaired purchasing power of small-scale farmers. Because of its fragile ecosystem and geography, Niger experiences droughts and floods, both of which contributed significantly to two shocks in the past decade. According to the 2010 Government of Niger (GoN) National Assessment, the 2004–2005 shock struck the Sahel region after the season's rains had already failed. As a result of the compounded shock, Niger suffered deficits of 223,000 metric tons (MT) of cereal and approximately 4 million MT of forage, which is used to feed livestock. The 2010 shock was not as severe, but Niger still had a food shortage of 119,700 MT of cereal as a result of the damage (Republique du Niger (RON), 2010-2011).

Apart from natural disasters, the agriculture sector faces other challenges, including:

- Lack of public and private investments.
- Threats from numerous pests (desert locust, birds, and rodents) and crop diseases. According to the Plant Protection Service, about 25% of agricultural production in Niger is lost each year to pests and an additional 25% to post-harvest losses (Mburu, November 2007).
- Lack of subsidies to farmers (such as credits, fertilizers, and new varieties of seeds).[15]
- Lack of technical support to farmers whenever new technologies are adopted.
- Soil degradation from erosion: loss of nutrients and arable lands.
  A surging population, growing at 3.5% per year (Population Reference Bureau - PRB, 2011). This overcrowds, and reduces access to, arable lands.

2.2. Economic Overview

As a landlocked country, Niger is economically dependent on its regional neighbors for trade and access to ocean ports. Its economy relies on subsistence crops, livestock, official development assistance, and some of the world's largest uranium deposits. More specifically, according to the US Department of State, in 2009, 64% of export earnings were from uranium, 20.5% were from livestock, and about 6% from other agriculture. More than 80% of the population is involved in subsistence agriculture, and agriculture represents about 40% of (US Department of State, 2011). Drought, desertification, and significant population growth have undermined economic growth.

[15] The new agricultural bank, *Banque Agricole du Niger* (Agricultural Bank of Niger), was created on February 18, 2011. Its goal is to improve agricultural production by increasing farmers' access to credit.

Niger's agriculture depends on rainfall; thus, the country relies on imports and food aid when rainfall is insufficient. At the household level, emigration has become an option for coping with food insecurity; each year, thousands leave Niger seeking better living conditions in destinations such as Ivory Coast, Ghana, and Libya.

These economic migrants often send remittances (through regular channels) to their families. According to the *Comite Ad'hoc de Gestion des Rappatries* (April 2011), prior to the February 2011 political crisis in Libya, approximately US$222,000 was transferred daily by Nigerien migrants in Libya to their families in Goure. However, it is important to note, transferred funds are generally used for household consumption and rarely for productive investments. Due to the recent crises in Libya and Ivory Coast, most of the Nigerian migrants have returned back home. By September 2011 over 200,000 immigrants had crossed from Libya into Niger (NYTimes 9/27/11), and this has created a loss of roughly US$80 million to the Niger economy.

Besides the specific vulnerabilities already mentioned, Niger also was negatively impacted by the high global food prices, fuel, and financial crises of 2008. These crises exacerbated the plight of Niger's most vulnerable social groups—which include women and young girls, who are often the last fed in poor households. The high food prices also led to reduced household food consumption.

Niger has an estimated population of 16 million (2011). The rural population in Niger comprises about 70% of the total population, and many rural Nigeriens live below the poverty line. The rural poor are net consumers of food staples and are highly vulnerable to price increases. Because Niger annually imports wheat, rice, and maize, the price increases of these staple foods intensified the crisis. Therefore, it was crucial for the Government of Niger (GoN), with the help of donors, to implement an emergency intervention plan, including generalized or localized food distribution, sale of cereals at low prices, and nutritional support activities for children suffering from malnutrition. Such support to vulnerable populations helped reduce acute food insecurity. (For detailed information on for USAID and WFP food aid in response to these shocks, see 1.2 of this report.)

With a large percentage of Nigeriens living near or below the poverty line—estimated at 60.8% in 2008[16]—negative shocks can lead to hunger, malnutrition, and the inability to build human capital though education and adequate health care/nutrition. Subsistence farming, small trading, seasonal migration, and informal markets dominate the Nigerien economy; few formal sector jobs are generated. Livestock production represents 14% of Niger's GDP, and includes camels, goats, sheep, and cattle. Industries such as textiles, cement, soap, and beverages represent a combined 15.2% of GDP (US Department of State, 2011).

In addition to uranium, Niger's economy also relies on the sale of other natural resources such as coal and gold. Niger also has oil potential: the China National Petroleum Company is exploiting the Agadez block of the country, and building a refinery north of Zinder to be operational later in 2011.

According to the International Monetary Fund (IMF), the Nigerien per capita GDP for 2011 is US$416, with annual growth of 5.4% and an inflation rate of 3.8%. As previously mentioned, rainfall which affects agricultural production plays an important role in the country's economic growth. Overall, per capita GDP increased by 41.85% between 2005 and 2010. The inflation spiked in 2008 (10.5%), primarily due to the global 2008 fiscal and price crisis.

Despite the noted economic growth and other positive factors, Niger is still one of the poorest countries in the world. It ranks at 167 out of 169 countries in the UN 2010 Human Development

[16] World Bank/IFPRI Niger: A Poverty Assessment, April 2011, p.7.

Report (UN HDR), ahead of only the Democratic Republic of the Congo (DR Congo), and Zimbabwe.

Table 3. GDP Growth and Inflation Rates, 2005–2010

Year	% GDP	% Inflation
2005	8.416	7.823
2006	5.807	0.054
2007	3.337	0.057
2008	9.289	10.532
2009	-0.865	1.142
2010	7.53	0.938

Source: IMF/World Economic Outlook Database, April 2011.

Furthermore, a prolonged political crisis has threatened the continued flow of much-needed donor assistance. A military coup in February 2010, followed by successful democratic elections at the end of 2010 has stabilized the government. Because official development assistance finances about 45% of Niger's budget, a sustained decline in development assistance could threaten progress made in recent years to increase access to health and education (World Bank, 2011).

The GoN's Second Poverty Reduction Strategy Paper (PRSP), which was approved by decree on October 10, 2007, includes seven pillars:

1. Strong, diversified, sustainable, and job-creating growth.
1. Equitable access to quality social services.
2. Addressing the demographic challenge relating to the high birth rate.
3. Reducing inequalities and strengthening social protection for vulnerable groups.
4. Developing infrastructure.
5. Promoting good governance.
6. Effectively implementing the strategy (Millennium Challenge Corporation-MCC 2011).

Based on its PRSP, the government has initiated a range of critical reforms, including:

- A focus on macro-economic growth and debt sustainability.
- Strengthening public expenditure and debt management.
- Transparent management of mining revenue.
- Restructuring and privatizing state-owned enterprises.
- Increasing access to social services.
- Measures to manage the rate of population growth.
- Enhancing the environment for private investor activities, especially in the agriculture sector.

In 2004, Niger reached the Heavily Indebted Poor Countries (HIPC) Completion point and received debt relief from the International Development Association (IDA), including topping-up, equivalent to US$142 million (Millennium Challenge Corporation-MCC 2011). The country also qualified for US$300 million in debt relief from the Multilateral Debt Relief Initiative (MDRI).

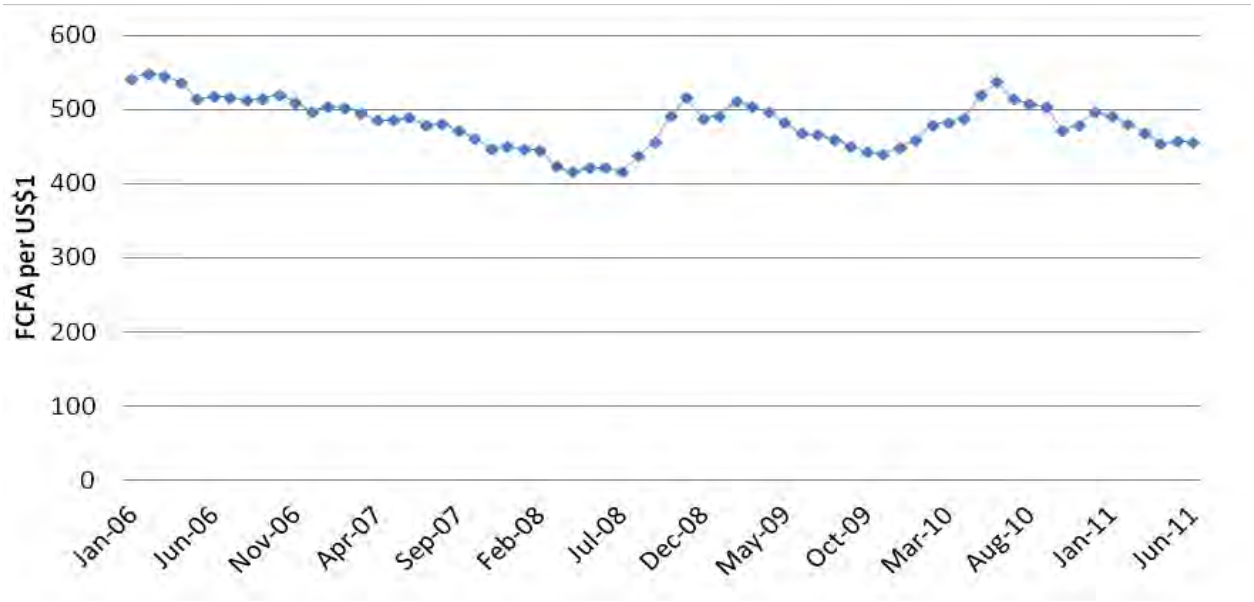
In 2011, the new government is actively trying to attract foreign private investment as a main component of restoring economic growth and development. Niger has attracted significant private investment over the years—in uranium, petroleum, cellular communications, and, most recently, in a dam and a cement factory—but poor legal and physical infrastructure continue to hamper investment. Currently, seven major internet service providers are operating in Niger (US Department of State, 2011).

2.3. Currency and Trade

Niger's economy, as previously noted, depends heavily on trade with its regional neighbors, especially Nigeria. Niger shares a common currency, the Franc Communaute Financiere Africaine (FCFA[17]), with seven other members of the West African Monetary Union; notably, Niger does not share a common currency with Nigeria. Because Niger trades large quantities of cereals with Nigeria, it becomes more expensive to import cereals (e.g. maize) from Nigeria whenever the Nigerian Naira appreciates against the FCFA. However, the real exchange rate in Niger remains relatively consistent and the appreciation in FCFA indicated in the figure below reflects stable terms of trade. The figure also shows the relatively high price of uranium, the country's main export product (IMF, 2010).

Since 2006, the FCFA has appreciated against the US dollar, as also shown in the figure below.

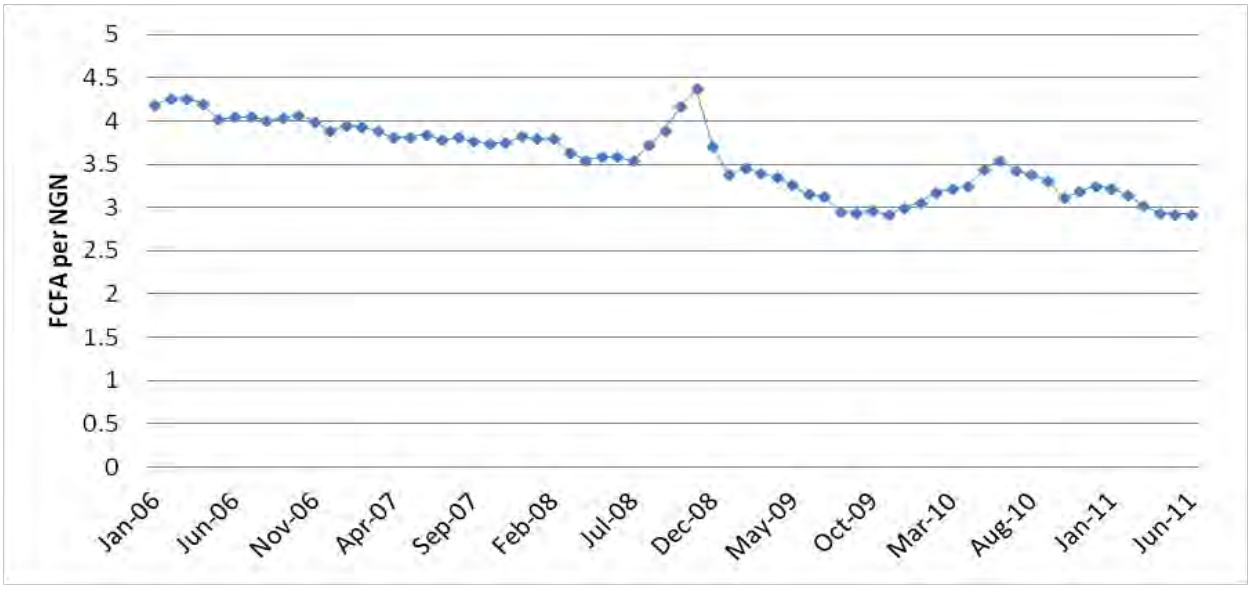
Figure 4. Average Monthly Exchange Rates, FCFA per US$1, January 2006–June 2011



Since 2005, and as reflected in the figure below, the FCFA has also appreciated against the Nigerian naira.

[17] On December 26, 1945, France introduced the *des Colonies Françaises d'Afrique Franc* (CFA franc). During the period of de-colonization (1954–1962), the African francophone countries maintained monetary co-operation with France. In April 1959, the Ivory Coast, Benin, Burkina Faso, Mauritania, Niger, and Senegal created a common central bank, *the Banque Centrale des États de l'Afrique de l'Ouest* (BCEAO). The BCEAO was responsible for creating the West African CFA franc, and its revised name *Communauté Financière Africaine-Franc*, or FCFA.

Figure 5. Average Monthly Exchange Rates, FCFA per Nigerian naira (NGN) 1, January 2006–June 2011



Source: Data obtained from OANDA, www.oanda.com.

The Union Economique et Monétaire de l'Afrique de l'Ouest (UEMOA) also plays an important role in Niger's economy. The origin of the UEMOA dates back to 1975, when the Economic Community of West African States (ECOWAS) was created to promote integration of the West African region through actions that would promote the free circulation of goods and people through improved market forces (Terpend, 2006). However, the ECOWAS participants proved unable to achieve full integration and in 1994, the Sahelian countries created the UEMOA in order to develop regional markets, limit government interventions in the market, and liberalize trade (Geert & Ibrahim, June 2007). The members of the UEMOA are Benin, Burkina Faso, Ivory Cost, Guinea-Bissau, Mali, Niger, Senegal, and Togo.

2.4. Policy

The following policy issues will be relevant for the next USAID/FFP Title II development program cycle in Niger, from FY12–FY16.

Host Country Food for Peace Agreement (HCFFPA). The Government of Niger (GoN) contributes to the USAID Title II MYAP program for Niger in two ways:

1. GoN exempts the import of direct distribution commodities from duties, as required by Title II regulations.
2. MYAP Title II Awardees are granted 95% of all duties and taxes imposed on monetized commodities (Africare, 2011). This arrangement is codified in the HCFFPA that Africare holds and implements with the GoN, covering the current FY06–FY11 MYAP cycle.[18]

It is anticipated that similar tax agreements will be negotiated for the next MYAP cycle (FY12–FY16), but these agreements will need to be completed by the new Title II Awardees.

[18] According to the HCFFPA, monetized commodities are taxed at 29% of C&F, of which the GoN returns 24% to the MYAP partners as a "government contribution" to their program activities. The remaining 5% represents a stamp duty and ECOWAS tax, which the GoN is unable to waive (DelCastillo, Mariko, Safari, 2008).

Genetically Modified Organisms (GMOs). Although GMO issues were inconsistently raised in 2010, as of the BEST field study in July 2011, Niger has no GMO regulation regarding imported goods. Awardees currently do not report facing import issues due to GMO regulations. Therefore, this report does not anticipate that the newly-elected GoN will raise any GMO-related concerns regarding the import of various food commodities under a typical food basket for current and future USAID Title II development programs.

Comprehensive Africa Agricultural Development Program (CAADP). In September 2009, the GoN was the third African country to sign a country compact document for the. Through CAADP, the Niger government has agreed to increase public investment in agriculture by at least 10% of its national budget, and to increase agricultural productivity by at least 6% (CAADP, 2011).

Further, Niger's National Investment Agricultural Program (NAIP) has been developed by all in-country stakeholders involved in the CAADP to foster their collaboration. The NAIP also constitutes a strategic planning framework for meeting the above long-term agricultural goals (CAADP, 2011). USAID/Niger is working extensively with the GoN in support of these goals.

3N (*Les Nigeriens Nourissent les Nigeriens*, "The Nigeriens Feed the Nigeriens"). The GoN's 3N rural development program has established six main priorities:

1. Improving the productivity of rain-fed farming.
2. Developing the livestock sector.
3. Developing irrigation.
4. Sustainably managing natural resources.
5. Reinforcing agricultural research.
6. Preventing and managing food crises and fighting malnutrition.

The program (FCFA 900 billion or US$2 billion) is quite ambitious and is dependent on GoN and donor funding. It is anticipated that the 3N program would complement Title II partner food security activities.

The study team does not expect a conflict between the objectives of 3N and Title II monetization of rice during the next five years, because the 3N rice irrigation activities are very unlikely to make Niger self-sufficient in terms of rice consumption during the next 5-year Title II development program cycle.[19] Nonetheless, conditions in the rice market should be continuously monitored, and regular adjustments must be made in recognition of future increases in domestic rice production.

[19] Information was collected from GoN 3N: Irrigation Program details, interview with Mr. Alio Ousmane, ONAHA-Konni, and Jeune Afrique article, 7/17/11.

Chapter 3. Food Aid Overview

3.1. Background

Over the last decade, Niger has received significant USAID/FFP Title II resources (emergency and non-emergency).

The country's food supply fluctuates according to cyclical drought. The years 2000, 2004, and 2009 were particularly difficult due to poor and irregular rainfall, and compounded by negative economic forces. Examples of these forces would include exchange rate fluctuations between the Nigerian naira, and poor terms of trade for livestock. These above factors led to poor agricultural production and significant negative national cereal balances (WFP/FAO, January 2011).

However, food security improved dramatically in 2010 after a record harvest of 5.154 million metric tons (MT) of cereals (FAO/WFP, January 2011). This yield represented a roughly 51% increase over the 2009 harvest of 3.421 million MT, and should enable improved conditions for many indebted smallholder farmers. Nevertheless, in many areas of Niger, acute malnutrition and stunting persist, and remain a sizable challenge for the government and international donors. Moreover, as of late July, the 2011 rainy season had started slowly.

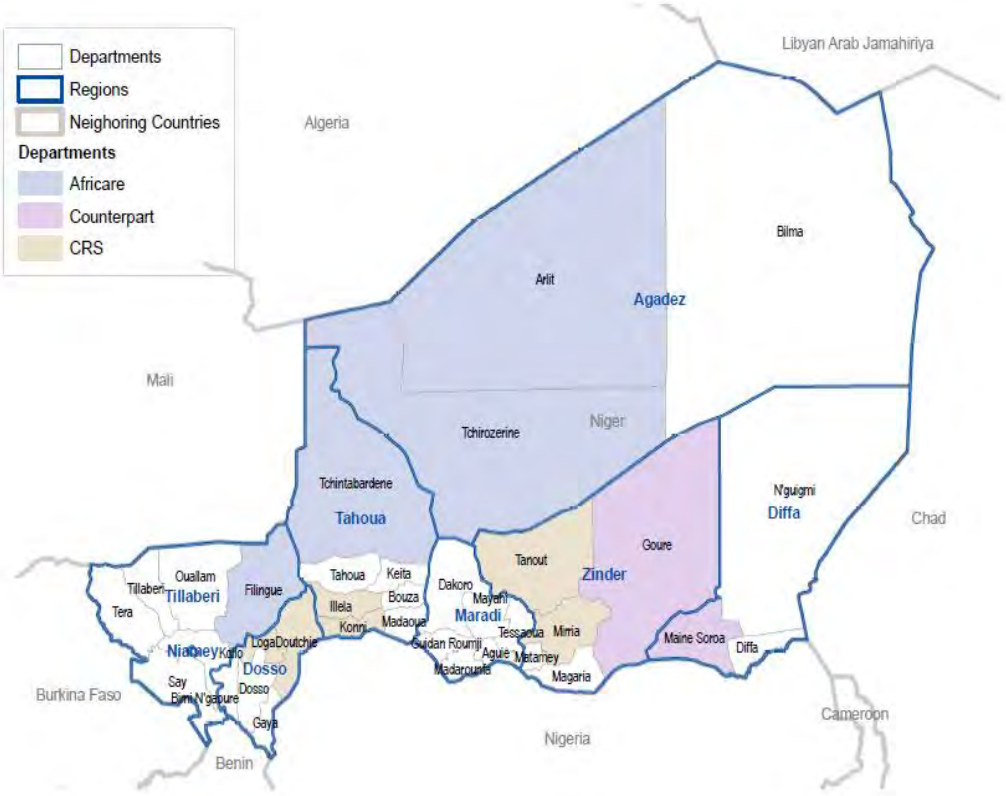
This Chapter summarizes previous, current, and planned US food aid to Niger through 1) USAID Multi-Year Assistance Program (MYAP) partners; 2) the World Food Program (WFP); and 3) US Department of Agriculture (USDA) Food for Progress (FFPr) and Food for Education/McGovern-Dole (FFE) food aid programs. Details are provided on activities of the three current Title II MYAP partners: Catholic Relief Services (CRS), Counterpart International (CPI), and Africare. These partners' activities include Single-Year Assistance Programs (SYAPs) for the year 2010 (CRS and CPI), and monetization by the MYAP partners (the consortium for which is led by Africare) and other Non-Governmental Organizations (NGOs). Planned activities are also described for the major food security stakeholders within Niger in the current and coming years.

In compiling this chapter, the BEST study team visited the Tillaberi, Dosso, Tahoua, Maradi, and Zinder regions in July 2011. The team conducted field and market assessments regarding overall food security.

3.2. Previous and Current Initiatives

The below map of Niger shows the areas covered by MYAP partners (Africare, CRS, and CPI).

Figure 6. Areas Covered by MYAP Partners



Source: Fintrac BEST Project, note map is indicative, and MYAP partners typically do not serve all areas within above highlighted departments

Table 4. Annual USAID Title II Food Aid Supplied to Niger (MT), 2006–2011*

Food Aid Type	2006	2007	2008	2009	2010	2011*	Totals
Emergency (WFP)	23,300	6,890	11,080	0	30,710	26,390	98,370
Developmental (PVOs)	3,950	9,320	480	13,140	15,170	16,360	58,420
Total	**27,250**	**16,210**	**11,560**	**13,140**	**45,880**	**42,750**	**156,790**

Source: USAID.
**Estimates. For 2011, figures are planned tonnages to be completed by the end of the fiscal year,*

The above table shows that:

- During 2006–2011, USAID has provided significant quantities of emergency and developmental food aid to Niger each year. On average, USAID provided 9,737 MT annually of developmental food aid. Over the past 6 years, USAID food aid (development and emergency) peaked in 2010, about 67% of which was emergency aid.
- As the 2010 figures in the table above illustrate, emergency food aid tonnages varied markedly. This fluctuation was mostly dictated by food insecurity levels—which increased or decreased depending on the previous year's rainfall, and other factors.

Table 5. Annual WFP Food Aid Supplied to Niger (MT), 2006–2011*

Year	2006	2007	2008	2009	2010	2011*	Totals
Total	49,742	34,546	33,910	23,374	148,752	86,128	376,452

Source: WFP, includes tonnages from all programs.
**Estimates. For 2011, figures are planned tonnages to be completed by the end of the calendar year,12/31/2011.*

The table above shows that WFP/Niger provided an average of 62,742 MT, per year of food aid during 2006-2010. As was the case with USAID Title II aid, the highest total of WFP/Niger food aid was distributed in 2010, reflecting increased food insecurity levels following the poor 2009 season. The fluctuation of WFP annual food aid also indicates Niger's needs according to normal and shock years.

3.3. Awardees/NGOs Operating in Niger

The current MYAPs for Africare and CRS began in late 2006, and CPI began its MYAP in 2008. Both CRS and CPI managed emergency SYAPs in 2010 in response to the poor 2009 agricultural season.

Africare. The goal of Africare's ATTFSI (Agadez/Tillaberi/Tahoua Food Security Initiative) is to reduce food insecurity and vulnerability for chronically food insecure households. The program targets departments within the regions of Agadez, Tahoua, and Tillaberi, which are regions north and east of Niamey. Project objectives include: 1) good governance; 2) conflict management; 3) improving agricultural, livestock, and natural resource management (NRM) practices; 4) strengthening health/nutrition systems; and 5) diversifying household income-earning opportunities. Representative activities include: 1) building pastoral wells; 2) small-scale irrigation; 3) establishing cereal banks; 4) providing agricultural inputs; 5) improving health education on nutrition, Human Immunodeficiency Virus (HIV), and breastfeeding; and 6) establishing village microcredit units. Africare's activities have been negatively impacted by recent physical security issues, and the resulting isolation, in Agadez, and to a lesser degree in Tahoua.

CRS. The goal of CRS' PROSAN (*Programme de Securite Alimentaire et Nutritionelle*) MYAP is to reduce food insecurity for rural families in vulnerable communities within certain departments of the targeted regions of Dosso, Tahoua, and Zinder. This area is spread roughly across the east-west axis of the country, parallel to the Nigerian border. Helen Keller International and CARE serve as partners under CRS' MYAP. CRS' three strategic objectives are: 1) protecting and mitigating conditions for vulnerable families by improving agro-pastoral production; 2) targeting hygiene/nutrition issues for families (especially children under 5 years of age and pregnant/lactating women); and 3) helping targeted vulnerable communities become more resilient to shocks. Representative activities include: 1) distributing animals; 2) cash-for-work to build/improve roads; 3) cereal banks; 4) building latrines; 5) literacy projects; 6) food-for-training; and 7) recovering degraded land.

CPI. The goal of CPI's MYAP is to strengthen resiliency against food insecurity of vulnerable populations in the regions of Zinder and Diffa, in remote southeastern Niger. CPI's strategic objectives include: 1) enhancing community livelihood capacity and resiliency, and 2) building human capacity through improved health and nutrition. Representative activities include: 1) cereal banks; 2) support for rural health centers and using behavior change/communication (BCC) approaches; 3) distributing goats; 4) establishing small hammer mills; and 5) promoting production of fruit and vegetables.

3.4. Total Annual Monetized Food Aid

Africare has led the consortium of three MYAP partners for monetization activities for the past five-year MYAP cycle (FY06–FY11). Historically, rice has been successfully monetized within Niger to fund broader food security activities under MYAPs; other commodities have also been monetized by USDA, but in small quantities.

Table 6. Monetized Title II Food Aid, FY06-FY11

Commodity	FY06*	FY07*	FY08	FY09	FY10	FY11**	Total
Rice (Title II)	3,952	7,710	0	11,141	13,221	13,642	49,666

Source: USAID, USDA, MYAP partners.
*Notes: * 1,539 MT of rice was called forward in FY06 but sold in FY07, therefore it is summed under FY07 in the table.*
*** Some monetizations for FY11 are not fully completed. Also GOJapan monetized the following totals of rice: 5,191 MT (2006), 5,096 MT (2007), 11,502 MT (2008) and 8,063 (2009); no Japanese rice was monetized in Niger in 2010 or 2011.*

See further details on monetization in Chapter 5.

3.5. Total Annual Distributed Food Aid

Table 7. Niger USAID FY09–FY10 Food Aid MT for MYAP and SYAP Partners

Partner/Year	SFBulgur	CSB	Pulse	Cereal	Veg. Oil	Total (MT)
CRS-2009 MYAP	1,147	--	--			1,147
CRS-2010 MYAP	960					960
CRS-2010 SYAP	2,655	2,753	337*	1,999**	286	8,030
CPI-2009 MYAP		103			11	114
CPI-2010 MYAP		84			29	113
CPI-2010 SYAP		331		647***	36	1,014
Africare-2009 MYAP		479	408			887
Africare-2010 MYAP	241	199	194			634
Total	**5,003**	**3,949**	**939**	**2,646**	**362**	**12,899**

Source: USAID, MYAP partners.
*Notes: *includes beans and lentils; **includes sorghum; ***includes rice.*

As the table above shows, for USAID's current MYAP partners, distributed food aid is not a major component of the overall food aid supply for Niger. As noted earlier, due to deteriorating food security in 2010, additional SYAPs were awarded to both CRS and CPI. Rations for the above MYAPs and SYAPs vary, depending on the particular program (such as food-for-work, blanket feeding, literacy, general distribution, school feeding, nutritional rehabilitation, and pregnancy).

Table 8. USDA Food for Progress/Food for Education Direct Distribution Programming, Niger (MT) 2007–2010

Partner	2007	2008	2009	2010	Totals
GoN	12,000 sorghum				12,000
IRD	1,600 SFB	1,000 SFB			2,600
Relief International			4,800*	4,800*	9,600
Total	**13,600**	**1,000**	**4,800**	**4,800**	**24,200**

Source: USDA, IRD, RI, GoN.
*Note: *Commodities include rice, CSB, and vegetable oil.*

Over the past five years, USDA has provided various commodities under its Food for Progress and Food for Education programs to support food security programming. Some commodities under these programs have been monetized, as described in Chapter 5.

The new Title II development program for Niger is expected receive funds of about US$15 million per year, depending on availability of funds and evolving needs for FY12. Likely geographic areas of focus for include Maradi, Zinder, Diffa, Tillaberi, Dosso, Tahoua, and/or Agadez.

Chapter 4. Adequacy of Ports, Storage, and Transport

Partners have successfully transported and stored food aid commodities over the past decade. Most of the roads and warehouses that handled over 200,000 metric tons (MT) in 2005 are still available currently, and additional storage capacity is being built by private investors. With current annual donor warehouse volumes of approximately 53,550 MT, donors, buyers, and the Government of Niger (GoN) have reliable storage capacity to handle large food aid tonnages in the foreseeable future. The organizations currently receiving Title II food commodities have established adequate transportation, storage, and handling capacity to prevent spoilage and/or waste.

4.1. Ports

4.1.1. Port of Cotonou

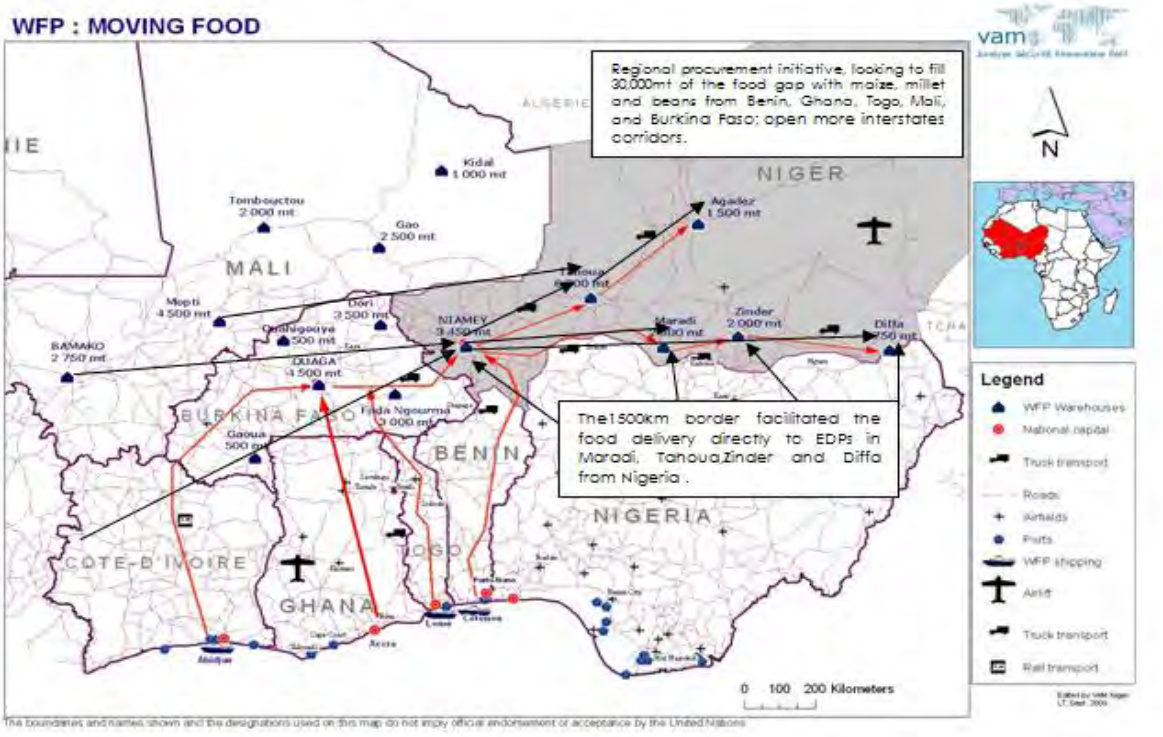
The large majority of food aid destined for Niger has arrived through the port of Cotonou, Benin. The figure below shows the main entry routes of Cotonou and Lome, Togo, and alternative ports. The port of Cotonou is Benin's largest and busiest port and serves other countries in the sub-region (i.e. Niger, Burkina Faso, Mali, and even Nigeria, when Nigeria is over-congested). The port of Cotonou typically accounts for 95% of the transit goods bound for Niger.

In 2009, the port handled slightly over 19 million MT, utilizing most of 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. The first phase of construction should be completed by 2013 (Dredging Today, 2010).

Infrastructure.[20] The port zone covers 400,000 m^2. It has eight berthing stations, divided into four berths of 155m for conventional vessels, two classical berths of 180m for conventional vessels, one berth of 220m for container vessels, and one berth at the end of the commercial quay to take roll-on and roll-off vessels.

[20] Cotonou Port website, www.otal.com/benin/beninport.htm

Figure 7. WFP Food Distribution



Source: WFP Logistics Capacity Assessment Niger, Feb. 2011, p.39.

Challenges. For the last two years, the port of Cotonou has been plagued by numerous structural and man-made obstacles that have rendered transit operations to Niger somewhat problematic. Those obstacles include:

- Port congestion due to heavy volumes of freight.
- A parking lot for trucks that is located far away and difficult to access.
- Lengthy administrative procedures for paying various port fees/customs taxes, whether or not the shipment is exempt from these fees/taxes.

4.1.2. Lome Port[21]

The port of Lome can be considered as an alternative port to Cotonou, if the latter becomes too congested. Otherwise, based on discussions with several importers, authorities of the Chamber of Commerce, the World Food Program (WFP), Private Voluntary Organizations (PVOs), and transit agents, Cotonou is a more attractive port than Lome, for several reasons, explored in greater detail below.

Infrastructure. Modernization of the port of Lome began in the 1960s, and a deep-water harbor was completed in 1968. It currently handles 3,000,000 MT annually. This modernization has enabled the port to handle export of phosphates (a major Benin export) and other major exports, such as cocoa, coffee, copra, cotton, and palm products.

There are four transit warehouses of 7,500m^2 capacity each, two of 10,000m^2 each, and two of 5,000m^2 each, one of which is reserved for Niger and the other for Mali. Furthermore, there is more than 200,000m^2 of open space storage. USAID/FFP currently has storage for pre-positioned food aid in Lome for Sahel countries in potential need.

[21] Source: www.seaport.homestead.com/files/lome.html

Security. In addition to the formal police and *gendarme*, Akwaba Shuttle Services, a private company, provides a full range of security services around any vessel berthing at the port of Lome.

However, interviewees reported that a recent Counterpart International (CPI) shipment, handled by Africare through the Port of Lome, experienced extensive thefts and pilferage both during day and night hours. Brazen food misappropriation has resulted in orders to entirely halt an offloading operation. The extent of the loss is not available as this situation is ongoing as of October 2011.

4.1.3. Cotonou and Lome: Commonalities and Contrasts

Both Cotonou and Lome ports can handle commodities in bulk, break bulk, or in containers. Surveyors are required to attend at the discharge port to monitor offloading of each vessel. The table below summarizes the comparative advantages and disadvantages for Cotonou versus Lome for shipping goods to and from Niger.

Table 9. Comparison of Relevant Factors – Cotonou and Lome

Factors	Port of Cotonou	Port of Lome
Distance from Niamey	938 km (SDV)	1,234 km (SDV)
Implication with transportation costs	Cheaper for MT/km	More expensive for MT/km
Estimates of transportation fees to:		
Niamey	$163.00	$190.00
Doutchi	$160.00	$222.00
Diffa	$263.00	$338.00
Goure	$265.00	$300.00
Konni	$171.00	$241.00
Abala	$186.00	$270.00
Agadez	$233.00	$305.00
Border crossings	One (Gaya)	Two (Togo & Burkina) + Police and Customs control posts in Niger
Road and administrative fees	One *Carnet de Transit* (customs book)	Two *Carnets de Transit* (@$450 for each 30/35 MT truck)
Dispatching shipments to other inland destinations (e.g., Doutchi, Goure, Agadez, Tahoua, Maradi)	Easy from Gaya	Trucks have to come thru Niamey
Truck fleets*	More available	Less available
Clearing and customs procedures	Lengthy & unnecessarily complicated	Quicker
Anecdotal evidence	Tarred roads, but patchy towards Malanville	Tarred roads; the Aledjo Fault is difficult for some truckers
History	Traditional port for Niger for two generations	New relationship

*Source for distance: SDV, Transit Agent. *Proportionally more trucks at Cotonou go directly on a regular basis to Niamey, whereas trucks at Lome port go regularly to Mali, Burkina Faso and Niger; the actual proportion varies depending on the time of year and other factors, but this is a significant advantage for Cotonou. Additionally the transit company chosen is another significant factor in determining actual delivery time of trucked goods, irrespective of which port is chosen.*

Conclusion. The Port of Cotonou is currently the preferred port for food aid commodities. Although Nigerien importers and exporters once boycotted the port of Cotonou[22], this boycott was resolved in April 2011, and Nigerien imports and exports now flow through Benin. With the lifting of the boycott, the natural advantages of Cotonou make it the primary choice, and Lome as an alternate port, for the import of commodities to Niger.

[22] In May 2010, Nigerien importers and exporters boycotted the port of Cotonou due to Beninese authorities at the port imposing excess tariffs on vegetable oil imports destined for Niger.

4.2. Storage

In response to recent food crises in Niger, donors, PVOs, and the GoN imported in significant tonnages of food commodities, either imported from the donor countries, or purchased regionally, thus requiring sufficient storage capacity. Accordingly, PVOs, the GoN, and the private sector own and operate many warehouses and storage facilities across the country.

Many Nigerien grain traders have warehouses with large capacity. Some private investors, seeing increased tonnages of food aid entering the country, have capitalized on the need for quality storage capacity. As a result, the quantity of warehouses, and overall storage capacity, are increasing throughout the country, including Niamey.

4.2.1. WFP

Compared with other international organizations, WFP currently has the most storage capacity nationwide. WFP's Niamey storage facilities have the largest capacity at 13,950 MT, followed by the organization's Zinder-Goure storage capacity of 12,050 MT. Depending on their port of landing, food commodities are typically stored in Niamey, Zinder, or Maradi.

Table 10. WFP Storage Capacity

Location	Capacity
Niamey	13,950 MT
Agadez	2,000 MT
Diffa	4,050 MT
Maradi	11,300 MT
Tahoua-Konni	10,800 MT
Goure-Zinder	12,050 MT
Diffa	3,450 MT
Total	57,600 MT

Source: WFP

Considering the total tonnage WFP imported annually between 2006 and 2011 (as displayed in Table 5), current storage capacity is adequate to handle WFP's shipments. Food commodities are typically distributed and delivered to the regions according to a dispatch plan developed by the *Systeme d'Alerte Précoce* (SAP), in collaboration with WFP and other PVOs.

When storage needs exceed availability, *Office des Produits Vivriers du Niger* (OPVN) has additional capacity. Storage was not considered a problem, because part of the local purchase was made via the *Office des Produits Vivriers du Niger* (OPVN), which has substantial storage capacity nationwide (see Table 11 below).

4.2.2. OPVN

OPVN has a large network of warehouses, with a total storage capacity of 154,700 MT in 235 warehouses located in throughout the country. While these warehouses primarily serve to store the GoN's National Food Security stock, the GoN has made space available on a temporary rental basis if humanitarian assistance or development programs need additional storage.

Table 11. GoN OPVN Storage Capacity Nationwide

Location	Capacity
Niamey	28 800 MT
Tillabéri	14,500 MT
Dosso	18,000 MT
Maradi	22,000 MT
Tahoua	23,600 MT
Zinder	28,900 MT
Diffa	9, 300 MT
Agadez	9, 600 MT
Total	154,700 MT

Source: OPVN

Additional storage, if needed, can be supplemented through storage facilities controlled by the Confederation National des Cooperatives-National Confederation of Cooperatives (CONACOOP).

4.2.3. Africare

Monetization. Africare generally does not own or rent a warehouse in Niamey. All of its monetized commodities are transported to the buyers' facilities straight from the port of Cotonou or Lome.[23] Under a well-established dispatching plan between Africare and its transit agent, the agent loads trucks as specified from the ports of origin. The food commodities are offloaded at the buyer's warehouses in the presence of a surveyor.

If Africare were to undertake small lots sales for monetization, the organization would need to obtain storage in Niamey (or other locations) to conduct these sales; this would mandate additional costs compared to the above current sales methodology.

Interviewees during the BEST study noted recurring challenges with the storage of monetized goods. Bags of monetized rice have generally been of poor quality, and tear easily. Although monetized rice shipments include extra bags for these scenarios, there are often not enough replacement bags. Furthermore, replacement bags are labeled ~~"~~not to be sold or exchanged," which is confusing and creates unnecessary impediments for some wholesalers.

This issue has a direct effect on all aspects of receiving and delivering the rice—and, importantly, a noticeable impact on the sales proceeds received.[24] Wholesalers insist on paying a lower price for reconditioned bags of rice.

Distribution. For its distribution program, Africare imports soy-fortified bulgur wheat (SFB), corn-soy blend (CSB), and dark red kidney beans (DRKB). The food commodities are delivered straight from the port to primary warehouses, located in Filingue, Tahoua, and Agadez. An independent surveyor then verifies the total tonnage delivered and warehoused. The commodities are transferred from these warehouses to community warehouses, based on the activities to be implemented. Truckers are held responsible for satisfactory handling of the commodities.

[23] Africare has obtained storage from WFP and the private sector as exceptional cases, but the above statement remains true.

[24] Because Nigerien consumers prefer American rice, Nigeriens are extremely sensitive to USAID markings; many smaller retail vendors and their clients do not believe that an unmarked or doubled reconditioned bag is the same rice. Reconditioned bags, including plain white bags doubled with the original torn bags, cannot be sold at the same price as intact original bags. Wholesalers are forced to buy new marked bags and re-bag, which increases their costs. Therefore,

Table 12. Africare Storage Capacity

Location	Capacity (MT)
Fiingué	300
Tahoua	60
Agadez	1,000 (OPVN)
Total	**1,360**

Source: Africare/Niger

4.2.4. CRS

Distribution. In its distribution pipelines, CRS imports SFB, CSB, vegetable oil, lentils, and/or DRKB. The commodities are trucked directly to regional warehouses in Doutchi, Kore, Mairoua, Zinder, or Konni, from where they are delivered to the rally points or community storage spaces. Food movements must be approved by both CRS/Niamey and the officer in charge of the specific activity for which the foods are being allocated.

Table 13. CRS Storage Capacity

Location	Capacity (MT)
Doutchi	500 (OPVN)
Koré Mairoua	500
Bakin Birgi (Zinder)	500 * possibility to rent 1,000MTfrom OPVN
Konni (CARE)	500
Total	**2,000**

Source: CRS/Niger.

4.2.5. Counterpart International

With respect to distributing food commodities, Counterpart International has stored and handled both Multi-Year Assistance Program (MYAP) and Single-Year Assistance Program (SYAP) commodities for the past two years without difficulty. Like the other PVOs, Counterpart initially stores the commodities in a central warehouse, from which they are delivered to distribution sites.

Table 14. Counterpart International Storage Capacity

Location	Capacity (MT)
Zinder	2,485
Guidiguir	1,000
Mainé Soroa	70
Diffa	450
Gouré	250
Total	**4,255**

4.2.6. Private Storage

The president of the Nigerien cereal traders' association indicated he has 5,000 MT of under-utilized storage capacity, which he could double the capacity if needed. He expressed support for the Local and Regional Procurement (LRP) program and had participated in numerous bid submissions to WFP.

As previously noted, constructing warehouses has become an attractive investment nationwide, especially in Niamey. In addition to their current capacity, two long-established wholesalers who buy monetized rice are building new warehouses on the outskirts of Niamey (i.e., Ets ADOUA,

constructing an additional 10,000 MT of storage; and Ets Baba Ahmed, constructing an additional three warehouses of 5,000 MT each). Other anonymous investors are building numerous other spaces that will offer between 500 MT and 1000 MT of capacity.

Overall, adequate storage is currently available in-country for Title II commodities at the level currently being programmed.

4.3. Inland Transport

4.3.1 Inland Transport

Africare, the lead agent in charge of food transit, has a policy of zero tolerance for losses, and strictly monitors commodity movement, and, as stated earlier, records any losses per an independent surveyor. In case of loss or damaged commodities, the value is calculated according to the USAID formula in Regulation 11:

> The value of commodities misused, lost or damaged shall be determined on the basis of the domestic market price at the time and place the misuse, loss or damage occurred, or, in case it is not feasible to obtain or determine such market price, the f.o.b. or f.a.s. commercial export price of the commodity at the time and place of export, plus ocean freight charges and other costs incurred by the U.S. Government in making delivery to the cooperating sponsor. When value is determined on a cost basis, nongovernmental cooperating sponsors may add to the value any provable costs they have incurred prior to delivery by the ocean carrier. In preparing the claim statement, these costs shall be clearly segregated from costs incurred by the U.S. Government.

Trucking is the only way to move food commodities to regional warehouses and to final distribution sites in Niger. The latest increases in fuel prices have impacted the cost of inland transportation.

For losses during inland transit, truckers are held responsible for the reimbursement of any lost goods. Further adjustments are made with the buyers, based on the quantity specified in the sales agreement and the quantity actually delivered.

As presented in the Port Analysis section, there is an added cost advantage to using transit from Cotonou over Lome. Table 9 shows how this distance is translated into higher inland transit costs.

Niger roads network. The roads of Niamey, Dosso, Tahoua, Maradi, Zinder, and Diffa in the southern regions are the most developed and can be travelled without security escort. The tarmac is generally in good shape along this west/east axis, except for the stretches between Madoua and Maradi, and between Zinder and Goure.

The Tahoua-Agadez route in the north is a tarred road with patchy stretches between Abalak and Agadez. Travel to this region is allowed only with a heavy security escort, provided by the national military. Even though no attacks have been made on a food aid truck in this area, it is recommended that truckers respect the hours designated by the authorities for passing through this region—and if possible, request a military escort.

Road transport costs. Table 9 shows estimated costs and transport time from the port of Cotonou to various destinations in Niger. In addition to these costs, note that the following other charges may be applied: 1) For containerized cargo, US$8.93 per container; 2) survey cost; 3) Niger Statistics Tax (1% Cost, Insurance, Freight (CIF) Niamey); or 4) truck parking fees that may be imposed at the destination. With respect to truck parking fees, there is a free 72-hour period for offloading trucks. After the third day, the consignee pays US$172.50 per day/per truck.

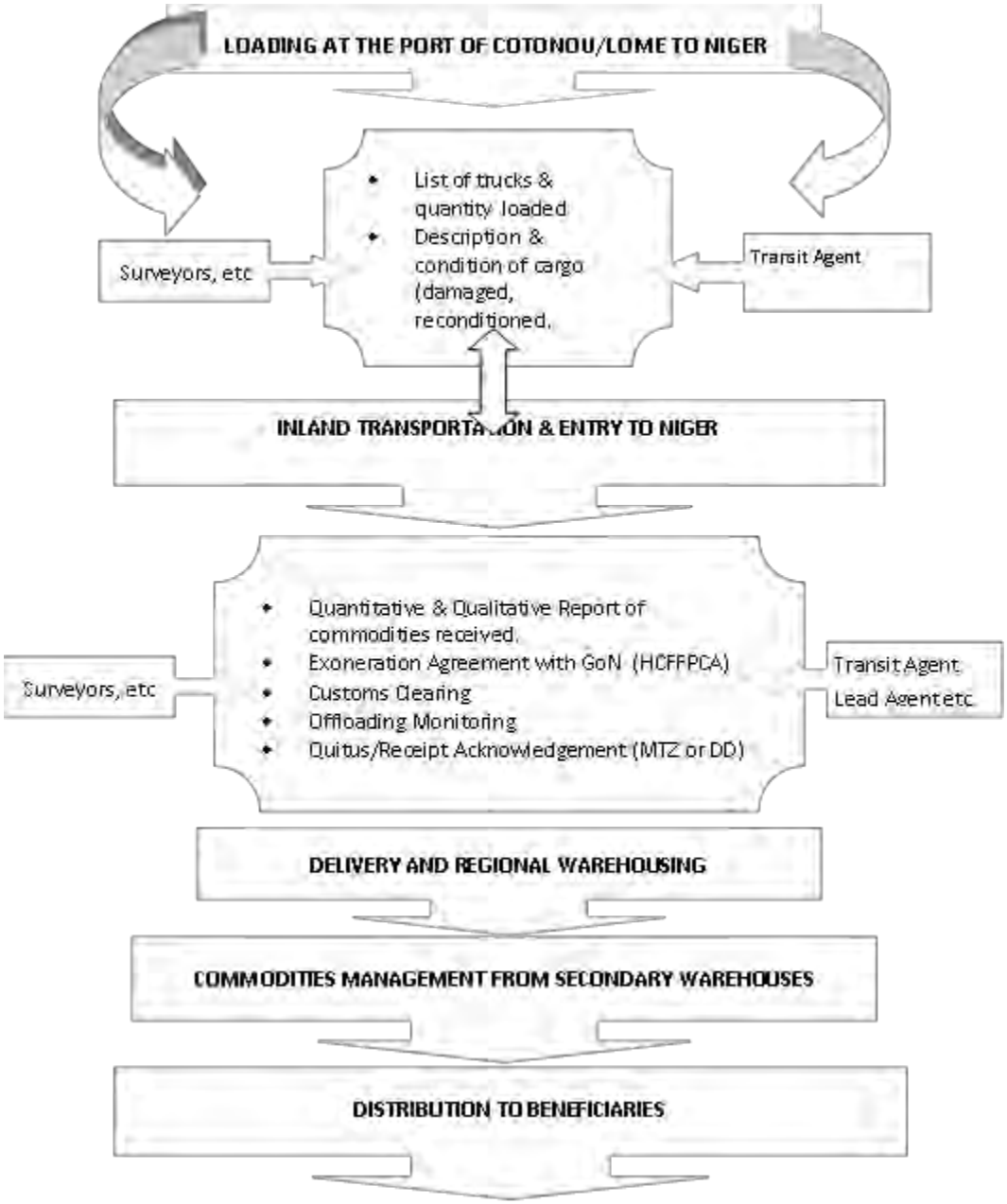
Suggested transit times from Cotonou or Lome are two weeks to Niamey, and three weeks to Diffa, Goure, and Agadez, with some variation depending on specific conditions per trip; for example, sometimes transport to Niamey can take up to a month.

Border challenges. Notorious and unauthorized checkpoints which require fees pose another challenge for transporters in the The Economic Community of West African States (ECOWAS) sub-region. These informal costs are translated into hidden costs in the price charged for each shipment.

The increasingly severe, damaging impact of unauthorized checkpoints prompted *Union Economique et Monetaire Ouest-Africaine* (UEMOA) to convene on July 25–26, 2011 in Niamey. As a result of that meeting, the *Observatoire des Pratiques Anormales* (OPA), an agency jointly established by ECOWAS and UEMOA, has been authorized and directed to eliminate unnecessary checkpoints. The new regulation will authorize a control point every 100km at most. USAID and the European Union (EU) are financially supporting the OPA.

Figure 8 below details steps involved in discharging goods at the ports and transporting them to Niger.

Figure 8. Transit of Commodities from Port to Niger



Source: ATingbo/Africare (2010).

4.4. Government Policy on Taxing Imported Commodities

Since 2004, tax exemptions for food commodities imported for commercial purposes (i.e., monetization) have been repealed by the GoN, (except in special cases authorized by the GoN) and food commodities are subject to the current internal 19% tax (TVA) and a variety of other taxes controlled and implemented by the customs office.

The current tax scheme in Niger is integrated into the rules of the UEMOA's Custom Union, which directs tax systems in Francophone West Africa according to a commodity's origin (inside or outside the UEMOA).

Nigerien tax regulations are also driven by macro-economic adjustment measures taken by the GoN following policy dialogues with the International Monetary Fund (IMF) and the World Bank. As a result, it has become increasingly difficult for custom and tax offices to accept exemptions for import commodities and projects financed by international donors.

With respect to Title II monetization, however, GoN officials and Africare have negotiated that the GoN will rebate the tax amounts generated to the NGOs for program activities; this rebate will be recorded as a host government contribution to these programs. In the case of rice, the GoN has agreed on a taxation mechanism consisting of paying 29% of C&F, 95% of which will be rebated to the PVOs for their activities and 5% of which will be paid to the Treasury. The Host Country Food for Peace Agreement (HCFFPA), renewed last year with Africare as the lead agent for food importation, provides for the exemption of distributed commodities from the tax, as required by 22 CFR 211.

Chapter 5. Monetized Food Aid

5.1. Introduction

The goal of monetization is not only to fund development programs,[25] but also to ―promote low cost, competitive food markets by encouraging investment in transportation, infrastructure and human capital (traders, entrepreneurs),‖ through the distribution of monetized product (USAID, 1998). Challenges to monetization abound. Monetization requires substantial knowledge of local markets and extensive management capacity, and can be risky—from procurement and shipping risks, to commodity-related financial trade risks, to potentially impacting local markets in negative ways.

This chapter is intended to inform USAID in making its Bellmon determination about monetized commodities for Fiscal Year (FY)12 programming in Niger. Four critical areas of inquiry are covered:

1. How appropriate is monetization for Niger during FY12?
2. If monetization is appropriate during FY12, which commodities are the most appropriate to monetize?
3. What is the approximate maximum feasible tonnage for each monetized commodity?
4. What special consideration (e.g. sales platform or timing of sales) should be taken into account when considering/undertaking monetization in Niger?

The content of this analysis is broken into three sections: initial commodity selection, commodity-specific market analysis, and monetization recommendation. For the complete methodology for determining the potential impact of monetized food aid, please see Annex XIII.

5.2. Initial Commodity Selection

The BEST study team performed a desk review to identify an initial set of commodities for study. The selection is based on available trade statistics, previous Bellmon studies, review of other relevant country reports, and interviews with key informants during a July 2011 field visit. For the purpose of this study, in order for a particular commodity to qualify for selection and possible recommendation for monetization, the following six ―tests‖ were applied:

1. Eligibility for export from the US.[26]
2. Eligibility for import to Niger.
3. Significance of domestic demand.[27]

[25] According to the CRS Report for Congress: *Agriculture: A Glossary of Terms, Programs and Laws* (2005 Edition, Updated June 16 2005), "monetization" is defined as follows:

> Monetization — A P.L. 480 provision (section 203) first included in the Food Security Act of 1985 (P.L. 99-198) that allows private voluntary organizations and cooperatives to sell a percentage of donated P.L. 480 commodities in the recipient country or in countries in the same region. Under section 203, private voluntary organizations or cooperatives are permitted to sell (i.e., monetize) for local currencies or dollars an amount of commodities equal to not less than 15 percent of the total amount of commodities distributed in any fiscal year in a country. The currency generated by these sales can then be used: to finance internal transportation, storage, or distribution of commodities; to implement development projects; or to invest and with the interest earned used to finance distribution costs or projects.

[26] This ―test‖ implies that it is also on the FFP list of commodities approved for monetization.

4. Whether 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.[28]

With respect to the first four tests:

Test 1: Eligibility for export from the US. All of the commodities discussed in this report are eligible for export from the US. Based on this first test, this analysis considers rice, edible oil, crude degummed soy oil (CDSO), wheat grain, wheat flour, and non-fat dry milk (NFDM) and milk products as potential candidates for the development program cycle.

Test 2: Eligibility for import. All of the commodities discussed in this report are commercially imported into Niger.

Test 3: Significance of domestic demand. To warrant importation for monetization, both local dietary preferences and available market information must strongly suggest that a commodity is in significant demand, and that national production is insufficient to meet the demand. National demand is estimated based on the latest five-year overall supply trends, equivalent to the sum of (1) domestic production and (2) net trade.

Test 4: Commercial import activity. All of the commodities discussed in this report have insufficient national supply to meet demand and therefore depend on imports and/or food aid to fill these supply shortfalls.

Test 5: Presence of adequate competition for the commodities. 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.

Test 6: Expectation that fair market prices can be achieved. An Import Parity Price (IPP) is generally the best estimate of a fair market price for commercially imported commodities. An IPP is based on the estimated cost a commercial entity would face to import the same (or very similar) food commodity. If IPP 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 considered for monetization.

This analysis adapts a common rule of thumb: monetized food aid should not exceed 10% of average yearly commercial import volume. Based on the value of the average imports of the last five years, the table below lists the 10 food products 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.

[27] 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.

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

Table 15. Average Annual Import Value (Last Five Years) for Selected Commodities

Commodities	Average MT	Average Value
Rice, semi-milled or wholly milled	155,341	61,916,386
Milk and cream, concentrated or sweetened	10,013	24,145,964
Wheat or meslin flour	56,284	21,780,979
Milk and cream powder unsweetened > 1.5% fat	7,450	20,778,084
Palm oil or fractions simply refined	27,345	16,017,999
Grain sorghum	41,408	11,425,722
Rice, broken	21,172	7,867,215
Rice, husked (brown)	10,251	4,814,492
Maize (corn)	25,885	4,778,370
Maize except seed corn	25,814	4,769,157

Source: Comtrade

Table 16 below summarizes each of the first four tests. The remainder of this analysis will assess the ability of local markets to absorb rice, edible oil, non fat dry milk, wheat, and wheat flour because these are the commodities being considered for monetization. If it is determined that local markets are able to absorb these commodities, the analysis will continue to recommend volumes for monetization. Local markets' absorption abilities, as well as recommended volumes, will be based on critical analysis of market competition (which must be adequate, according to Test 5 above) and prices (which must be fair, according to Test 6 above).

Table 16. Initial Selection of Commodities Based on Tests 1–4

Commodity	Eligibility for Export from US	Eligibility for Import to Niger	Significance of Domestic Demand	Deficit in Niger
Rice, semi-milled or wholly milled	√	√	√	√
Rice, broken	√	√	√	√
Rice, husked (brown)	√	√	√	√
Palm oil or fractions simply refined	√	√	√	√
Wheat or Meslin flour	√	√	√	√
Milk and cream, concentrated or sweetened	√	√	√	√
Milk and cream powder unsweetened > 1.5% fat	√	√	√	√
Grain sorghum	√	√	√	X
Maize (corn)	√		√	√
Maize except seed corn	√		√	√

5.3. Market Analysis – Rice

5.3.1. Demand

Rice is the third most important cereal in Niger after millet and sorghum, and represents only 6% of total cereal consumption. Rice consumption in Niger has been growing rapidly since the mid-1970s. Demand for rice has been growing at an estimated 9% per year (Mburu, November 2007). National rice consumption in Niger (computed by calculating the sum of local production, imports, and food aid, minus exports) in 2010 was estimated to be about 214,336 metric tons

(MT) and is projected to reach at least 254,653 MT (assuming the annual growth rate of 9% is maintained) by the end of 2012. The growth in rice consumption is driven by population growth and increased income, resulting in changes in consumption patterns.

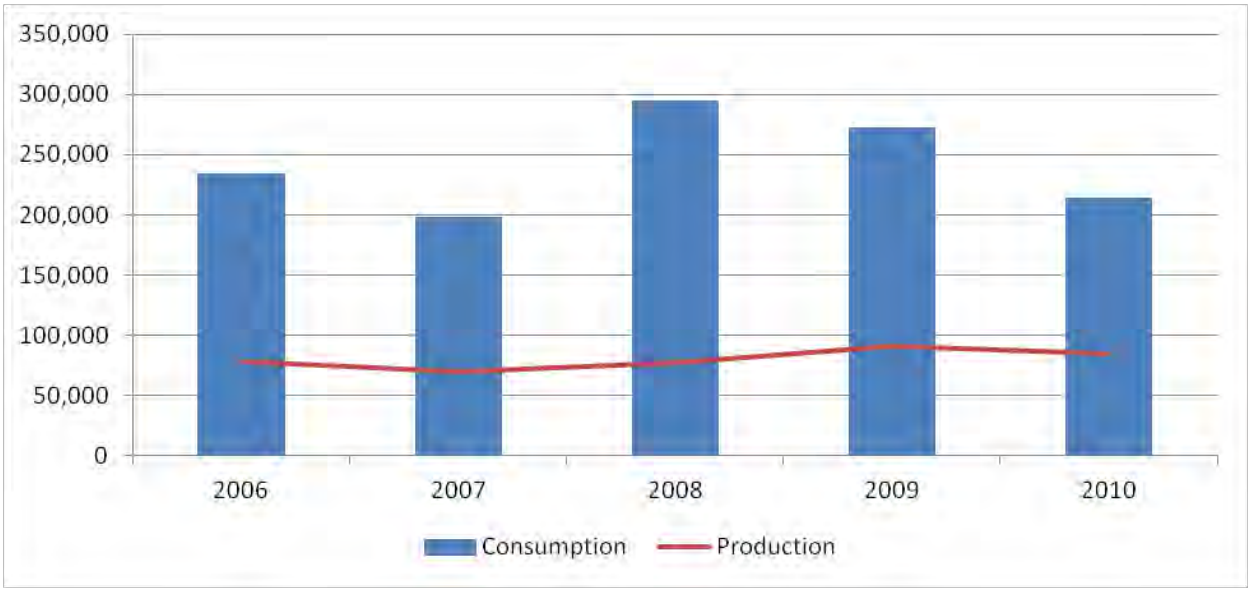
Rice is increasingly becoming an important part of the food basket for urban families, including the poor, because preparation requires less firewood (the price of which has escalated) compared to other coarse cereals. In addition, rice is convenient and blends well with traditional dishes.

Niger's population is growing at an estimated 3.5% per year. The urban population growth is mainly due to the exodus of youths from rural areas. This new segment of the population adapts to the urban way of life, and the dietary habits of these young people follow a new, urbanized pattern (increased consumption of rice and bread). This population is generally price-sensitive and, therefore, prefers rice with a noticeable amount of broken grains (but not 100% broken).

5.3.2. Domestic Production

Domestic production of rice represents about 34% of Niger's total rice supply (see figure below). Production increased from 70,000 MT in 2007 to 91,000 MT in 2009. Despite this growth, domestic production is far from sufficient to meet domestic needs, estimated at 250,000 MT per year.

Figure 9. Domestic Rice Consumption (MT)



Source: Comtrade, WFP, 2008 Bellmon, FAOSTATS, and ITC.

Niger produces improved and traditional rice varieties, under two production systems: rain-fed or upland rice, and irrigated production systems. Rice is produced in Kirtachi, Gotheye, the Tillaberi commune in the Tillaberi region, Gaya in the Dosso region, and in Sabon Machii in the Maradi region. Much of this rice is of poor quality, and for that reason, imported rice is often preferred.

Local rice producers have formed an association.[29] The association is composed of many cooperatives, collaborating to benefit from training, subsidized fertilizers, other agricultural

[29] La Fédération des Unions des Coopératives des Producteurs de Riz (FUCOPRI).

inputs, and commercialization of their paddy rice. Altogether, the association produces 70,000 MT to 90,000 MT of rice per year. Of that total, half (approximately 35,000 MT-45,000 MT) is being produced on 7,600 ha of irrigated swamps which produces a low yield of 5.5 MT per hectare.[30] During the BEST field trip meeting in July 2011, the current president of the association offered the following opinions and comments about the rice sector:

- Local rice is more nutritious, but its physical appearance is not attractive and it breaks easily. People preferred the clean sight of the non-parboiled rice imported from Asia and the US.
- Production costs are relatively high (e.g., water, pumps, inputs, seeds, and training).
- The association has no objection whatsoever to rice monetization in the country, based on the association president's[31] assertion that the deficit has to be covered (a perspective echoed by officials from the *Office des Produits Vivriers du Niger* (OPVN), Chamber of Commerce, and the National Association of Cereal Sellers (AVC).

5.3.3. External Trade

Imports. According to the International Trade Commission (ITC), FAOSTAT, and Comtrade, an annual average of 190,000 MT of rice was imported during FY06–FY10, with annual volumes ranging from 149,074 MT to 246,840 MT. The 190,000 MT per year average represents almost twice the volume of average domestic production (80,503 MT of paddy rice) during the same five-year period. Of this amount, five countries account for over 86% of all rice imports into Niger: Thailand (31%), Pakistan (27%), India (13%), Vietnam (8%), and the US (7%), providing an annual average of nearly 190,000 MT over the same period.

Food aid. Total rice imported between FY06 and FY10 by Multi-Year Assistance (MYAP) Private Voluntary Organizations (PVOs), US Department of Agriculture (USDA), and the World Food Program (WFP) programs averaged 14,449 MT per year (or 7.6% of the average annual imports). Title II Awardees have monetized a total of 49,666 MT of US No.3 long grain rice 15% broken for the past six years. Average annual volumes have varied; in FY09-FY11, volumes ranged from about 11,000 MT to 13,600 MT.

5.3.4. GoN Policy

The Government of Niger GoN occasionally intervenes in the domestic rice market through price controls and/or the removal of import taxes to keep the price low for Nigerien consumers, typically in shock times for urban populations. For example, the price of imported rice in Niamey was 400 *Franc Communaute Financiere Africaine* (FCFA)/kg from October 2009-November 2010, but was slightly higher for that similar time frame in Zinder (450FCFA/kg) and Maradi (500FCFA/kg); this was done in response to the 2008 global commodity price spikes.

Current domestic rice production is only roughly 1/3 of national rice consumption. However, the GoN would like to increase domestic rice production, and the proposed GoN ~~3~~N" Program (Nigeriens Nourish Nigeriens) will target increased rice irrigation activities as part of this program. The BEST team does not believe the 3N program will conflict with the proposed USAID Title II development program from FY12-FY17, based on the fact that these activities are extremely unlikely to make Niger self-sufficient in rice production within the next five years. However, market conditions within domestic and imported rice markets should be monitored and monetization activities adjusted to account for any increases in domestic rice production.

[30] Source: Ayouba Hassane, the President of FUCOPRI

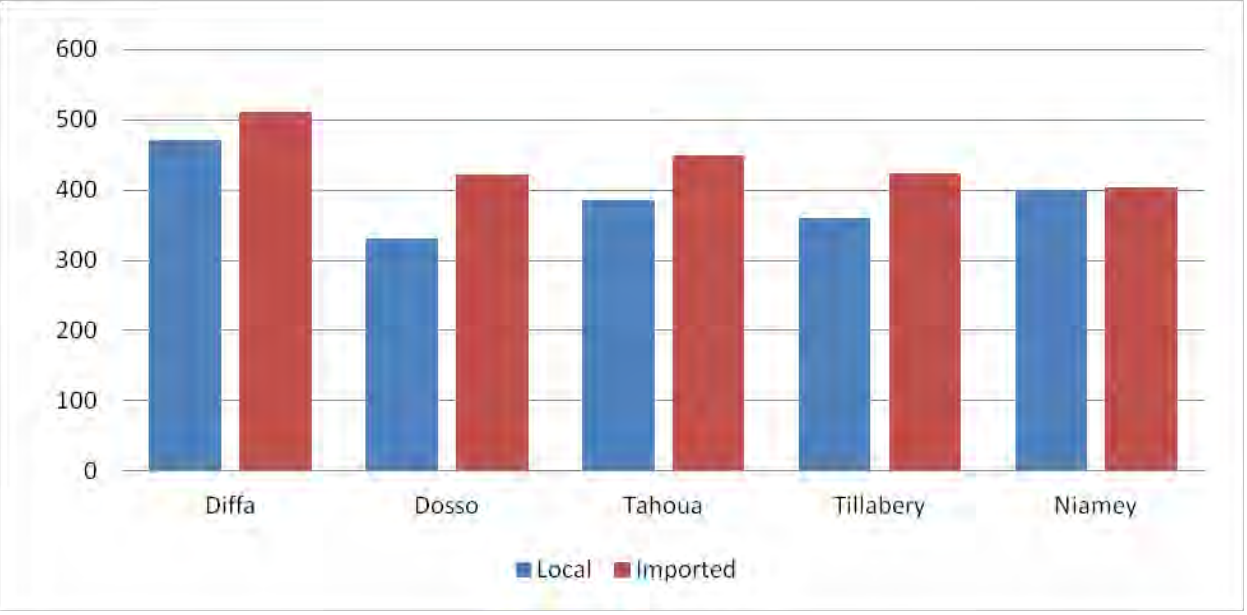
Additionally, to support domestic production, GoN policy mandates that large rice wholesalers/importers must purchase 3% of their rice from domestic sources to promote domestic production. On the ground, the BEST team found that this provision was not strictly enforced.

5.3.5. Rice Price Trends

The team analyzed price trends for local and imported rice. The areas included for this analysis are Diffa, Dosso, Tahoua, Tillaberi, and Niamey, as shown in Figure 10. These areas were selected according to data availability.

Niger imports two-thirds of its overall rice supply. The country's few small niches of local production create some variation between local and imported consumer prices across markets. Local and imported rice vary in availability, and, as stated previously, in price. Local rice prices are lower compared to imported rice prices, and reflect differences in quality. In 2010, local rice consumer prices were generally lower than imported rice prices (see the figure below). In Niamey, the main market in the country, there was a 10% difference between local and imported prices.[32] In Dosso, Tahoua, and Tillaberi, local and imported prices showed a greater gap. Whereas local prices in Dosso were FCFAF332/kg, imported rice prices were FCFAF423/kg, representing a 36% price difference. This particular case showed the highest difference in imported and local rice prices among all areas studied in this analysis. In Tillaberi imported and local prices showed 26% price difference[33], while in Tahoua prices showed a 22% difference.[34]

Figure 10. 2010 Average Nominal Consumer Prices for Local and Imported Rice (CFAF/kg)



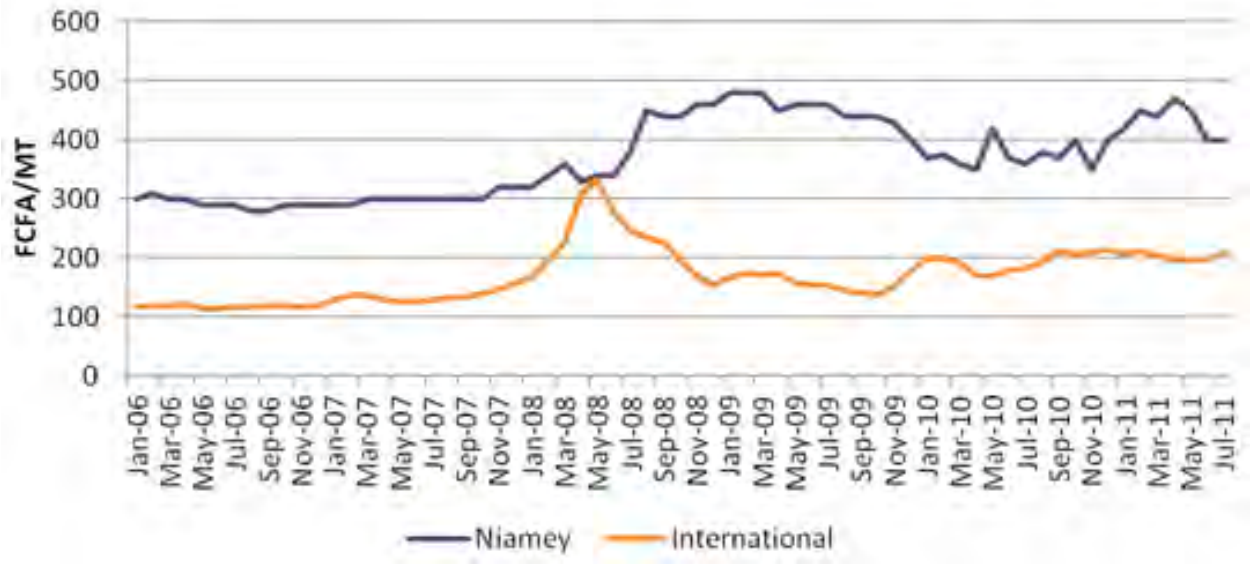
Source: Système d'Information sur le Marché Agricole (SIMA).

In 2007 and 2009 (the years before and after the 2008 food crisis), 2009 imported rice prices were more than 40% higher than 2007 prices across all regions examined, as reflected in the figure below. In Niamey, nominal consumer prices were 50% lower in 2007 than they were in

[32] Nominal consumer prices for local rice were FCFAF400 per kilogram compared with FCFAF404 per kilogram for imported rice.
[33] The local rice price was on average FCFAF359/kg compared with FCFAF424/kg for imported rice.
[34] Local rice prices were FCFAF359/kg compared with FCFAF424/kg for imported rice.

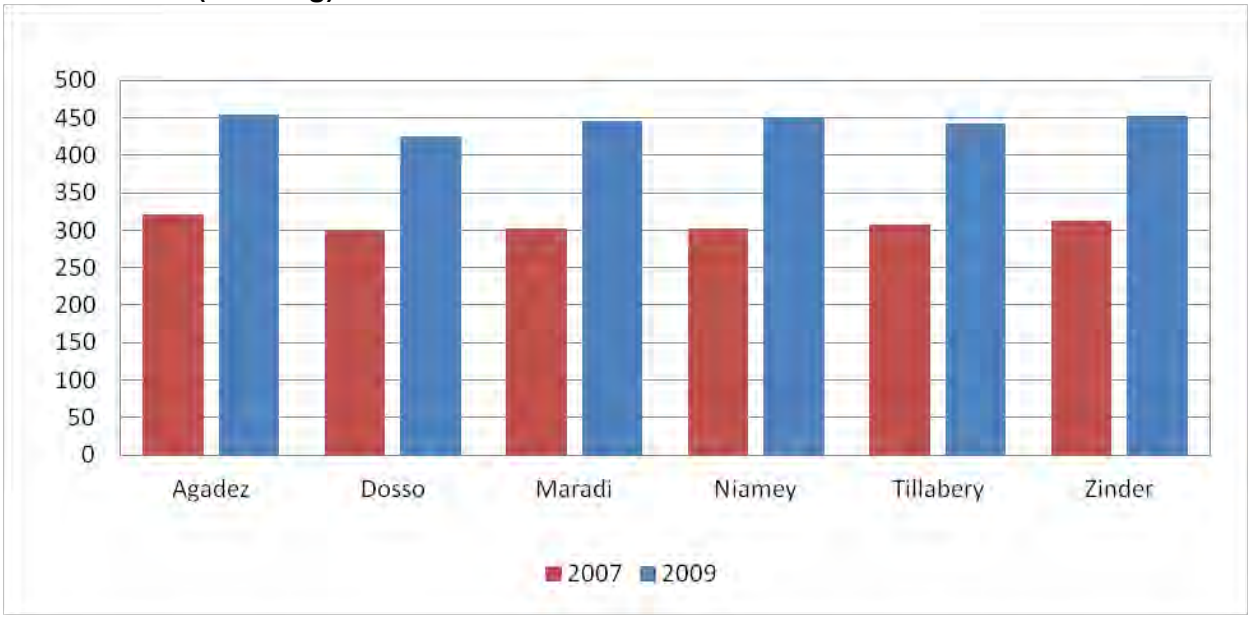
2009; 2007 prices of FCFAF302 increased to FCFAF452 in 2009. This differential most likely reflects the influence of global rice prices, as well as the fact that international price transmission to local prices or markets can lag for months. See the figure below for a comparison of international rice prices and Niamey rice prices.

Figure 11. International vs. Niamey Rice Prices, 2006-2011



Source: International prices from FAO and Niamey prices from Sytème d'Information sur le Marché Agricole (SIMA)

Figure 12. 2007 and 2009 Average Nominal Consumer Prices for Imported Rice, by Market (CFAF/kg)

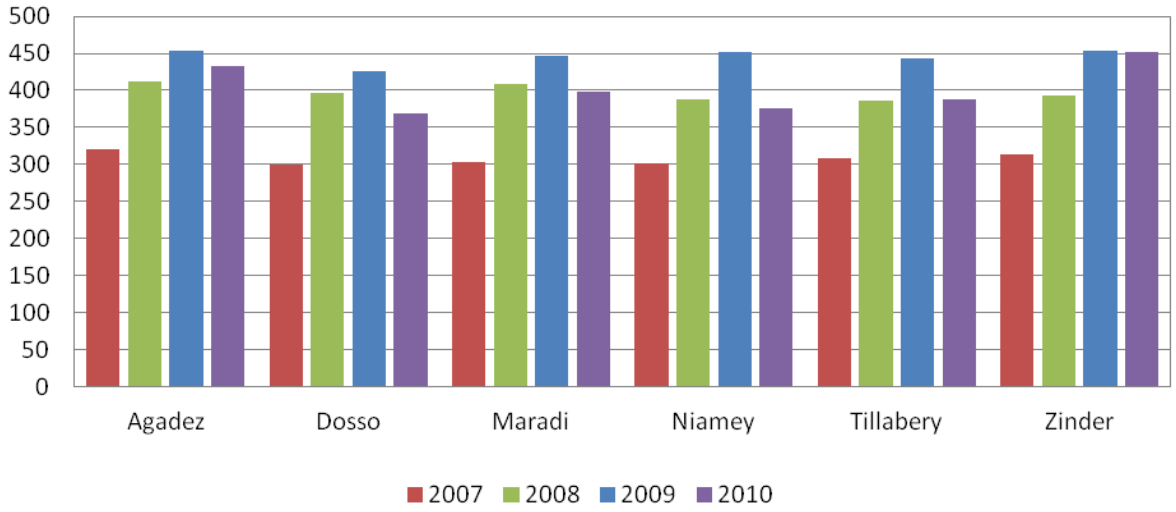


Source: Sytème d'Information sur le Marché Agricole (SIMA).

As Figure 13 shows, from 2007 to 2008, prices for imported rice significantly increased across all regions, and continued to increase into 2009. Although 2010 prices generally tended to be

lower than in previous years, they have not yet returned to the 2007 levels, suggesting some lasting effect from the 2008 food crisis.

Figure 13. 2007–2010 Average Nominal Consumer Prices for Imported Rice, by Market (CFAF/kg)



Source: Sytème d'Information sur le Marché Agricole (SIMA).

5.3.6. Competitive Environment

The importation and commercialization of rice is somewhat liberalized in Niger, since this process began two decades ago, with occasional GoN intervention to control prices in certain markets (e.g., Niamey). Niamey and regional capitals hold a network of marketing facilities, although transportation to some areas during the rainy season may limit transactions on rural markets.

There are at least four large importers of rice, and at least ten large wholesalers, which together suggest there is some competition in the imported rice industry in Niger. Information on importers' market share was not readily obtainable. Notably, some of the importers/wholesalers are entities related formally under one parent company, or less formally by personal relationships, which appears to influence the degree of competition in the market. For example, Baba Hamed, Rimbo Sarl, and Rissa Ali Boubacar all appear to operate under Groupe Baba Ahmed. There are numerous semi-wholesalers, some serving more distant markets such as Agadez.

Of at least 16 buyers who have purchased Title II monetized rice over the past 5 years, roughly half have purchased Title II rice more than once. When monetization tenders have been issued, there have occasionally been new buyers. In 2010, for example, there were eight buyers, all of whom are wholesalers: 1) ETS Ahmed Baba, 2) CSM (now bankrupt and no longer in business), 3) Adoua, 4) ETS Abdi, 5) Ets Himadou Hamani, 6) Sidi Amar, 7) ETS Mohammed Ibrahim, and 8) ETS Abougou. Among these, Baba Hamed, Adoua, Abdi, and Himadou Hamani (recently deceased) also act as importers. Sidi Amar, Mohammed Ibrahim, and Abougou are semi-wholesalers.[35] Other regular buyers include ETS Baguè Daouda, and Najim Moctar.

[35] Abougou and Mohammed Ibrahim first participated in monetization in 2010 following an invitation for tendering in Agadez. The relatively smaller quantities reflect their position as semi-wholesalers in a location in the interior of the country.

Buyers of monetized rice are required to obtain a letter of credit; the cost of which is negotiable with the buyer's bank and generally varies between 8-14% of the commodity value. The requirement limits the ability of smaller wholesalers/semi-wholesalers from participating, as these actors have less access to credit. Nonetheless, the requirement is viewed as a critical protection mechanism for Title II PVOs in a market setting where contract enforcement is problematic.

5.3.7. Monetization Past Performance

With Africare leading the consortium, current Title II MYAP PVOs (Africare, Counterpart International, and Catholic Relief Services (CRS)) have utilized a bidding system in monetized sales for the past four years. In its early monetization operations in Niger, Africare used the floor-sale mechanism, fixing minimum and maximum prices within which bids were considered. However, Africare later learned from this method; during their current Title II period, the organization has eliminated the maximum bid limit (while keeping the minimum bid limit).

Overall, the current monetization process appears to be transparent. The lead agent issues an announcement for tender bids in the daily papers and on the radio. Interested buyers submit his or her bid (Appels d'Offres) in sealed envelopes. After the bidding period ends, bids are opened before an audience, including all the bidders, and in the presence of a bailiff (huissier). The successful bidder(s) receive(s) a notification in the mail, at which time the sales agreement, including the payment terms, is signed. Payment terms usually require 30% down payment with the remaining balance terms negotiated per individual buyer.

However, there have been occasional problems as well as some concern regarding explicit or implicit collusion among the bidders, particularly involving the relatively large buyers. Still, it is difficult to determine which factors influenced prices during periods when sales prices performed relatively poorly.

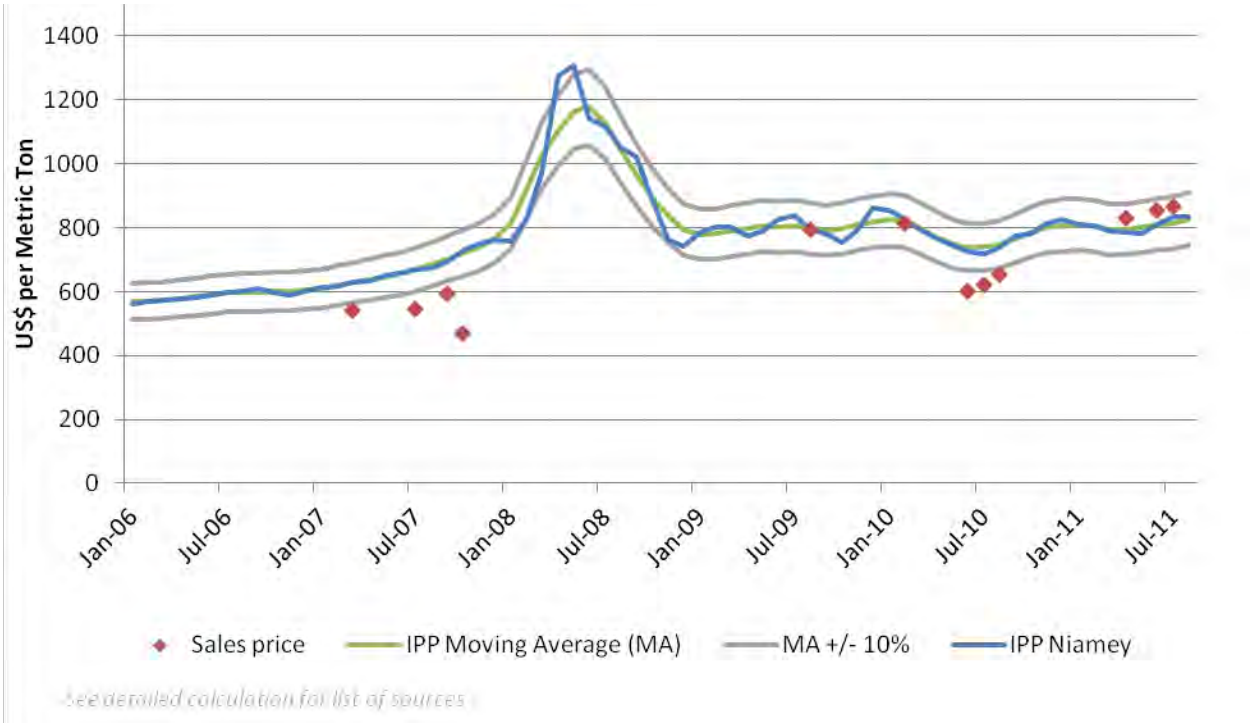
In 2010, the monetization agent used a different sales mechanism—negotiated sales—instead of open bids. Negotiated sales were used because buyers had too much rice on hand due to two concurrent shipments of Title II rice.[36] Due to this increase in shipment size, usual buyers no longer had the financial capacity to bid and sign a sales agreement. After consulting with FFP/Washington, the lead agent resorted to negotiating a price with the buyers, and FFP/Dakar sent a delegate to Niger to monitor the process.

No buyers have defaulted on monetized sales; as a general practice, an irrevocable bank guarantee must be obtained and a sales agreement signed before the commodities are loaded at the US port.

The study team analyzed monetization sales prices achieved during the past five years against a calculated IPP, results of which are displayed in the figure below.

[36] When bids were requested for an upcoming large shipment, buyers still had substantial amounts of unsold rice from FY07 in their warehouses. The food commodities were initially scheduled to arrive in two shipments over the course of 2010, but they arrived in one large shipment of over 11,000 MT.

Figure 14. IPP for Thai 15% Broken Rice, Shipped via Benin to Niamey, with Calculated Shipping Rate



For purposes of calculation, the team estimated IPP based on Cost, Insurance, Freight (CIF) Niamey, ex-Thailand via Cotonou for Thai 15% broken rice. Thailand was chosen because it is the most common source of commercially-imported rice for Niger (followed by Pakistan), and the quality of Thai rice most closely resembles the Title II rice monetized in Niger. As reflected in the graph above, for the 12 monetization sales analyzed, the average sales price was 91% of the calculated IPP. However, as the graph also shows, sales prices varied somewhat significantly in different years, which affected the average. Sales were less competitive in 2007 and June–August 2010; specifically, the 2007 transactions were approximately 21% below IPP, while the 2010 monetization transactions averaged 11% below IPP. In 2009, the monetization sale was at approximately IPP, and the 2011 transactions to date have been within 5% of IPP. Annex V provides further analysis on these sales.

Though interviewees during the BEST field visit expressed some concerns regarding the export of Title II monetized rice to northern Nigeria, the team believes this scenario rarely, if ever, arises. The added transport costs of shipping from Niamey to primary markets in Sokoto/Katsina/Kano would be a burden to exporters, and, furthermore, consumers in northern Nigeria generally prefer parboiled rice to the non-parboiled rice variety currently being imported for Title II monetization in Niger.

5.3.8. Recommendation

Based on review of trade data and interviews with key informants during the field visit, the study team recommends the monetization of up to 19,000 MT[37] of non-parboiled rice, US grade No. 3 or better, 15% broken, for the upcoming Title II development program cycle. Monetization of rice is recommended for the following reasons:

[37] This is equivalent to 10% of the average 5-year commercial imports.

1. Commercially imported rice is in high demand, and currently meets nearly two-thirds of Niger's demand for rice.
2. According to Nigerien wholesalers, Nigerien consumers prefer US rice when it is available. Consumers' perception of US rice quality creates demand for it in Nigerien markets; for example, US rice reportedly expands in volume during cooking and a small quantity fills the stomach quickly. Bidder behavior also reflects preference for US rice; they are more eager to participate in US rice sales, and report quicker sales of US rice as compared to rice imported from other origins.
3. There is no evidence that commercial imports are competing with domestic production, despite the fact domestic production has grown more than seven-fold in the past three decades. There is a consensus among rice market actors[38] that Niger has an extant rice deficit. Moreover, of these public and private market stakeholders, none has an objection to monetization to fund food security programming in Niger. These actors remarked that monetization is a sound and positive mechanism for: 1) addressing the food deficit in Niger; and 2) promoting development of rural communities through complementary USAID funding that promotes general food security. On this point, the presidents of Association of Local Rice Producers (FUCORI) and the cereal traders association specifically stated, without hesitation, that their businesses would not be negatively impacted by food aid in general or monetization in particular and that USAID programming overall helps Niger address its food supply deficit. Importantly, both domestic rice producers and rice importers share this perspective.
4. The rice market appears to be relatively competitive, with many large and small wholesalers capable of handling monetized rice and regularly participating in sales given appropriate timing. There is some suggestive evidence of explicit or implicit collusion among the larger buyers of Title II rice in the past; potential Awardees will need to guard against the effects of any collusion through careful market analysis, learning through others' monetization experiences, and ensuring sufficient time is built in to their programming cycle to allow for retendering and/or follow up negotiations with potential buyers to ensure all commodities are sold at a fair market price.
5. As reflected in Figure 14 above, for the past 12 monetization sales, the average sales price (Thai 15% broken, CIF Niamey via Cotonou) was 91% of the calculated IPP. This average reflects two periods of poor performance, one of which appears to have been due to an unintended surplus of Title II rice on the market due to a shipping delay and unsold quantities of rice from the previous year. The average was higher for the three most recent Africare monetization sales in 2011, as well as the sale in 2009, which were all within 5% of calculated IPP. Although there is some evidence that bidders occasionally collude, or attempt to collude, this shows that monetization sales can be competitive in Niger via the current sales system, If Title II rice comes in multiple shipments throughout the year, the likelihood of flooding the Niamey rice market, with concomitant sales price reductions, is reduced.
6. Title II commodities are purchased with local currency, freeing up foreign exchange resources to be used for Niger's other economic and human development needs.
7. Sales made to local merchants and small traders through an open and transparent tender bid process appear to promote competitive marketing practices, and are the best approach for encouraging private enterprise and democratic participation in the rice business in Niger. Smaller merchants are also exposed to the commercial banking system, since they must obtain letters of credit (Traites Avalisées) to assure payments beyond the initial down payment.

[38] This consensus includes the association of local rice producers (FUCORI); the president of the cereal traders association (le Association des Vendeurs de Cereales), officials of the INS and Système d'Alerte Précoce (SAP), and the Chambre de Commerce.

Title II PVOs should coordinate with USDA and its Food For Progress (FFPr) program that allows government to government allocation (FY08). Title II PVOs should also coordinate with other bilateral donations, e.g., Japan, which donates rice almost on a yearly basis (on average this amounts to less than 5,000 MT annually over the past 5 years, and has been suspended since 2010).[39] The arrival of Title II monetized rice and Japan's monetized rice in the same time period (e.g., the summer of 2010) in the past could be one factor impacting the sale of the MYAP monetized rice. This sale may have been problematic due to the increased supply on Nigerien urban markets; in such a scenario, consumers/buyers are less willing to pay a premium on quality when the additional rice could be bought at a lower price, or even given as a handout to some segments of the population.

5.4. Market Analysis – Edible Oil

5.4.1. Demand

Although vegetable oil consumption in Niger 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 (Mburu, November 2007). At present, consumption estimates stand at 9.19 kg per capita per year (Mburu, November 2007),[40] which is less than 50% of the recommended edible oil intake. National vegetable oil consumption in 2010 was estimated at 52,646 MT.[41]

The consumption of vegetable oil is a relatively new phenomenon in the country; urban areas account for the majority of current consumption. Oil in small amounts is typically consumed daily, in foods such as fried millet beignets (donut-like cookies), which constitute the traditional breakfast in urban and rural Niger. Fried fish is sold by women at roadside eateries, in the markets, or in the cities. The population also regularly consumes grilled chicken and meat (which are cooked with small amounts of oil), french fries, and fried yams.

Imported vegetable oils in Niger are primarily composed of crude or refined palm oil that comes from Malaysia or Cote d'Ivoire.[42]

Local groundnuts are used to produce artisanal groundnut oil at the local level, as well as to produce vegetable oil at the commercial level. Olga sources its groundnuts locally to produce its vegetable oil. Niger produces a significant amount of groundnuts; in the 1960s and 1970s, the country was ranked second in groundnut production across West Africa. However, recent groundnut production has declined[43] while importation of processed palm oil from Asia has increased. Households process groundnuts for their own consumption, as well as for income generation.

Groundnut oil is sold in glass bottles or plastic containers, and the price is affordable to the average consumer, especially in rural settings. However, palm oil is a common substitute for groundnut oil, and Nigeriens' dietary patterns are changing with the importation of Asian palm oil. Although the two oils are substitutable, groundnut oil can be stored for a longer period of time (4 to 6 months) whereas palm oil tends to lose color and flavor after a shorter period of time. Price and packaging are the determining factors for consumers purchasing vegetable oil. Large wholesalers and smaller wholesalers generally use a 20–25 liter container, and sell to large retailers who repackage the oil into smaller, 1-2 liter containers. Retailers also package oil

[39] Japan monetized a total of 29,852 MT of rice over the past 6 years in Niger.
[40] The WHO recommends 19 kg to 22 kg per capita per year consumption of oil and fat to maintain human nutritional requirements.
[41] Figure computed by calculating the sum of local production, imports and food aid minus exports.
[42] Niger imports both crude and refined palm oil from these countries.
[43] Groundnut production is particularly variable in quantity and quality as compared to other, more stable, crops.

into small plastic bags of 0.25 or 0.50 liters, to accommodate the modest purchasing power of the average consumer.

A small percentage of the urban Nigerien population is developing more of a taste for higher quality vegetable oil as their standard of living improves. Although price remains the most important factor for the majority of consumers, some appear to be willing to pay a slight premium for quality. Therefore, demand for higher quality vegetable oil is minimally increasing.

5.4.2. Domestic Processing and Production

Niger is involved in the production and processing of raw groundnuts, as well as the processing of imported crude palm oil. Vegetable oil can be a blend of both refined groundnut and refined palm oils, and is the most common oil on the market.

Processing. Olga is the name of Niger's single oil refinery. The company is located in Maradi, and is a former parastatal privatized in 2001. Olga can refine/produce 45,000 MT of groundnut oil (at a rate of about 140 MT refined oil per day), and has additional capacity to produce vegetable oil (which consists of mostly imported palm oil). Olga has a storage capacity of 10,000 MT. The oil extraction rate varies quite a bit, depending on the quality of the nut, but is usually around 52%. Left over cake from the extraction process accounts for the majority of the remainder (46%-47% of the nut), and is used mostly as animal feed. The remainder is waste. The refinery is operational only for 4 out of 12 months per year.

As stated earlier, Olga imports crude palm oil from Cote d'Ivoire and Malaysia.

In addition to Olga's activities, groundnuts are processed into oil on the local level. This process is primarily artisanal, with no use of solvent. The local peanut oil market is typically confined to the regions of production, as well as exported to the Nigerien border. An estimated 50 percent of this artisanal oil is exported to Nigeria.

Production. Peanuts are produced in the middle-south regions of Niger (Zinder, Maradi, and to a lesser extent Dosso). The peanut harvest occurs in October/November, and marketing takes place in November/December and can sometimes last until February.

5.4.3. External Trade

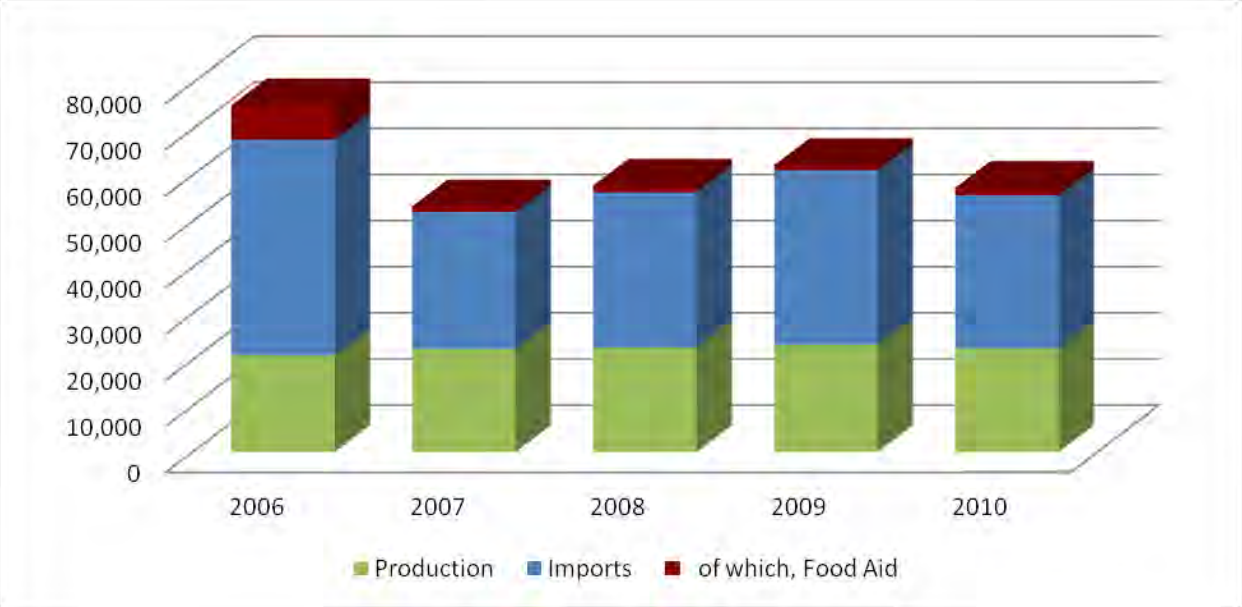
Imports. Edible oil imports averaged 36,242 MT per year over the last five years. Imports have fluctuated during this period and peaked at 46,763 MT in 2006. Commercial imports represent approximately 66% of total supply, of which food aid represents 5%.[44] Niger imports edible oil mainly from Malaysia (50%) and Cote d'Ivoire (37%). Edible oil from the US accounts for about 3% of all edible oil imports, most of which is used in food aid programs.

Overall, edible oil imports are growing in Niger at less than 10% per year, based on estimated official and unofficial trade flows.

Food aid. As previously mentioned, MYAP PVOs, sub-recipients, WFP, and other donors have imported oil during the last five years for both humanitarian assistance and monetization. These imports account for a small percentage of all imports, as shown below. No palm oil is imported as food aid.

[44] An average of 2,600 MT of oil is imported as food aid annually, 2006-2010.

Figure 15. Domestic Vegetable Oil Supply (MT)



Source: Comtrade, WFP, 2008 Bellmon, FAOSTATS, and ITC.

5.4.4. Competitive Environment

CDSO. As mentioned previously, Olga Oil is the only refinery in Niger; thus, the company is a monopoly in terms of oil processing. According to the 2008 Bellmon and the July 2011 field work, the plant uses both economic and political clout to determine the entry of other players to the market.

During a BEST interview in July 2011, Olga expressed its preference to purchase US CDSO rather than refined vegetable oil. As the country's only refinery, Olga would naturally prefer to process a raw product (particularly given it has the excess installed capacity) rather than importing a refined product.

Refined oil. A number of actors are involved in the refined oil industry, and import refined vegetable oil. Many of these actors are commercial importers and wholesalers involved in the rice market, who deal in oil as well. During BEST interviews in July 2011, large rice companies expressed interest in purchasing monetized refined vegetable oil, as described below.

Sani Garba, a wholesaler familiar with rice monetization, also imports oil from Togo that originally comes from Malaysia. Garba imports, on average, 700 MT of vegetable oil per month, and has the financial capacity to do so through his bank.

Garba imports OKI and Molly brand oil, in 25-liter cans. The price varies, generally ranges from FCFA11,000 to FCFA14,000. The product arrives containerized, and transportation costs range from FCFA1,400,000 (~US$3,100) to FCFA2,500,000 (~US$5,500) per 25 MT container. On the day of the interview, Garba noted he currently had 35 containers of oil being loaded at the port of Lome (July 24, 2011).

Garba noted interest in purchasing monetized refined oil, provided that the price is competitive and the timing is appropriate. For example, a monetized sale during Ramadan[45] would be preferable because consumers would be preparing for the post-holiday celebration, Eid-ul-Fitr,

[45] Ramadan is the fasting month for Muslims (which constitute the majority of Nigeriens).

as well as the following celebration of Tabaski (Eid al-Adha).[46] **Omar Sadou** is a wholesaler and traditional buyer of Title II rice, who brings in edible oil as well. He currently imports about 50 containers of edible oil per month, from Malaysia and Cote d'Ivoire, through the port of Cotonou. Each container is 25 MT; thus, monthly imports total about 1,250 MT, and yearly imports total about 15,000 MT. Sadou sells the DINOR brand in 20 and 25 liter cans. Sadou is also interested in purchasing Title II refined vegetable oil, according to BEST interviews.

Ahmed Alhousseini is a traditional bidder for Title II rice who also trades in oil. Similar to Sadou, Alhousseini brings in DINOR brand oil from Malaysia, in 20-25 liter cans, containerized and shipped through the port of Cotonou. He imports about 30 to 50 containers per month; annually, he imports between 9,000-15,000 MT of edible oil. He sells the 25-liter for FCFA14,000 to semi-wholesalers.

Alhousseini asserted that the quality of DINOR oil is low, and that local production by Olga in Maradi is not enough to cover demand. He suggested that vegetable oil should be added to the list of commodities to monetize in Niger, and claimed he would bid for monetized refined vegetable oil.

Notably, these wholesalers have existing marketing channels throughout the country to move monetized commodities to remote locations in Niger. Given the porosity of the country's border with Nigeria, as well as ethnic bonds (in particular among the Hausa on both sides of the border), however, there is also some potential for monetized oil to be exported to Nigeria.

5.4.5. Monetization Past Performance

Unlike rice, refined vegetable oil has not been commonly monetized in Niger. Title II partners last undertook vegetable oil monetization in 2003, led by Africare. BEST research indicated that the 2003 Africare vegetable oils sales in 2003 were at a price significantly less than the price of equivalent Olga Oil products. As a result of pressure from the GoN and the private sector, these sales were halted.

5.4.6. Recommendation

Either CDSO or refined vegetable oil would be reasonable commodities for monetization, as a secondary option to rice. Both CDSO and refined vegetable oil have advantages and disadvantages as potential monetized commodities, as discussed below.

Refined vegetable oil. Refined vegetable oil has more potential buyers than CDSO; thus, monetized sale prices of refined vegetable oil are more likely to reflect this competition.

Of importance to PVOs, while a fair market price is likely achievable, cost recovery rates for monetized refined vegetable oil would likely be compromised by competition from Malaysian imports. As stated earlier, past experience with the monetization of refined vegetable oil has been negative.

CDSO. As an advantage, CDSO is a crude product that would support the local processing industry if monetized.

Cost recovery rates for CDSO would likely be compromised by competition from Malaysian imports, but likely to a lesser degree than refined vegetable oil. As stated earlier, CDSO only has one potential buyer; thus, monetized sale prices of CDSO may reflect this lower degree of competition.

As stated previously, Olga would like to purchase CDSO from the US, refine it in-country, and then sell it in the Niger market. However, market demand in Niger is price sensitive, and

[46] Tabaski (Eid al-Adha) is celebrated 70 days after the end of Ramadan.

consumers prefer less expensive palm oil; therefore ,the sales price for CDSO would have to be competitive with cheaper Malaysian palm oil imports, which are typically 15%–25% lower in price than the higher-quality soy/vegetable oil available on global markets. Adding to this fact, Olga is a monopoly, which may negatively affect a PVO's ability to negotiate a fair market price, even assuming CDSO would be sold at the price of crude palm.

According to an Olga official's rough calculations in July 2011, palm oil was priced at FCFAF240 /liter in Abidjan. Transport and taxes would add around FCFAF85,000–90,000/MT from Abidjan to Niamey; however, these prices can change quite a bit based on regional and global economic forces for vegetable/palm oil, and are also dependent on changing diesel prices and the level of official/unofficial taxes. The Olga official said that if US CDSO were offered, he would be interested in purchasing around 7,000–10,000 MT.

Considering that Olga is the only edible oil factory/refinery in the country, the company is likely to be the only bidder/prospective buyer for CDSO.[47] The BEST field team expects that a bid from Olga would likely be similar to current prices for palm oil imported from East Asia (C&F Niamey/Maradi). Therefore, cost recovery for any potential American CDSO sales should be expected to be 15%–25% lower than market prices for CDSO.

Based on these factors, it is recommended that all the parties involved conduct a quick market analysis early on, when negotiations are initiated for the monetization of CDSO. In this manner, PVOs can determine a favorable strategy for introducing the commodity.

The study team recommends monetization of CDSO in small volumes—in the range of 6,000 MT-8,000 MT (which would yield between 3,965 MT–5,200 MT of refined oil, approximately 10% of commercial imports).

Monetization of CDSO should be viewed as a second-best option to the monetization of rice. Furthermore, future Title II partners should note that the current market structure would likely mean that monetized CDSO would be sold for a price that is competitive with imported crude palm oil from East Asia/Ivory coast[48]. Although CDSO is a higher-quality vegetable oil that typically merits a 15-25% premium on competitive markets, is the Niger oil market has little competition and Nigerien consumers prefer a cheaper cooking oil. Thus, CDSO would be expected to sell at a price comparable to the lower-quality imported crude palm oil. The accurate comparison on the Niger market for CDSO, based on importing palm oil from East Asia (CIF Maradi, ex-Thailand, and using Cotonou port for off-loading) is US$1270.62 per MT.[49]

In this case, there would be no seasonal considerations in terms of timing calls forward and sales because Olga's capacity is underutilized throughout the year, due to a lack of raw materials. The introduction of crude oil on the Nigerien market will not be a disincentive to production, because commercial imports continue to meet about 66% of the national demand for edible oil. The recommended tonnage should be based on the following assumptions:

- 66% of demand met through commercial imports.
- 65% conversion rate of crude to refined oil.
- Monetized CDSO volumes would represent 10% of commercial import volumes.

The team also suggests that the PVOs use the latest crude palm oil prices CIF Maradi, with port and transport costs per MT, and then assess the fair market price.

[47] See Annex VI-Monetization Methodology, Step 2: Market Analysis for further information on negatives associated with sole buyers.
[48] Olga confirmed that most imported palm oil that is consumed in Niger comes from either East Asia or Ivory Coast.
[49] See IPP calculation details in Annex V.

5.5. Market Analysis –Wheat Grain

5.5.1. Demand

Wheat is a less-consumed cereal in Niger, and demand has varied in past years. In the last two years, middle and low-income households in Niger have been substituting baked wheat products with cheaper baked cereal products, such as those based on sorghum and rice.

Historical data indicate that between 2003 and 2007, average annual wheat consumption declined, falling from 41,000 MT to 39,000 MT; during that same period, per capita income declined 15% (Mburu, November 2007). This consumption decline could reflect consumer response to increased prices of wheat products in international markets (Mburu, November 2007).

Total demand for wheat flour was estimated at about 41,350 MT in 2009 (Mburu, November 2007), higher than its 2007 level but about the same as demand in 2003. Given the current population growth rate, demand for wheat flour in 2010 is estimated at 44,000 MT.

Wheat in the form of bread/baguettes is considered somewhat of a luxury consumer good, and therefore, demand is highly correlated to price (negatively) and income (positively).

5.5.2. Domestic Production

Niger produces very little wheat domestically. Annual production is estimated at 8,142 MT; this quantity accounts for roughly 2/3 of the country's total supply of 11,592 MT. According to the 2008 Bellmon, Agadez, Zinder, Maradi, Diffa, Tahoua, and the Commune of Niamey are Niger's major wheat-producing areas.

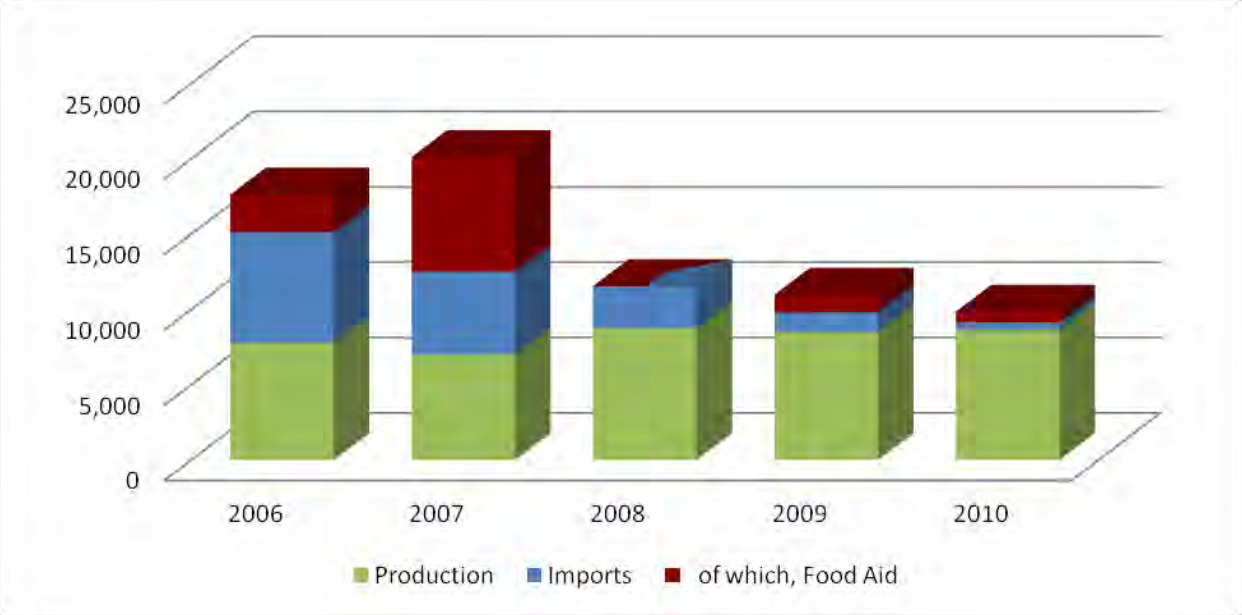
Locally produced wheat grain is processed at the household level and locally consumed in traditional dishes such as couscous and porridge.

Notably, Niger is only capable of producing soft wheat grain, and cannot produce hard wheat grain due to the country's tropical climate. Hard wheat is an essential ingredient in the production of baking flour, and has a higher protein content than soft wheat. Efforts to expand production of local wheat have been frustrated by factors such as: 1) quality of production is low, because producers rely on unimproved local varieties, and lack access to improved varieties; 3) relative costs of local production are higher than imported wheat grain; and 4) as the country's only mill is no longer functional, marketing opportunities are limited. Although the country's single wheat mill once sourced 70% of its wheat flour from locally produced wheat grain, Nigerien wheat grain producers are no longer able to sell their product to this mill which closed in early 2011.

5.5.3. External Trade

Wheat grain imports averaged 3,476 MT per year over the last five years. Imports fluctuated during this period and peaked at 7,316 MT in 2006. Commercial imports of wheat grain represent approximately 30% of total supply, of which distributed food aid represents 21%. Over the past five years Niger's wheat imports came from the US (52%), France (39%), and Nigeria (1%).

Figure 16. Domestic Wheat Grain Supply (MT)



Source: Comtrade, WFP, 2008 Bellmon, FAOSTATS, and ITC.
Note: Food aid shown in this graph could consist of either wheat grain or bulgur wheat.

5.5.4. GoN Policy

The GoN is currently undertaking three programs to support domestic wheat production.

Emergency program. The government is providing seeds and fertilizers to farmers in the regions of Tahoua and Agadez, after a poor harvest. Under this program, 842 ha of irrigated land will be put under wheat.

3N. Under its 3N program, the GoN is supporting wheat production on 3,045 ha of irrigated land in Agadez and Tahoua.

Tamesna and Irhazer irrigated land project. The GoN is working in collaboration with the French Uranium company AREVA to promote the cultivation of wheat. The project is located in Agadez region, and planned to begin in 2011.

- Coverage: 9,000 ha (5,000 ha in the Tamesna and 4,000 ha in Irhazer)
- Duration: 5 years (pilot phase expected January 2012)
- Beneficiaries: Ex-Tuareg rebels, Libyan refugees, local population
- Seeds used: varieties with high potential (Hayatane, Bilwa, Taraza, Cha Ine), procured in Algeria

5.5.5. Competitive Environment

As mentioned above, the country once had a single wheat mill, Moulins du Sahel (MDS), which closed in early 2011 due to bankruptcy.

MDS was a parastatal before being privatized in 2004. As part of the privatization, it received a five-year tax holiday as an incentive to local investors. The company had installed a milling capacity of 30,000 MT of wheat grain per annum. As stated previously, MDS produced about 70% of its wheat flour from locally produced wheat grain.

5.5.6. Recommendation

The study team recommends against the monetization of wheat grain since the only large-scale milling company is currently not in operation.

5.6. Market Analysis – Wheat Flour

5.6.1. Demand

Although Niger's market for wheat flour is relatively small, demand for wheat flour has grown significantly in the last two decades, particularly with increasing urbanization. Attracted by the cities, more and more Nigeriens have left their villages and are becoming increasingly urbanized on the outskirts of the main capitals; consumers have increasingly incorporated wheat products into their diet, particularly the French baguettes, cakes, croissants, and pastries. Wheat flour is also used for preparing the traditional sweet beignets sold on the streets. 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.

5.6.2. Domestic Production

As stated earlier, the country's single mill is no longer operational; thus, Niger currently relies completely on imports to fulfill wheat flour demand. Even when MDS was operational, the company only accounted for 2% of total wheat flour supply.

If MDS were to become operational again, and utilized 100% of its milling capacity, the mill would still only produce 21,000 MT of wheat flour per year. In this scenario, Niger would have to import about 9,000 MT of wheat flour per year to meet demand, based on current consumption levels.

5.6.3. External Trade

Wheat flour imports averaged 26,687 MT per year over the last five years.[50] Imports fluctuated during this period and peaked at 30,386 MT in 2010. Commercial imports represent approximately 98% of total supply. According to interviews with three wholesalers in the wheat business, wheat flour is imported primarily from France (43%), Nigeria (9%), Morocco (10%), and Benin (9%), and is subsidized by the government. The main customers of these wholesalers are bakers who demand wheat flour with 11% to 12.5% protein content for baking.

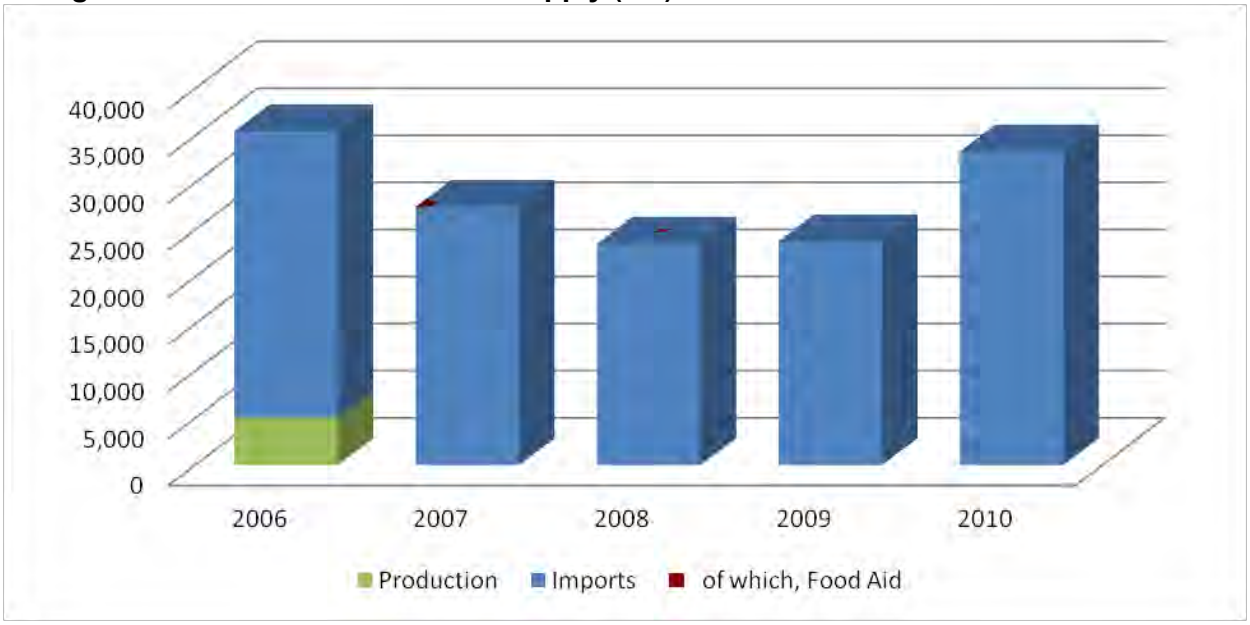
Neither Title II wheat grain nor wheat flour is used as a distributed food aid commodity, though WFP does distribute wheat (possibly bulgur wheat). Title II programs distribute wheat substitutes (i.e. CSB and wheat-soy blend).

5.6.4. GoN Policy

As in many African countries, wheat flour to make bread is a very sensitive commodity—so sensitive that the high price of bread triggered riots in many African countries about 5 years ago. Wheat flour is therefore subsidized by the government and is not subject to customs duties, although an administrative fee equal to 1% of CIF is imposed.

[50] To calculate the 5-year import average for wheat flour, the study team averaged 4 different data sources: ITC, Comtrade, FAO, and 2008 Bellmon.

Figure 17. Domestic Wheat Flour Supply (MT)



Source: Comtrade, WFP, 2008 Bellmon, FAOSTATS, and ITC.

5.6.5. Competitive Environment

Importation and commercialization of wheat flour is partially liberalized in Niger, with the GoN intervening to maintain low consumer prices. At least 10 wheat flour wholesalers are potential buyers of wheat flour throughout Niger, which suggests some level of competition in the imported wheat flour industry. The majority of wheat flour importers are located in Niamey and Maradi, including leading bakers who import flour from France. Others importers are located in Zinder and Gaya.

As mentioned before, wheat flour imports are subsidized by the government and not subject to customs duties, only 1% of CIF for administrative fees, which discouraged commercial imports of wheat flour.

5.6.6. Recommendation

Given the present level of demand and current prices for wheat flour, monetization of a small volume has potential to generate slightly over US$1.3 million.[51] Based on the following points, the BEST team recommends that PVOs monitor the wheat grain and wheat flour markets to assess the potential viability of monetization of wheat flour in the future.

- Demand for wheat flour is very sensitive to changes in price (demand is relatively elastic). When households suffer negative income shocks, they often switch from the consumption of bread and other wheat-based products to cheaper foods like millet.
- GoN interventions in the wheat flour market via subsidies could create an uncompetitive environment.
- MDS only recently closed due to bankruptcy; if the mill does reopen in the near future, wheat flour would be less appropriate as a commodity for monetization.

[51] Estimate is based off FOB Rouen price for French bakers flour, as of October 27, 2011. Source: Les Moulins d'Haiti

5.7. Market Analysis – Milk Powder

5.7.1. Demand

Imports of milk powder continue to decline, from nearly 48,000 MT in 2002 to only 12,889 MT in 2009. Dry milk powder imported into Niger is used to manufacture yogurt, ice cream, and condensed sweetened milk.

Most of the country's national local milk production, nearly 400,000 MT, is consumed on the farm. This milk represents about 75% of total milk consumption. Only a small fraction of locally produced milk enters into the formal commercial channels to be sold to larger industrial users.

The government has been encouraging processing plants to maintain the current consumer dairy product prices at FCFA250 for one-half liter of pasteurized milk and FCFA100 for a 0.2-liter packet of yogurt. But at these prices, processing plants do not cover their production costs. In response, the plants have developed strategies to address their cost-price squeeze, such as product adulteration and use of smaller containers. Milk processing plants are also exploring stronger links with local producers; this is in part due to the change in imported milk prices, as described in section 5.7.3.

5.7.2. Domestic Production

Milk production in Niger is mainly from cattle, camels, and goats, and is a key component of pastoralist production systems. The livestock/meat sector is very important for both Niger and Nigeria, especially for populations along the Kano-Katsina-Maradi (KKM) corridor (Mburu, November 2007). Locally produced milk is consumed by pastoral families and also processed into traditional dairy products that are sold to generate additional income.

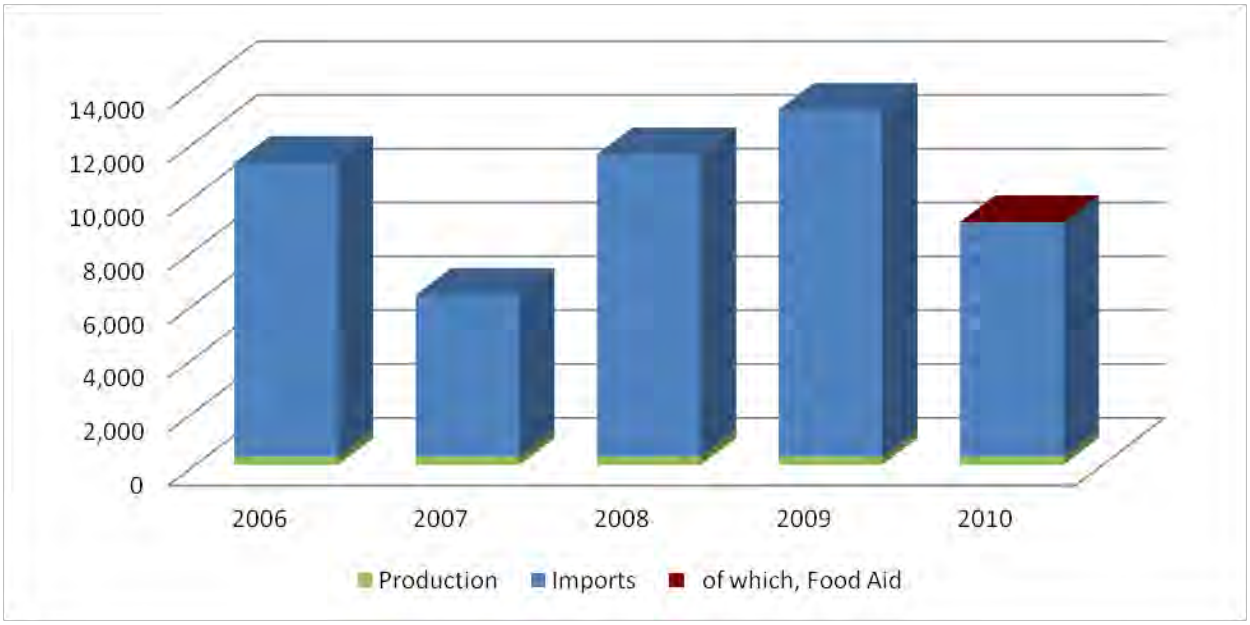
Nigerien livestock consume rain-fed crops; thus, milk production is closely tied to weather patterns. Very low and unreliable rainfall is characteristic of the livestock-producing areas of Diffa, Tahoua, Tillaberi, and Agadez.

As noted below, large dairy companies rely mostly on imported milk powder; however, one company, Niger-Lait, does purchase small quantities of locally produced fresh milk on a regular basis. Most of the local milk used commercially is produced in the government's experimental farm at Toukounous[52] near Filingue.

Niger produces a very small amount of milk powder, averaging 315 MT annually over the past five years.

[52] The BEST team visited the Toukounous milk facility in July 2011.

Figure 18. Domestic Milk Powder Supply (MT)



Source: Comtrade, WFP, 2008 Bellmon, FAOSTATS, and ITC.

5.7.3. External Trade

As stated previously, 75% of total milk consumption is produced and consumed at the household level. The commercial market meets a smaller percentage of total demand, and relies mostly on imported milk powder. Almost all (95%) of the raw material used in the Niger milk commercial market consists of imported milk powder, and almost all imported milk powder is sourced from France.

The country has three large milk producing plants, Solani, Niger Lait, and Laban. All three are located near Niamey, where the national consumption market is concentrated.

As noted earlier, however, processing plants are looking to source more locally produced milk due their need to lower costs. A recent change in EU policy has impacted the Nigerien dairy sector, as explained below.

In the past, subsidized milk powder imported from the European Union encouraged reliance on imported supplies, by rendering imported supplies less expensive than locally produced milk. Until the end of 2007, imported milk supplies were not only more reliable, they were less expensive compared to local milk supplies.

However, the EU eliminated rebates on non-fat dry milk in mid-2006, on whole dried powder in January 2007, and on all butter and cheese in June 2007.

Though these measures made locally produced milk more competitive with imported milk powder, they have yet to actually aid dairy producers because marketing channels for local milk supply are fragmented and disorganized. Furthermore, local milk supplies are relatively unreliable, in quantity and quality (Mburu, November 2007).

NFDM was not in the food basket of PVOs or donors during 2010. This is basically due to the country's lack of potable water. Powdered milk, when not processed in the proper sanitary and hygienic environment, can be a serious cause of health problems, especially for infants and

young children. Nationwide, only 47.3% of Nigerien households have access to potable water.[53]
Recommendations

This study does not recommend monetization NFDM in Niger for the following reasons:

- *Insufficient demand.* Per information received from stakeholders in Niamey, the country overall would have insufficient demand for powdered milk, due mostly to cultural preferences for other commodities.
- *Breast milk substitute*. NFDM could easily be a breast milk substitute, which would be contrary to FFP policy.
- *Potential export of unprocessed commodity to Nigeria*.[54] NFDM is a high value commodity that could easily be exported into Nigeria in powder form, given the high cross-border trade.

5.8. Third-Country Monetization (TCM)

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, the monetization activity could, over time, 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 US agricultural legislation (e.g. Farm Bill), which requires that monetization does not introduce local market or production disincentives.

Third-Country Monetization (TCM), can offer a legally compliant alternative for Awardees operating in a country with less than fully competitive domestic commodity markets, or where market demand is simply insufficient to support Title II monetization for food security programming. TCM 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. TCM 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.

Despite the positives just described, TCM is a reasonable option for Niger, either alone or as a supplement to in-country monetization, for the foreseeable future (FY12 and beyond) because 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 Co-operation and Development-Development Assistance Committee (OECD-DAC) list. Within the region, there are many LIFDCs, including Benin, Togo, Burkina Faso, Cote d'Ivoire, Ghana, Liberia, and

[53] This low coverage is only slightly worse in some regions: 45.8% in Dosso, 45.6% in Maradi, and 45.4% in Tahoua, but much lower on the outskirts of Niamey (38.1%) and Tillaberi (34.6%). However, coverage is substantially better in the urban section of Agadez, where more than 98% of households have access to potable water (WFP, January 2009).
[54] Per USC Title 7, Chapter 41 Agricultural Trade Development Assistance, IV, Section 1733.

Senegal. 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 TCM takes place.

The subject FFP guidelines read as follows:

> 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/ohrlls/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 provides an overview of the products and markets that should be considered for FY12 activities in the Niger:

Table 17. Quantities of Select Commodities Imported in Select Ports (Total MT, 2006-2010)

Commodity	Nigeria	Senegal	Ivory Coast	Ghana	Burkina Faso	Guinea	Benin	Togo
Maize	8,020	518,947	45,197	106,402	10,324	2,958,976	472	547
Rice in the husk (paddy or rough)	723	5,364	6	1,490	35,668	4,784,296	3	
Rice, broken	472,762	4,076,941	862,183	1,538,407	450,026	267,360,963	1,040	35,529
Rice, husked (brown)	78,395	112	3,055	34	2,938	3,207,759	864	15,001
Rice, semi-milled or wholly milled	4,283,817	161,861.12	2,709,332	391,339	559,495	9,681,631	402,949	27,972
Soya-bean oil crude, whether or not degummed	1,800	421,711	9	117	0	36,601	1	
Wheat and meslin	29,939,000	1,970,678.04	1,259,343	1,652,751	249,300	20,269,783	1,690	69,713
Wheat or meslin flour	864	7,733	64,254	98,383	92,203	62,068,670	14,005	1,812
LIFDC	✓	✓	✓	□	□	□	□	□
Port City	✓	✓	✓	□		□	□	□
Adequate Port Facilities	✓	✓	✓	□		□	□	□
Convertible Foreign Exchange	✓	✓	✓	□	□	□*	□	□
Present Significant Security Issues	□							

Source: UN Comtrade and the BEST Port Study. Data not available for Liberia;
Notes: Data provided via desk study; more information would be available via on-site market studies; The official exchange rate and the exchange rate the population uses are different due to the lack of foreign currency in the banks in Guinea.

If TCM 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 third country monetization country and the Title II development food aid program country must endorse the monetization.

One potential hurdle will remain: the transfer of the proceeds if the sale is conducted. Transferring large amounts of money in the ECOWAS sub-region is subject to the scrutiny of UEMOA's regulations. The seller may end up paying substantial handling fees to the originating and receiving banks.

Chapter 6. Distributed Food Aid

6.1. Introduction

This Chapter provides general guidelines to help ensure that future distributed food aid programs in Niger will not result in substantial production disincentive or disruption of local markets. The study provides guidelines within a specific framework for analyzing the potential market and production impact of distributed food aid. The recommendations are broad, and importantly, future Awardees are expected to conduct their own independent needs assessments, market analysis, and formative research to fully understand local conditions, needs, and the range of appropriate responses.

6.2. Objectives of Distribution Analysis

The Bellmon Amendment requires assurances that a proposed food aid distribution program in any country 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 ~~-a~~dditional consumption" for beneficiary households (e.g., food consumption that would not have occurred in the absence of the food aid distribution program). If food aid transfers exceed a household's 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.

To 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 Niger.
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 Niger, including border areas with neighboring countries.
4. Key considerations for all distributed food aid interventions in Niger, and guidelines for each of the most likely modalities for distributed food aid.

6.2.1. USAID Food Aid Distribution Modalities and Geographic Targeting for FY12–F Y17 Title II Development Program Cycle

Per USAID guidelines, Title II development programs should focus programs *to reduce food insecurity and malnutrition among vulnerable rural populations in Niger*. Applications will improve food security by addressing these two priority components:

1. Reduce chronic malnutrition among pregnant and lactating women and children under 5 years of age, with an emphasis on children under 2 years of age.
2. Increase the local availability and households' access to nutritious foods by diversifying agricultural productivity, increasing rural households' income, and increasing resilience to shocks.

This dual track effort is intended to yield compounding returns in food security status by simultaneously addressing its three underlying causes - food availability, access, and utilization.

Governance, gender, vulnerability reduction, emergency preparedness, and program integration will be cross-cutting themes and must also be addressed.

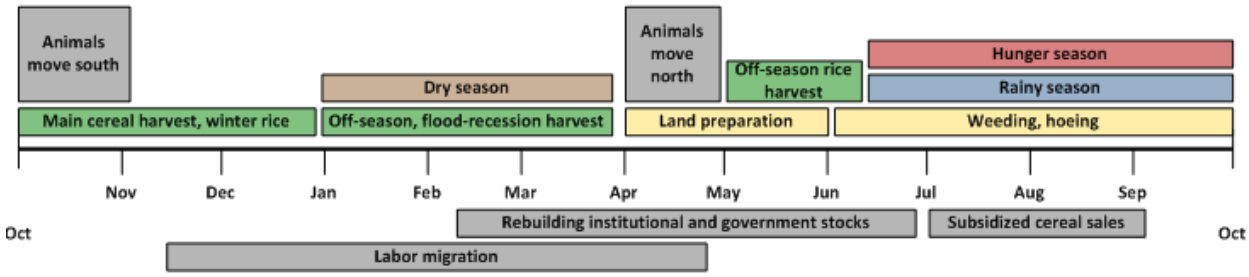
National and Localized Food DeficitsSince the 1980s, Niger has struggled to feed its population, becoming highly dependent on imports and international food assistance. Over the past five years, USAID and the World Food Program (WFP) have provided, on average, 75,000 metric tons (MT) per year[55] of food aid to help meet Niger's national food requirement. On an annual basis, 22% of Niger's population suffers from chronic food insecurity (per capita consumption of less than 1,800 kcal per person, per day) (World Bank, 2011). Through its most recent ~~"d~~depth of hunger" estimates,[56] the Food and Agriculture Organization (FAO), as cited by the World Bank,[57] estimates the national average food deficit (in kcal/person/day) for the undernourished population in Niger (2006-07) is 250 kcal per person per day. In any given year, droughts, floods, pest invasions, and poverty all contribute to an exacerbation of persistent food shortages.

Notably, overall food supply of a country does not necessarily reflect household-level food security. Factors which affect household-level food security include:

- Food availability at national and regional levels
- Food distribution channels
- Food prices and low incomes, which together negatively affect access.
- The habits and food choices of its people

Households rely on their harvests for revenue, especially revenue from cash crops (e.g., cowpeas, onion, tiger nuts, sesame, cotton, and peanuts). In Niger's urban areas, the average household spends 35% of its revenue on food compared to 23% in rural areas (WFP, 2005). For both urban and rural households, whenever the price of food increases, generally more money will be allocated to food and less to savings and other household expenses; or less food will be consumed during these shock times. Figure 19 outlines the seasonal calendar of agricultural activities.

Figure 19. Niger Seasonal Calendar and Critical Event Timelines



Source: FEWSNET, available at http://www.fews.net/Pages/timelineview.aspx?gb=ne&tln=en&l=en.

[55] For more details on USAID and WFP food aid tonnages over the past five years, see 1.2(Food Aid Overview).

[56] From FAO, ~~"D~~epth of hunger or the intensity of food deprivation," indicates how much food-deprived people fall short of minimum food needs in terms of dietary energy. The food deficit, in kilocalories per person per day, is measured by comparing the average amount of dietary energy that undernourished people get from the foods they eat with the minimum amount of dietary energy they need to maintain body weight and undertake light activity. The depth of hunger is low when it is less than 200 kilocalories per person per day, and high when it is higher than 300 kilocalories per person per day." FAO depth of hunger estimates provide a useful national benchmark which can be used prior to PVOs conducting formative research in proposed target communities to determine in more precise detail the average household deficits of beneficiary households.

[57] See the World Bank's Database at http://data.worldbank.org/indicator/SN.ITK.DPTH

Food shocks are a recurring problem in Niger; in the last decade, the country has experienced good harvests, except for the years 2000, 2004, and 2009. Even during good harvest years (i.e., increased availability), there are always some localized food deficits.

Furthermore, chronic malnutrition persists in Niger. The causes of chronic malnutrition are many:

- Lack of food availability at the local level, and poor household access (both physical and economic) to food markets.
- Poor sanitation and health practices.
- Limited dietary diversity, with deficiencies in micronutrients.
- High fertility rate: in Niger, women have an average of 7 children each.
- Low education levels among females.

For current statistics on malnutrition, see Annex IV of this report.

The following paragraphs briefly explain factors that contributed to the two bad harvest shock years of 2004/05 and 2009/10, as well as the current state of food security in Niger.

2004–2005 harvests. In 2004–2005, the food crisis in Niger was triggered by insufficient rainfall following a locust invasion. According to a GoN report, in 2004–2005 as a result of the failed rains, Niger suffered a deficit of 223,000 MT of cereal and a roughly 4 million MT deficit in feed livestock (Cabinet du Premier Ministre, RON, 2005). This food crisis coincided with a broader West African food stock shortage, which led to high grain prices in local and regional markets. The situation worsened when governments in Nigeria and Burkina Faso implemented protectionist measures, which reduced the flow of cereals (millet and corn) back into Niger and drove millet prices about 45% higher in June 2005 compared to the previous 5-year average (SIMA-July 2005). (Sánchez-Montero, 2006). This limited access to cereals for poor households. In order to survive, poor households typically sold their assets (especially animals), borrowed money, and/or undertook gardening activities where water was available.

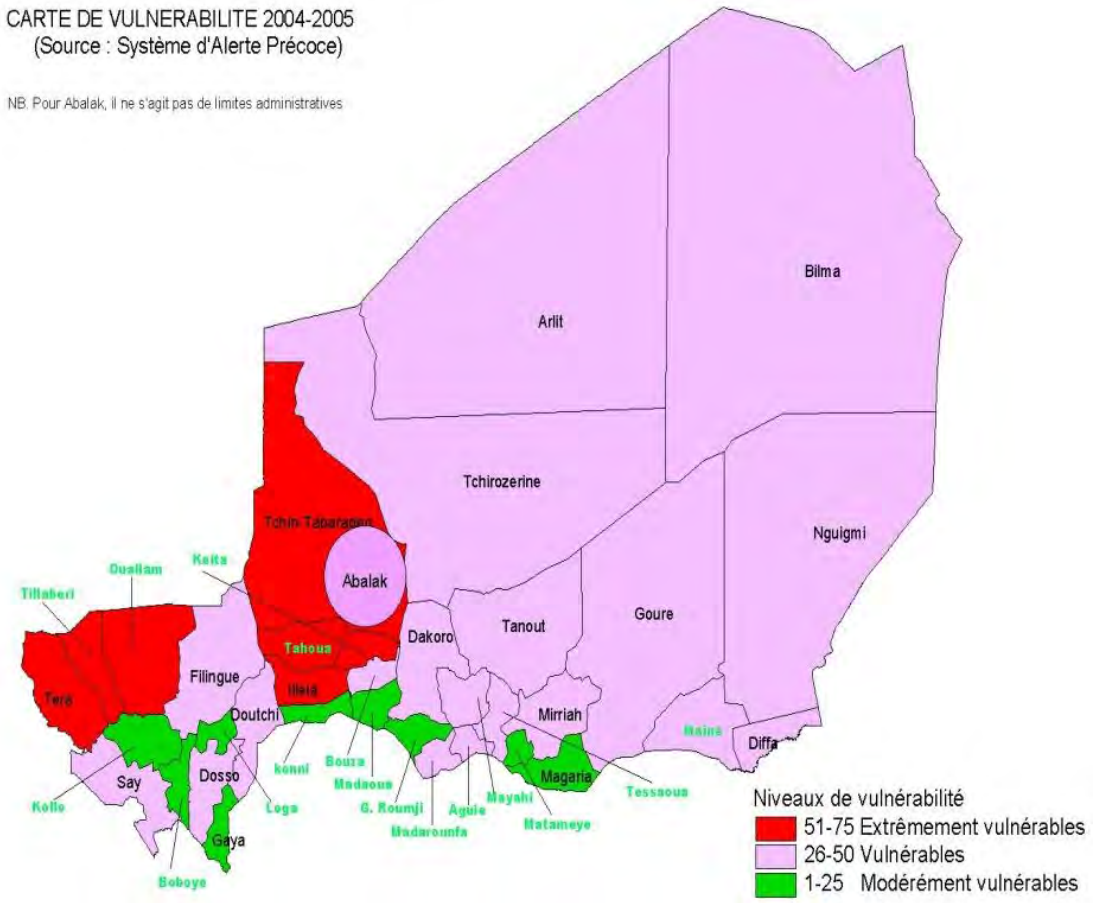
The food crisis was further compounded by the following (Sánchez-Montero, 2006):

- Sluggish reactions of the Nigerien government and international community in deciding on and implementing appropriate responses.
- Poor information management and decision making.
- Lack of nutritional surveillance data.

Four regions were most seriously affected by the 2005 food crisis: Zinder, Tahoua, Maradi, and Tillaberi. In total, about 3,600,000 people —1/3 of the entire population — were impacted by the food crisis.

The food insecurity vulnerability map for Niger for the 2004–2005 season (Figure 20 below) generally reflects that food insecure conditions prevailed throughout the country, with extremely vulnerable food security conditions in the west. The map also shows that some parts of the south were only moderately food insecure.

Figure 20. Food Insecurity and Vulnerability Map, 2004–2005



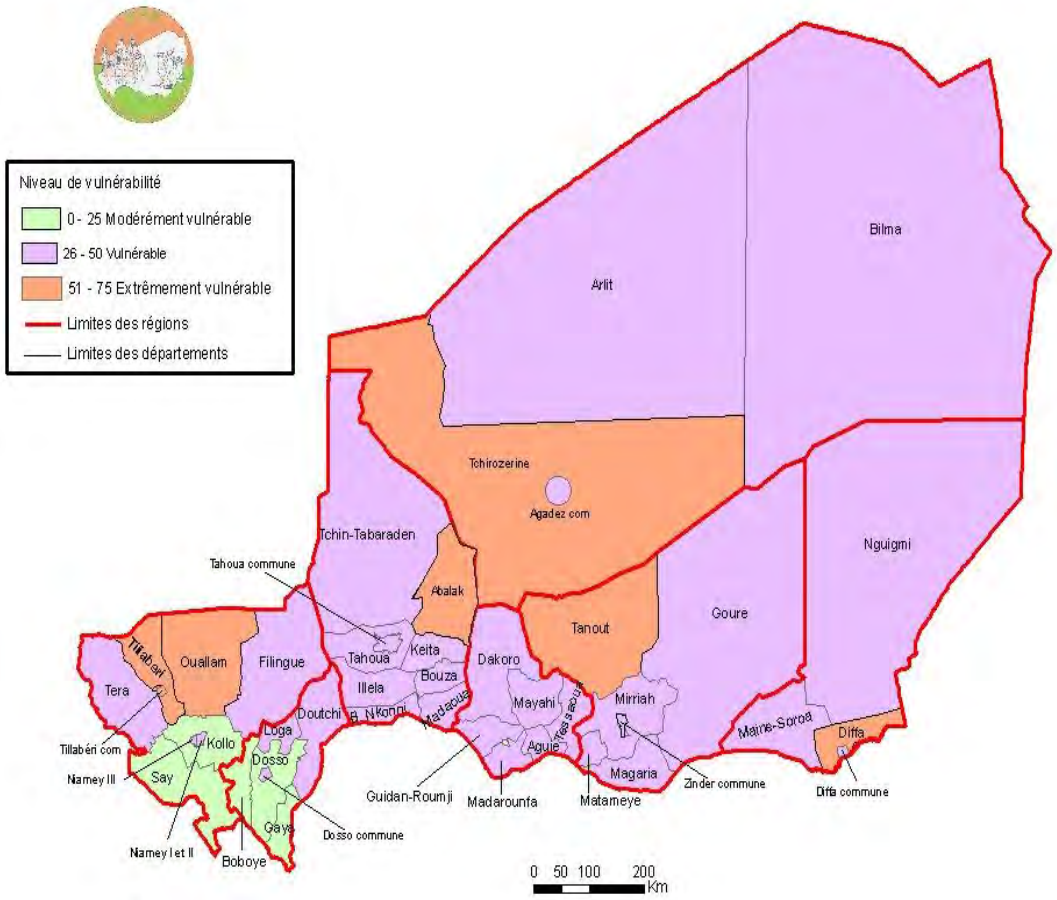
Source: System d'Alerte Précoce.

2009–2010 harvests. In 2009–2010, the food crisis was triggered by insufficient and variable rainfall, and losses from plant diseases and pests (e.g. grasshoppers, flower insects, rodents, and birds).

Total cereal production in 2009 was 31% less than the 2008 harvest (GoN, 2010). Nationally, the total area planted for millet and sorghum—Niger's two main cereal crops—decreased, 3.3% for millet and 16.7% for sorghum.

By June 2010, the poor harvest from the previous fall season left Niger with an estimated food shortage of 119,700 MT of cereal and approximately 16 million MT in feed livestock (forage) (GoN, 2010). A comprehensive assessment of households' vulnerability to food insecurity, conducted by the GoN with the support of its technical and financial partners (WFP, European Union (EU), Food and Agriculture Organization (FAO), UNICEF), established that 3.3 million people were severely food insecure, and an additional 3.8 million were moderately food insecure—in total about half of the country's population (APS EFSP, 2010).

Figure 21. Food Security and Vulnerability Map – May 2010



Source: System d'Alerte Précoce.

At the same time, the donor-funded nationwide Standardized Monitoring and Assessment of Relief and Transitions (SMART)[58] Nutritional Survey[59] reported that Global Acute Malnutrition (GAM) rates in Niger increased to a national average of 16.7%—above the 15% World Health Organization (WHO) international alert threshold, and 4.4% higher than the same period of 2009. The most affected regions, based on GAM rates, were Diffa (22.1%), Maradi (19.7%), Zinder (17.8%), and Tahoua (15.8%). Furthermore, the remaining four regions had rates close to the ―critical" 15% threshold: Tillabéri (14.8%), Dosso (14.3%), Agadez (13.9%), and Niamey (13.3%) (APS EFSP, 2010).

The food crisis could also be related to, again, slower than ideal decision-making by key government officials, who did not fully admit the scale of hunger in-country. This crisis was alleged to have contributed to the military coup in February 2010. The situation was more fully acknowledged when the military assumed power after the coup and announced officially that Niger needed food aid from humanitarian agencies.[60]

However, the 2010 production resulted in a bumper harvest of 5,154,214 MT of cereals, as compared to the 2009 production season.[61] This meant that many families were able to

[58] USAID/OFDA was one of the donors for this survey.
[59] This survey was conducted by the GoN and UNICEF between May 24 and June 16, 2000.
[60] For further details and discussion, see sahelblog.wordpress.com/niger-foreign-aid.
[61] Ministry of Agriculture and Livestock, February 2011

significantly improve their food security status from the 2009/10 marketing year to the subsequent 2010/11 marketing year.

Current food security situation.[62] According to FEWS NET, production for the current agricultural season could vary from average to good. However, according to the Coordinator of *Systeme d'Alerte Précoce/Gestion des Catastrophes* (SAP/GCA),[63] as of July 25, 2011, 900 villages in four areas (Tillaberi, Zinder, Diffa, and Agadez) had not planted because of the lack of rainfall.

Currently, an estimated 2.3 million Nigeriens are food-vulnerable, a 63% improvement over 2010 and a 38% improvement over the average for the previous five years (FEWSNET, 2011). This improvement is mainly due to the record-breaking 2010 harvest.

Due to the recent sociopolitical crises in Libya and Ivory Coast, however, most of the Nigerien economic migrants to those countries have returned to Niger. This has reduced remittances and reduced household income. For instance, reporting on conditions as of July 2011, FEWS NET reports that in the regions of Dosso (Loga), Tahoua (Tahoua), and Zinder (Tanout and Gouré, in central Niger), money transfers had decreased 51%-75% since the onset of those crises (FEWSNET, 2011). Consequently, households' incomes have decreased, which in turn impact household food consumption levels.

6.3. Private Market Capacity to Meet Localized Food Deficits

6.3.1. Introduction

This section assesses the capacity of private markets (local and regional) to meet localized food deficits, and how this capacity ameliorates food insecurity in Niger. It relies on analysis of market structure, conduct, and performance.

Regional dynamics. As a landlocked country dependent on rain-fed agriculture, Niger depends on trade with its contiguous neighboring countries, such as Benin, Nigeria, Burkina Faso, and Mali.[64] Nigeria is the largest trade partner with Niger for cereals, vegetables, cowpeas, and livestock.[65]

Typically, in return for staple foods from neighboring countries, Nigeriens, depending on the time of the year, sell livestock (such as goat, sheep, cattle, and camels) and crops (such as cowpeas and legumes). For instance, whenever traders from Nigeria sell cereals in Niger's markets, they in turn typically buy animals from Nigerien livestock owners. Because of this symbiosis, any production or price changes in contiguous neighboring countries can have strong impacts—positive or negative—on food security in Niger. One researcher found that the cross-border markets of Malanville (Benin), Jibia, Illela and Mai-Adua (Nigeria) appear to strongly influence prices in over 65 percent of the markets in Niger, a finding which underscores the critical importance of free and open cross-border trade for Niger's food security (Aker, Cereal Market Performance During Food Crises: The Case of Niger in 2005, 2007).

[62] Noting current conditions and the three preceding vulnerability maps, the Cellule des Crises Alimentaires reports the following zones in Niger as chronically food –deficit areas: Tillaberi Region: Ouallam, Tillaberi, Nord Tera and Nord Filingue Departments; Dosso Region: Boboye, Loga and Nord Doutchi Departments; Tahoua Region: Bande Nord Illela (Bagaroua), Tahoua, Abalak (Tchintabaraden), Garhanga (Keita), Keita, Tabotaki (Bouza) and Bouza Departments; Maradi Region: Dakoro, Nord Guidan Roumdji, Nord Mayahi, and Ourafane (Tesaoua) Departments; Zinder Region: Tanout, Goure, and Nord Mirriah Departments; Diffa Region: N'Guigmi Department.

[63] Per the BEST field team interview.

[64] A 2002 study conducted by SIMC (Système d'Information sur les Marchés de Céréales) provides an overview of local and border markets and marketing characteristics. Other important studies, conducted in 2006 and 2007, report on dynamics of cross-border commodity trading.

[65] As detailed in Chapter 1, both Niger and Nigeria are members of ECOWAS despite the fact they do not have the same currency.

Given these dynamics, Niger has long been interested in promoting integration of the West African markets in order to achieve the free circulation of goods and people through improved market forces. To that end, Niger joined the Economic Community of West African States (ECOWAS) and in 1994, joined the *Union Economique et Monétaire de l'Afrique de l'Ouest* (UEMOA).

National dynamics. As previously mentioned, the main crops grown in Niger are millet, sorghum, maize, rice, cowpeas, peanut, and vegetables. Millet, sorghum, maize, and rice are produced for consumption. Cash crops, such as cowpeas, peanut, onions, and other vegetables, are traded between Niger and its contiguous neighboring countries.

Previous research has found Nigerien cereal markets to be fairly well-integrated, though more so in low-production years (Aker, Cereal Market Performance During Food Crises: The Case of Niger in 2005, 2007). With the exception of certain market catchment areas which are relatively less well-integrated, traders move commodities from production areas to consumption areas. In Niger, this means that crops flow from the south to the north (specifically, to the Tanout and Agadez areas). Livestock flows from the north to south (however, note that many southern households are increasingly developing livestock). Aker reports that price movements in Niger respond primarily to supply shocks (production shortfalls or bumper harvests), rather than demand shocks (Aker, Cereal Market Performance During Food Crises: The Case of Niger in 2005, 2007).

While regional markets during low production years are generally well-integrated, resulting in the flow of goods from surplus areas (with relatively lower prices) to deficit areas (with relatively higher prices), some research has concluded that local markets within Niger are only partially integrated. The flow of goods between local markets appears to be heavily influenced by transaction costs, most of which are related to the price of gas (Aker, Cereal Market Performance During Food Crises: The Case of Niger in 2005, 2007).

Livestock markets play an important role in Niger's economy (14% of GDP), and particularly in household food security. In fact, livestock represents the principal revenue source for households in agro-pastoral areas. As stated earlier, livestock can be exchanged for cereals; that exchange could be advantageous or disadvantageous to livestock owners, depending on the time of year and the condition of the livestock. For more information, see Section 6.4.3.

External forces can also impact commodity flows within and outside of the country, including:

- Official and unofficial cross-border hindrances (checkpoints).
- Currency fluctuations between the *Franc Communaute Financiere Africaine* (FCFA) and the Nigerian naira.
- Uneven security.
- Poor road conditions, especially during the rainy season.

Other important factors that influence the availability and flow of goods include GoN policy, and community-based support systems (such as Zakat, discussed below, and cereal banks, discussed in Section 4.5.3.)

Policy. As a measure to reduce food insecurity, the newly elected president developed a new rural development (agriculture) policy for the next five years of his mandate. For further details on the 3N program, please see Section 2.4.

The current Issoufou government (in power since February 2011) supports Food For Work (FFW) activities, along with other programs that can promote overall food security, and has not reinstituted the previous government's ban on these activities.[66]

Zakat.[67] Alms-giving, known as Zakat, takes place in Niger and other Muslim countries, and occurs most frequently during the month of Ramadan and at the end of the Islamic year. Wealthier individuals give money or food provided to poorer sectors of Nigerien society. The impact of Zakat on overall food security would be difficult to measure; nevertheless, it should be seen as a temporary/transient measure that improves consumption levels for poorer Nigeriens in both rural and urban settings.[68]

6.4. Market Structure

Generally, crop and livestock markets are separated geographically in urban areas, and mixed in rural areas. In urban areas, markets are held daily. In rural areas, markets are held weekly, on a fixed day.

Niger's cereal trade is dominated, if not controlled, by a group of large traders based in Niamey who also have connections in Maradi, Zinder, and Nigeria—the main commercial markets outside of the capital.[69] These traders reportedly customarily manipulate the market and take advantage of consumers by keeping a large amount of their stocks out of circulation until the lean season, when prices are high.

Although there is a Market Information System (MIS) (SIMA -*Système d'Information sur les Marchés Agricoles*), which is responsible for providing market information to the general public, price information is not well-transmitted into the rural areas, which can lead to market distortions due to asymmetric information. Traders, who have both greater access to credit and greater access to price information, thus have the ability to take advantage of small-scale farmers, particularly those with great cash needs, by offering producer prices which may be below the fair-market value.[70]

6.4.1. Market Types

Four types of markets exist in Niger:

Collection markets (crops).[71] In general, these markets are located in rural areas, especially in crop production areas. Producers are essentially sellers and buyers (commodity assemblers) and may or may not be a local village resident.

Assembly markets (crops or livestock).[72] Markets where crops or livestock are gathered for transfers to other trading centers or consumption markets (retail markets).

[66] The previous Thandja government had banned food for work activities, necessitating changes in the design of MYAPs for the previous 5-year program cycle. This position was articulated to the BEST team by the Office of the Prime Minister, staff at Cellule Crises Alimentaires (CCA) and personnel at the Systeme d'Alerte Precoce et la Gestion des Catastrophes (SAP/GC) office in July 2011.

[67] Idrissa Noma, Fintrac, BEST consultant.

[68] Sangare, Yacouba, US Peace Corps/Niger agriculture specialist and Fintrac BEST consultant, email communication.

[69] Noma, Fintrac/BEST consultant

[70] Noma, Fintrac/BEST consultant.

[71] Examples of Collect Markets include: Maradi: Dakoro, Dan-Gomma, Tessaoua, Gazans Mayahi Aguie, Tchadoua, Maidjirgui, Toundoun-Agoua, Kornaka, Dandana, old-Koria, El Kolta, Koons, Sarkin-Yama, Sabon-Machi, Garare, Guidan-Roumdji, Djirataoua Gabi, Maraka, Tibiri, Chadakori; Zinder: Bakin-Birji, Sabon-Kafi, Balbedji, Guezaoua, Baboul, Tanout Mirriah, Matameye Dungass, Guidiguir, Band, Takalmaoua, Kazou, Magaria, Kazaoe, Koundoumaoua; Tillaberi: Tamou, Karalzoubou, Loumbo-Kolli, Kabadje, Kirtachi, Ballayara, Filingue, Sanam, Torodi, Abala, Yeda, Wankama, Hamdallaye; Dosso: Fabigui, Fadama, Doutchi;

[72] Assembly Markets include:Tillaberi and West Region: Niamey and Ballayara; Maradi Region: Maradi; Zinder Region: Zinder; Tahoua Region: Tounfafi, Badaguichiri, Tahoua; Dosso Region: Dosso;Agadez Region: Agadez;Diffa Region: Diffa

Retail markets (crops and livestock). Located in urban and rural areas, these markets are known for selling many types of commodities and have many warehouses. Consumers (households) mainly frequent these markets.

Cross-border markets (crops and livestock). Generally located along the border with Nigeria (Tahoua region: Konni; Maradi region: Dan Issa and Madarounfa; Zinder region: Magaria, Matameye, and Benin; Dosso region: Gaya and Doutchi). Consumers, as well as local and foreign traders, frequent these markets.

In both food-surplus and food-deficit years, households increasingly depend on markets to meet their food requirements (World Bank, 2009). In April 2005, the typical household in Niger depended on market purchases for 90% its food (Beekhuis & Laouali, June 2007); the current level of market dependency is likely unchanged.

6.4.2. Crop Markets

Crop markets are characterized by the presence of several different types of market actors:

Commodities assemblers: Located in the villages, commodities assemblers are often producers or small traders who collect commodities from various suppliers (farmers, dealers, etc.) in rural areas. Commodities assemblers usually work for wholesalers. Even though they are well-organized compared to farmers, sometimes competition exists among them because they work for different wholesalers.

Wholesalers: Located in the large urban trading centers, wholesalers have—besides their own funds—mortgage guarantees and access to bank credit. They own many warehouses that can stock large quantities of commodities. Wholesalers stock commodities in their warehouses in order to transfer them within the country or export them to neighboring countries or via their ports (WFP/CILSS/FEWS NET/OCHA/SWAC/UNICEF/WAMIS-NET, July 2006). Larger wholesalers trust and supply many smaller wholesalers with commodities on credit. Payment is not received until the goods have been sold (CILSS & UNICEF, 2006).

Smaller wholesalers: Small wholesalers' main goal is to transfer cereals from surplus areas to deficit areas. Small wholesalers do not keep large stocks and generally trade in volumes that range between 5 MT to 30 MT per week by buying from production areas and selling in wholesale markets (CILSS & UNICEF, 2006). The *Comité Inter-Etate pour la Lutte contre la Sécheresse au Sahel* (CILSS)/UNICEF study also found that in addition to the credit they get from larger wholesalers, these small wholesalers sometimes engage in production in order to finance their businesses.

Retailers: Very often, retailers get their inventory from smaller wholesalers in large wholesale markets or from small rural collection markets. Retailers play a significant role in the consumption markets and also in cross-border trade.

Cereal banks (including the strategic grain reserve): Cereal banks play an important role in the Nigerien grain market. An overview of cereal banks at the national versus village levels are outlined below.

Cereal banks at the national level. Over the past decades, and as previously noted, the Sahel in general and Niger in particular have experienced successive "shocks" and/or food security crises. Community granaries (or *Rumbu Tsime* in Hausa) were a traditional way for local communities in Niger to store cereals in anticipation of its historically chronic food deficits.[73] France, as a dominant colonial power in West Africa, also created *les greniers de reserves* (granary reserves) to help combat food insecurity. Over the years these strategies became less

[73] Sangare, Fintrac/BEST consultant.

efficient as a result of the diverse consequences of the food crises.[74] The GoN therefore created the *Office des Produits Vivriers du Niger* (OPVN) in 1984 to ensure safe supply of cereals to the population.[75] The OPVN has evolved, with the advent of freer market forces in-country, to a point where the organization monitors national food security and controls Niger's strategic grain reserves. Its goal is to hold 100,000 MT of target stock in reserve; and to purchase 60% of this stock from local producers and 40% from imports.[76]

Cereal banks at the village level. At the village level, cereal banks are community-based small warehouses used to buy, store, and sell grains. The cereal banks store locally-grown or imported cereal in the warehouse until the lean season, when grains are exhausted, and new crops not yet harvested (June to October). During this period, cereal banks serve households short on food/cash resources. When prices increase during the lean season, banks sell these grains at prices lower than the actual market price (but sufficient to make a small profit).[77]

A management committee is typically formed to oversee the cereal bank. The committee usually consists of seven to nine members; committees that include women have generally been proven to be more successful than those run solely by men. In many cases, however, committee members are not literate or numerate, creating management challenges.[78]

According to the GoN Ministry of Agriculture and Livestock, 3,947 cereal banks were created in Niger between 1980 and 2006.[79] However, most of these banks have failed and no longer operate. There are many converging reasons for these failures, including the following:

- Mismanagement (due, at least in part, to lack of literacy and numeracy).
- Lack of a monitoring system by bank sponsors.
- Under the policies that regulate cereal supply, cereal banks can be forced to sell cereals at prices lower than the banks' original purchase price prices (e.g. due to local political interference); thus, the banks could lose much of their initial capital investment.
- External factors, such as:
    - Successive food crises.
    - The multiplicity of agencies (GoN, United Nations (UN), donors, local PVOs) with different approaches.

Based on these challenges, a growing number of development agencies are questioning the usefulness of cereal banks, given the challenges they have faced in Niger. A national strategy document on cereal banks (GoN, 2010) identifies the factors that adversely affect their management, and emphasizes the role that each partner (local authorities, local and international agencies, and cooperatives) should play in order to make cereal banks viable. The document details the process of implementing a cereal bank, implementing training programs for its staff, and establishing a monitoring system that must be followed by each partner. However, resolving these issues within Niger, and within the wider Sahel, requires not only more efficient partnerships, but also changes in the mindset of beneficiaries.[80]

[74] Sangare, Fintrac/BEST consultant.
[75] World Bank, 2009, p. 8.
[76] BEST field interview with Sedou/OPVN, July 14, 2011. While OPVN's stocks would naturally vary from year to year, OPVN reportedly purchased 33,000 MT of cereals from the bumper 2010 harvest, and reported having 43,000 MT of cereals on-hand at the time of the mid-July 2011 field visit.
[77] Noma, Fintrac BEST consultant.
[78] The BEST field team visited Sissia in the Zinder region, where only two of the nine committee members were literate.
[79] As a practical matter, no reliable current data exist concerning the number of cereal banks that continue to operate nation-wide. The most recent inventory, which was done in 2009 and included only three regions, found that the number of cereal banks had increased 45.55% in Zinder, 15%.18% in Maradi, and 19.81% in Tahoua.
[80] Noma, Fintrac BEST consultant

Going forward, it is presumed that organizations will continue to select cereal bank beneficiary villages based on need. However, keeping in mind the lessons learned, future development programs should consider the following points to increase cereal bank viability:[81]

- Better information and awareness-building in the villages regarding the establishment of a cereal bank.
- Strong community cohesion and motivation, with an underlying sound business approach.
- Literate committee members.
- Greater involvement of women, since available information indicates that cereal banks managed by women are more successful.
- The availability of a community building with sufficient storage capacity and quality standards.
- Strong communication and coordination among sponsors, in order to avoid discrimination among villagers or between villages. In some areas (not Multi-Year Assistance Program (MYAP) areas), it has been observed that the same village had two cereal banks sponsored by two different agencies.
- Adequate monitoring systems and training of management committees.

These elements should apply to the whole country. However, the success of cereal banks also depends on the department- and region-specific factors such as: 1) culture, religion, and education; and 2) support from PVOs, donors and the GoN to ensure adequate monitoring and training.

6.4.3. Livestock Markets

Livestock is critical to household food security in Niger; it accounts for nearly two-thirds of household agricultural income (World Bank, 2011). Livestock markets function in the same way as crop markets Small animals like goats are normally used for barter trade in the market. Traders include livestock owners, retailers, and wholesalers. While there are some relatively large livestock traders with some market power, most are small livestock traders/owners with no power to set prices.

Livestock sales peak during food crises, because vulnerable households sell more livestock and exchange them in local markets for cash needs (e.g., food and health care); for example, increased sales of female livestock could indicate increased food insecurity.

Generally, poor trades for livestock owners are more likely during the rainy season (which is also the lean season), when animals are in poor condition and sometimes enfeebled, yet food stocks are low or non-existent. Good trades for livestock are likely to occur before the Tabaski[82] holiday, because community members and herders have been fattening them—but this depends on when Tabaski falls during the year.

Cereal-Livestock Terms of Trade (TOT). The graph below shows terms of trade data (kilograms of millet per goat) between 2005 and early 2011 in Maradi and Konni, two representative towns about 200 kilometers apart, and both near the Nigerian border.

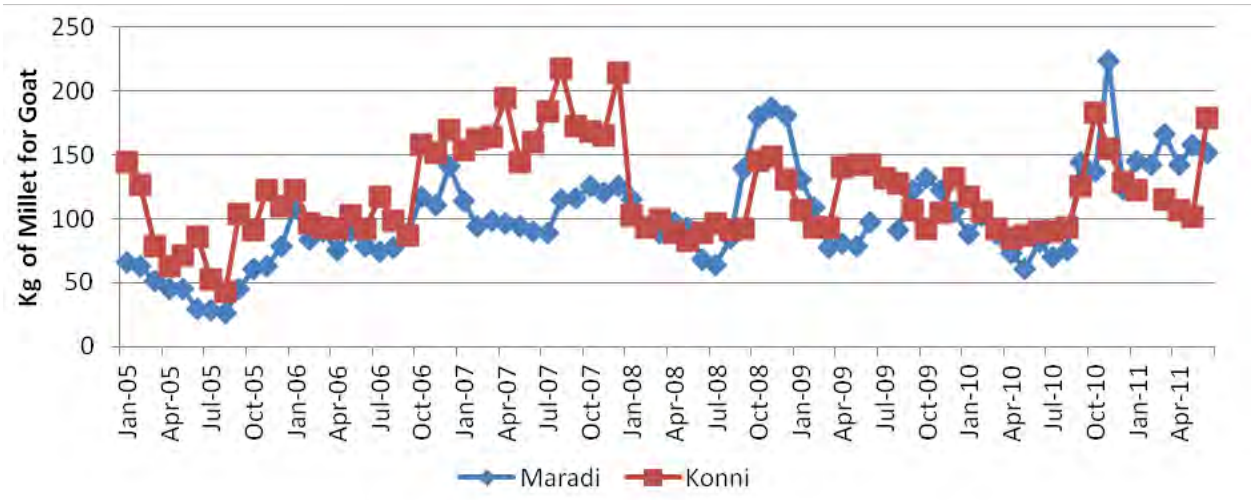
In 2005, the TOT were poor (low) for Maradi and Konni, mostly because Niger experienced cereal and animal food deficits compared with the other years. The 2005 livestock deficit was worse for Maradi than for Konni. In 2007, in contrast to 2005 and most other years, TOT

[81] Noma, Fintrac/BEST consultant.

[82] Tabaski (Eid el Adha) typically occurs 70 days after the end of Ramadan, and again this would be most noteworthy when this holiday occurs during the lean months between June-September.

between millet and goat peaked for Konni because livestock owners had a good production year. Also of note for that year is that TOT for Konni's livestock owners was significantly better than that for Maradi livestock owners, indicating a less-than-expected level of market integration between the two towns. Overall, TOT has been better in Konni than Maradi for livestock owners, except for brief spikes in late 2008 and late 2010.

Figure 22. Terms of Trade in Maradi and Konni, Kgs of Millet per Goat, 2005–2011



Source: FEWS NET.

6.4.4. Market Conduct

Markets can contribute to improved food security if there is adequate competition among buyers and sellers, which requires relatively free flow of information and low barriers to business entry (including access to credit). Where there are market failures, such as asymmetric information or large barriers to entry, market prices will not necessarily reflect supply and demand conditions.

Although Niger's regional food markets are fairly free of monopolistic and monopsonistic tendencies overall, opportunities to gain excess profits (either through collusion or ―hoarding") nevertheless may exist because of large differences in access to capital, influence, and information. While anecdotal stories of ―hoarding" by large market traders proliferate during supply shocks in Niger, some research suggests that Nigerien cereal markets are relatively competitive, even during shock years (Aker, Cereal Market Performance During Food Crises: The Case of Niger in 2005, 2007).

That said, commodity assemblers often have the ability to determine prices by buying commodities at low prices from rural farmers who are desperate for cash, and then selling them at high prices to retailers, who in turn sell them to consumers at even higher prices. As mentioned previously, it is very common for traders to stock large quantities of commodities in their warehouses until the lean season in order to make more money.[83] While the existence of market intermediaries who are willing to engage in temporal arbitrage (buy low now to sell high later) or spatial arbitrage (buying in surplus areas to sell in deficit areas) is a critical ingredient to any well-functioning market, it is possible for such traders to gain excess profits when there are market failures, such as exist in Niger.

[83] Noma, Fintrac/BEST consultant.

In collaboration with EU, the GoN has created many modern livestock markets. These markets are separate from crop markets, and aim to support effective market competition through the provision of accessible, quality facilities for livestock sales.

6.5. Market Performance

As stated previously, Niger relies on neighboring countries for much formal and informal trade. Theoretically, export taxes no longer apply among member countries of ECOWAS or UEMOA; however, custom duties do exist and can impact ease and volumes of trade. Neighboring countries' trade policies can impact prices in Niger. For example, in 2005 the Nigerian and Burkina Faso governments implemented protectionist measures that reduced the flow of cereals into Niger, leading to increased prices in Niger's local markets.

The exchange rate also impacts local prices; for details, see Section 2.3. For instance, during the 2005 food crisis, the Naira rose 5% against the FCFA and at the same time, Niger experienced a 5% price increase in local markets. These combined factors led to an overall price increase of about 10% in Niger's markets (Terpend, 2006).

Other factors which can impact local prices include (but are not limited to) road conditions, security, and inflation.

Livestock prices are influenced by the some of the same factors as crop prices. However, as previously mentioned, livestock prices are also specifically dependent on the time of the year, the locality, and the condition of the livestock. For example:

- Livestock prices are usually low during the rainy season.
- As a result of transportation costs, livestock prices in the southern part of the country are often higher.
- Terms of trade are generally beneficial to livestock owners in good years when livestock feed is sufficient; however, livestock prices typically decline whenever there is a feed deficit.

In general, local prices of all crops and livestock depend heavily on production levels; and, furthermore, local prices of cereals (millet, sorghum, maize, rice), reflect cereal production levels in neighboring countries and the ability and willingness of local Nigerien traders to import cereals.

Although Niger's private markets face many challenges, they do generally have the capacity to meet market demand, even in bad years. The larger challenge for food security is the issue of access; poor households have constricted access to food in the markets due to low purchasing power and high market prices.

6.6. Market Integration

Market analysis is important to food security assessments for three complementary reasons (Beekhuis & Laouali, June 2007): 1) to understand the impact of responses to crises; 2) to provide a form of food security monitoring; and 3) to inform whether cash transfers are preferable to food aid (Shin, 2010). Market integration, in particular, is an important part of market analysis that should be considered when estimating the impact of distributed food, cash, or vouchers. For more information, see "A geospatial analysis of market integration: the case of the 2004/5 food crisis in Niger," 2010.

Markets are integrated—that is, price transmission occurs among markets—when the price in one market affects prices in others through trade flow adjustments. A simple (albeit imperfect)

method for measuring market integration is based on the Pearson correlation coefficient estimate between prices. A positive and statistically significant correlation coefficient suggests that two markets are integrated through trade. Absence of price correlation suggests that markets are not linked through trade, and prices are determined independently from one market to another.

Factors such as road/transport infrastructure, phone/internet accessibility, market structure, and cultural barriers can all impact the degree to which markets are integrated. Furthermore, market integration may be more or less stable during certain years, or certain times of the year. When addressing food security, it is important to note how a program may impact both the market of the target area and the markets which are integrated with the target area.

As noted elsewhere in this report, Niger's trade with neighboring countries impacts Nigerien markets. In particular, market conditions in Nigeria, a country which produces significantly larger amounts of millet, sorghum, and maize than Niger, influence the prices and supply of food crops in Niger. Nigeria accounts for a large amount of Niger's millet, maize, and sorghum supply. According to the World Bank, as of 2009, Niger only produced approximately 30% of total millet produced by the two countries, and produced only 9% of total sorghum. Almost all of the maize consumed in Niger is cultivated in Nigeria.[84]

Within Niger, millet and sorghum represent 90% of overall cereal consumption. Using monthly nominal retail prices reported by SIMA for the period June 2009 to June 2011 for each of these commodities, correlation coefficients were estimated for all price pairs among six major Nigerien markets: Agadez, Dosso, Niamey, Maradi, Tillaberi, and Zinder. These marketplaces were primarily selected on the basis of data availability; nonetheless, these markets play an important role in the trade networks of these commodities.

A detailed analysis was conducted on market integration for millet, maize, sorghum, and imported rice, and results presented in Annex IV. The analysis reveals that all the commodities analyzed show significant market correlation.

The most important implication for food aid programming is that donors and implementing partners should expect that food aid which might substitute for both imported goods (imported rice) and locally produced goods, will have a relatively low impact on local markets. The reason food aid (which substitutes for commodities) will have little impact on prices is because these changes in price are dampened as they are transmitted across space. For example, because millet prices in Dosso are highly integrated with those of Niamey, the relationship between the two markets will help "smooth" the impact of food aid (more specifically, food aid that may substitute for millet) on Dosso's local markets. For the locally produced commodities outlined here, any impact on production incentives and/or trade for market actors outside of the immediate local market setting is very likely.

The more integrated markets become, the less of an impact any change in local food supply will have on a single target market. If the market is well-integrated with others, price changes will be transmitted across geographic space, and thus dilute the impact on the target market. This appears to be the case for most staple foods in Niger. Therefore, donors and implementing partners should incorporate market monitoring outside of their immediate local market catchment area to appropriately measure the impact of their program.

[84] Because this report focuses specifically on Niger, and available data on Nigerian markets are sparse, this report does not fully analyze how Nigeria's markets impact Niger's markets and economy. For those interested, sources of market data include FEWS NET (including data for markets in northern Nigeria).

6.7. Key Considerations for Distributed Food Aid

This section covers key considerations for all interventions that involve distributed food aid in Niger, including geographic targeting, seasonal targeting, household targeting, evidence of leakage in local markets, activity type, and commodity selection. The section concludes with a brief section on other considerations for distributed food aid within Niger.

6.7.1. Geographic Targeting

As of August 2011, USAID/FFP anticipates funding upcoming Title II interventions as a first priority in the central regions of Maradi and Zinder; and as a second priority in the regions of Tillaberi, Dosso,Tahoua, Agadez, and Diffa. Based on available proxy indicators of district-level food deficits and production, any of these above areas covering the breadth of the country would not be expected to pose any immediate Bellmon concerns.

The prioritization of regions is based on: 1) stunting, wasting, and underweight statistics; 2) the past history of shocks in-country; and 3) poverty levels (FANTA, 2011). The BEST field team does not believe that initial geographic targeting at the department level within the above-specified targeted regions would create Bellmon concerns.

However, as noted earlier in this chapter, markets are mostly integrated along an east-west axis within southern Niger; also, some markets in northern Nigeria correspond with neighboring Nigerien markets across the border (e.g., Konni in Niger and Illela in northern Nigeria).

Potential market impacts would need to be analyzed more fully within Niger as well as with regional neighboring countries, particularly Burkina Faso, Benin, and Chad. It is imperative that potential Awardees undertake careful needs assessments and analyze local and regional market conditions (including cross-border markets where applicable) to further refine appropriate geographic targeting at a more localized level.

6.7.2. Seasonal Targeting

The timing of ration delivery is very important. Food distributed during the lean season (*soudure*), typically June through September/October (FEWSNET, 2011), 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. As previously noted, the variability of staple prices and livestock prices between seasons affects household income and consumption, especially between years of good rains and poor rains.

The lean season in Niger generally falls during the same time for areas near the western border with Burkina Faso to areas near the eastern border with Chad. Departments within the northern parts of Tahoua, Agadez, Zinder, and Diffa regions are all significantly drier than zones in southern Niger.

In addition, rainfall can be highly variable, which would also significantly impact overall food security levels. Potential Awardees must determine any variations of the lean season for various populations and crops, specific to the geographic areas in which they plan to work. (Please see Chapter 2 and Chapter 6 for more details on Niger's seasonality.)

6.7.3. Household/Individual Targeting

In most sub-Saharan African countries, women play a major role in household nutrition. They are the primary caregivers and contribute to acquiring or producing food for the household. Though gender relations are outside of this report's scope, gender equity issues certainly affect

these caregivers' abilities to provide food for their households. (For further information on gender, and integration of this cross-cutting issue, see FFP RFA guidance).

The food security pillars of availability, access, and utilization are all important and relevant in years of poor rainfall throughout the various regions of Niger. However, access and utilization are notable key issues in years with shocks along the southern Nigerien border with Nigeria (World Bank, 2009). During these shocks, availability can be a factor in pockets of low agricultural production, but typically can be mitigated through trade in northern Nigeria, and with other regional neighbors.

Interviewees during the BEST team's field visit to Niger indicated that food aid is likely appropriate for areas currently targeted by the Awardees. However, targeting can always be improved, particularly for areas served by both donors and the GoN (WB/IFPRI, 2011). Physical security issues should be taken into account, especially for the Tillaberi, Tahoua, and Agadez regions.

Donor and NGO interviewees noted beneficiaries' possible dependency on food aid. Potential Title II development programming should take these and other factors into account when designing appropriate food security programs for the targeted regions within Niger for the next Title II cycle.

6.7.4. 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 that 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 Niger in July 2011. USAID and WFP food aid are targeted over vast areas of the country. The team therefore visited local markets and interviewed informants to determine whether food aid was appearing in the markets in Tillaberi, Dosso, Tahoua, Maradi, and Zinder regions. Physical security concerns prevented the team from visiting northern Tahoua and Agadez regions.

The three current MYAP partners (Africare, Catholic Relief Services (CRS), and Counterpart International (CPI)) are distributing minimal quantities of direct distribution commodities over a wide area (all MYAP partners distributed less than 1,000 MT of food aid each in their respective target areas in Fiscal Year (FY)10). Additionally, both CRS and CPI implemented emergency SYAPs in 2010 in response to the food insecurity from the previous 2009 harvest, and these two programs totaled 9,000 MT of additional food aid. In comparison, WFP/Niger averages over 60,000 MT per year of food aid distributed directly since 2006.

The World Food Program (WFP) and the MYAP partners all reported that market leakage occurs rarely, although Supplemental Plumpy Nut sachets were seen for sale (FCFA 200 each) by informal vendors in Tessaoua during the field visit in July 2011. No food aid was seen in markets that were visited in Filingue, Doutchi, Konni, Maradi, Zinder, and Goure. The current MYAP Awardees report that Title II food assistance was not appearing on local markets in their target areas, and that the primary cereal used for direct distribution, soy-fortified bulgur, is the least-preferred cereal for Nigeriens, after millet, sorghum, rice, and maize. BEST field interviews also supported this point.

6.7.5. 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 (Africare, CRS, and CPI), and other important actors in food security in Niger (including the GoN, WFP, Food and Agriculture Organization (FAO), European Union (EU), CARE, Helen Keller International, Mercy Corps, Save the Children, Oxfam, World Vision, and Afrique Verte). These scenarios are meant to serve as illustrative guidance rather than as a prescription, given that the potential Awardees' Title II development program proposals have yet to be finalized and are thus unavailable to inform the present report.

Food for Work (FFW)/Food for Assets (FFA).[85] The intent of FFW is to create food-wage employment during periods when food reserves are low and little employment opportunity for cash wages presents itself. The lower rural incomes occur at precisely the time of year when staple prices tend to spike because of food shortages in local markets. Key interviews with GoN and donor stakeholders in July 2011 indicate that the new Nigerien government is supportive of general FFW projects.[86]

Wage payments in FFW programs are generally made in-kind versus 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.

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 may be made in-kind, in cash, or a combination of both. 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 in place useful assets for the entire community—thus, this approach is potentially more long-term than FFW.

However, in practice, many activities in Niger and other countries could be classified under both FFW and FFA because the end results are the same. Activities that fall under either of these classifications could include building/rehabilitating roads, reducing soil erosion, promoting better natural resource management (NRM) activities, and establishing water points and/or other structures.

6.7.6. General Considerations to Ensure Bellmon Compliance

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.

[85] 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

[86] Both the Office of the Prime Minister/La Primature and Systeme d'Alerte Precoce stated that food for work would be supported by the new Issoufou government (September 2011).

Timing of food distribution is critical. FFW/FFA commodity distribution will be less disruptive if done during the lean season rather than during the harvest season, and specific conditions should be taken into account for pastoralist, agro-pastoralist, and agriculturalist 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, the lean season in Niger typically extends from June to September/October. Lean seasons generally tend to be longer the farther north one goes in Niger. Potential Awardees must determine the particularities of the lean season for various populations and the seasonality of crops according to specific geographic regions/departments. The seasonal agricultural graphs and calendars for Niger provide details about seasonal variations across regions and commodities.

Another approach would be to conduct FFA/FFW activities even earlier than the lean season, but after the October/November harvest. Payment could be split; e.g., half payment made at the time of the work being done, and the balance payment made during the lean season. This would in effect be putting food into the bank to save until needed.

Also noted above, there must be sufficient monitoring and oversight 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 can participate effectively in such gender-targeted FFW/FFA activities. Including a food used commonly in child feeding may also help to self-target to women, if the program intends to attract female beneficiaries in particular. Another possibility is to design activities that can be carried out by women, leaving men to continue to work their fields or in other cash wage activity.

Commodity selection. Local diet should be considered in selecting appropriate commodities for distribution. Beneficiaries are more likely to optimize food aid if the commodity is culturally acceptable and/or the distribution is accompanied by nutrition education and awareness. The Nigerien diet consists of either millet or sorghum for about 90% of national cereal consumption. Other foodstuffs consumed in significant quantities include rice, maize, cowpeas, and cassava.

Peanut oil is the most commonly consumed edible oil that is domestically produced, at roughly 50,000 MT/year nationally (Olga, 2011). However, significant quantities of palm/vegetable oil are also imported for consumption. Nonetheless, Nigeriens' consumption of vegetable oil on a per capita basis is significantly less than that recommended for a proper, balanced diet (2008 Bellmon). According to interviews conducted during the BEST team's field visit, price is the most important factor in determining what type of oil is purchased and consumed.

The current MYAP partners are located along the east-west axis in Niger, and distribute soy-fortified bulgur (SFB), corn-soy blend (CSB), kidney beans, rice, sorghum, and vegetable oil. All of these foodstuffs are reported to have been readily accepted by beneficiary populations throughout Niger.

Although generalizations about food preferences for all of Niger are difficult, it is nevertheless likely that the above foodstuffs would be readily accepted by both agriculturalists and pastoralists throughout the country.

6.7.7. Other Considerations

There is a long history of food aid in Niger. Therefore, it is imperative for future Title II development programming to be well-targeted within the country, and to be coordinated with other development initiatives that target agricultural production and general food security activities. To avoid creating disincentives to production and marketing within the various regions of Niger, as well as ensure that development programming within the area is harmonized among actors, coordination and well-designed targeting is absolutely essential.

Physical security. Over the past couple of years, Niger has had security incidents that involved kidnapping expatriates and various Islamist groups, notably Al Qaeda in the Islamic Mahgreb (AQIM) (Interview with French citizen, July 2011). For example, two French citizens were kidnapped from Niamey and killed in January 2011, with AQIM claiming responsibility. This led to the suspension of the US Peace Corps/Niger program and other international PVOs reducing or suspending their own development activities. Security remains a concern, especially in the Tillaberi, Tahoua, and Agadez regions, and in north-eastern Nigeria from conflict associated with supporters of ~~"B~~oko Haram."

Corruption. To minimize corruption, effective staffing and oversight of program implementers and beneficiaries should be a key component of every food aid program. Additionally, anecdotal stories have been circulated about how various traders/businessman engage in ~~"h~~oarding" of commodities to maximize profits, especially during periods of food insecurity and shocks (such as in 2005 and 2009), and on both sides of the Niger/Nigeria border. Partners also noted the importance of raising community awareness about each program's targeting criteria, rationale, and other characteristics, in order to avoid corruption, theft, and/or conflict 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 Niger and neighboring countries. WFP and the current MYAP partners all have a considerable amount of experience in Niger, and interviewees noted many program improvements which resulted from lessons learned over time.

Collaboration. Potential Awardees should also 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 (MYAPs and SYAPs) and beneficiary coverage (who target beneficiaries are, how target beneficiaries 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, minimize disruption of markets and production incentives.

Chapter 7. Local and Regional Procurement (LRP)

Local and Regional Procurement (LRP)[87] 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 that 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.[88] 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 related 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 because of supply shortages caused by diverting 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 that locally procured foodstuffs consistently meet food safety standards.
- Non-delivery or delayed delivery of locally procured foodstuffs for distribution because donors/implementing partners are unable 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. On the other hand, if the value exceeds the local wage, local labor could be impacted.

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

- Because they augment the purchasing power of beneficiaries—and therefore may increase consumption/demand—inflationary pressure may result on the prices of foodstuffs purchased by poor consumers who are *not* beneficiaries of the cash transfer

[87] LRP can stand for "Local and Regional Procurement," or "Local and Regional Purchase"; for this report the term is used interchangeably.
[88] See, for example, Tschirley and del Castillo (2007), GAO (2009), USDA-FAS (2009).

or voucher program. 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.
- Opportunities for corruption can exist if the implementing organizations do not closely monitor all steps of procurement and implementation.
- Social risk. Vouchers are not distributed to everyone in a given community, or even everyone in a given family; beneficiaries are chosen based on specific criteria. Tension or jealousy can result from those who do not qualify.

Protectionism. In 2010, regional protectionism affected exports to Niger. For example, Burkina Faso blocked maize exports and Benin blocked vegetable oil exports. These neighboring governmental actions were overcome while in place, and eventually the ban was lifted; however, if a similar scenario could be a potential impediment for future LRP programs.

7.1. Current Initiatives

In 2010, 7.8 million people in Niger were judged by FEWS NET to be at risk of food insecurity, mostly because of various shocks that occurred in various regions of Niger in 2009. Cash/voucher programming was used in 2010 to respond to those shocks.

The total number of families receiving cash or vouchers in 2010 reached 165,000 individuals, or roughly 1,000,000 beneficiaries, including family members (Learning). Approximately 15 different agencies used cash and/or vouchers in response to the 2009 shock (Please see Annex III/Household Consumption and Expenditures for further details on cash and voucher-based programming in Niger by Oxfam, Save the Children, *Action Contre Le Faim*, and other PVOs).

The following summaries highlight cash/voucher programs funded by USAID and US Department of Agriculture (USDA).

7.1.1. USAID/FFP/EFSP

Local and Regional Procurement within Niger was supported significantly in 2010 by USAID/FFP's Emergency Food Security Program (EFSP), in response to the below-average 2009 harvest and resulting food insecurity from the season. The EFSP program disbursed US$26.6 million in total for LRP grants to the World Food Program (WFP) (US$17.6 million), Mercy Corps (US$4.6 million), and Catholic Relief Services (CRS) (US$4.4 million).[89]

WFP/Niger (USAID/FFP/EFSP). Historically, WFP/Niger has purchased food commodities locally and regionally (triangular purchases) to meet in-country food assistance needs. In 2010, WFP/Niger was awarded a US$17.6 million grant for May–December 2010. The program targeted 1.19 million beneficiaries in the regions of Tillaberi, Tahoua, Maradi, and Zinder. Distributions were partially completed in the months of May (meeting 29% of targeted monthly beneficiaries) and July (meeting 90% of targeted monthly beneficiaries).

The GoN complemented WFP's initial response with another grant to WFP through the *Dispositif National pour la Prevention et la Gestion des Crises Alimentaires*) (DNPGCA). Under this grant, WFP purchased 631 MT of cereals locally. The program also procured 15,715 MT of cereals regionally, from Nigeria, Ghana, Mali, and Ivory Coast; the largest purchase was sorghum from Nigeria.

[89] Anecdotally from the July 2011 field work, the quality and weight of bagged, locally and regionally-purchased commodities should be thoroughly checked to ensure compliance.

Mercy Corps/Niger (USAID/FFP/EFSP). Mercy Corps' LRP grant was the first LRP grant awarded by USAID/FFP/EFSP. The program targeted parts of Filingue department, in the western Tillaberi region, and was implemented in July–September 2010. An estimated 65,000 beneficiaries were reached with locally and regionally purchased maize, cowpeas, millet, oil, and salt. Benin and Burkina Faso were the main suppliers for maize and cow peas. The monthly ration per household was 100kg of maize, 10kg of cow peas, 3.4 liters of oil, and 210g of salt.

CRS/Niger (USAID/FFP/EFSP). CRS' LRP grant targeted the Ouallam and the Tillaberi departments within western Tillaberi region. The program was designed to reach 140,756 total beneficiaries through vouchers used to purchase foodstuffs available in local markets. Heads of household (20,108 people) received *Franc Communaute Financiere Africaine* (FCFA) 25,000 (~US$55) in vouchers per month for three consecutive months, from August–October 2010. Foods typically purchased in local markets under this program included millet, sorghum, cowpeas, vegetable oil, rice, and maize; furthermore, approximately 5,065 MT of food commodities were purchased with vouchers under this program.

7.1.2. Other Actors

USDA: CRS/Niger VOICE (Vouchers Offering Incentives for Communities During Emergency) project. USDA also supports LRP in Niger. In 2010, USDA awarded CRS with US$1.9 million for LRP programming under the VOICE project. The project targeted 21,000 families in the departments of Ouallam in the western Tillaberi region, and in the departments of Mirriah and Goure in the central Zinder region. Vouchers worth FCFA16,000 per beneficiary (~US$34) were distributed to heads of household in both May and June of 2011. Vouchers were used to purchase the following commodities from local vendors: millet, sorghum, cowpeas, vegetable oil, maize, and gari (cassava). CRS worked through a local partner. In addition, 3,986 hectares of land were agriculturally rehabilitated to complement CRS' LRP activities.

WFP/Niger. In addition to their USAID-funded LRP programming, WFP also implements cash interventions in Niger. Currently, WFP plans to disburse US$18 million from July 2011–December 2012, representing the organization's third-largest grant (in cash terms) for an in-country program (after Haiti and Pakistan). Parts of Maradi, Tahoua, and Zinder regions will be targeted in 2011 for this program.

Typically, cash distributions are timed as follows:

- Cash for Work activities occur between April and June, to coincide with the beginning of the harvest season.
- Unconditional cash transfers are made between July and September, when the lean season is felt more acutely by food insecure families.
- Cash for Work activities are also programmed for November–December, after harvests are completed.

Cash for Work wages are roughly US$2/day, for up to 25 working days per month. Criteria for beneficiary families are coordinated with the GoN *Cellule Crise Alimentaire* (CCA).

As mentioned earlier, many other cash and voucher programs operate within Niger, including several by PVOs. Please see Annex III/Household Consumption and Expenditure for further details.

7.2. Potential for Expansion

The 2008 paper by Dr. Jenny Aker, "Rainfall Shocks, Markets and Food Crises: Evidence from the Sahel" (Aker, 2008), analyzes the 2004–2005 crisis in Niger and provides valuable

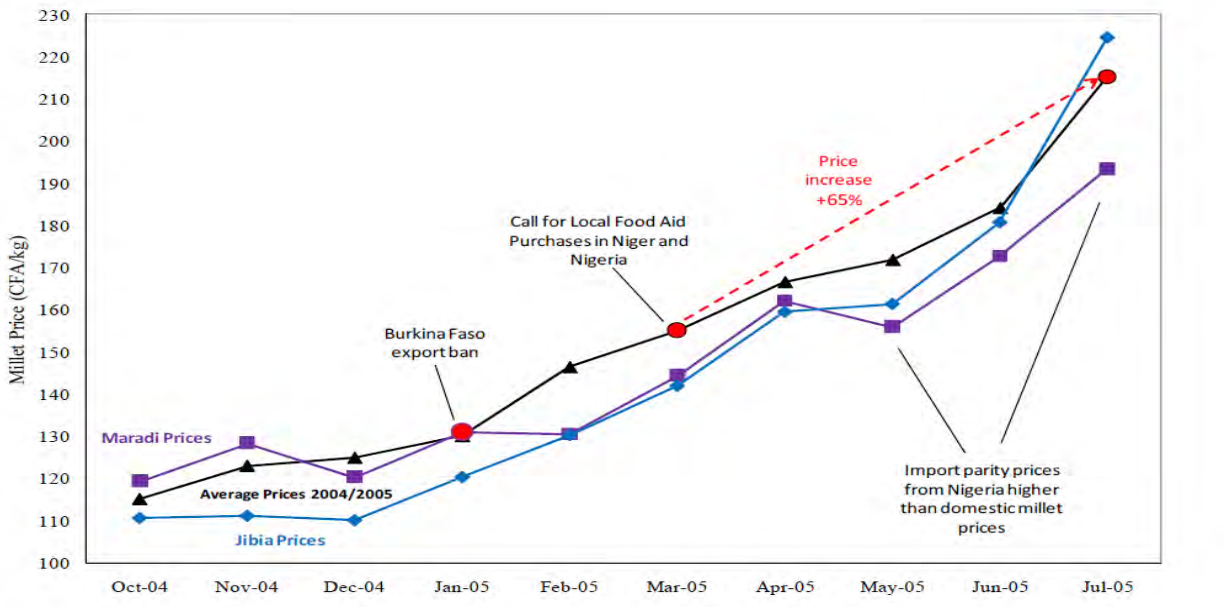
lessons—and a cautionary tale—for PVOs undertaking LRP interventions to address future shocks.

As noted earlier, below-average rainfall occurred in 2004, and cereal prices in 2005 were on average 25% higher than the 10-year average. Aker attributes this price rise to three main factors (all reflected in the graph below):

1. A regional ban by Burkina Faso and others on cereal exports in January 2005.
2. The call by the GoN and PVOs for LRP to increase cereal supplies in March 2005.
3. High import parity prices for millet from Nigeria led to decreased millet imports to Niger between May–July 2005.

These and other factors contributed to dramatic price rises for millet in 2005, and higher than normal differences between lean and harvest seasons in Niger. LRP appears to have actually *contributed* to these significant price rises.

Figure 23. Millet Prices (CFA/kg) in Key Granger-Causing Markets, 2004–2005



Notes: Prices are the millet price (CFA/kg) during the 2004/2005 marketing season, deflated by the consumer price index. Prices are provided by the Agricultural Market Information System.

Source: Aker, Jenny (2008). Rainfall Shocks, Markets, and Food Crises: Evidence from the Sahel.

The above graph also shows that the GoN and international PVOs could exacerbate these kinds of shocks through LRP programs if programs are not properly managed and implemented. Aker also discusses many other factors, but for LRP, she offers the following recommendations/considerations:

- Study and apply best practices/lessons learned.
- Create specific criteria and/or conditions to assist international agencies, donors, and host country governments in determining whether local purchases are appropriate during a particular year.

- If local purchases are deemed appropriate, create criteria for determining the quantity, geographic location, and purchase prices.[90]

Overall, the LRP and voucher programming described in this chapter (supported by USAID and other donors) helped Nigeriens improve their food security levels. Further study should be undertaken to measure how the 2009 shock impacted FY10, as well as FY11 programming—especially in light of the record 2010 Niger cereal harvest of 5,154 million MT.[91]

The BEST team recommends the following, based on field interviews and anecdotal information:

- The impact of LRP on large and small traders needs to be monitored.
- The question of whether cash or food aid is best for targeted families should be analyzed for particular areas and particular annual conditions.
- Vendors could change their behavior if sizable CFW activities are initiated in areas where those vendors operate.
- USAID should further evaluate, with its partners, the impact of LRP activities under the EFSP.

The collective impact of LRP and cash/voucher programming may positively impact food security in the short-term. However, this strategy will be dwarfed by the significant larger need to combat Niger's long-term poverty and food security challenges. Building up and improving market systems and market functions will help Niger economically, but much larger issues remain. These include:

- A 3.5% birth rate—which exceeds the typical annual growth rate for agricultural production.
- Continued environmental degradation linked to population growth and climate change.
- Continued vulnerability, due to Niger's landlocked status, to larger neighbors' currency fluctuations (e.g., the Nigerian naira) and trade bans that can restrict Niger's imports/exports to and from an ocean port.
- Poor governance.
- Inconsistent or short-sighted behavior from donors. For example:
    - MCC's decision to suspend its Niger program after the February 2010 coup.
    - Japan's cancelation of its yearly rice allocation for 2010, also due to the coup.
    - International donors who are more responsive to Niger's short-term needs in times of crisis, rather than longer-term developmental needs.
- The need to improve education, literacy and numeracy for villagers, especially those managing cereal banks and other food security programs.
- The need for improved health care and nutrition to especially target global acute malnutrition, wasting, and stunting.

The GoN and the international community can be expected to effectively monitor food security conditions in-country, to hopefully mitigate the next famine, or near-famine. However, further resources are desperately needed if Niger is to move beyond its vulnerable position, and become capable of increasing the overall food security of its people.

[90] Aker, 2008, p. 24.
[91] WFP/Niger email correspondence, August 2011.

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NIGER
BELLMON ESTIMATION

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Annex I. Economic Overview

Niger is a vast landlocked country (490,000 square miles, about three times the size of California and twice the size of France) (US Department of State, 2011), with a current estimated population of 15,730,754 (*Institut National de la Statistique* - Niger, 2011). The majority of Nigeriens live along a narrow band of arable land (which comprises 15% of all Niger land) in the south of the country. The primary industrial sector in Niger is agriculture, livestock, fisheries, and forestry, with agriculture alone representing approximately 40% of Niger's annual Gross Domestic Product (GDP). Mining, industry, and construction, Niger's secondary industrial sector, accounts for approximately 15% of GDP *(Institut National de la Statistique* - Niger, 2011)

I.i. Economic Growth

During the last five years, Niger has experienced relatively high GDP growth rates, averaging 5% per year (Table 1). Notably, 2008 was an exceptional year for Niger's economy, partially driven by a cereal record harvest that year (IMF, 2011). After negative growth was registered in 2009, Niger's GDP in 2010 was estimated at *Franc Communaute Financiere Africaine* (FCFA) 2,714 billion, nearly US$5.5 billion. This period of strong growth (except for 2009) has been due in part to an expansion of the mining sector—notably uranium exports—and generally low inflation rates, which have remained in the single digits (Table 1). The International Monetary Fund (IMF) projects that from 2011 to 2016, Niger will continue with exceptionally high real GDP growth (IMF, 2011)

Table 1. Niger: Economic Indicators

	2006	2007	2008	2009	2010
(1) GDP (current, billion FCFA)	1,906	2,035	2,399	2,542	2,714
(2) GDP (current, billion US$)	3.6	4.3	5.4	5.3	5.5
(3) GDP growth (annual %)	6	3	10	-1	8
(4) GDP growth, real (annual %)[1]	5.8	3.3	9.3	-0.9	7.5
(5) GNI per capita, PPP (current international $)	620	630	680	..	..
(5) Inflation, GDP deflator (annual %)	3	3	8	5	2
(6) Exchange rate (CFA francs per US$1)	523	479	449	471	495

Sources: Table compiled by Fintrac/BEST, based on the following data: Row 1: IMF (2009), Niger: Selected Issues and Statistical Appendix; 2006-2009 is from IMF (2010), Niger: Third Review Under the Three-Year Arrangement Under the Extended Credit Facility; 2010 is from IMF (2011), Niger – Assessment Letter for the World Bank and the European Union; Row 2: The World Bank, WDI database; 2009, is from African Economic Outlook; 2010 is from IMF (2011), Niger – Assessment Letter for the World Bank and the European Union; Row 3: The World Bank, WDI database; Row 4: The World Bank, WDI database; 2009 is from IMF (2010), Niger: Third Review Under the Three-Year Arrangement Under the Extended Credit Facility; 2010 is from IMF (2011), Niger – Assessment Letter for the World Bank and the European Union; Row 5: African Economic Outlook.

I.ii. Analysis of Economic Growth

A more detailed analysis of Niger's economic growth shows that agriculture employs more than 80% of the total population and accounts for roughly 40% of GDP. Livestock contributes approximately 12%. During the last five years, agricultural production has grown steadily (Table

2). A record harvest in 2008 and in the second half of 2010 prevented the country from suffering from the global food crisis in those years (IMF, 2011). The IMF has forecasted that 2011 would continue to show strong agricultural growth (IMF, 2011). However, rainfall in the 2011 rainy season has been irregular, and this will likely slow down agricultural output.

The mining component's contribution to Niger's economic growth more than doubled between 2003 and 2007, from 2% to 5% of GDP, likely due to increasing earnings from uranium exports. In 2010, mining contributed 7% to total GDP. Expansion of mining and oil outputs are projected to double from 2012 to 2016, which would likely increase total GPD by around 5% (IMF, 2011). Niger's economy also relies on other natural resource such as coal and gold.

Table 2. Niger: Major Products and Service Industries (Current Prices, in Billions of CFA Francs)

	2003	2004	2005	2006	2007	2008	2009	2010
GDP	1,534	1,530	1,777	1,906	2,035	2,399	2,542	2,714
Primary sector	676.8	615.9	754.3	817.2	829.9	1,045.4	999.4	1,136.5
Agriculture	382.3	324.4	444.1	497.9	490.9	666.4	582.6	707.8
Livestock	204.1	208.4	221.3	235.5	251.7	282.6	304.3	307.1
Forestry, fishing	90.3	83.1	88.9	83.9	87.3	96.4	112.5	121.6
Secondary sector	176.2	182.2	195.2	214.8	281.5	344.3	375.6	412.6
Mining	29.7	31.4	35.7	40.1	98.2	144.4	157.3	180.0
Industry, energy, manufacturing	109.9	112.1	117.9	127.2	132.6	141.8	154.5	164.9
Construction and public works	36.6	38.7	41.6	47.5	50.7	58.1	63.7	67.7
Tertiary sector	680.9	732	827.4	874.4	923.4	863.5	948.5	997.4
Commerce, transport, services	433.9	471	511.4	538.2	573.8	670.1	720.6	759.9
Government	149.3	145.2	181.5	198	204.9	193.4	227.8	237.6
Import taxes and duties	97.7	115.8	134.5	138.2	144.7	166.4	188.3	201.7

Source: IMF(2009), Niger: Selected Issues and Statistical Appendix Source from 2008 to 2010 (Institut National de la Statistique - Niger, 2011)

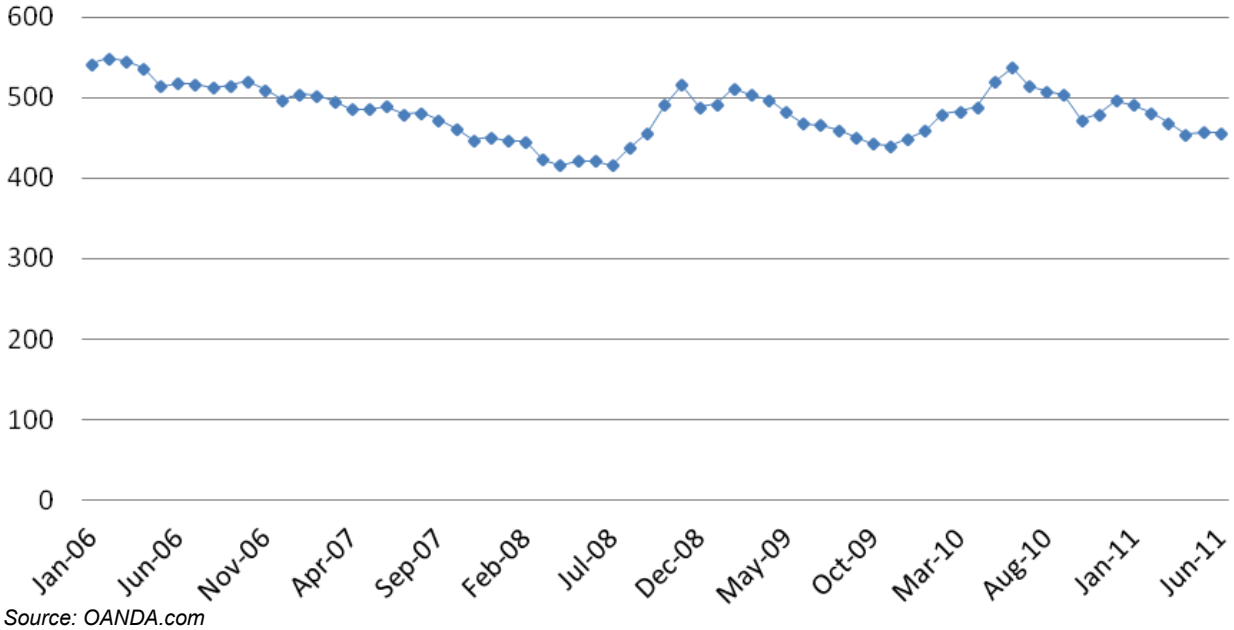
I.iii. Exchange Rate

Niger does not have a national currency. It uses the West African Franc, the FCFA.[1] According to the International Monetary Fund (IMF), the real exchange rate in Niger remains consistent and the appreciation observed reflects stable terms of trade and the relatively higher price of uranium, the country's main export product (IMF, 2010)

Since 2005, the FCFA (also known as the XOF) has appreciated against the US dollar (see the figure below).

[1] In December 26, 1945, France introduced the *des Colonies Françaises d'Afrique Franc* (CFA franc). During the period of de-colonization (1954–1962) the African francophone countries maintained monetary co-operation with France. In April 1959, the Ivory Coast, Benin, Burkina Faso, Mauritania, Niger, and Senegal created a common central bank, the *Banque Centrale des États de l'Afrique de l'Ouest* (BCEAO). The BCEAO was responsible for creating the West African CFA franc (Kaptouom, 2007).

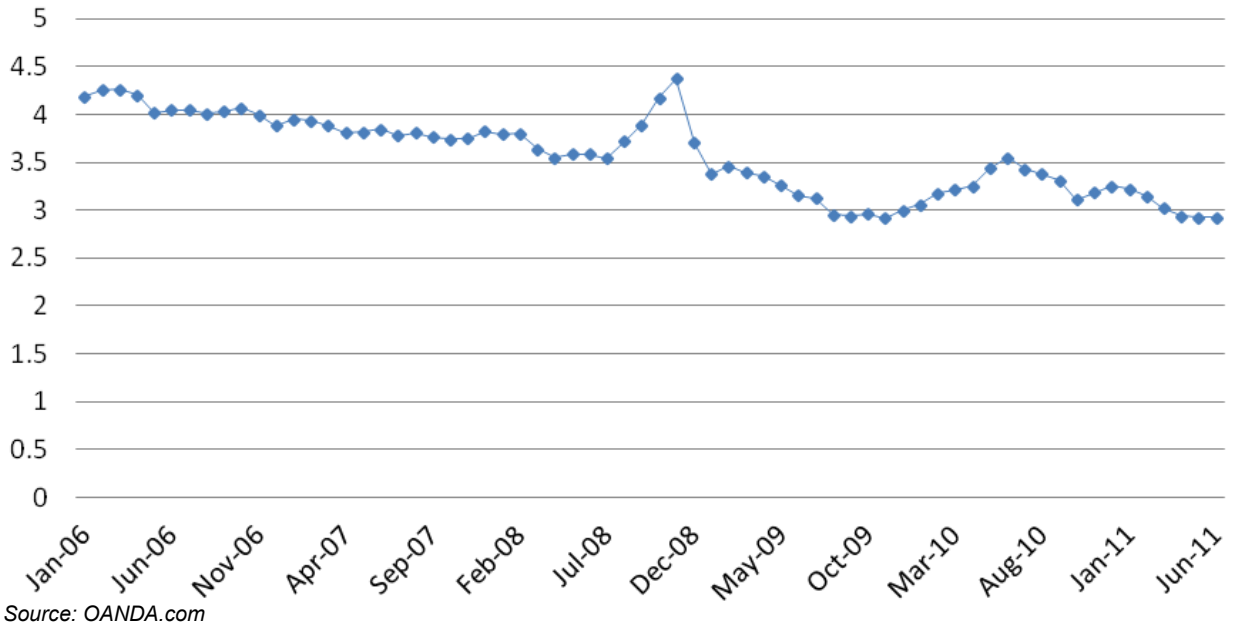
Figure 1. Average Monthly Exchange Rates, FCFA per US$1, January 2006–June 2011



Source: OANDA.com

Since 2005, and as reflected in the figure below, the XOF has also appreciated against the Nigerian Naira (NGN).

Figure 2. Average Monthly Exchange Rates, FCFA per NGN 1, January 2006–June 2011



Source: OANDA.com

I.iv. Trade Integration

Since its independence in 1960, Niger has participated in numerous regional and global agreements, which have increased its level of integration into global and regional trade. The formation of the West African Economic and Monetary Union (or UEMOA, its French acronym) in 1994 represented the culmination of a long integration process. The UEMOA established a customs and monetary union that shares a common currency (the FCFA) and a common external tariff. Since 1999, the FCFA has been pegged to the euro (*Banque Centrale des Etats de l'Afrique de l'Ouest*, 2011) (Kaptouom, 2007)

As member of UEMOA, Niger is also part of the Economic Community of West African States (ECOWAS), a trade union created in 1975. The stated objectives of ECOWAS are (Jenny C. Aker, 2010) (Kaptouom, 2007):

1. Liberalizing trade by eliminating (a) customs duties on imports and exports and (b) non-tariff barriers.
2. Adopting a common external tariff and a common trade system.
3. Free movement of persons, goods, services, and capital among member states.
4. Promoting rights of residence and establishment.

Since 1996, Niger has also been a member of the World Trade Organization (WTO). As member of the WTO, the country is an active member of following groups (World Trade Organization, 2011):

- African, Caribbean, and Pacific (ACP) countries with agricultural preferences in the EU.
- The African Group.
- The Least Developed Countries group.
- The G-90 group—a combination of the ACP, the African Group, and the Least Developed Countries group.

Unilaterally, Niger is well-integrated with markets in the sub-region, particularly with Nigeria, its main trading partner, but also with Benin, Burkina Faso, and Chad (Aker, 2007). In addition, in 2008, as a member of UEMOA, Niger participated in the third Trade and Investment Framework Agreement (TIFA) Council meeting with the United States (US). The objective of this council was to discuss cooperation in the WTO, regional integration, commercial issues, trade capacity building, and technical assistance (Office of the United States Trade Representative, 2011). In 2009, Niger alone totaled US$164 million in goods trade (imports and exports) with the US (Office of the United States Trade Representative, 2011).

In terms of intra-market trade, the level of Niger's trade integration is very high. Particularly for food and agricultural products, markets in Maradi, Zinder, Tessaoua, Guidan Roumdji (Maradi region), and Tounfafi in the Tahoua region are believed to influence 75% of all other market prices in the country. Niamey (the capital city) influences markets in the Tillaberi region (Aker, 2007).

I.v. Imports

In US dollar terms, food and fuel imports comprised 14% of total imports in 2010, which is nearly half their levels during 2006–2008, around the time of the global spikes in food and fuel prices (see the table below).

Table 3. Niger: Food and Fuel Imports (US$'000)

	2006	2007	2008	2009	2010
Total imports	860,213	955,681	1,247,490	1,266,886	997,462
Food (excludes live animals)	126,210	115,090	175,429	114,760	94,267
Food, as % of total imports	15%	12%	14%	9%	9%
Fuel	124,280	163,401	210,017	187,459	44,906
Fuel, as % of total imports	14%	17%	17%	15%	5%

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

Niger's largest category of food imports in 2010 was cereals, accounting for over half of total food imports (see the table below).

Table 4. Niger: Food Imports (US$'000)

	2010
Food Imports (excludes live animals)	55,022
Beverages	4,618
Cereals	32,453
Dairy	9,597
Fish	572
Fruit	467
Meat	1,495
Vegetables	5,820

Source: ITC.

The most recent available data on trade with other countries are from 2009. In 2009, 80% of Niger's cereal imports originated from Thailand and Pakistan. Rice is the only cereal that Niger imported from both Thailand and Pakistan. (See the table below.)

Table 5. Niger: Top 5 Sources of Cereal Imports in 2009 (US$'000)

	Percentage of Total Cereal Imports, 2009
Thailand	42%
Pakistan	37%
Vietnam	12%
United States of America	3%
Nigeria	3%

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

I.vi. Exports

The most recent available data on exports are from 2009. In 2009, and as reflected in the table below, mineral and ore exports accounted for most of Niger's foreign exchange earnings (83% of total exports). Livestock and food were the other leading exports (16%).

Table 6. Niger: Selected Major Exports, US$'000

	2009
Total Exports	363,445
Minerals and ores	300,753
Minerals and ores, as % of total exports	83%
Live animals	40,153
Live animals, as % of total exports	11%
Food (excludes live animals)	16,797
Food, as % of total exports	5%

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

As reflected in the table below, bovines, sheep, and goats accounted for about 84% of total live animal exports in 2009.

Table 7. Niger: Live Animal Exports, US$'000

	2009
Live Animals Exports	40,153
Bovines	20,852
Sheep and goats	12,925
Horses and mules, etc	3,295
Animals (unspecified)	3,080
Other (Poultry, Swine, Fish)	1

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

In 2009, the most mineral and ore export revenues, by far, were generated through exports of uranium and thorium.

Table 8. Niger: Minerals and Ores Exports, US$'000

	2009
Minerals and Ores Exports	300,753
Uranium and Thorium	239,251
Gold	61,374
Silver	128
Other (Tin, Iron, Nickel, Precious metals)	0

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

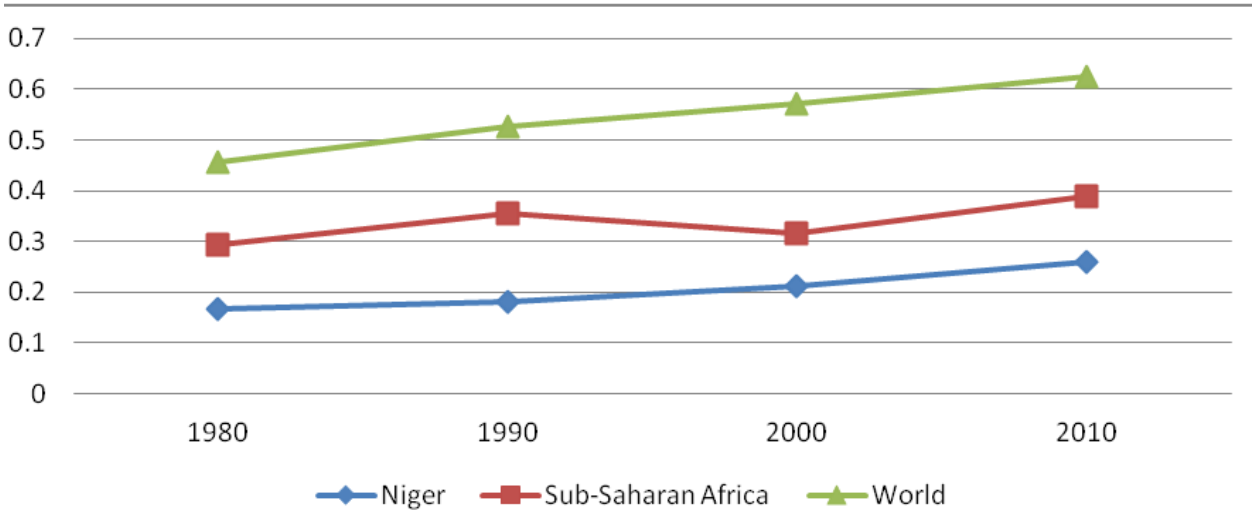
I.vii. Poverty

Niger is one of the poorest countries in the world. According to International Human Development Indicators, the per capita income in 2010 was only about US$400 (United Nations Development Programme, 2010). The economy heavily depends on agriculture, which accounts

for about 40% of GDP. About 80% of the population lives in rural areas, which requires urgent rural development by transforming and modernizing the agriculture sector (IDA - International Development Association, 2010).

In terms of Human Development Index (HDI)[2], Niger still lags behind other Sub-Saharan countries (see the figure below). However, since 1980, Niger has gained important ground in increasing its HDI: from 1980 to 2010, the HDI grew at 1.5% percent annually. On the other hand, Niger currently ranks 167 out of 169 countries with comparable data (United Nations Development Programme, 2010).

Figure 3. Human Development Index



Source: United Nations Development Programme, 2010.

I.viii. Policy

Since 2000, Niger has initiated a series of reforms based on a national consensus to increase economic growth and reduce poverty. The results of these policies have been an average GDP growth of 4.8% per year. However, daunting challenges remain, specifically (IDA - International Development Association, 2010):

- Population development.
- Drought affecting agricultural production.
- Political instability.
- Limited human capital.

Improvements in small-scale irrigation have contributed to increasing productivity in agriculture. In addition, institutional reforms in the rural sector have improved overall productivity. Increasing government revenues, decreasing external debt, and a moderate budget deficit have all contributed to improve the country's overall fiscal situation. Deficits on external accounts are

[2] The HDI represents a push for a broader definition of well-being and provides a composite measure of three basic dimensions of human development: health, education and income (United Nations Development Programme, 2010)

currently around 11–12%, which is relatively low. However, deficits could increase in coming years due to increases in Foreign Direct Investments (FDI) in mining and oil (IDA - International Development Association, 2010).

According to the IMF, Niger is pursuing key policy reforms intended to move the country forward along the path to increased economic stability and decreased poverty. For example, Niger is implementing a medium-term expenditure framework to improve strategic budget planning, which in turn would enhance the quality and transparency of financial information by (a) further integrating budget and treasury functions and (b) strengthening treasury operations (IMF, 2010).

Annex II. Agriculture Overview

This Annex provides an overview of Niger's agricultural sector and includes: 1) agro-ecological, agro-economic and regional production zones; 2) a seasonal crop production calendar; 3) the agricultural and livestock production base and trends; 4) crop production, broken down according to the country's main regions; 5) agricultural imports and exports; and 6) policies that impact the agricultural sector.

II.i. Agro-Ecological, Agro-Economic, and Regional Production Zones

Niger has a land area of 1,267,000 square kilometers (km^2) (World Bank, 2011). However, Niger is highly vulnerable to food insecurity, in part because:

- Arable land Niger is limited—nearly 90% of the country is covered by the Sahara desert.
- Niger depends on rain-fed agriculture. Rain-fed agriculture is carried out on only 120,000 km^2 (or about 10% to 11% of land area), and rains are limited to 350 mm to 600 mm per year (World Bank, 2009) (FAO, 2010).
- The most productive agricultural land in the country, which receives over 600 mm of rainfall, comprises only 1% of Niger's total land area (FAO, 2010).

FAO defines four types of agro-ecological zones in Niger (FAO, 2010):

1. Desert Sahara zone
2. Sahel Sahara zone
3. Sahel Sudan zone
4. Sahel zone

As noted above, most of Niger's land area is covered by the Sahara Desert (Table 9). Across its agro-ecological zones, and on its limited arable land, Niger produces a combination of cereals (millet, sorghum, maize, rice), tubers (cassava, sweet potatoes), fruits (dates, citrus), and vegetables (Table 9).

Table 9. Niger's Agro-ecological Zones

Zone	Land Area (%)	Avg. Annual Rainfall	Crop Type	Crops
Desert Sahara	77	<150 mm	Oasis	Palm, citrus; gardening
Sahel Sahara	12	150 to 350 mm	Oasis, rain-fed	Cereals, legumes, date palm, citrus; gardening
Sahel Sudan	1	>600 mm	Rain-fed	Millet, sorghum, maize, groundnuts, legumes, cassava, sweet potato
Sahel	10	350 to 600 mm	Rain-fed	Millet, sorghum, rice, cowpeas, vegetables, fruit

Source: Table compiled by Fintrac/BEST, based on information from FAO.

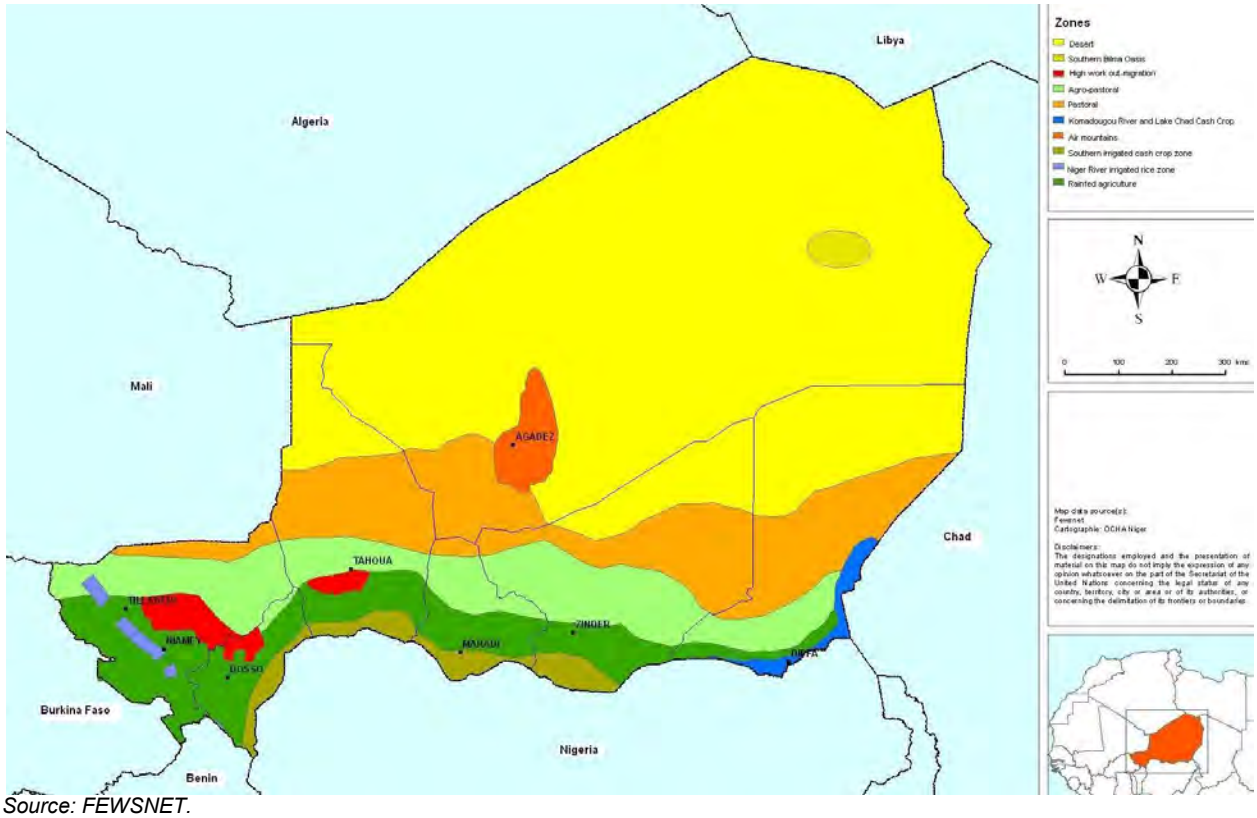
Based on the ecological characteristic of each region, FEWSNET divides the country into the following 10 agro-economic zones, as depicted in Figure 4:

1. Desert

2. Southern Bilma Oasis.
3. High work out-migration.
4. Agro-pastoral.
5. Pastoral.
6. Komadougou River and Lake Chad Cash Crop zone.
7. Air mountains.
8. Southern irrigated cash crop zone.
9. Niger River irrigated rice zone.
10. Rain-fed agriculture.

In the desert and oasis zones, agricultural production is very limited.

Figure 4. Niger's Agro-Economic Zones



Source: FEWSNET.

In terms of regional production, the Maradi and Zinder regions are the main cereal production centers, accounting for approximately 40% of production of millet and sorghum alone (Beekhuis, 2005). Cowpea is grown in nearly all regions that have agricultural and/or agro-pastoral activities. Groundnut is generally produced in the southern belt of Zinder and Maradi, and in Madoua (which is in the Tahoua region). Almost all maize and souchet production takes place in Dakoro (which is in the Maradi region). Rice production is done mostly in the Tillaberi river valley region. Commercial crops such as onions are grown in Agadez, Dosso, Zinder, and Tahoua, and most produce is grown in the southern regions. Other commercial crops are also grown in isolated areas in Diffa. Areas in Tchintabaraden, Téra, Ouallam, and Filingué have very few agricultural production alternatives apart from millet and sorghum, and they mostly diversify into livestock breeding (Beekhuis, 2005)

II.ii. Seasonal Crop Production Calendar

Considering the FEWSNET's agro-economic zones (Table 9), different areas have different production seasons and livestock movement.

In the high work out-migration sub-zone, millet and sorghum production runs from September to October; cowpea production starts around September to October; groundnuts are produced in September; vegetables production starts around April until June. Livestock migration starts around June on continues until November (FEWSNET).

In the agro-pastoral zone, millet and sorghum production usually starts in September and October; the cowpea production window is from September to November; vegetables are produced from March to May. Livestock migration to northern pastures starts around June and continues until December (FEWSNET).

In the pastoral zone, milk and meat production generally run from July to December. Livestock migration to distant pastures starts around June and continues until October; the livestock returns around November and December. Water and pasture increase from November to May. Animal diseases are common all year long (FEWSNET).

In the Komadougou River and Lake Chad Cash Crop zone, millet and sorghum production runs from September to October; cowpea and groundnuts production also runs from September to October production; rice production has two periods, one from November to December and second harvest from June to July. Water resources from the Nigerian Dam fluctuated from May to October (FEWSNET).

In the air mountains zone, maize production runs from June and until September; onions and garlic are harvested around October; livestock sales are around September and October; milk production runs approximately from June until September. Generally, livestock disease increases from December to April (FEWSNET).

In the *southern irrigated cash crop zone*, millet and sorghum production starts around October up until November; cowpea production is usually in October; onions are produced from December to April or May. Regarding crop pest and agricultural disease, the incidence is higher for onions from December to February and for rain-fed products from around May to September. Livestock migration encroaching from northern zones happens around April to November (FEWSNET).

In the Niger River irrigated rice zone, millet and cowpea production runs from September to October; rice production has two production windows, one running from approximately June to July and another from November to December (FEWSNET).

In the *rain-fed agriculture zone*, millet and sorghum production runs from September until October; cash crops are harvested from September until November; cassava and vegetable production runs from March to May. Livestock migration starts around June and continues until October (FEWSNET).

Observing seasonality by the main regions in Niger:

- In Maradi, the rainy season begins mid-June and ends around October.
- In Zinder, Tahoua, and Tillaberi, the rainy season usually begins in July and ends in October.
- In Agadez, the rainy season begins in mid-July.
- For the main urban center Niamey and neighboring Dosso, the rainy season begins around the second week of June and ends in October.

II.iii. Agricultural and Livestock Production Base and Trends

National cereal production (i.e., millet, sorghum, maize, and rice) has steadily increased from the mid-1980s to the 2000s. According to the World Food Program (WPF), during that 20-year period, production increased almost 50%, representing a 2% cumulative increase each year (Beekhuis, 2005). Most of this gain has been due to an increase in cultivated areas, which has compensated for the decline in yields observed during the same 20-year period. However, total production remains highly variable, with increases of more than 50% at times and decreases of more than 40% percent at other times (Beekhuis, 2005).

From 2004 through 2010, millet dominated crop production, averaging 2.9 million MT per year, followed by sorghum and cowpeas production, each of which averaged almost 1 million MT per year. Peanut production represents another important crop in volume terms, with average production of 223,295 MT per year. Niger also produces small volumes of rice and maize (Table 10).

Goats, sheep, and cattle dominate Niger's livestock production. From 2004 through 2010, Niger had on average 11.9 million heads of goat, 9.7 million heads of sheep, and 8.0 million heads of cattle. Other important livestock production includes camels, donkeys, and horses. (See Table 10.)

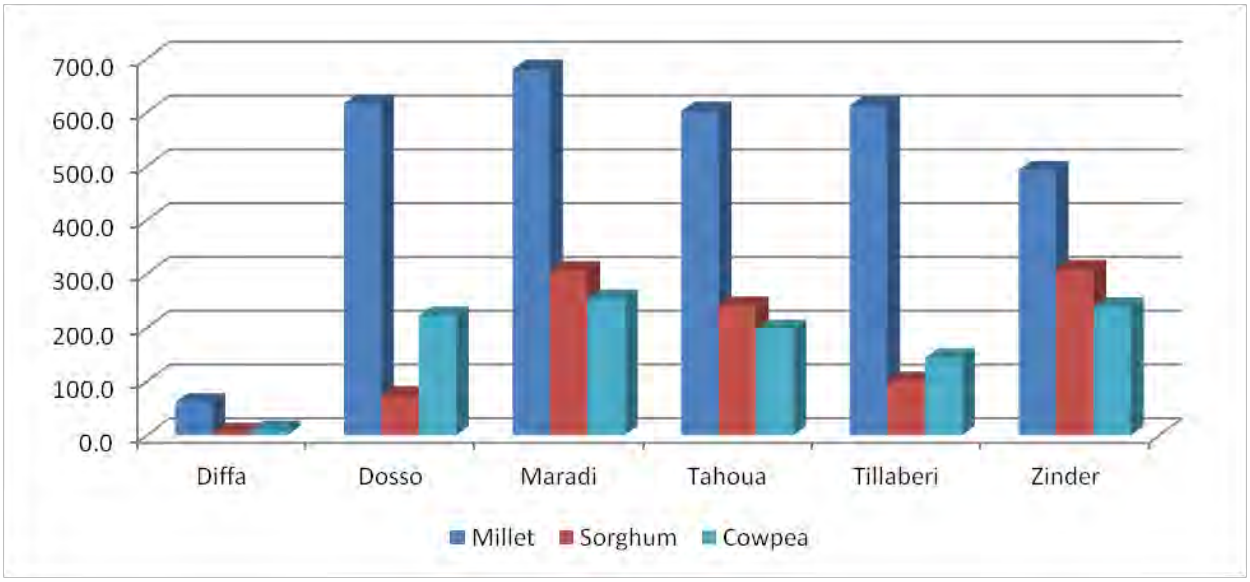
Table 10. Top Agricultural Products (MT) and Livestock (1,000 heads)

Products	2004	2005	2006	2007	2008	2009	2010	Average
Agriculture	3,217,889	4,382,298	4,899,903	4,995,290	6,789,167	4,478,991	7,358,377	5,160,274
Millet	2,037,714	2,652,391	3,008,584	2,781,928	3,489,391	2,677,855	3,837,525	2,926,484
Sorghum	599,528	943,941	929,265	975,223	1,311,144	738,661	1,301,840	971,372
Rice	78,099	59,902	78,377	70,000	129,431	20,117	29,963	66,556
Maize	3,970	951	19,085	19,324	6,129	1,389	9,381	8,604
Cowpea	159.08	139.04	152.56	147.68	304.97	253.50	406.25	963,964
Peanut	159,079	139,035	152,561	147,676	304,969	253,497	406,245	223,295
Livestock 2	30,298	31,038	31,799	32,323	36,306	36,451		33,036
Goats	10,964	11,238	11,519	12,155	12,642	13,147		11,944
Sheep	8,924	9,192	9,468	9,847	10,191	10,548		9,695
Cattle	7,192	7,336	7,483	8,243	8,737	9,262		8,042
Camels	1,542	1,565	1,589	1,606	1,631	1,655		1,598
Donkeys	1,448	1,477	1,507	237	1,568	1,599		1,306
Horses	228	230	233	235	1,537	240		451

Source: Niger Ministry of Agriculture; subtotals are Fintrac/BEST calculations.

Broken down according to region, from 2005 through 2010, Maradi was the main cereal (millet and sorghum) production region in Niger. Millet production averaged 680,200MT and sorghum 305,600MT. Tillaberi was the second largest production area, with average millet production of 612,700MT and sorghum production of 100,600MT. Tahoua was third, with average millet production of 602,100MT and sorghum production of 240,300MT. Maradi dominated cowpea production, averaging 253,500MT, followed by Zinder (238,300MT) and Dosso (221,100MT) (Figure 5).

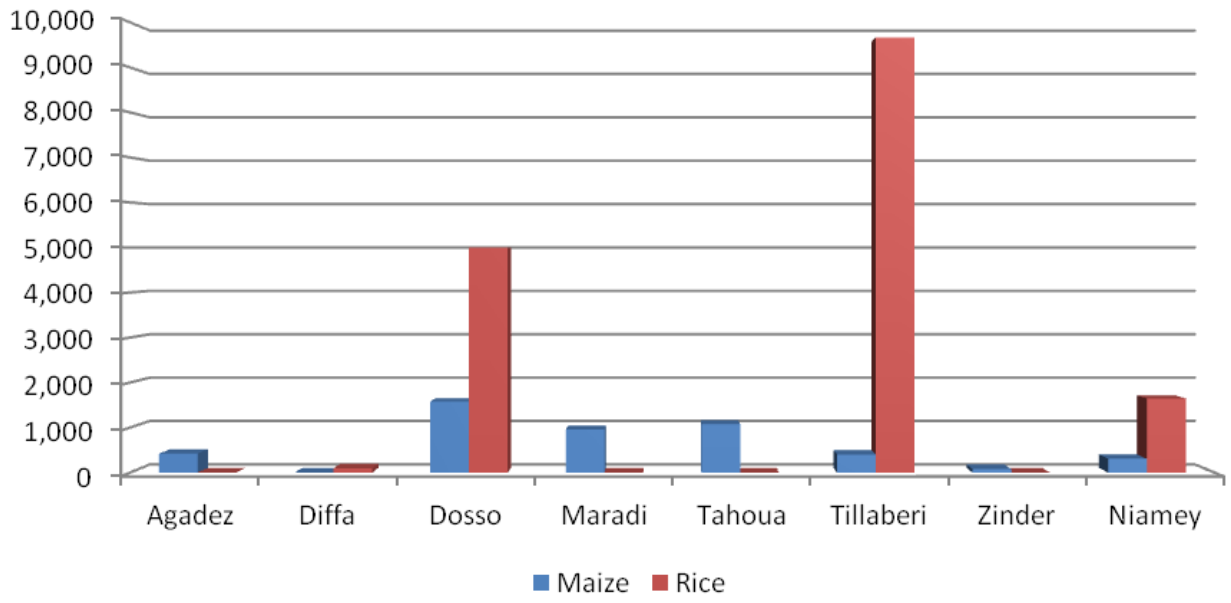
Figure 5. 2005–2010 Average Main Cereals and Cowpea Production by Region (1,000 MT)



Source: INS.

Between 2005 and 2010, only small quantities of rice were grown, mostly in Tillaberi (9,665MT per year) and Dosso (4,994MT per year). Maize production in Dosso averaged 1,579MT per year and 1,080MT per year in Tahoua (Figure 6)

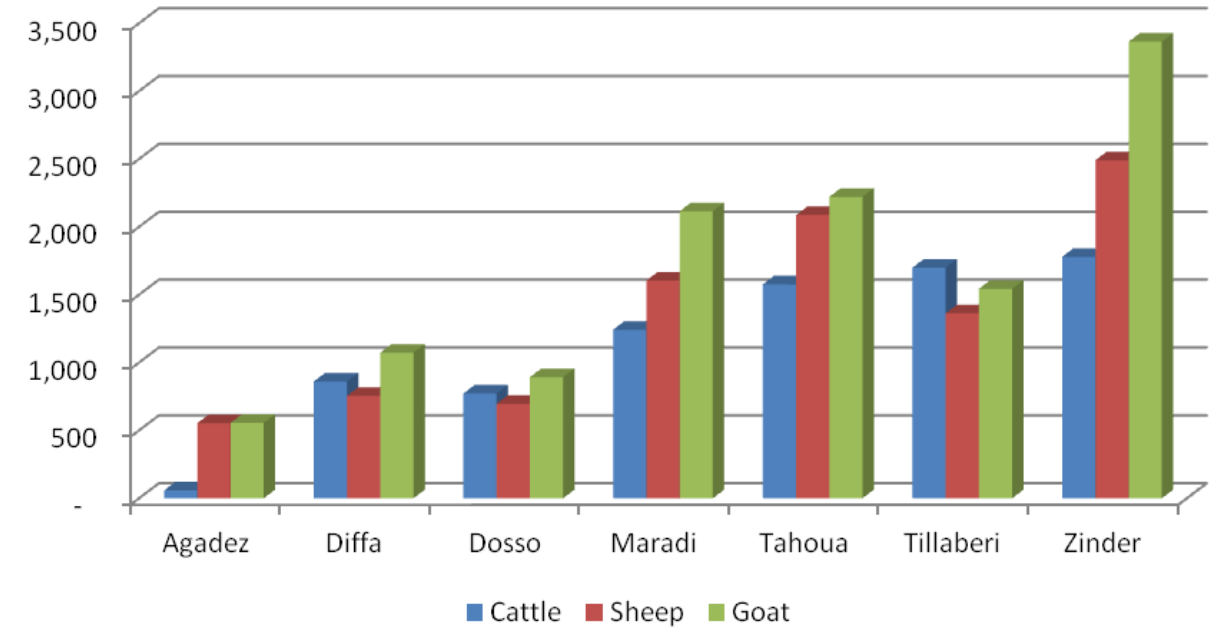
Figure 6. 2005–2010 Average Maize and Rice Production by Region (MT)



Source: INS.

Zinder accounts for the largest percentage of cattle, sheep and goat. From 2004 through 2009, cattle averaged 1.8 million heads per year, sheep 2.5 million heads, and goats 3.4 million heads. Other important regions for livestock are Tahoua, Maradi, and Tillaberi (Figure 7).

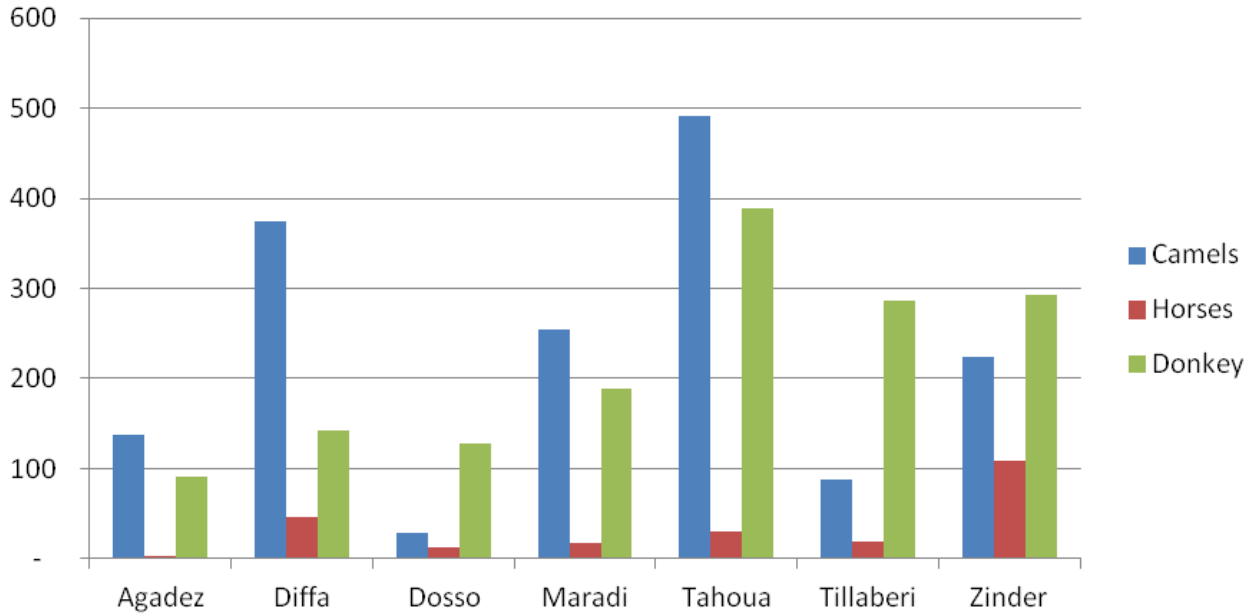
Figure 7. 2004–2009 Average Livestock Distribution by Region (1,000 heads)



Source: INS.

Other important livestock include camels, horses and donkeys. From 2004 through 2009, on average Tahoua had the largest herd of camels (491,000 heads) and donkeys (375,000 heads). Other important livestock production regions include Diffa, Zinder, and Tillaberi (Figure 8).

Figure 8. 2004–2009 Average Livestock Distribution by Region (1,000 heads)



Source: INS.

II.iv. Imports

Niger imports about 20% of its cereal needs (IRIN, 2011). On average, from 2005 through 2009 rice imports represented more than 80% of total cereal import volume. Niger also imported a relatively small quantity of millet and sorghum during the same period. (Table 11)

Table 11. Niger Cereal Imports (MT)

Products	2005	2006	2007	2008	2009
Rice	286,668	163,075	165,710	221,689	164,774
Sorghum	12,182	27,471	34,107	150	14,661
Maize	38,078	36,386	34,244	4,482	3,706
Millet	6,145	1,508	1,188	2,285	n/a

Source: Rice and Sorghum INS; Maize from 2005 to 2007 from FAOSTAT and from 2008 to 2009 from ITC; Millet from FAOSTAT.

II.v. Exports

As reflected in the table below, Niger's main export commodities are live animals, onions, cowpeas, and souchet. On average, from 2005 through 2009 onions represented more than 50% of total export volume, live animals represented 38%, and cowpeas and souchet around 6% and 3% respectively.

Table 12. Niger Main Agriculture and Livestock Exports (MT)

Products	2005	2006	2007	2008	2009
Live animals	36,489	46,773	37,390	59,674	63,004
Onion	79,284	68,559	61,883	75,063	48,249
Cowpea	6,904	6,727	6,910	13,098	4,271
Souchet	1,411	3,508	4,207	5,198	5,202

Source: INS.

II.vi. Key Policies/Initiatives Affecting Agriculture Sector, Including Bio-safety Laws

Starting in the mid-1990s, Niger started a series of changes to enable increases in real producer prices for exports. These measures included (1) lowering export taxes, (2) raising administered producer prices, (2) reducing marketing costs, and (5) depreciating the exchange rate of the domestic currency. (World Bank, 2011).

The Government of Niger has also developed a long-term strategy to support the rural sector, described in the "*Strategie de Developpment Rural* (Rural Development Strategy RDS)". This strategy consisted of 14 programs and was first included in the 2006–2007 Medium Term Expenditure Framework for the Rural Sector (*Cadre de Depenses a Moyen Term du Sector Rural* - CDMT). The budget for these programs in 2011 totals FCFA114,033,590,991—the equivalent of US$228 million. Of the total budget, 12% has been (or will be) contributed by GoN, 62% will come from donors' support, and 26% is under negotiation (NEPAD, 2011).

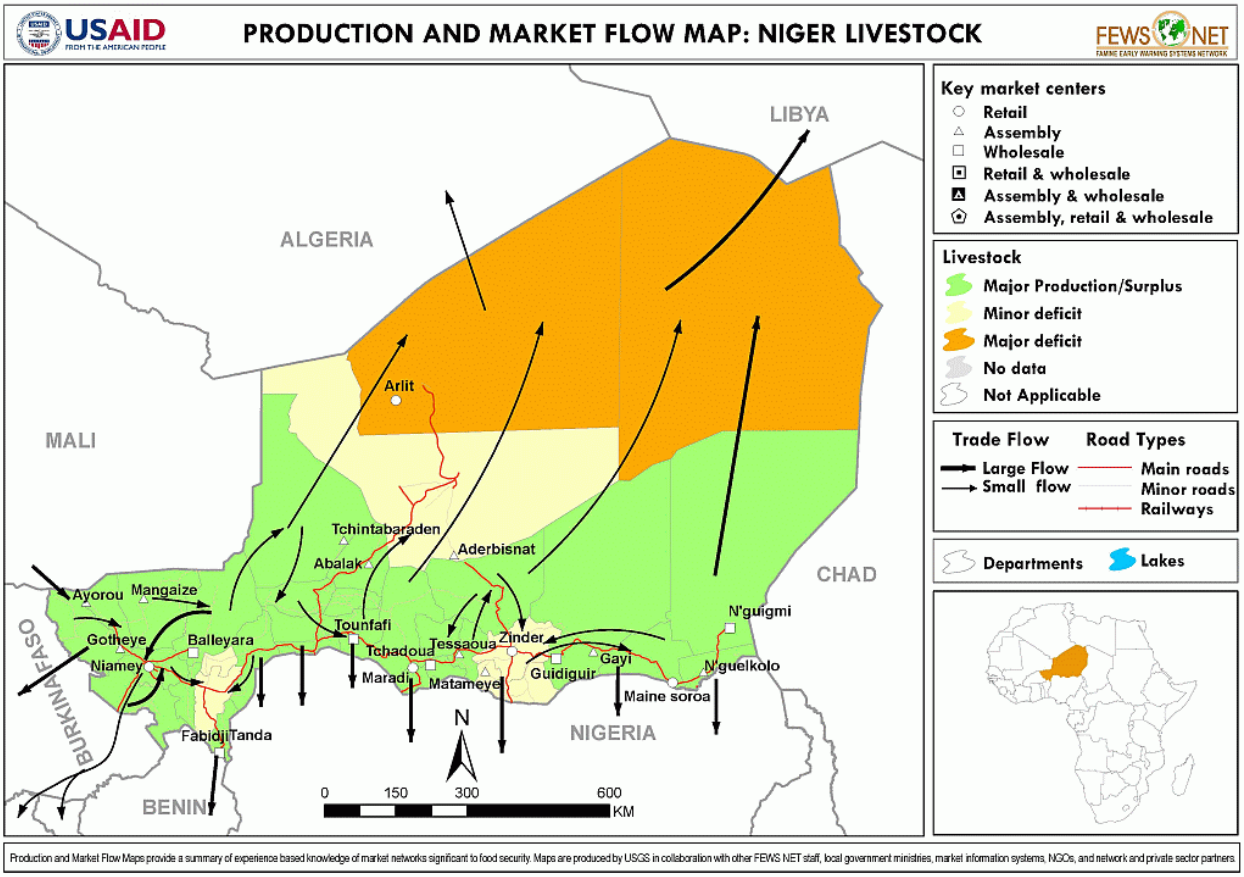
In the country's Strategy for Accelerated Development and Poverty Reduction (PRSP 11), it is acknowledged that Niger's sustainable source of growth is in the agro-sylvo-pastoral sector. In the PRSP 11 for the period 2008–2012, the main objectives are (1) pursuing strong, diversified, sustainable, and equitable growth to create jobs, and (2) increasing potential for export-oriented, agro-pastoral supply chains. The PRSP, which is strongly linked with the Government's Rural Development Strategy (RDS), includes an Action Plan defining a comprehensive framework for agriculture and rural development over the next ten years (World Bank, 2009).

In addition, the Program 3 of the RDS Action Plan aims at strengthening and supporting key agro-sylvo-pastoral supply chains. The total cost of this program is estimated at FCFA57.56 billion over the period 2006–2015. The areas included are:

- Inter-professional coordination.
- Reinforcing producers' organizations.
- Marketing agro-sylvo-pastoral products.
- Building the capacity of economic agents.

In addition, other RDS programs include rural infrastructure, financial services, research and extension, and strengthening public institutions (World Bank, 2009).

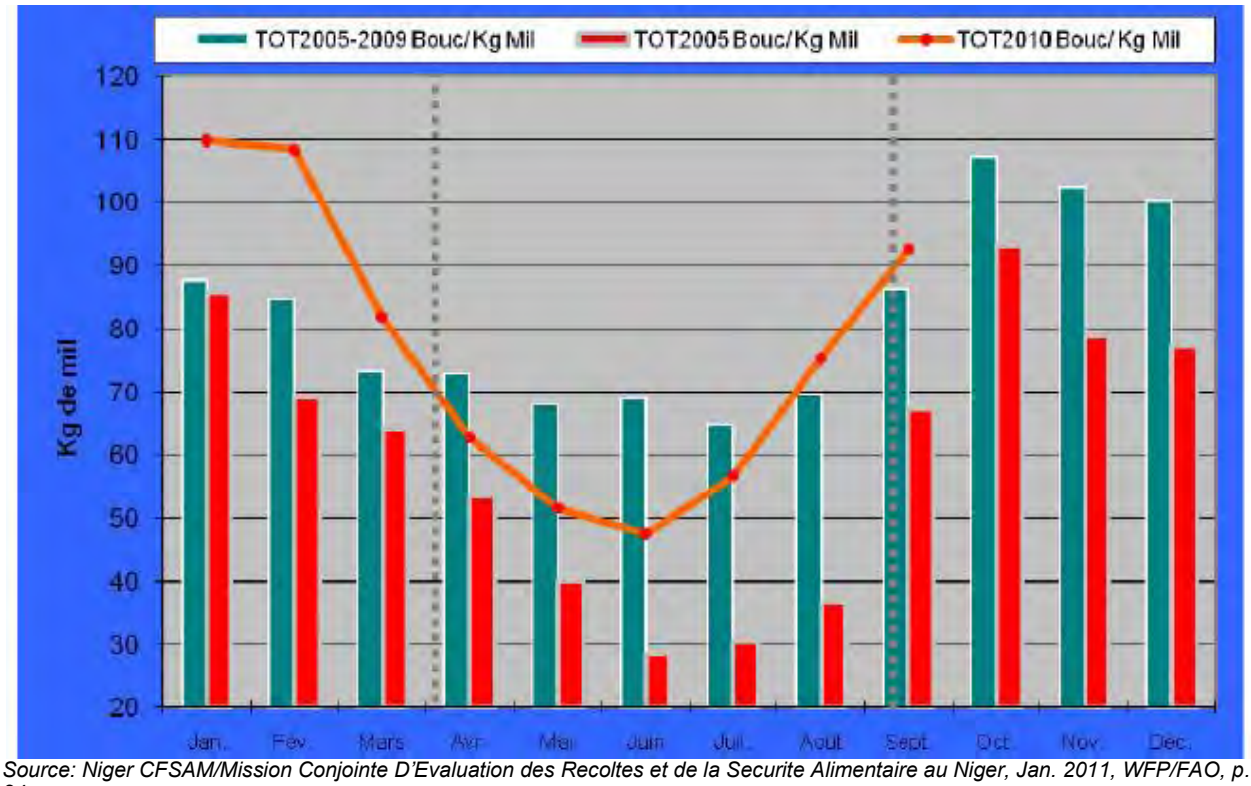
Figure 9. Agricultural Production Market Flows: Livestock



Source: FEWS NET

Note that there are three maps reproduced from FEWS NET for this section, covering Niger's production and market flows for livestock, rice and millet. Additionally, a graph from the 2011 WFP/FAO CFSAM is also provided below, showing the terms of trade between goats and kilograms of millet at Abalak, shown here in the above map.

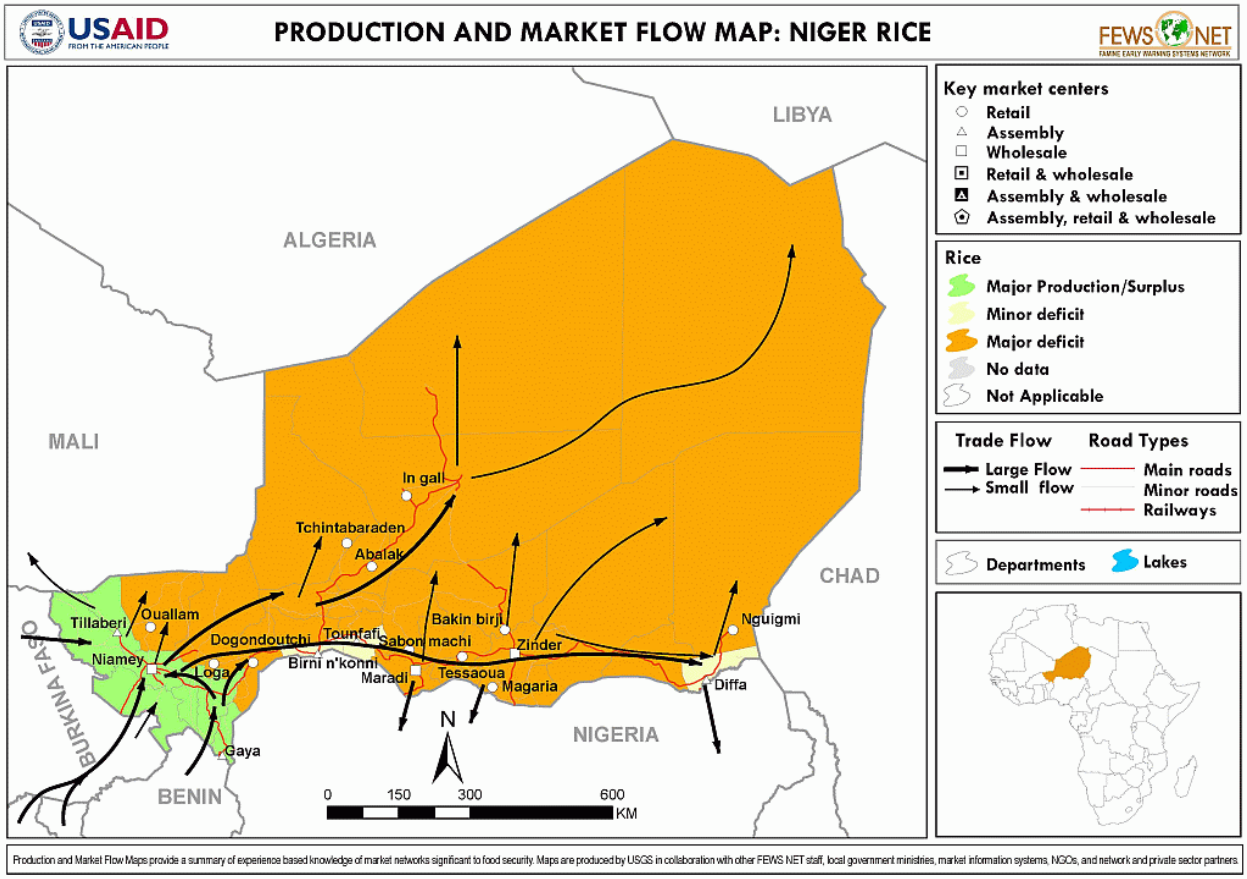
Figure 10. Terms of Trade: Goat and Millet, 2005, 2009, 2010 (Single Goat vs kg of Millet)



Source: Niger CFSAM/Mission Conjointe D'Evaluation des Recoltes et de la Securite Alimentaire au Niger, Jan. 2011, WFP/FAO, p. 24

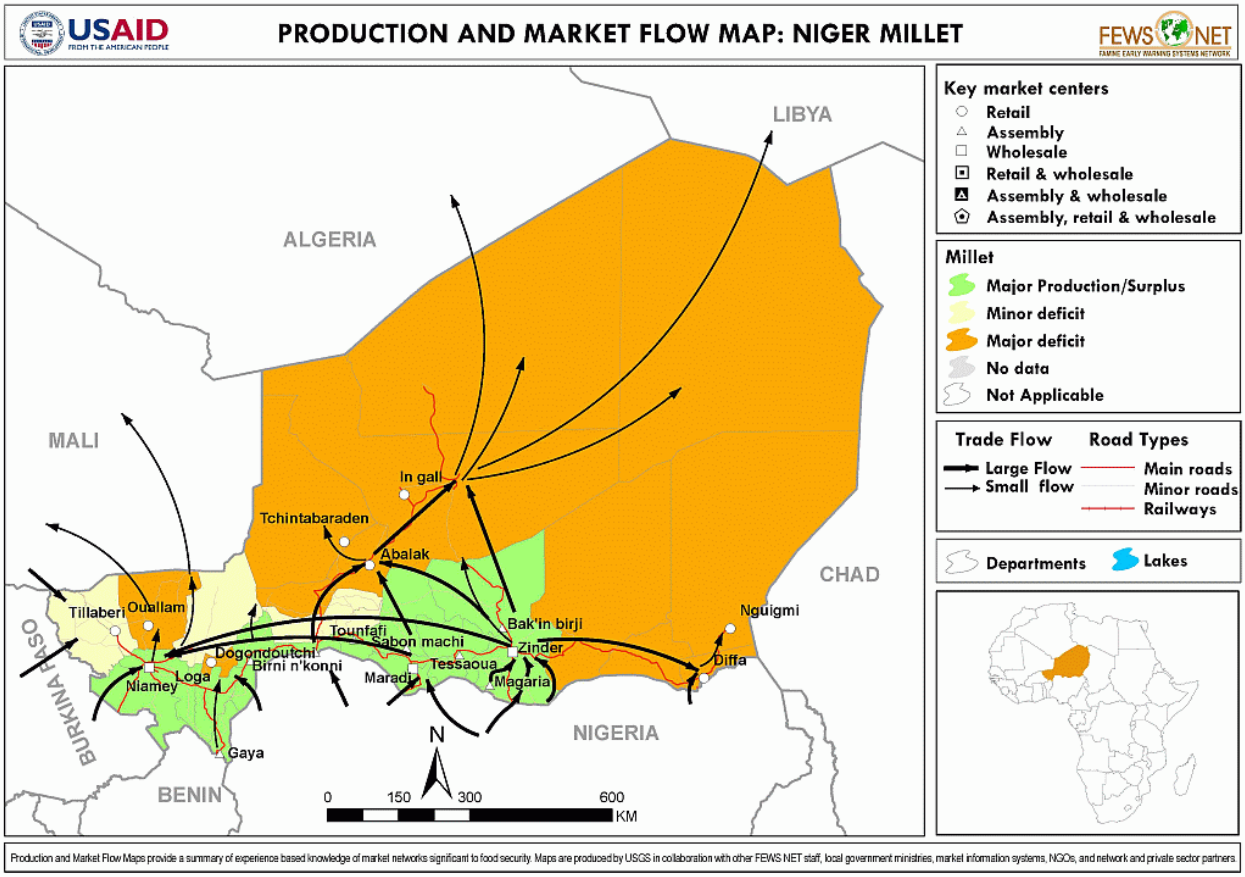
Note the above graph measures the terms of trade between a goat (~~b~~ouc") and the equivalent quantity of kilograms of millet, with the summer months of 2005 showing the poorest terms of trade for pastoralists, due to the drought of 2004.

Figure 11. Agricultural Production Market Flows: Rice



Source: FEWS NET

Figure 12. Agricultural Production Market Flows: Millet



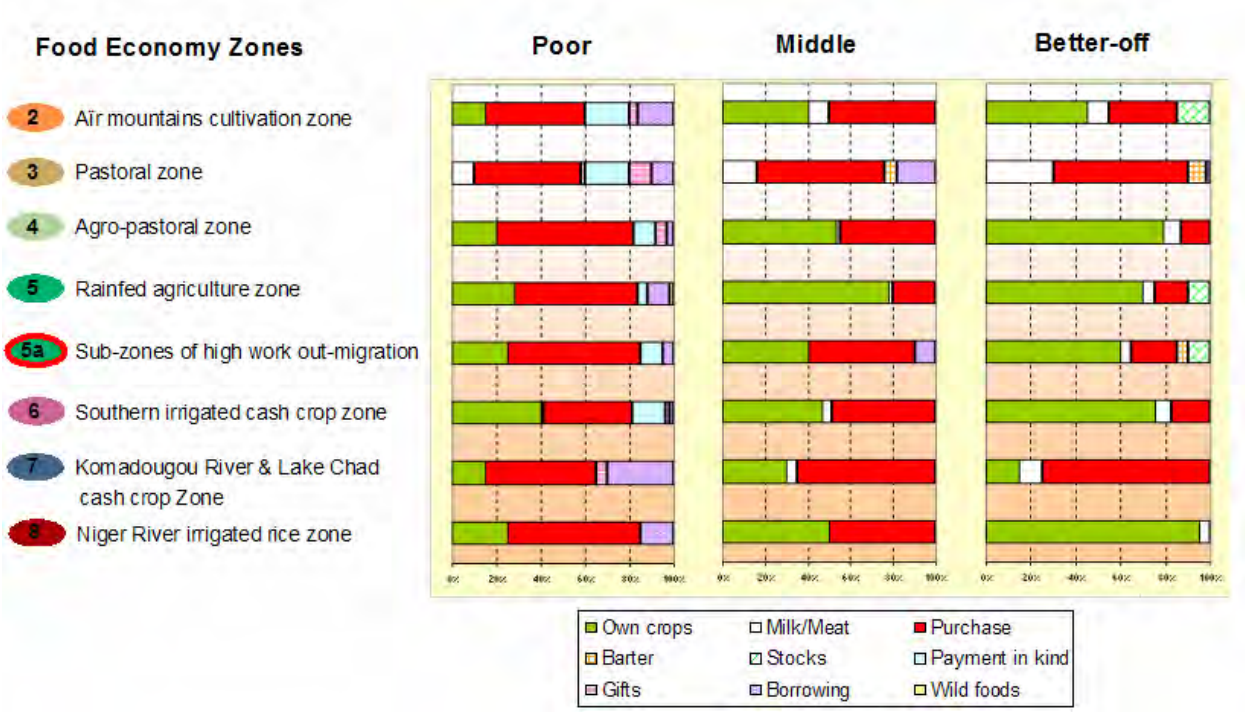
Source: FEWS NET

Annex III. Household Consumption and Expenditure

III.i. Sources of Food

The food sources graph below illustrates that the majority of rural people in Niger—regardless of where they live—depend greatly on the market for staple foods. This is not surprising for pastoralists; but it is also the case even for the Rain-fed Agriculture Zone, which produces most of the surplus grain for the national market (FEWS NET, January 2005). In that zone, the poor are normally able to obtain somewhat less than 30% of their food requirements from their own fields—and even the middle group need to buy some 20% of their basic food needs from the market. The graph also shows that surplus production is highly skewed towards the better-off minority.

Figure 13. Sources of Food by Livelihood Zone

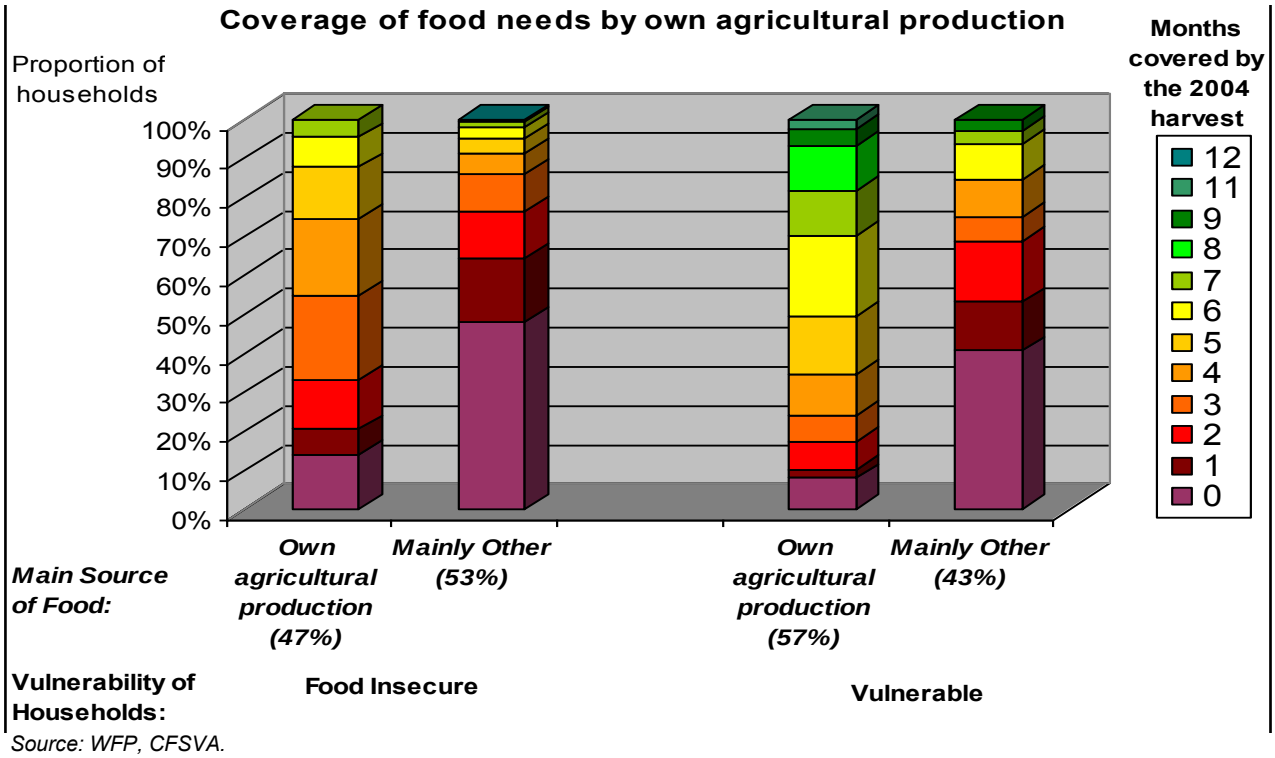


Source: FEWS NET.

According to the 2005 Comprehensive Food Security Vulnerability Assessment (CFSVA), the most food-insecure households depend less on agricultural production and more on small businesses, remittances, and gifts; they also have less livestock. About 47% of food-insecure households and 57% of vulnerable households depend on their own production as the main source of food. However, among the food-insecure households who depend on their own production, only 48% produce enough for more than three months. This means that unless a coping strategy was applied, 52% of the food-insecure households producing their own food

would run out of food within three months of the harvest. Similarly, 24% of the vulnerable households would run out of food three months or less after the harvest.

Figure 14. Coverage of Food Needs by Own Agricultural Production



Source: WFP, CFSVA.

III.ii. Local Diets/Main Staples

According to the 2008 Bellmon Report, traditional grains in Niger consist of millet, sorghum, corn and ~~f~~fonio".[3] Millet accounts for around 75% of coarse grains production and sorghum most of the remaining 25%. Corn and fonio production are insignificant. Nevertheless, corn is part of the Nigerien diet, and the third preferred dry cereal after millet and sorghum. Unlike millet and sorghum, however, the majority of corn consumed in Niger is imported and commercialized.

Millet is the most important staple food crop in Niger and is produced during the rainy season. Millet is drought-tolerant and survives long periods of water stress. The main millet producing areas are Maradi, Zinder, and Dosso. Sorghum ranks is produced in the same areas as millet and is second as a staple, but sorghum production is almost half that of millet. Maize is normally produced under rain-fed conditions and through the irrigation systems located in areas along the Niger River. The main producing area is Konni, but there is also a second season crop.

[3] Fonio (Digitaria spp) or ~~h~~hungry rice" is a West African cereal that has been cultivated for thousands of years and is a part of the local diet and culture. Despite its economic and cultural importance, however, the knowledge of fonio remains limited because scientific research has generally been directed towards better known crops such as sorghum, pearl millet, and maize.

Rice is increasingly considered a staple in Niger, 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 small group of farmers who produce it.

III.iii. Sources of Income

The most recent data on sources of income, from 2005, show that non-farm income comprises more than half (59%) of total income, with wage labor accounting for only 16% of non-farm income. As of 2005, there were five main groups of income sources (Government of the Republic of Niger, August 2007):

1. Farm income.
2. Wages and salaries.
3. Grants and transfers.
4. Property income.
5. Other non-farm income.

With respect to farm income—which as of 2005 accounted for 41.6% of all household income—subsistence farming was the highest income item, accounting for nearly 30% of total household income. The relative proportion of livestock in the country's total income was estimated at about 10%. Wages and salaries accounted for only 15.8% of total income: 7.9% for the public and semi-public sector, 4.6%for the modern private sector, and 3.3% for the other sectors. (See Table 13.)

The three other sources of income accounted for more than three-fifths of the total cash income of households: grants and transfers accounted for 15%, property income 3.6%, and the aggregated group of non-farm income 24%.

Table 13. Breakdown of Cash and Non-cash Income by Source (2005)[4]

Source of Income	Proportion (in %)
1. Farm income	**41.6**
Income from subsistence farming	29.8
Income from livestock	9.7
Income from fisheries	0.4
Industrial farm income	0.9
Other farm income	0.8
2. Wages and Salaries	**15.8**
Public and semi-public salaries	7.9
Modern private sector wages	4.6
Wages from other private activities	3.3
3. Grants, transfers and other income	**15**
4. Interest, rents and property income	**3.6**
5. Other income from non-farm activities	**24**
Total	**100**

Source: Government of the Republic of Niger, QUIBB 2005 Survey.

III.iii.i. Remittances

Official remittance inflows play a minor role in Niger's economy. Estimates for 2010 indicate that annual remittances were roughly equivalent to 1% of GDP.

Table 14. Niger: Remittance Inflows (US$ million)

	2003	2004	2005	2006	2007	2008	2009	2010
GDP (US$ billion)	2.7	2.9	3.3	3.6	4.2	5.4	5.3	5.5
Inward remittance flows (US$ million)	25	60	66	78	79	79	75	70

Source: The World Bank, World Development Indicators and Migration and Remittances in Niger factsheet.

III.iv. Expenditure Patterns

According to the FANTA's Food Security Country Guidance: Niger (FY2012-FY2016) report, almost two thirds (61%–64%) of household expenditures are for food. Most Nigerien households are net food purchasers. That report also estimates that typical poor (including very poor) households in the rain-fed agricultural livelihood zones and agro-pastoral livelihood zones obtain about 35%–50% of their food needs from purchases in a normal year; the rate rises to 65%–75% for poor households in the pastoral zones.

Nigerien smallholder producers tend to sell their cowpeas after harvest and to retain cereals for their own stocks. When household stocks deplete, households purchase local and imported grain.

[4] This 2005 information is the most recent that is available.

III.v. Poverty

Poverty headcount figures are outdated and difficult to obtain. However, GDP per capita in Niger is only UD$349 per year. And according to the most recently available poverty assessment (2005), about 62% of Niger's population lives in poverty and 34% in extreme poverty. These rates are even higher in rural areas, where 80% of Nigeriens live: nearly 66% of rural Nigeriens are poor and 36% are extremely poor. Niger is ranked 167th—third to last globally—in the Human Development Index of the United Nations Development Program (UNDP, 2010).

Table 15. Niger: Poverty Headcount (%), 2005

Niger	**62.1**
Rural	65.7
Urban	55.5

Source: QUIBB survey 2005, cited in PRSP 2008

Women, and households headed by women, are the poorest groups and most vulnerable. Poverty figures, broken down according to province, show that Maradi province has the highest percentage of people living in poverty (80%).

Regional variations of poverty follow this pattern as well: predominantly rural regions such as Maradi (79.7%), Tillaberi (68.9%) and Dosso (67.3%) have the highest incidences of poverty, while in the predominantly urban region of Niamey, the incidence of poverty is only 27.1%.

III.vi. Summary – Cash Programming in Niger, December 2010 Workshop

NOTE: ECHO-funded projects are listed in grey.

	Type Zone	Objectif	Target HHs	Montant total/ HH	Kit reçu	Modalité, fréq et durée transfert	Ciblage Zone	Ciblage ménages	Formation	Utilisation argent et impact	Succès	Défis
SCUK/ ECHO/ OFDA	Transferts sociaux Rural (Zinder et Tahoua)	Moyens de subsistance des ménages	11,183	150,000	20,000 à F25,000/mois selon zone (couverture 100% besoins Kcal – 2,100kcal, et prix sur les marchés). Total: F120,000 à F200,000/ménage	Mensuel, pendant 6 à 8 mois selon zone soudure) Commerçant préfinance	Classement SAP et zone d'intervention SCUK	Méthodologie HEA: Très pauvres	sur causes de malnutrition	87% vivres, dont 77% céréales Difficile mesure impact sur nutrition car multiples interventions (suivi PB d'une cohorte + admissions MAS/ référence)	Pas de perte argent, amél diversité alim, pv achat et conso Pas d'inflation significative Suivi approfondi de l'effet sur l'éco ménage	Coordination au niveau dépt (doublons)
Concern/Tufts/ ECHO/ OFDA	Transferts sociaux/ progr intég santé/ cash Rural Tahoua	Prév malnutrition	15,934	110,000	Au choix: Cash (F20,000 à F25,000 selon période) ou Cash + semences (F45,000 total + kit semences) Total: F110,000/ ménage	Cash manuel (cartes) et M-transfert par téléphone par distributeurs Mensuel, 5 mois de mai à sept. (oct. à déc. pour BFprotection) Coût + élevé pour transfert tél, mais éco d'échelle poss	Villages vulnérable selon éval SAP de déc. 2009 (>50% déficit)	Méthodologie HEA: Très pauvres Approche particip	Formation sur portables + charge solaire	91% vivres Suivi P/T (MAG) selon type de bénéficiaire	Plaidoyer pour couverture de villages hors SAP Outil innovant (tél) avec potentiel d'expansion Recherche opérationel avec Tufts Kit au choix Suivi effet NUT!!	Ciblage zones SAP Nouvelle technologie

	Type Zone	Objectif	Target HHs	Montant total/ HH	Kit reçu	Modalité, fréq et durée transfert	Ciblage Zone	Ciblage ménages	Formation	Utilisation argent et impact	Succès	Défis
MC/OFDA	CFW & vouchers Urbain Niamey et Agadez villes	Protection assets + Réhab terres, DRR et hygiene	6,723	120,000	F2,000/jour pendant 60 jours (1 pers/ménage), car milieu urbain Total: F120,000/ ménage	Paiements hebdomadaires Niamey: 06/09-05/10 et 09-12/10) Agadez: 11/09–06/10 (et 07-11/10)	Zones d'inondation (Agadez) et crise alimentaire (Niamey) Quartiers : selon indicateurs socioéco	Définition participative de catégories socioéco par communautés Priorités : femmes chefs de ménage; handicapés	Ne pas nuire; Utilisation et sécu matérie ; Eco familiale (épargne); Gestion AGR	Niamey: 94% vivres, 53% eau potable Agadez: 96% vivres, 59% eau	Ciblage Formations en gestion Activités de dvpt éco plus long terme Outil cash bien approprié en milieu urbain	Influence politique, impact LT, coordo, stratégie de sortie Concurr avec sté privée

ACF-E/ECHO	Transferts sociaux (+ CFW – non présenté Rural Gouré	SAME	1,200	50,000	F50,000/ménage en total (couverture des besoins alimentaires pendant 1 à 2 mois) Total : F50,000/ ménage	2 tranches: 15,000F et 35,000F/ ménage, en juillet et août Transfert manuel	Villages vulnérable selon éval SAP de déc. 2009	Manque stocks alimentaires, actif, bétail. Critères sociaux (handicapés, vieux, femmes chefs)	Régime alimentaire, AGR (petit commerce)	XX% Vivres (majorité), remboursement dettes, achat ruminants, démarrage AGR Reconstit stocks, amél diversité alim Impact sur statut NUT non évalué	Ciblage de villages enclavés	Insuff. aide Accès aux zones enclavées Progr non intégré, impact inconnu
FAO/DUE	CFW	Restauration pâturage, diversité bio, lutte vs. plantes envahiss	8,483	50,000	F50,000/ménage reçu en moyenne (avec 8 partenaires différents) Jusqu'à F90,000 (CRF) qui équivaut à 450kg cereals	Programme: mai à août 2010 IMF (selon partenaire)	Choix des zones?	Activité auto-excluante Critères : sans-emploi ; ménage avec 2 'enfants U5, handicapé, malade ou vieux ; femme chef de ménage ; condition physique ; min. 17 ans		Utilisation : Achat de vivres, d'aliment de bétail Résultats : Fixation de populations et amélioration du pv d'achat	Taux de réalisation 99.7% Lutte contre plantes envahissantes Collaboration IMF Durabilité	Ensemencement (semences non disponibles) Quid de l'exclusion de certains ménages très pauvres sans main d'œuvre Mobilisation pour travaux d'intérêts collectifs futurs?
FAO/CERF	Transferts sociaux	Appui production	12,500	20,000	F20,000/ménage pour accompagner kit semences	Juillet et août						

	Type Zone	Objectif	Target HHs	Montant total/ HH	Kit reçu	Modalité, fréq et durée transfert	Ciblage Zone	Ciblage ménages	Formation	Utilisation argent et impact	Succès	Défis
CARE/ DFID	TM (et CFW) rural Diffa en past et agropast	Protection récoltes et couverture besoins alimentaires – obj. purement SA	2,996	25,000	F25,000/ménage (estimation, selon prix du sac de 100kg de céréales)	Mensuel sept., oct. et nov. 2010 (période de début de récolte, mais fort endettement des agriculteurs; période faste pastorale, mais termes de l'échange + production lait encore faibles) IMF locale	Zones agricoles: Enquête vuln. SAP d'avril 2010 Pertes animales (> 90% zone nord; >50% zone centrale)	Agropastoraux : petit superficie (<1ha) non productive, endettement, vente petits ruminants Past: > seuil de viabilité pastorale *		* Approche SCVM (Sécurité des Conditions de vie des ménages) - catégorisation en classes A,B, C, D. Critères: biens (champs et/ ou bétail; système d'élevage et diversification du cheptel) + niveau de perte bétail, taille des ménages, femmes chefs de ménage Utilisation (pas encore): achat de vivres et rachat d'animaux		
IFRC/ CRN	CFW 2010 (TM 2005)	Fixation de dunes, récup terres	3,232	20,000	(payé la veille du marché) Total: F15,000 à 25,000F/ménage, max. F1,000/pers/ jour	15 à 35 jours Paiements hebdomadaires pour la confection de l'ouvrage, payé au chef d'équipe	Villages déficitaires (70% - 100%)	Populations vuln				Problème fonciers à règler
Oxfam/ ECHO (phase 1)	Food vouchers (rural, urbain et périurbain) Tahoua, Tillabéry, Maradi, Agadez et Niamey	Couvrir besoins alimentaires	2,500	25,000	Selon taille des ménages F3,600 à F4,000/ pers selon période, selon prix Total: F25,000/ HH (prix de 100kg mil)	Avril à oct. 2010, mensuel, validité de 1 mois Commerçant s'engage à fournir vivres figurant sur une liste; généralement sans commission; max. 25% échange contre argent Suivi du respect des procédures	Villages déficitaires SAP; zones non encore couvertes ou Zones affectées par inondations	Critères éco/ pauvreté et sociaux; familles avec enfants malnutris en 2010		Achat: 80% mil, ensuite légumineuses et huile Pas d'info encore sur impact du programme	Collaboration avec commerçants Dispositif de plaintes	Approv en produits de base par commerçants dans zones éloignées

	Type Zone	Objectif	Target HHs	Montant total/ HH	Kit reçu	Modalité, fréq et durée transfert	Ciblage Zone	Ciblage ménages	Formation	Utilisation argent et impact	Succès	Défis
Oxfam/ ECHO (phase 2)	TM – rural « livelihood grants » (CFW plus tard)	Invest en moyens prod/ réhab post-crise	2,000	56,000	« livelihood grants »: coût de 2 chèvres ou 2 mois salaire Total :F56,000/ ménage en un ou deux versements	Nov. à mars, mais pas encore démarré Un seul versement	Selon résultat de campagne 2010/11	Mêmes ménages seulement dans le cas des inondations (Agadez et Niamey), autrement non!	Gestion budget familial, prise de décision des femmes/ budget	Informations pas encore disponibles	Mise en œuvre des transferts	
Oxfam/ ECHO	CFW – rural Mêmes zones	Bandes pare-feux	500	45,000	F1,500/ ménage/ jour	Distribution hebdomadaire Sept. à déc. Commerçants (6-8% commission)						
MDM/HELP/ ECHO	Téra (Tillaberi), Mayahi (Maradi)	Réduction morbidité, mortalité et malnutrition			Approv de médocs + qualité des soins + évacuations sanitaires + appui à la gestion de la structure sanitaire			Depuis 2006: gratuité soins pour U5, CPN et planning 2007: exemptions de paiement pour U5 par Etat Reste couvert par HELP (PLW, cas sociaux, accouchmt)		Utilisation des services: CPN: 93%, 71% Acouch assist: 27%, 30% U5: 1,3 à 2,5 contacts/ an	Favoriser les évacuations, accès aux médocs, augmentation de l'utilisation Pérennité partiellement assurée (car budget santé passera de 8% à 15%) Qualité des soins; Filet social	Gratuité parfois payante; affaiblissement de la gestion communautaire Pérennisation de la hausse d'utilis + évacuations Qualité des soins Confiance en Etat Définition cas sociaux ; Coût à évaluer
	Type Zone	Objectif	Target HHs	Montant total/ HH	Kit reçu	Modalité, fréq et durée transfert	Ciblage Zone	Ciblage ménages	Formation	Utilisation argent et impact	Succès	Défis
	Type Zone	**Objectif**	**Target HHs**	**Montant total/ HH**	**Kit reçu**	**Modalité, fréq et durée transfert**	**Ciblage Zone**	**Ciblage ménages**	**Formation**	**Utilisation argent et impact**	**Succès**	**Défis**

CRS/ICRISAT	Foire aux semences Rural - Dosso Zinder, Tillaberi, Maradi	Sécheresse 2009			US$20 (environ F10,000)/ménage en coupon à semences – correspondant à 20 à 30kg de semences	Mai à juillet 2010		Ménages vulnérables (4 classes) définis selon processus participatif : petite superficie et peu de couverture des besoins alim et d'animaux		- Germination: bons taux (80% mil; 100% pour sorgho et niébé) - Utilisation semences: 83% semis; 13% consommation - Superficies: 91% augmentation - Injection fonds dans éco locale	Partenariat avec STD et association de multiplication semences Réussite opération (ciblage, utilisation)	Conservation des semences Systématiser les tests de germination
CRS/FFP (ligne EFSP)	Coupons de vivres Rural Tillaberi		20,108	75,000	Valeur du coupon: F25,000/ ménage (selon coût vivres: céréales + pulses) Total: F75,000/ mén	Collaboration avec commerçants agrées Pendant 3 mois (août, sept., oct.)						Ciblage
VSF-B/ FAO/ DUE	CFW Déstockage Ménages pastoraux Dakoro (Maradi)	Aug pv achat Transf viande	1,808	50,000	Rachat des animaux à F50,000/ tête bétail (au lieu de < 10.000F),	Juin à août 2010 5 semaines	Zone d'intervention de VSF depuis 2003 + zone des plus affectées par crise (bilan fourrager + céréalier) + zone de refuge pour pastoraux/ mortalité	Nb repas, div alim, malnut, femme chef ménage, exode, UBT, type propriété bétail, résultats zoo-techn, prod fam, état animaux,	Pas de formation	Utilisation de l'argent : - femmes CFW transformation viande: alimentation de la famille - hommes propriétaires de bétail: aliment de bétail + petits ruminants Pas de suivi/ nutrition		Mobilisation de la main d'œuvre (besoin d'un nb élevé)
VSF-B/ FAO/ DUE			491	1,750	F1,500-F2,000/j+viande Total: F10,000 (au lieu de F40,000 prévu) abattage/ transformation et redistribution							
VSF-B/FAO/ DUE	CFW Parefeu	Aug pv achat	500	48,000	1km= F30,000/ 500 pers Total	Oct. à déc. 2010 Durée: 4 semaines		Bénéficiaires différents				Taux officiel de rémun est bas

	Dakoro (Maradi)				F48,000/pers							Mobilisatio pop difficile Substitution à des travaux auto-gérés localement
	Type Zone	**Objectif**	**Target HHs**	**Montant total/ HH**	**Kit reçu**	**Modalité, fréq et durée transfert**	**Ciblage Zone**	**Ciblage ménages**	**Formation**	**Utilisation argent et impact**	**Succès**	**Défis**
WFP/CRS	CFW	SA/ NUT Conserv sol	4,080	70,000	F1,000/pers/ jour pendant 20 jours/ mois Total : environ F70,000/ménage ??	Sept. à déc. 2010 4 mois FCFA270, 000,000	Insécurité alimentaire : 64%; accès marché Présence partenaire		Formation techniques (récup terres, etc.)	Ménage (FCS + CSI + utilisation): Utilisation: vivres 62%, autres (achat animaux): 26% FCS: 37% à 11% conso pauvre Marchés (prix, flux) : prix stables (au lieu de chute habituelle)	Objectif atteints	Quelle mise à l'échelle? Besoin: renf. capacités des instit; sensibil; saison; suivi dépenses;
WFP/Concern	Cash Maradi, Zinder et Tahoua	Protection Blanket feeding	37,000	30,000	Total: env. F30,000/ ménage ???	Nov. à déc. 2010 1,05 Mrd FCFA IMF + ONGs	Non présenté	Non présenté	Non présenté	Non présenté	Non présenté	Non présenté
Unicef/ SCUK et CARE	Rural Tahoua, Maradi	Protection Blanket feeding	35,000	60,000	F20,000/ ménage Total: F60,000/ ménage	Pendant 3 mois pendant le Blanket feeding	Enquête nutritionnelle de juin 2010	Ménages avec enfants U2	Sensibilisation sur l'utilisation de l'argent et changements de comportements	Impact ? pas encore. Evaluation externe en cours par consultant. PDM par INS suivi des marchés par SIMA		Ciblage sur HH vulnérables ; collab avec STD en urgence ; collab commerçants
BILAN des ACTIONs	Transferts sociaux (sans contribut) : cash ou coupon/ CFW	Live saving (nutrition and mortality) vs. livelihood protection	Estimated 166 238 HHs (1,16 indiv) (ECHO funded: 33, 317)	Approx. CFA 10.4 Mrd (approx. EUR 15.9 Mio.)	CFW: F1,000-F2,000/ j TM : - mois: F15,000-F25,000 - total: F50,000-200,000	Duration: 1 à 8 mois	Selon vulnérabilité telle qu'établie par SAP (déficit en céréales) Zone d'intervention de l'agence Connaissances locales	Critères économiques/ pauvreté (HEA); critères conjoncturels (impact du choc); critères sociaux	Minorité: 5/13	Sécurité alimentaire: effet positif semble acquis. Expériences isolées sur effets positifs sur statut nutritionnel des enfants – à approfondir.		

Annex IV. Food Security

IV.i. Introduction

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

IV.ii. Livelihood Zones

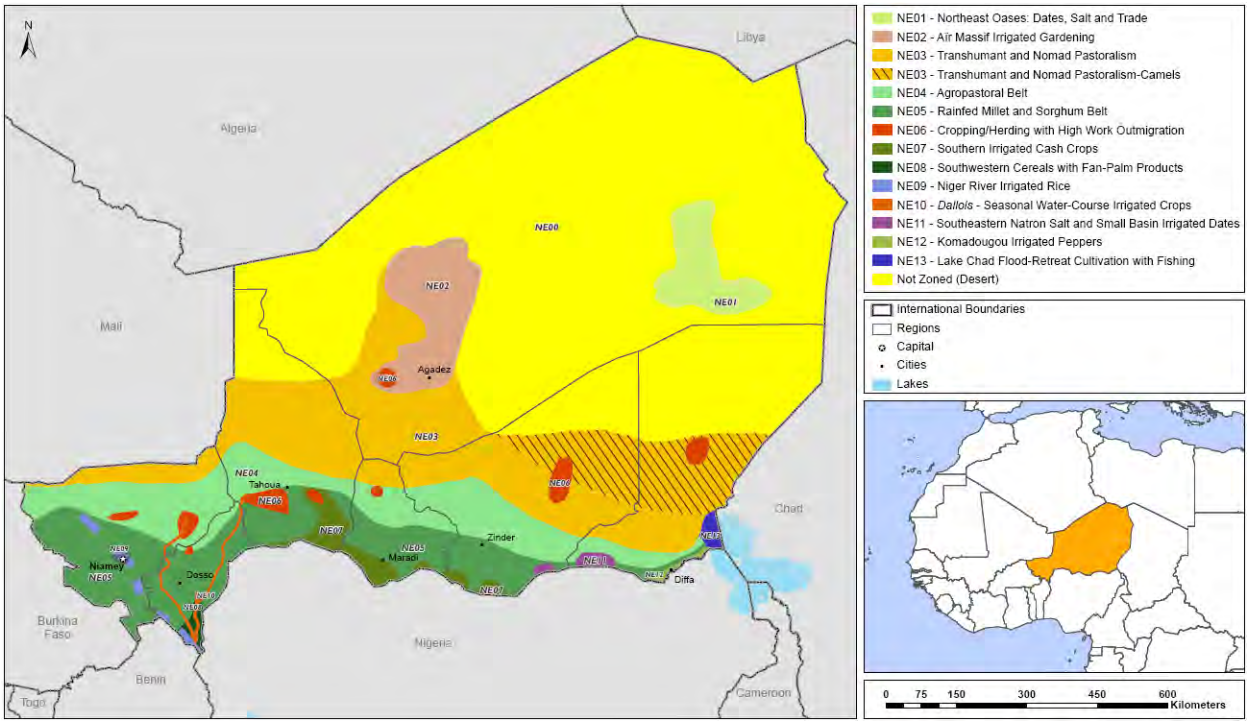
Livelihood zones are geographic areas in which households share, on average, similar livelihood patterns, or generally have access to the same set of food and cash income sources and markets. Niger has 13 livelihood zones, as depicted in Figure 15.

Figure 15 was created by FEWS NET, which developed the livelihood zones using a combination of quantitative and qualitative data, local expert knowledge, and field verification.[5] These zones provide the foundation for household economy analyses.

In every Nigerien livelihood zone, a combination of cereals, roots and tubers, and dates are grown. Livestock is also raised in all livelihood zones. Better-off households earn income from selling crops and livestock (particularly cattle, goats, sheep, chicken and camels), from selling related livestock products, and from petty trade. Poorer households complement their income from crop sales with cash earned from labor—mainly unskilled labor—and from selling natural products such as firewood, thatching grass, and charcoal. As described later in this Annex, livestock also represents a source of regular and fallback income, depending on a household's economic status.

[5] FEWS NET worked in collaboration with the Government of Niger (GoN) via the Agriculture General and Regional Directorate of Ministries of Agriculture and Livestock, the Early Warning System, the Information Communication Unit, and the National Institute of Statistics; WFP; FAO; and Oxfam.

Figure 15. Livelihood Zones of Niger



Source: FEWS NET

IV.ii.i. Dominant Livelihood Strategies

The economy in rural Niger is becoming more cash-based, and therefore the role of markets as a part of the rural Nigerien livelihood is increasing (FEWS NET, August 2011). Although most Nigeriens are primary producers, they also depend on the market, to varying degrees, for household food supply.

Part of this market participation comes from selling and exchanging livestock, which as previously mentioned is a component of almost all Nigerien livelihoods (even in the poorest agricultural households). For pastoralists, livestock is a regular and major source of income for buying staple foods and covering other expenses; for producers, livestock is viewed more as a fallback option for raising emergency cash.

Poor producer households are also most likely to earn income (in cash, not in kind), from paid labor; as mentioned above, labor income is often supplemented by selling firewood and charcoal and from petty trade. Households located far from agricultural areas are more likely to migrate to agricultural areas for work.

IV.ii.ii. Underlying Causes of Food Insecurity

Food insecurity is found in various areas of the country, and is attributable to numerous factors. Among the factors listed by the 2005 CFSVA and FEWS NET are the following:

- During the past 14 years, Niger has experienced three severe droughts: in 1996, 2000 and 2004. Two of these droughts were associated with food crises. These weather-related shocks coincided with lower cereal production, high cereal prices, and lower incomes for the rural poor. In 2005, as a result of the 2004 drought, an estimated 2.4 million Nigeriens suffered severe food shortages, with more than 800,000 classified as critically food insecure (FEWS NET, 2005).
- The high birth rate, and thus burgeoning population, has over-burdened and is continuously degrading natural resources. This translates into a continued decline in grain yields. Households are unable to produce enough, even when rainfall is good. For a single year deficit, they need several consecutive years of good harvests in order to recover.
- As the population expands, competition for land and water intensifies. Land degradation due to desertification, soil erosion, and deforestation is leading to loss of productivity and increased conflict.
- Seasonal and annual price increases significantly affect household access to food staples.
- Asset poverty.
- Lack of security. More than a decade of socio-political instability, and conflict, has led to a deterioration of the country's economy and to food insecurity. Conflict typically reduces food availability, access, and utilization. It also leads to poverty, high infant mortality, inequality, and declining per capita incomes. The growth-inhibiting impacts of conflict can be observed in the rapid resumption of agricultural growth following peace, as experienced in Niger.
- Poor infrastructure: especially roads that worsen during the rainy seasons.
- Lack of diversified farming practices.
- Smallholders place increasingly marginal lands under cultivation. Low and declining soil fertility limits the volume and reliability of production and restricts farmers to millet and sorghum in the absence of improved techniques and inputs.
- Animal and crop diseases

IV.ii.iii. Typical Hazards

Hazards to food security in Niger, as identified in the 2011 FEWS NET report *Livelihoods Zoning "Plus" Activity in Niger*, include:

- Sudden increases in the world prices of food commodities.
- Exchange rate fluctuations: appreciation of the Nigerian naira has affected prices of imported grain.
- Loss of arable land via erosion, landslides, or sink holes.
- Damage to crops from pests, rodents, and predator birds.
- Climate-related shocks such as droughts, floods, and fires.
- Extended droughts or rainfall deficits during germination periods.
- Hikes in fuel prices, which increase marketing and transportation costs.
- Animal diseases.
- Poor access to water.
- Poor road infrastructure.
- Civil insecurity in Niger, which limits access to productive land and may lead to loss of main livelihood (which, for many households, is livestock and crops)
- Limited access to agricultural tools and seeds, water, health, and sanitation—thus reducing cultivation and utilization of food.

- Variable climatic conditions that affect crop and livestock production, and livestock movement.

IV.ii.iv. Key Food Insecure/Vulnerable Populations

By any measure, food insecurity is pervasive in Niger. During the 2010 food crisis, almost 47.7% of the Nigerien population was moderately or severely food insecure, and of that percentage 22.2%--nearly half—was severely food insecure (FANTA II, July 2011). The GoN has projected that about 17.3% of the national population will face moderate or severe food insecurity in 2011.

The geographic distribution of food insecurity among the country's more than 15 million inhabitants varies seasonally and inter-annually. Seasonally, food insecurity peaks for farmers between June and September, while pastoral food insecurity rises after November when livestock are taken southward in search of water and pasture (FANTA II, July 2011).

According to FANTA, although food insecurity is higher in the urban than the rural areas, chronic food insecurity is most widespread in agro-pastoral communities, where agriculture is tenuous and unreliable, market access is weak, and livestock holdings are limited. Unfortunately, the 2009–2010 pastoral crises may have eroded livestock assets sufficiently to have fundamentally undermined the pastoral economy as well.

IV.iii. Summary of Recent Food Security Assessments

There are few recent food security assessments for Niger. In fact, only one has been found: FAO/WFP's Crop and Food Security Assessment Mission (CFSAM).[6] The following summarizes this assessment, and outlines the key assumptions underlying its findings.

IV.iii.i. Crop and Food Security Assessment Mission (CFSAM)

Objective. In 2009–2010, Niger suffered a serious food crisis, similar to another five years earlier, which led to (1) a dramatic slump in agricultural and pastoral production, (2) loss of assets, livestock, and other forms of saving, and (3) a high level of household indebtedness.

It was against this background that the GoN, FAO, WFP, CILSS, and FEWS NET conducted a thorough assessment of the 2010 crop, pasture, and food security situation in order to (a) better understand the extant scenario and prospects, and (b) design, prepare, and implement income- and production-generating activities that would enable people to access food produced during 2010–2011.

Methodology. The assessment was conducted from October 18 through July 13 2010. The methodology entailed the following activities:

- A meeting was held among the key stakeholders and information sources[7] to discuss the methodology.

[6] Inter-Agency Crop and Food Security Assessment Mission to Niger, January 20, 2011. Available at http://documents.wfp.org/stellent/groups/public/documents/ena/wfp231339.pdf.

- The team was divided into three groups, and was able to visit six of the country's seven regions—Dosso, Maradi, Tahoua, Tillaberi, and Diffa—between October 17 and November 3. The only region not visited was Agadez.
- Data were collected at the regional, departmental, village, and household levels.
- The groups met with various technical services and regional and sub-regional food crisis prevention and management committees, and conducted numerous focus group-type interviews to gauge the impact of the 2009–2010 food crisis on croplands in 2010 and on the production available for human consumption.
- The team carried out field visits to observe the state of crops and rangelands, and interviewed farmers and herdsmen on production conditions, expected yields, and their adaptation strategies.
- The team visited markets in order to observe price movements, particularly cereal and livestock prices.
- The team visited several recuperation and nutrition centers, and interviewed beneficiaries via official, organized focus groups, to better understand the current level of acute malnutrition, the prevalence of malnutrition in recent months, and its main causes.

Summary of Key Findings. Key findings of the CFSAM assessment included the following:

1. The 2010 and 2011 agricultural seasons produced a record cereals crop.
2. Despite the floods that affected several regions in July and August, rainfall was adequate on the whole, which enabled cereals cycles in most departments to proceed normally.
3. Food and non-food assistance provided by the government and the partners have been effective and helped cushion the impact of the food crisis on seed availability.
4. With the exception of a few localized areas, the rangelands have recovered well following the sound phenological development of fodder crops, and water points have been replenished.
5. Bush fires were reported. During the last two weeks of October, about 28,000 hectares of rangeland were destroyed in the Maradi region.
6. Aggregate cereals production, estimated at over 5.6 million MT (including off-season crop harvest forecasts) is about 60% higher than the 2009 output and exceeded the average of the past five years.
7. The output of niébé (cowpea), the main cash crop, is expected to be 1.9 million MT, compared with 787,472 MT in 2009 and 1.5 million MT in 2008.
8. According to these figures, the country should have a significant cereal surplus. It is understood that this surplus will be used partly to replenish stocks, which were depleted after the 2009–2010 food crisis.
9. The high level of cereal production, coupled with favorable harvests in the neighboring countries—particularly in Nigeria, Burkina Faso, Mali, and Chad—is expected to lead to much improved and satisfactory food availability during the 2010–2011 marketing year.
10. According to the most recent in-country nutrition survey, acute malnutrition is still extremely worrying—higher than 17% in October–November 2010 in the regions of Agadez and Zinder. The many causes of malnutrition relate to the affected populations' low incomes, but are also related to inadequate care and feeding practices, and the lack of access to health care facilities and services.

[7] FAO; WFP; CILSS-AGRHYMET; FEWS NET; Ministry of Agriculture and Livestock, Protection Directorate (DPV); the Food Crop Directorate (DCV); the National Meteorological Agency; the Early Warning System (EWS); the National Food Crisis Management and Prevention Agency (DNPGCA); *Système d'Information des Marchés du Bétail* (SIM Bétail), the livestock market information system; and *Système d'Information sur les Marchés Agricoles* (SIMA), the national system for agricultural market information.

Summary of Key Recommendations. Key recommendations of the CFSAM assessment included the following:

- It is urgent to improve household purchasing power and access to food by supporting herd replenishment, off-season cropping, and other income-generating activities. Support should also be given to marketing agricultural products by replenishing cereal banks and national security stocks.
- Support should be given to nutritional recuperation centers.

IV.iv. Seasonality of Activities

Table 16. Seasonal Calendar

Month/ Date	Jan	Feb	Mar	Apr	May 1-4	Jun 1-4	Jun 5-18	Jun 19-20	Jun 21-30	Jul 1-10	Jul 11-31	Aug	Sept	Oct	Nov	Dec
Agadez											x	x	x	x		
Diffa											x	x	x	x		
Dosso							x	x	x	x	x	x	x	x		
Maradi								x	x	x	x	x	x	x		
Niamey							x	x	x	x	x	x	x	x		
Tahoua										x	x	x	x	x		
Tillaberi										x	x	x	x	x		
Zinder										x	x	x	x	x		

Rainy season (x)

Dry Season

Source: (Bulleting Decadaire - Mois de juillet 2010 , 2010).

Niger has two main seasons: a rainy season and a dry season. However, rainfall is highly variable across regions and from year to year, which influences variations in production and subsequently vulnerability to shocks (World Bank, 2009). In general, the rainy season coincides with crop planting, and starts in some areas in the south around May 15, followed by the dry season which usually starts after October. In Maradi, one of the main production areas (World Bank), the rainy season begins mid-June and ends around October. In Zinder (second important production area according to the World Bank), and in Tahoua and Tillaberi, the rainy season usually begins in July and ends in October. Finally, Agadez begins its rainy season in mid-July. For Niamey (the main urban center) and neighboring Dosso, the rainy season begins around the second week of June and continues until October.

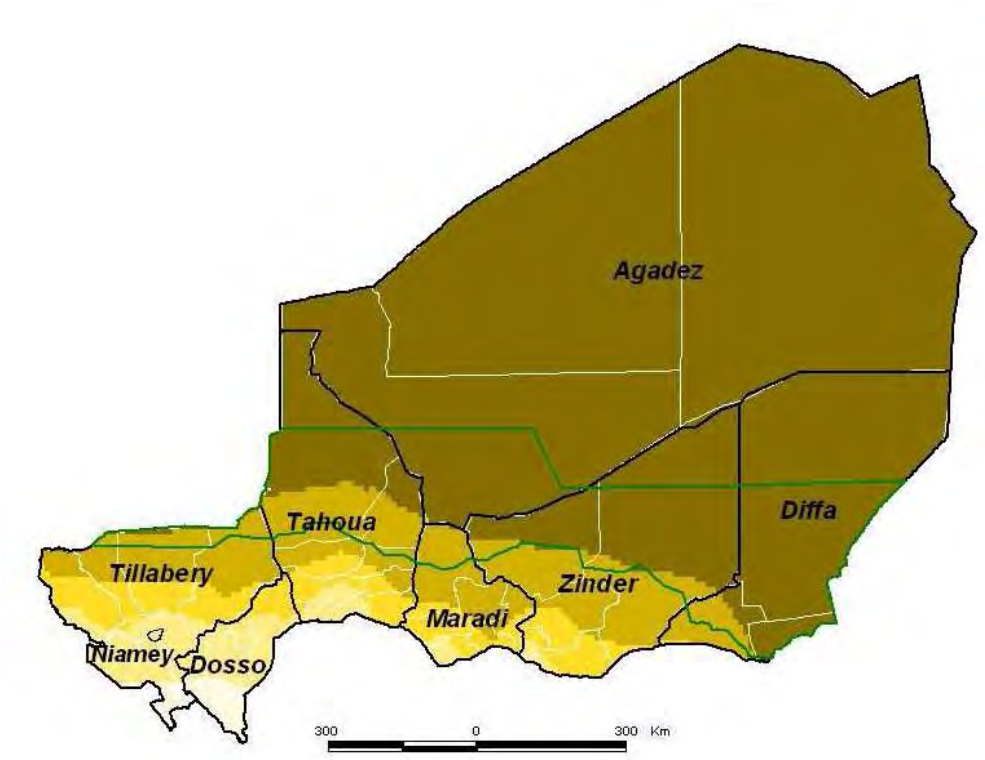
IV.v. Seasonality of Prices

This section includes an analysis of nominal monthly consumer prices for six main areas in Niger (which are depicted in Figure 16):

- Niamey, the capital and main urban center in the country.
- Dosso and Tillaberi, located in the south west.
- Tahoua in the south central part of the country.
- Maradi and Zinder, the country's main production areas, also in the south.
- Agadez, in the northern part of the country
- The analysis uses monthly nominal consumer prices obtained from SIMA. Prices correspond to years 2010 and 2011, which for the purpose of this analysis are considered ~~-n~~ormal" years in terms of production and price variation.

Prices for most imported grains, such as rice and maize, show little variation across different markets. On the other hand, local prices for millet and sorghum tended to be higher from May to September, which is usually the planting season, and decline during harvest season, which begins in October.

Figure 16. Niger Price Analysis – Six Main Areas

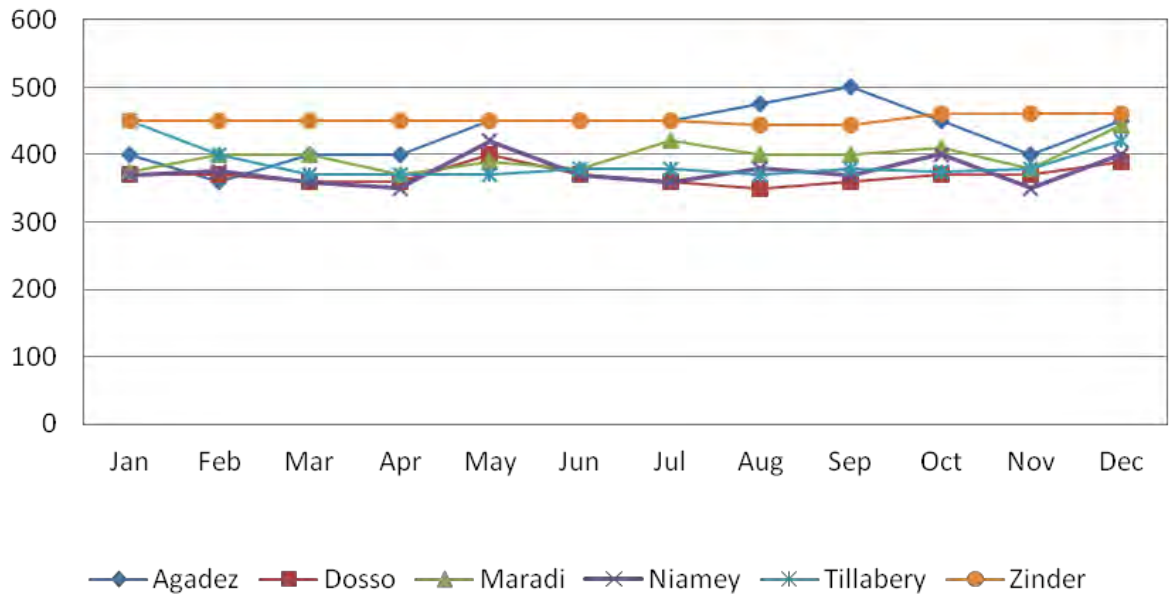


Source: (Bulleting Decadaire - Mois de juillet 2010 , 2010

IV.v.i. Imported Rice and Maize

In general, prices for imported rice and maize vary relatively little during a year. This is probably due to market integration in the region. Niger imports most of its rice and maize consumption from neighboring countries: Nigeria, Burkina Faso, Mali, and a small percentage from Benin (Beekhuis, 2005) (World Bank, 2009); this helps keep consumer prices stable throughout the year. However, this also makes Niger more vulnerable to small variations in production and prices in neighboring countries.

Figure 17. 2010 Average Monthly Nominal Consumer Price – Imported Rice (CFAF/kg)

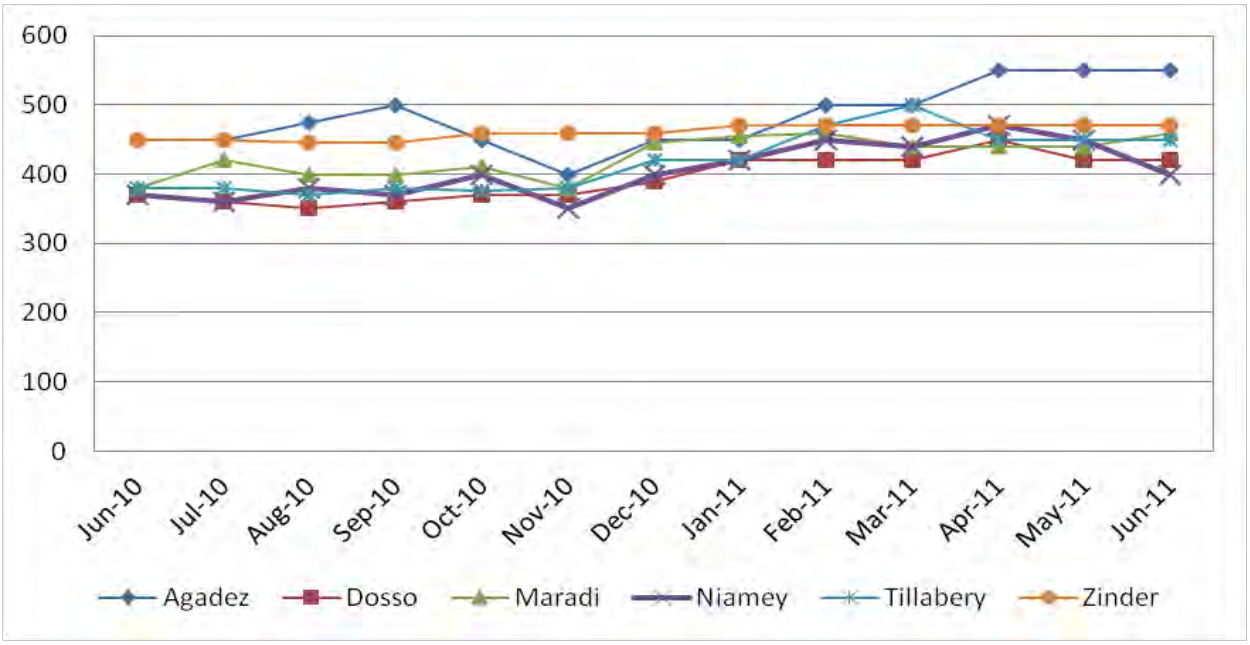


Source: SIMA

As the above figure indicates, in 2010, nominal consumer prices for imported rice were relatively stable across main markets in the south, particularly in Tillaberi and Zinder. In Dosso, Maradi, and Niamey, there were some small increases in May, after which prices declined until slight increases in October and again in December.

The Agadez market is further north from the main production and trading areas of Maradi and Zinder, and the main market area of Niamey—and therefore more price variation is expected. True to form, Agadez had more—and more pronounced—price changes in 2010. Prices increased from April to May, followed by a stable period until July, and another substantial increase from July to September. After September Agadez prices decreased again.

Figure 18. 2010–2011 Average Monthly Nominal Consumer Price – Imported Rice (CFAF/kg)

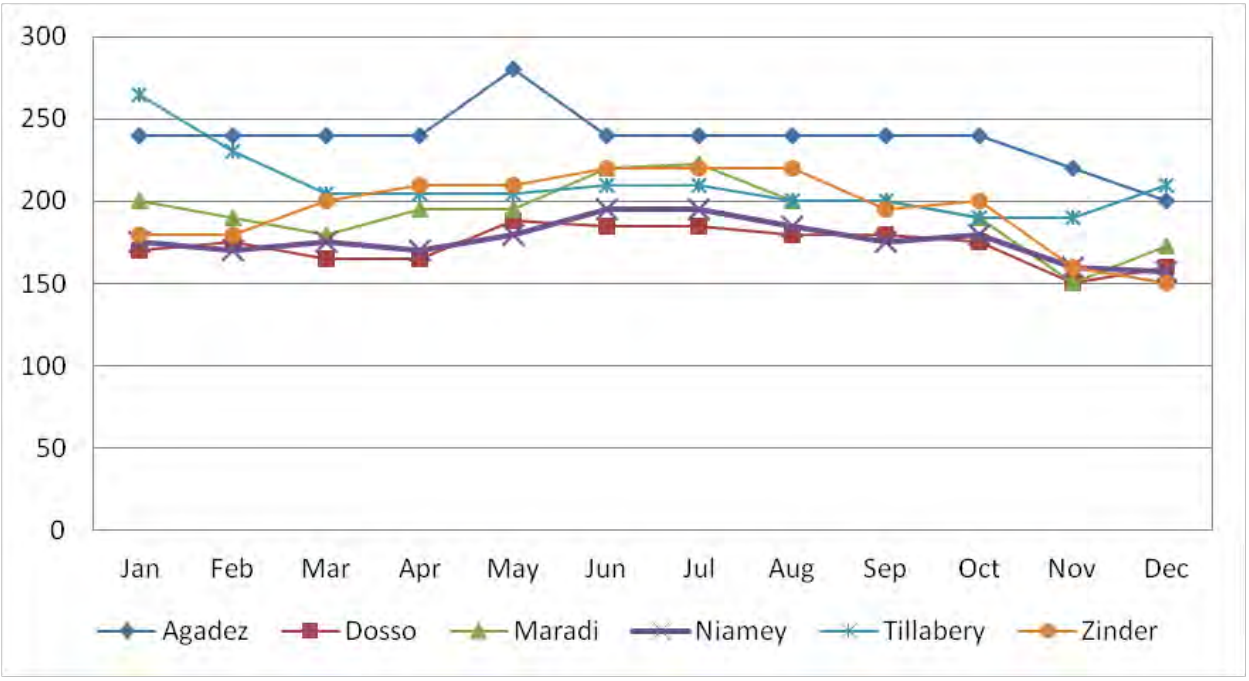


Source: SIMA

The above figure shows price variations for imported rice from June 2010 through June 2011. Nominal retail prices showed slightly more variation in 2011 than in 2010, and in some markets, a relatively upward trend overall. As expected, prices varied more in the Agadez market, in the north, where prices increased from July through September 2010, followed by decreases in October and November 2010, and thereafter markedly upward trend until April 2011. In Niamey, prices increased from November 2010 until April 2011, and started declining after that. Other areas such as Dosso, Maradi and Tillaberi showed trends similar to Niamey. Zinder showed the least variation in nominal consumer prices during the thirteen-month period covered in the above figure.

Maize prices were relatively stable during 2010. In the main market of Niamey, maize prices slightly increased from May to July, to mostly decrease from August until the end of the year. In other markets in the south, prices showed similar trend throughout the year. In the northern area of Agadez, prices were stable for the most part with a slight increase from April to May continued by a lower price from June and even lower after October.

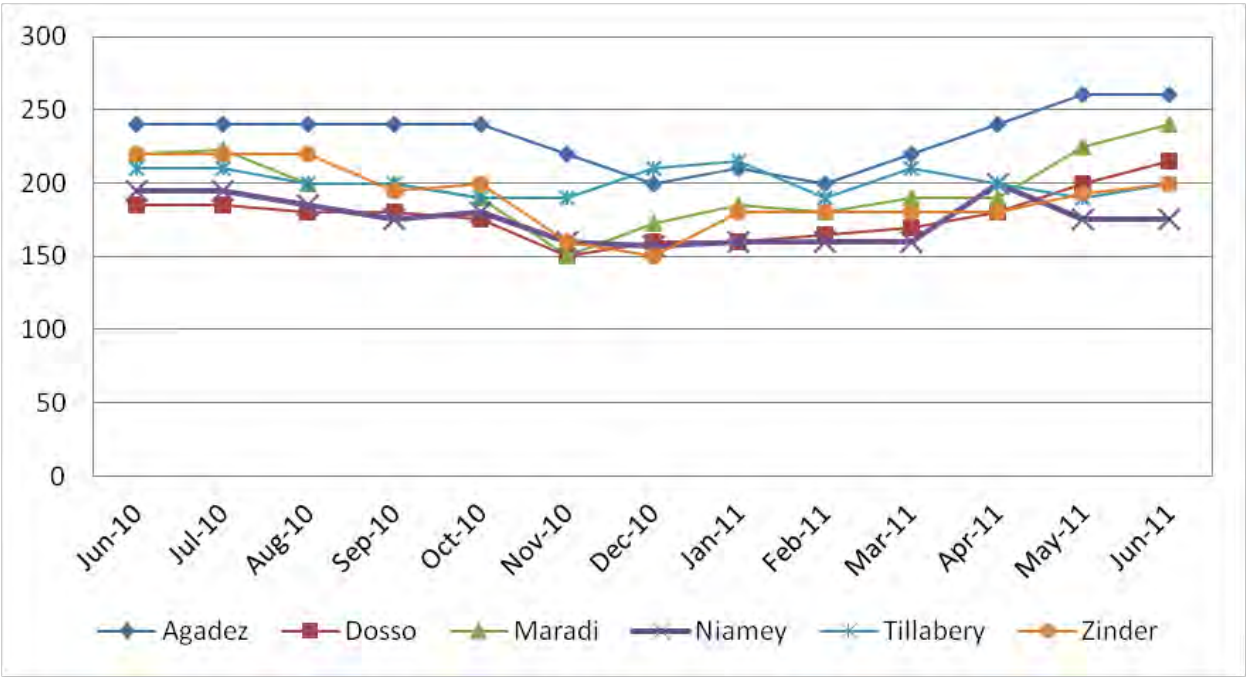
Figure 19. 2010 Average Monthly Nominal Consumer Price – Imported Maize (CFAF/kg)



Source: SIMA

Unlike rice prices, nominal consumer prices for maize showed more seasonal variations during the 2010–2011. As reflected in the above figure, from June through October 2010, prices in almost all markets around the country were relatively stable. However, after August 2010, prices started to decline in Niamey and Zinder while remaining stable in Agadez, Dosso, and Tillaberi. After October 2010, all areas, with the exception of Tillaberi, experienced a decrease in consumer prices. In Tillaberi, prices slightly increased from November 2010 through January 2011 and later (as reflected in the figure below) generally decreased through May 2011. After October 2010, prices in Agadez, Dosso, and Niamey remained low, while Maradi and Zinder showed a slight increase and upward trend through June 2011. Prices in Agadez started to increase after February 2011 and this trend continued through June 2011. Prices in Niamey decreased from June 2010 through November 2010, remained stable until March 2011—when a spike occurred—and then declined and stabilized as of the end of June 2011.

Figure 20. 2010-2011 Average Monthly Nominal Consumer Price – Imported Maize (CFAF/kg)



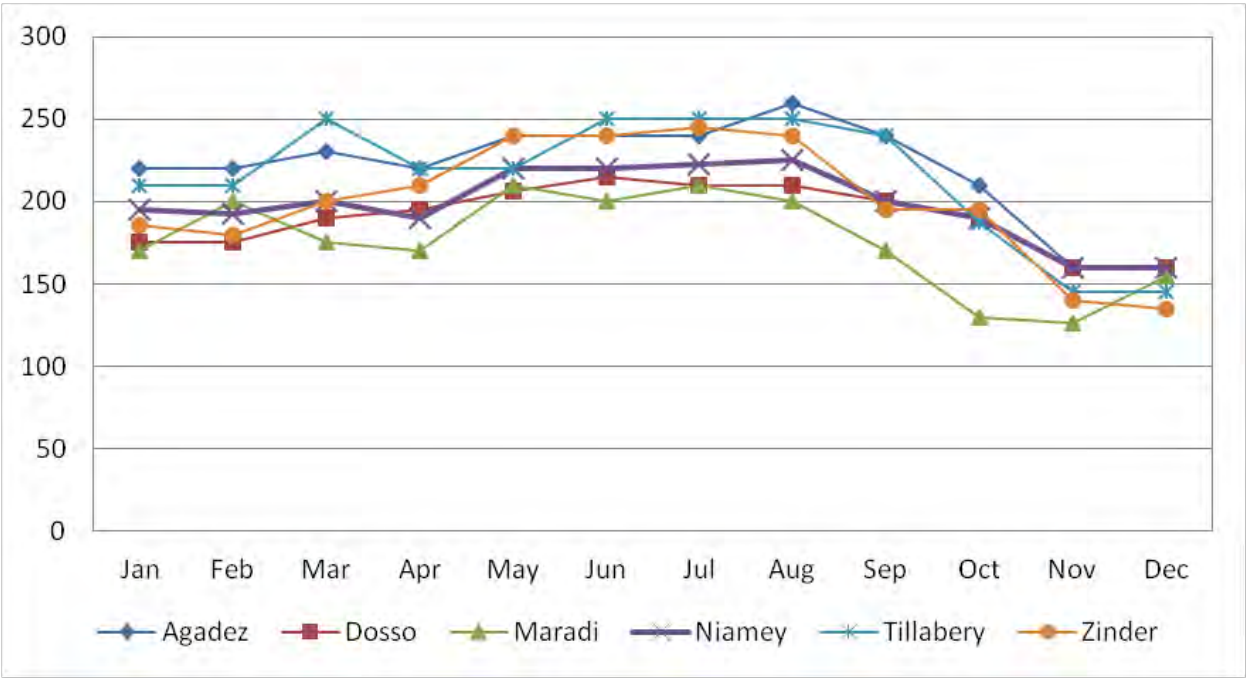
Source: SIMA

IV.v.ii. Local Millet and Sorghum

As expected, prices for locally produced millet and sorghum tend to vary more during the year. In general, prices tend to increase after April until August, and decline from August to November and December.

As for local millet prices, nominal consumer prices in general were relatively stable from January through August 2010 for all areas in this study (see the figure below). Prices were slightly more variable in Maradi and Tillaberi. While prices in Tillaberi tended to fluctuate upwards during this period, in Maradi prices were relatively lower. After August 2010, prices in all areas started a downward trend through November 2010.

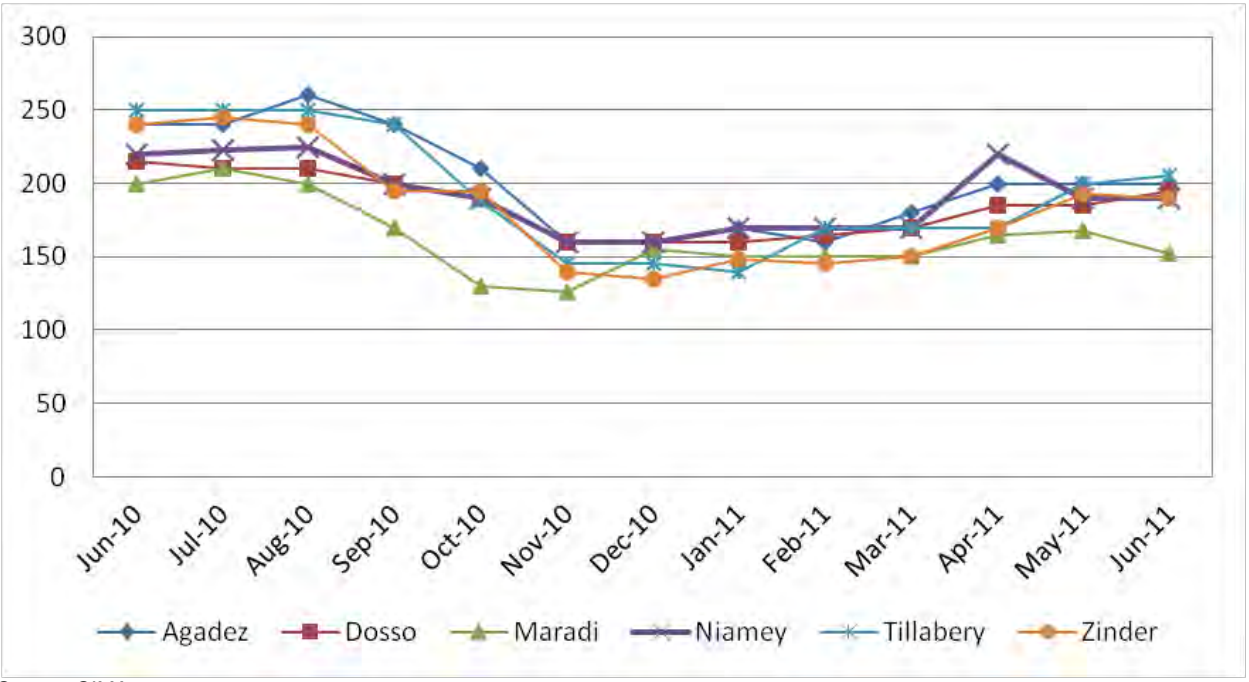
Figure 21. 2010 Average Monthly Nominal Consumer Price – Local Millet (CFAF/kg)



Source: SIMA

Comparing the 2010 and 2011 seasons, millet consumer prices in all markets had a similar downward trend from September through November 2010. Subsequently, prices were mostly stable through March 2011 (with a few exceptions in Maradi and Tillaberi), and started to increase again after March 2011 (with some small variations in Maradi and Niamey).

Figure 22. 2010-2011 Average Monthly Nominal Consumer Price – Local Millet (CFAF/kg)

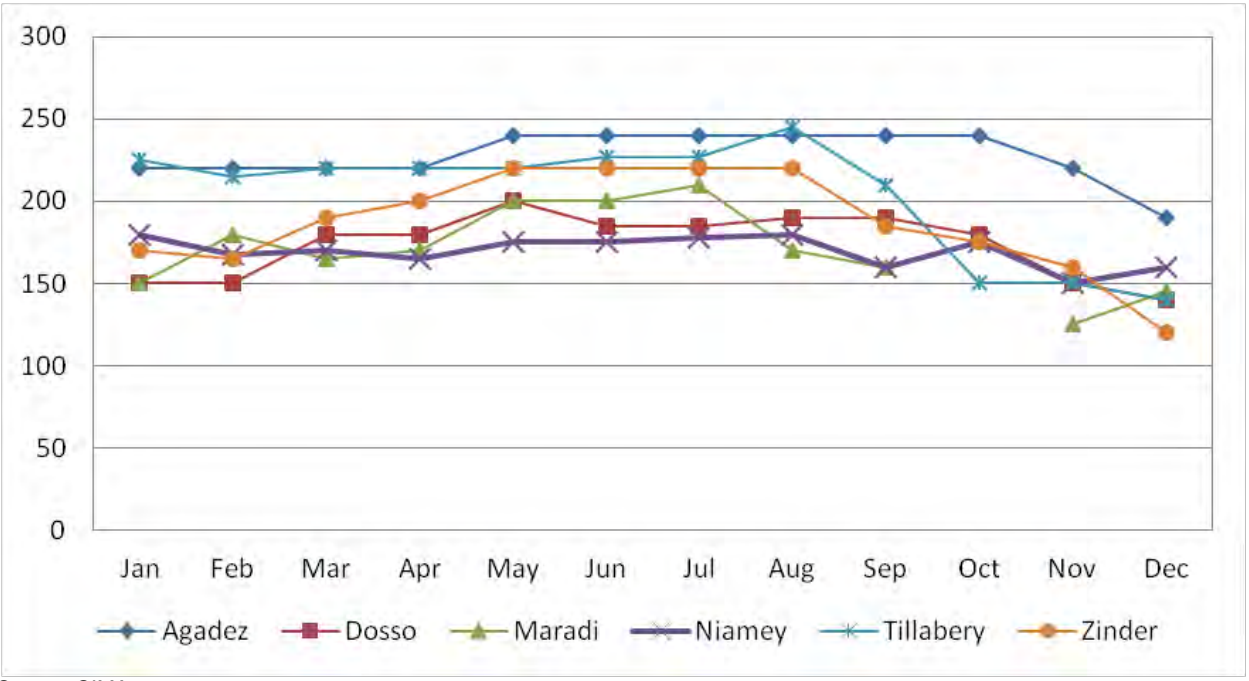


Source: SIMA

In general, sorghum prices were somewhat variable across all markets. However, prices tended to follow a similar trend during the year: relatively stable during January and February, slightly increasing from March through August, and finally decreasing again from September onward.

In 2010, in Niamey—the main market in Niger—sorghum prices were relatively stable during the year, with a minimal variation in September and October. In Tillaberi, prices were more variable, increasing from March until August, sharply decreasing after August, and remaining low through the end of the year. Prices in Maradi and Zinder increased from February through May, remained stable until August, and then decreased through December. In Agadez and Niamey, prices were generally stable until October and then declined through December.

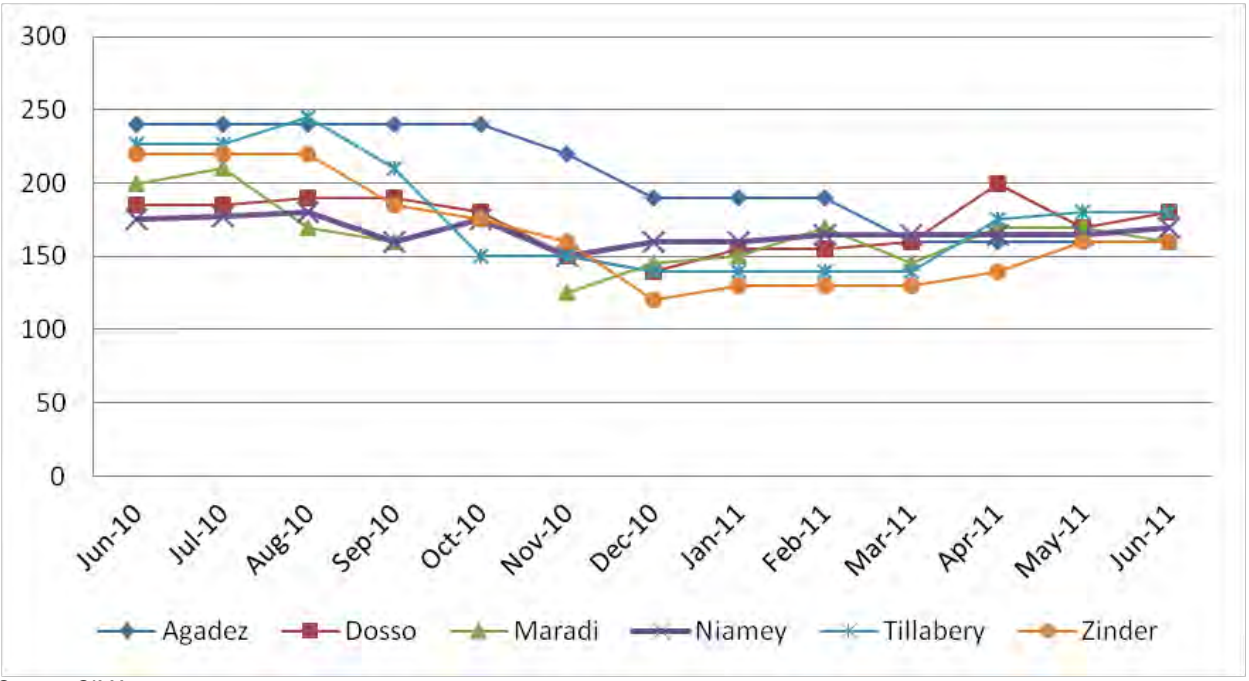
Figure 23. 2010 Average Monthly Nominal Consumer Price – Local Sorghum (CFAF/kg)



Source: SIMA

During the 2010–2011 period, and as reflected in the figure below, consumer prices for local sorghum followed similar trends across the various markets. Prices were generally stable in June and July 2010, followed by a downward trend from around August until December 2010, to remain stable again from December through June 2011. However, some variations were observed in Maradi and Tillaberi, and a small price increases occurred in Dosso from March to April 2011, but prices in Dosso later returned to their lower levels.

Figure 24. 2010–2011 Average Monthly Nominal Consumer Price – Local Sorghum (CFAF/kg)



Source: SIMA

IV.vi. Consumer/Retail Price by Markets 2007–2009

This section covers nominal consumer prices for rice, maize, millet, and sorghum from January 2007 through December 2010 across Niger's main regions. The objective of this analysis is to provide details about price changes during this period and also to assess how the global food crisis in 2008 impacted consumer prices. The areas covered in this section are Niamey, Dosso, Tillaberi, Maradi, and Zinder—which are all located in the southern part of the country—and Agadez, the only region represented from the north.

IV.vii. Overview of Average Prices, by Commodity

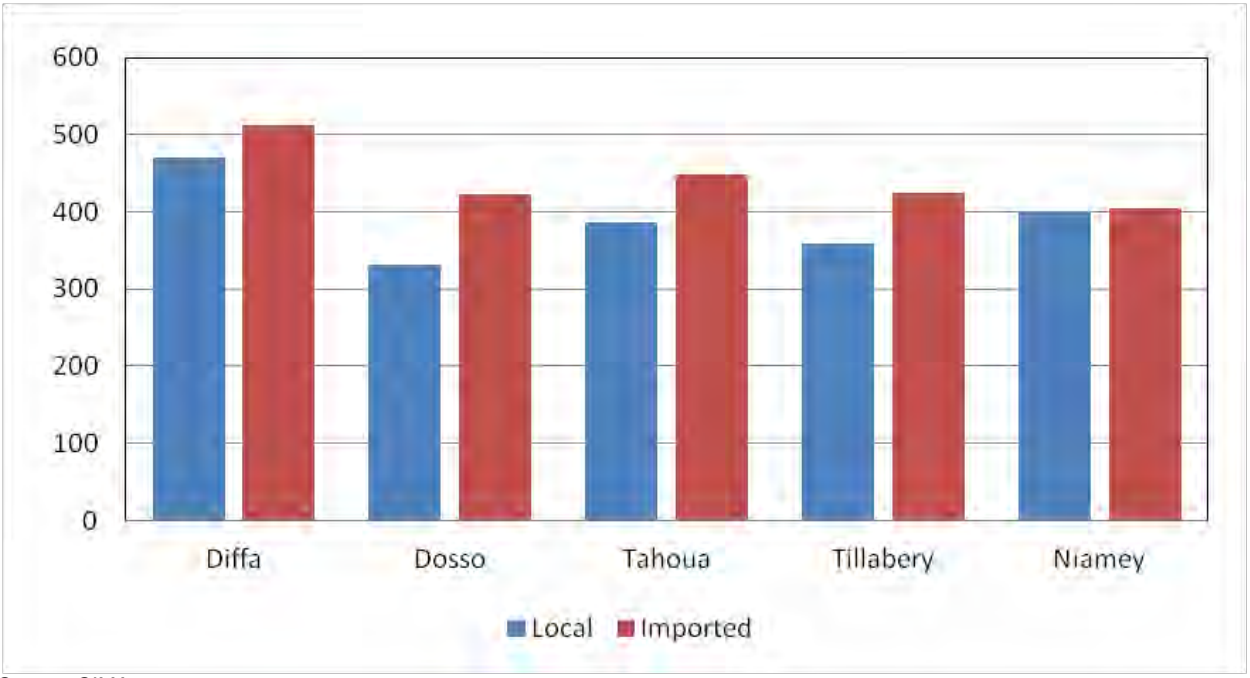
IV.vii.i. Rice

In the specific case of local versus imported rice prices, the areas included for this analysis are Diffa, Dosso, Tahoua, Tillaberi, and Niamey (see the figure below). The analysis includes these areas primarily because data are available relating to local and imported prices.

While Niger imports almost all rice, it has small niches of local production that create some variation between local and imported consumer prices across markets. In 2010, local consumer prices were generally lower than imported rice prices (see the figure below). In Niamey, the main market in the country, there was a 10% difference between local and imported prices. Nominal consumer prices for local rice were CFAF400 per kilogram compared with CFAF404 per kilogram for imported rice. In Dosso, Tahoua, and Tillaberi, local and imported prices

showed a greater gap. Local prices in Dosso were CFAF332/kg compared with CFAF423/kg for imported rice, representing a 36% price difference. This was also the highest difference among all areas of the country. In Tillaberi, the local rice price was on average CFAF359/kg compared with CFAF424/kg for imported rice (a 26% price difference), while in Tahoua local rice prices were CFAF359/kg compared with CFAF424/kg for imported rice (a 22% difference).

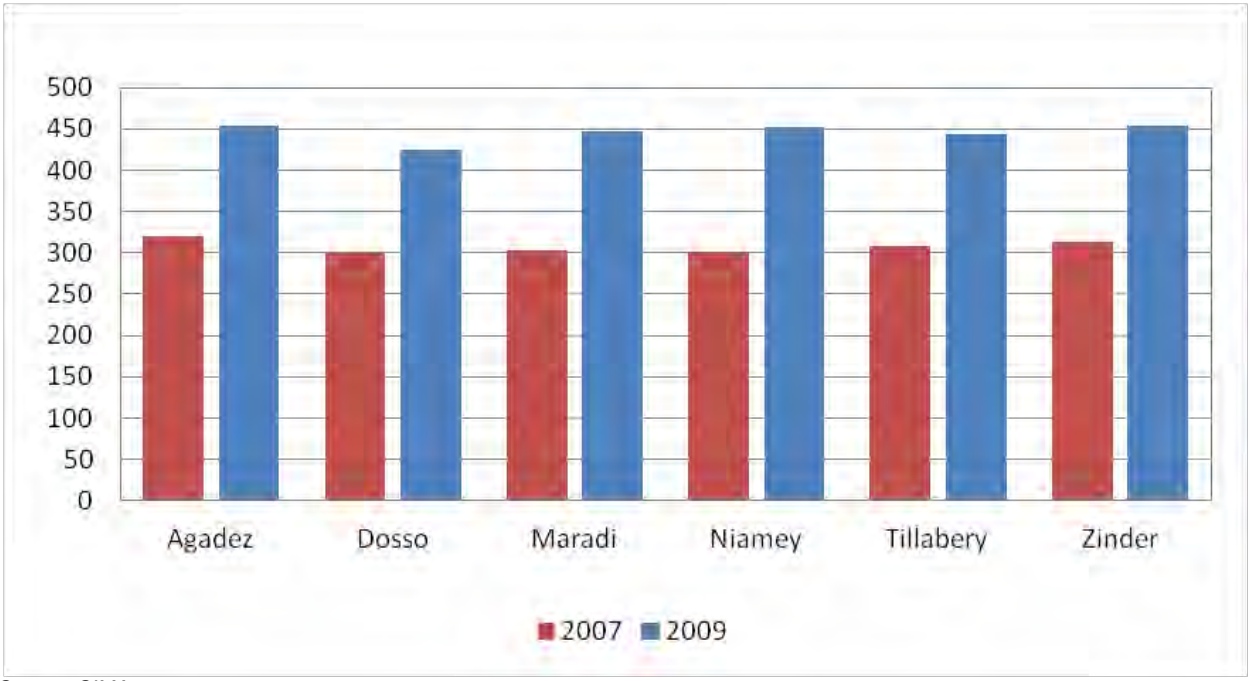
Figure 25. 2010 Rice Local and Imported Nominal Consumer Prices (CFAF/kg)



Source: SIMA

In 2007 and 2009 (the years before and after the 2008 food crisis), and as reflected in the figure below), imported rice prices were more than 40% lower across all regions examined. In Niamey, nominal consumer prices were 50% lower in 2007, with prices going from CFAF302 in 2007 to CFAF452 in 2009. This differential most likely reflects the influence of global rice prices, which are believed to be responsible for this notable difference between 2007 and 2009.

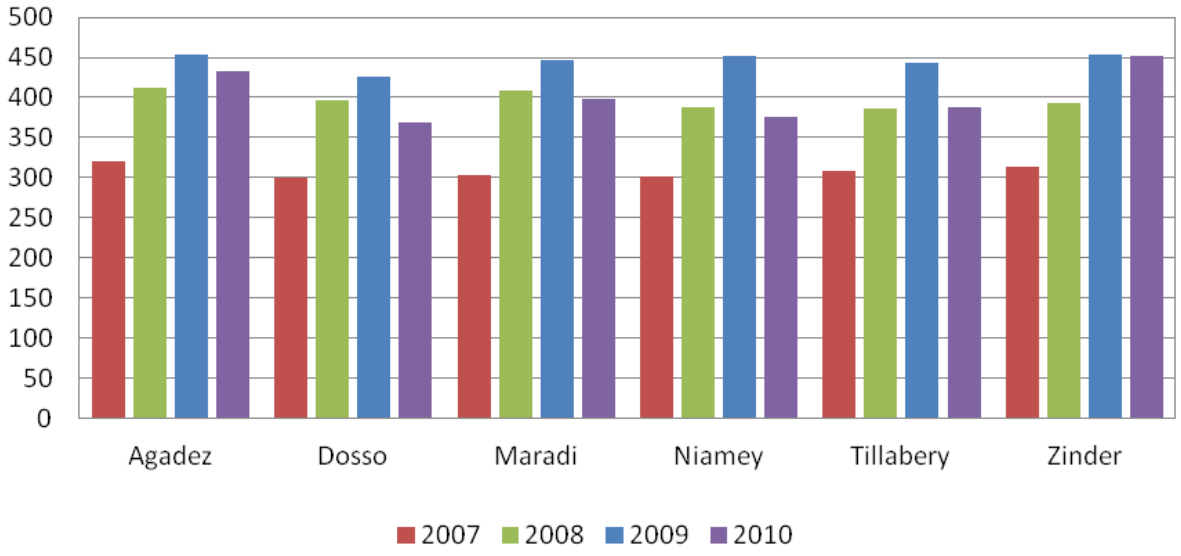
Figure 26. 2007 and 2009 Rice Imported Nominal Consumer Prices by Markets (CFAF/kg)



Source: SIMA

From 2007 to 2008, prices for imported rice significantly increased rice across all regions, and this upward trend continued well into 2009 (see the figure below). Although 2010 prices generally tended to be lower than in previous years, they have not yet returned to the 2007 levels, suggesting some lasting effect from the 2008 food crisis.

Figure 27. 2007–2010 Imported Nominal Consumer Prices for Rice by Markets (CFAF/kg)

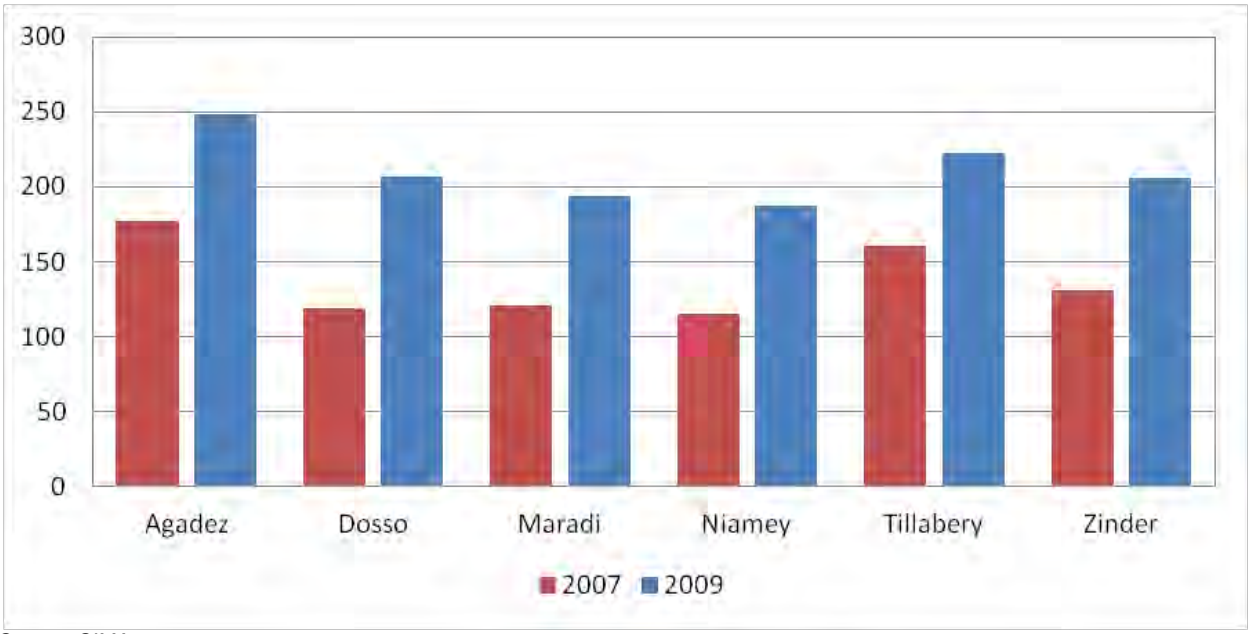


Source: SIMA

IV.vii.ii. Maize

In 2007 and 2009 (the years before and after the 2008 food crisis), imported maize prices were higher across all regions examined (see the figure below). The Dosso area reported the largest increase in consumer prices, from CFAF119/kg in 2007 to CFAF207/kg in 2009--a 74% increase. Similarly, prices in Maradi went from CFAF121/kg to CFAF194/kg, and in Niamey from CFAF115/kg to CFAF187/kg; in both areas, the change represented an increase of more than 60%. The increases were lower in Zinder, ranging from CFAF131/kg in 2007 to CFAF206/kg in 2009 (a 58% increase). The lowest increases were observed in Agadez, from CAFA177/kg to CFAF248/kg (a 40% increase), and in Tillaberi, from CFAF160/kg to CFAF222/kg (a 39% increase).

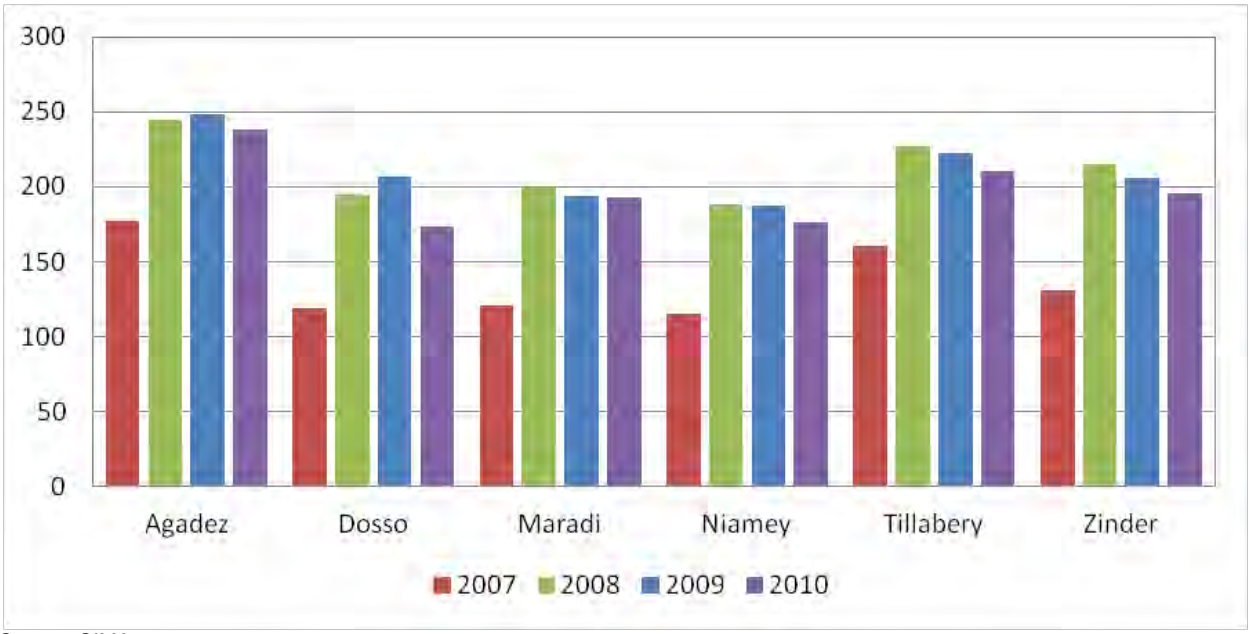
Figure 28. 2007–2009 Maize Imported Nominal Consumer Prices by Markets (CFAF/kg)



Source: SIMA

Observing the period from 2007 to 2010, it may be inferred that overall, post-crisis prices for imported maize have remained higher in all regions. Although prices decreased after 2009 in Agadez, Dosso, Niamey and Zinder, they have nevertheless remained high compared with pre-crisis prices. This is reflected in the figure below.

Figure 29. 2007–2010 Maize Imported Nominal Consumer Prices by Markets (CFAF/kg)

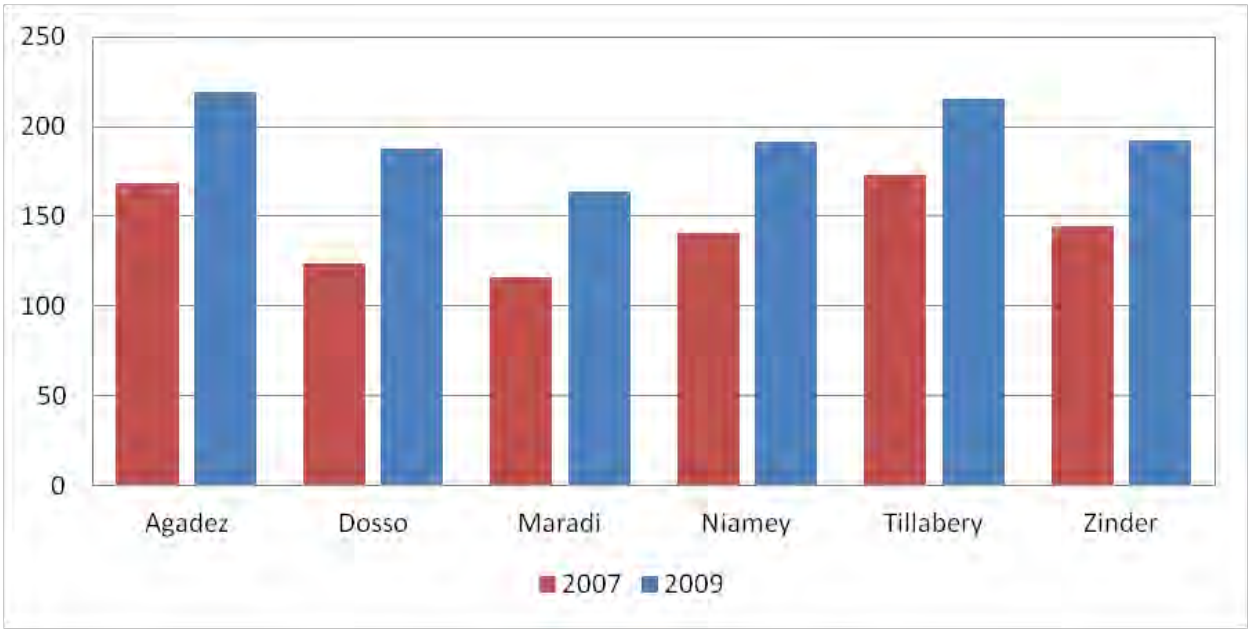


Source: SIMA

IV.vii.iii. Millet

As reflected in the figure below, prices for local millet were also significantly higher in 2009 than in 2007, for all regions. The largest price increase was in Dosso, where millet prices went from CFAF124/kg to CFAF188/kg (a 52% increase). Maradi experienced a 41% increase, from CFAF116/kg to CFAF164/kg, followed by Niamey, where prices increased by 36%, from CFAF140/kg to CFAF192/kg. Prices in Agadez and Zinder increased by about 30% percent. The lowest price increase was observed in Tillaberi, where millet prices went from CFAF173/kg to CFAF215/kg (a 24% increase).

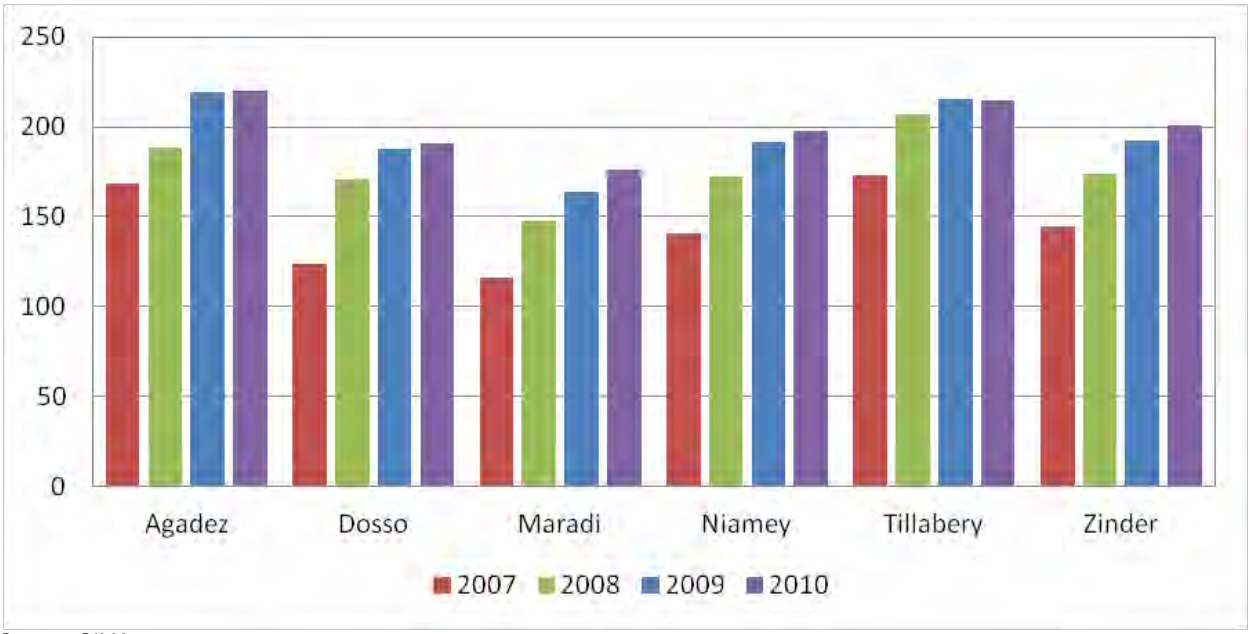
Figure 30. 2007–2009 Millet Local Nominal Consumer Prices by Markets (CFAF/kg)



Source: SIMA

Comparing prices pre- and post-2008 food crisis, it may be inferred that local millet prices were also affected by price hikes: after the crisis, consumer prices have remained relatively high in all markets. However, as indicated in the figure below, consumer prices—although higher overall post-crisis, remained relatively stable during 2010.

Figure 31. 2007–2010 Millet Local Nominal Consumer Prices by Markets (CFAF/kg)

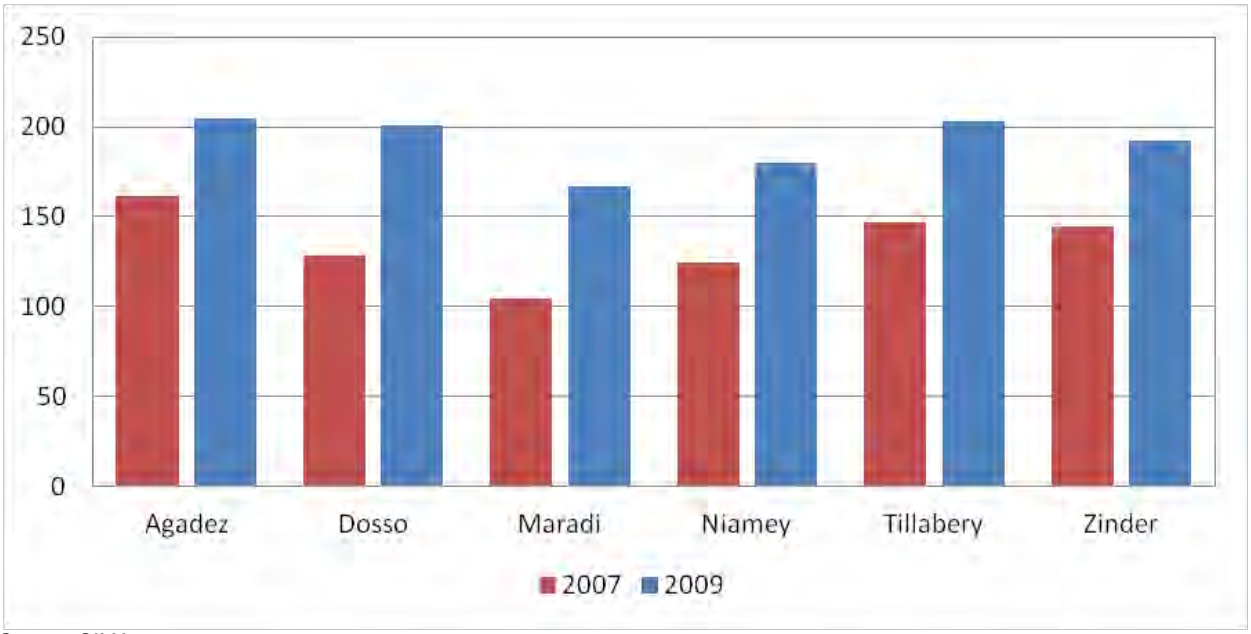


Source: SIMA

IV.vii.iv. Sorghum

Nominal consumer prices for sorghum also increased during the 2007–2009 period. Maradi reported the largest increase in prices, from CFAF105/kg in 2007 to CFAF167/kg in 2009 (representing a 60% increase). Dosso prices increased from CFAF129/kg to CFAF201/kg (a 56% increase), and Niamey prices increased from CFAF124/kg to CFAF180/kg (a 45% increase). Prices in Tillaberi, Zinder, and Agadez also increased, but at lower percentages, with prices from 2007 to 2009 38% higher in Tillaberi, 33% higher in Zinder, and 27% higher in Agadez.

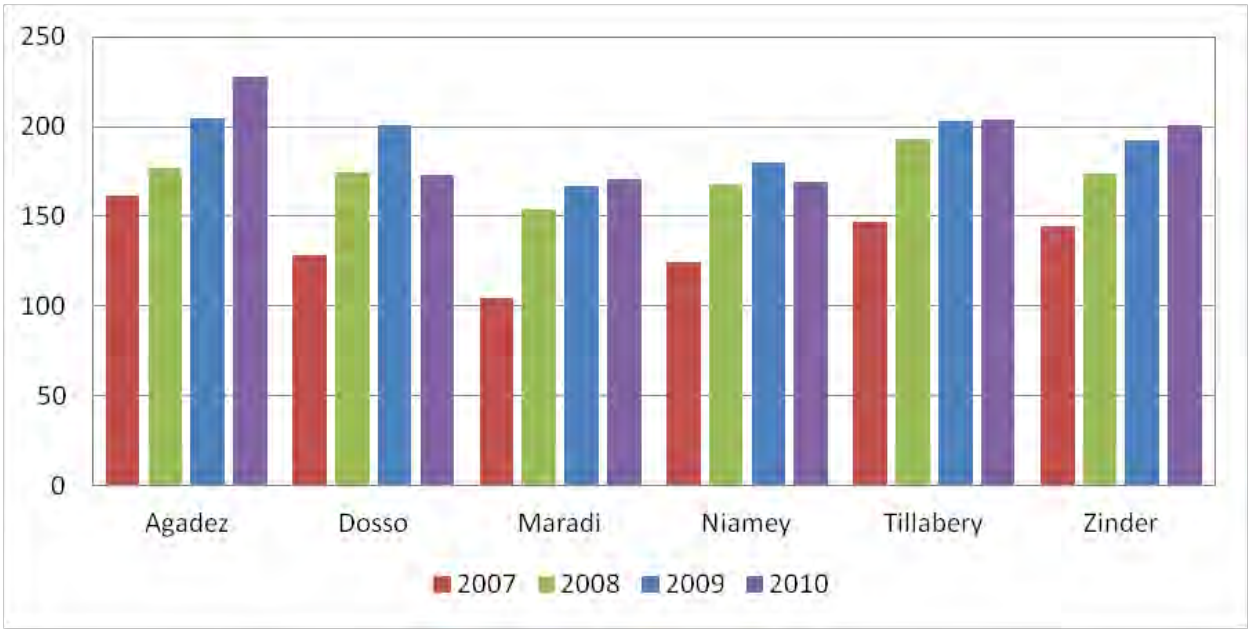
Figure 32. 2007–2009 Sorghum Local Nominal Consumer Prices by Markets (CFAF/kg)



Source: SIMA

Clearly, the 2008 food crisis also affected prices for locally produced sorghum. As the below figure shows, prices in all markets have remained high after 2008 in all areas except Dosso and Niamey, where prices decreased in 2010. On the other hand, prices in Agadez and Zinder have consistently increased since 2008.

Figure 33. 2007–2010 Sorghum Local Nominal Consumer Prices by Markets (CFAF/kg)



Source: SIMA

IV.viii. Price Changes by Region and Product

This section looks at each region separately and analyzes consumer price variation of imported rice and maize, and local millet and sorghum. The analysis extends from January 2007 to July 2011 and uses nominal consumer price data available for these regions from SIMA.

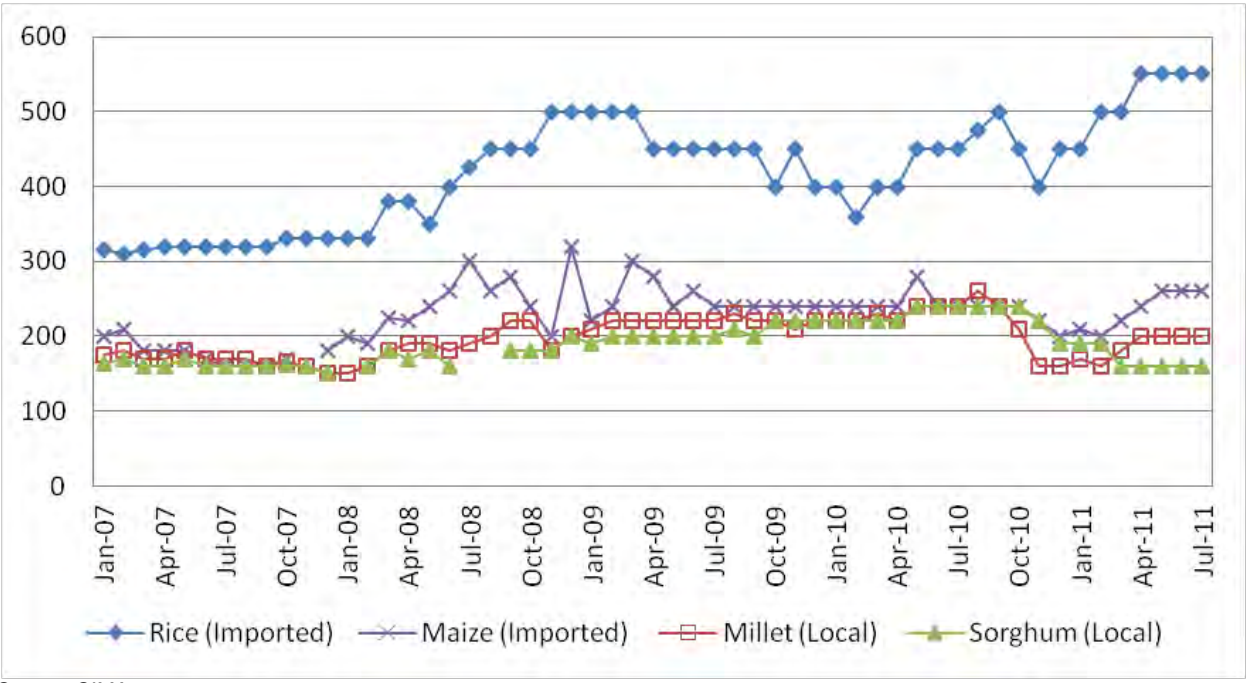
IV.viii.i. Agadez

Agadez is mostly a pastoral area and a net buyer of food (World Bank, 2009). During the period analyzed, consumer prices in Agadez varied substantially, particularly for imported rice and maize. While in 2007, rice prices were relatively stable, starting January 2008 rice prices trended markedly higher, with some small decreases in 2010 and the beginning of 2011, but significantly increasing again from April 2011. Based on this recent history, it is reasonable to suggest that rice prices in Agadez will continue a slight upward trend throughout 2011.

Prices for maize also showed important variations. In 2007, prices were relatively stable. However, from January 2008 through July 2009, maize prices varied each month. During the last part of 2009 and until October 2010, prices were relatively stable again, although nominal consumer prices did not return to the levels of 2007. In 2011, prices have again showed more variation.

Millet and sorghum prices in Agadez varied less during the same period, and followed relatively similar trends. While prices were relatively stable during 2007, by 2008 they started to trend upward trend through October 2010. In 2011, prices have started to decline again and remain relatively stable.

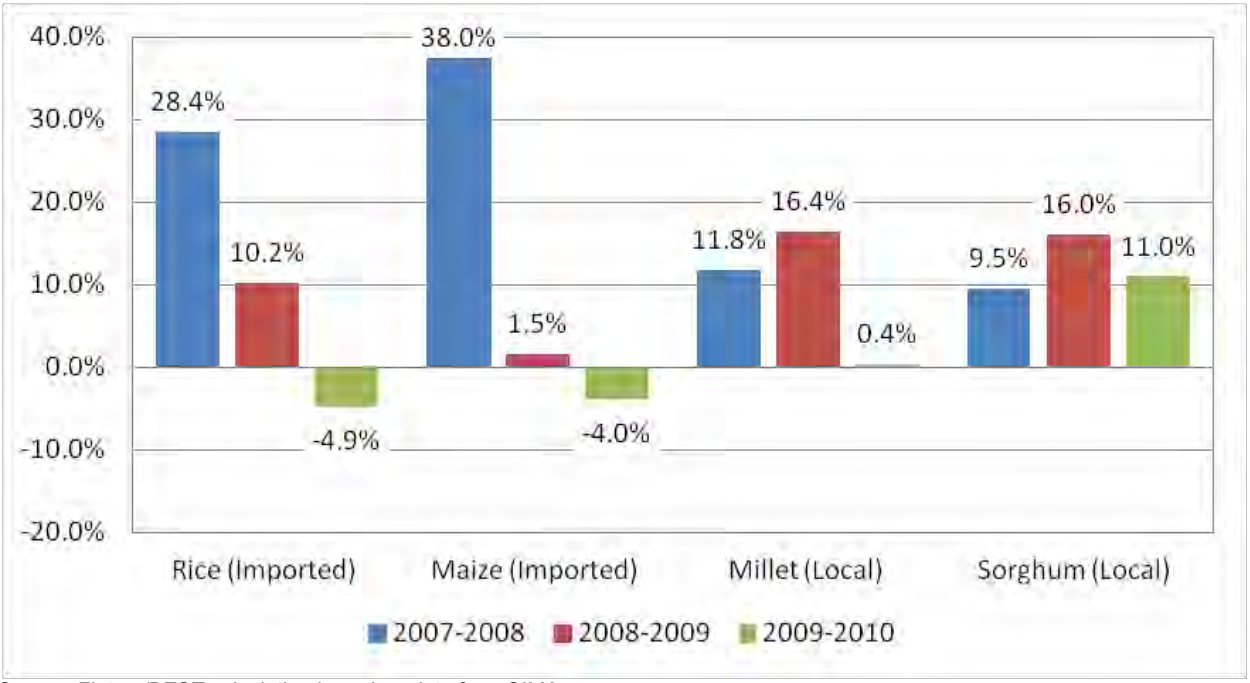
Figure 34. 2007–2011 Agadez Monthly Consumer Price Changes (CFAF/kg)



Source: SIMA

Observing the average percentage change among commodities from year to year, rice and maize prices increased the most in the crop year 2007–2008. Rice prices increased 28.4% and maize prices increased 38%. Price changes during that period were not as significant for millet and sorghum: millet prices increased 11.8% and sorghum 9.5%. Although prices for maize and rice still increased from 2008 to 2009, the percentage variations were not as substantial as in the previous year: rice increased 10.2% and maize increased only 1.5%. On the other hand, prices for locally produced millet and sorghum increased by higher percentages. Millet prices increased 16.4% and sorghum prices increased 16%. By 2009–2010, rice and maize prices decreased 4.9% and 4% respectively; millet prices increased 0.4%; and sorghum prices increased 11%. (See the figure below.)

Figure 35. Agadez Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

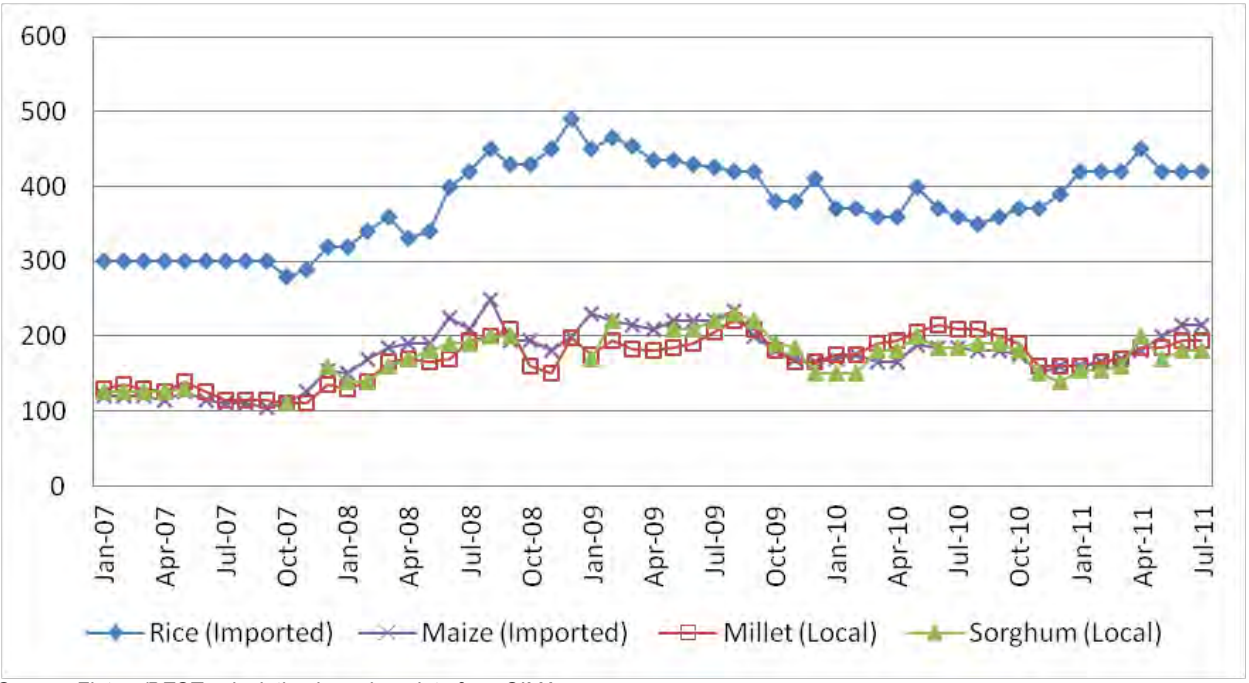
IV.viii.ii. Dosso

Dosso, located east of Niamey and close to the Nigerian border, is an important urban center and market. Prices for rice during 2007 remained unchanged until September. At the end of 2007 and the beginning of 2008, prices increased rapidly, reaching a peak in January 2009, and then started decreasing again until approximately July 2010. After July 2010, prices again increased but have remained relatively stable in 2011. However, these stabilized 2011 price levels are still higher than the levels prior to 2008.

Prices for maize, millet, and sorghum in Dosso have followed a similar pattern from 2007 to 2011, thus showing signs of being relatively integrated. During 2007, prices for these three commodities showed little variation, but starting in 2008 prices became increasingly unstable. During 2008, prices trended upward until the last quarter, when prices began to decrease. In

2009, prices increased again and remained relatively stable until August. From then through June 2011, prices for all three products have continued to follow a cyclical path.

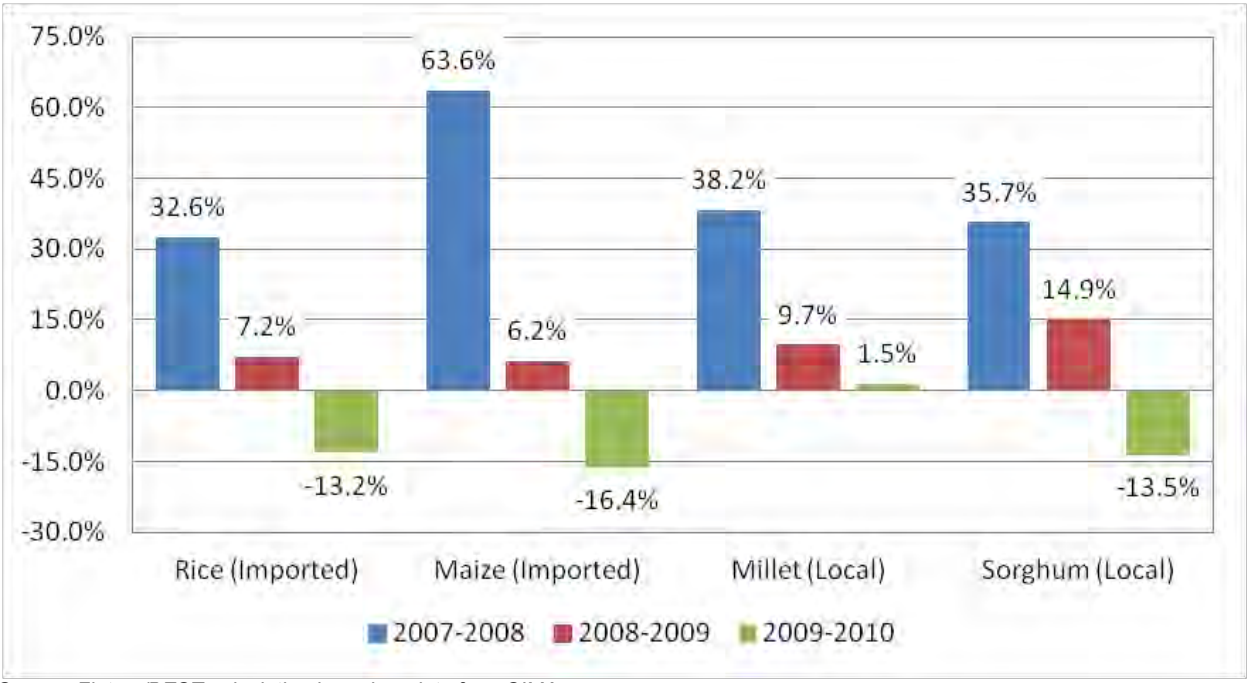
Figure 36. 2007–2011 Dosso Monthly Price Changes (CFAF/kg)



Source: Fintrac/BEST calculation based on data from SIMA

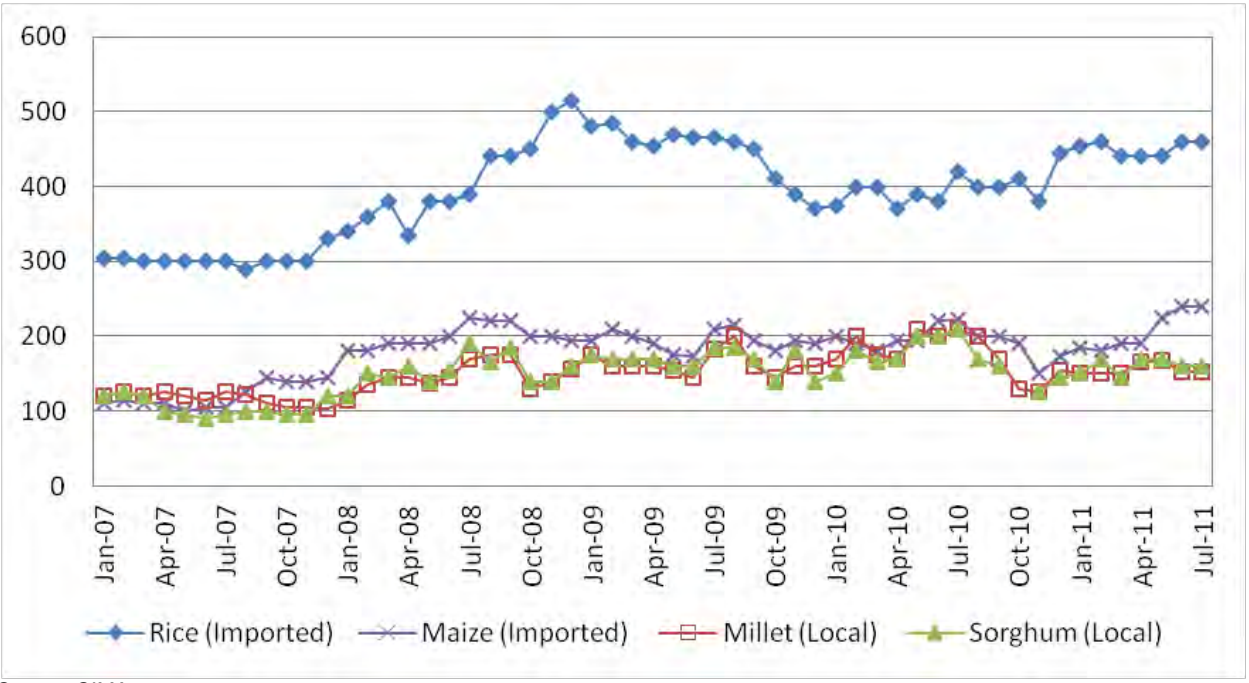
From 2007 to 2008, nominal consumer prices in Dosso spiked notably. Rice prices increased nearly 33%, and maize prices increased more than 60%. Prices of locally produced millet and sorghum increased significantly, more than 30% each. From 2008 to 2009, prices increased, but much more modestly than in the previous year. Rice prices increased about 7% and maize prices 6%. Millet prices increased almost 10% and sorghum by 15%. From 2009 to 2010, all prices decreased markedly with the exception of millet, which increased 1.5%.

Figure 37. Dosso Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

Figure 38. 2007–2011 Maradi Monthly Price Changes (CFAF/kg)



Source: SIMA

IV.viii.iii. Maradi

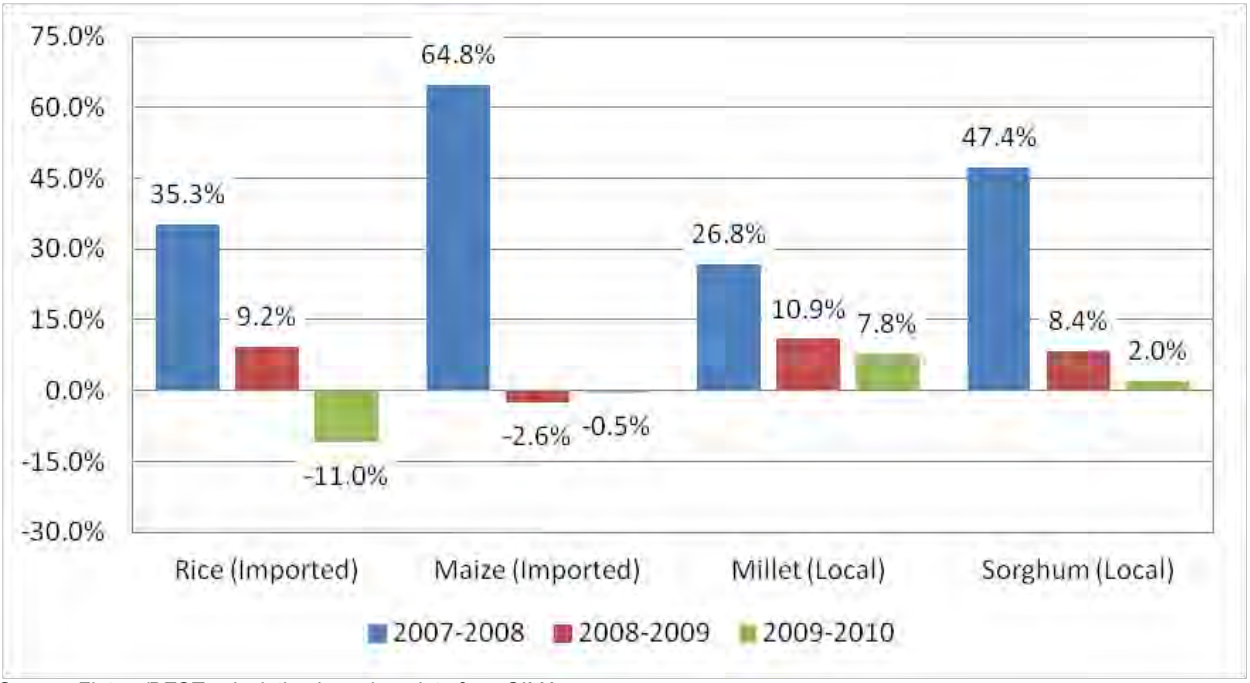
Maradi is an important production area in Niger. In 2007, and as indicated in the above figure, consumer prices for rice showed little to no variation. In 2008, however, rice prices started to

climb, reaching a peak at the end of year and then gradually decreasing until the end of 2009. During 2010, rice prices were relatively unstable from month to month and by the beginning of 2011, had started trending upward again.

Consumer prices for maize were relatively stable for the first half of 2007. After July, however, prices started to trend upward until mid-2008. After July 2008, prices varied considerably with series of months showing increase in prices, followed by decreases. This variable trend continued until April 2011, but in May 2011, prices began to turn upward more dramatically. .

Prices for millet and sorghum in Maradi followed pattern similar to maize. In 2007, millet and sorghum prices were relatively stable, and in 2008, started to increase and become more unstable until the first half of 2011.

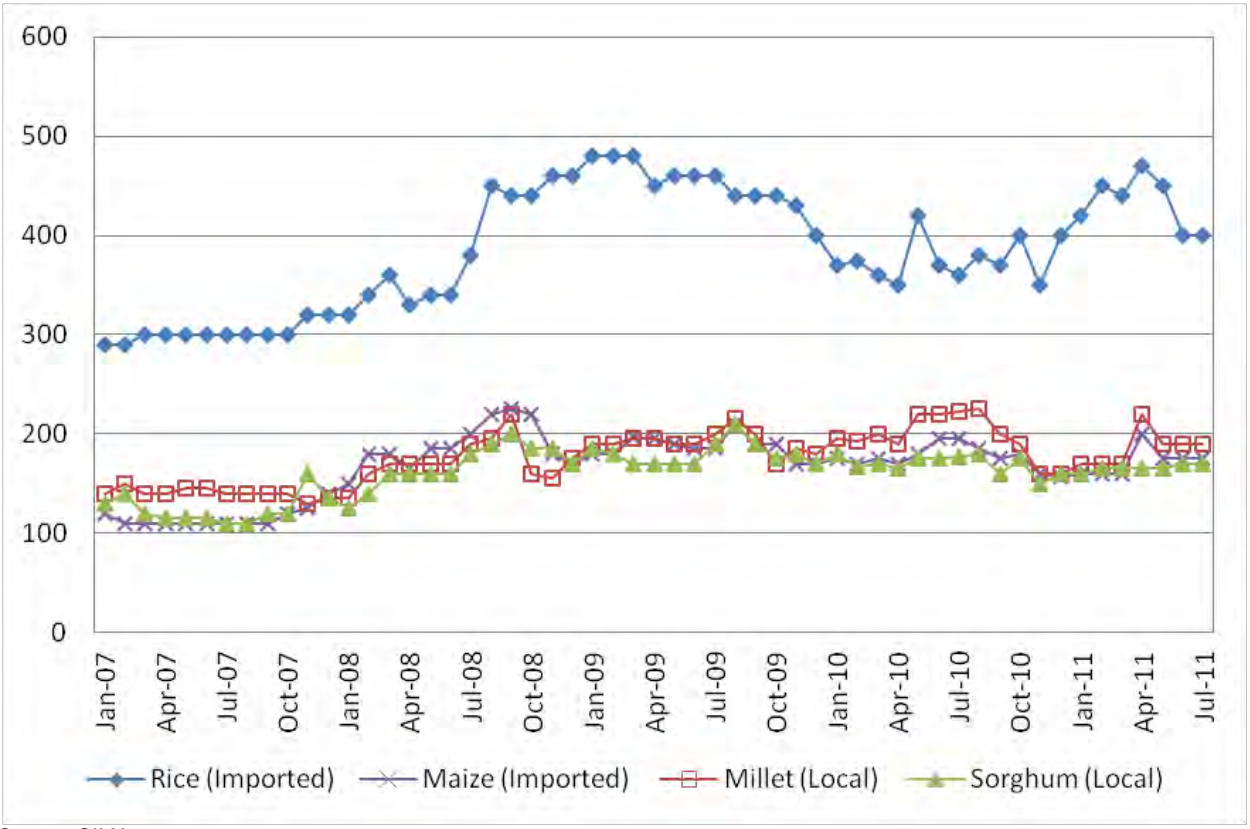
Figure 39. Maradi Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

In the crop year 2007–2008, prices in Maradi substantially increased for all commodities in this analysis. Maize prices increased almost 65%; sorghum prices increased 47.4%; rice prices increased 35.2%; and millet prices increased 26.8%. In 2008–2009, prices for three of the four commodities increased, but much more modestly than in the previous year. Millet prices increased nearly 11%, rice 9.2%, and sorghum 8.4%. However, prices for maize decreased 2.6%. In 2009–2010, prices declined 11% for rice and 0.5% for maize—and the downward trend has continued into 2011. On the other hand, millet prices increased 7.8% and sorghum prices increased 2% in 2009–2010.

Figure 40. 2007–2011 Niamey Monthly Price Changes (CFAF/kg)



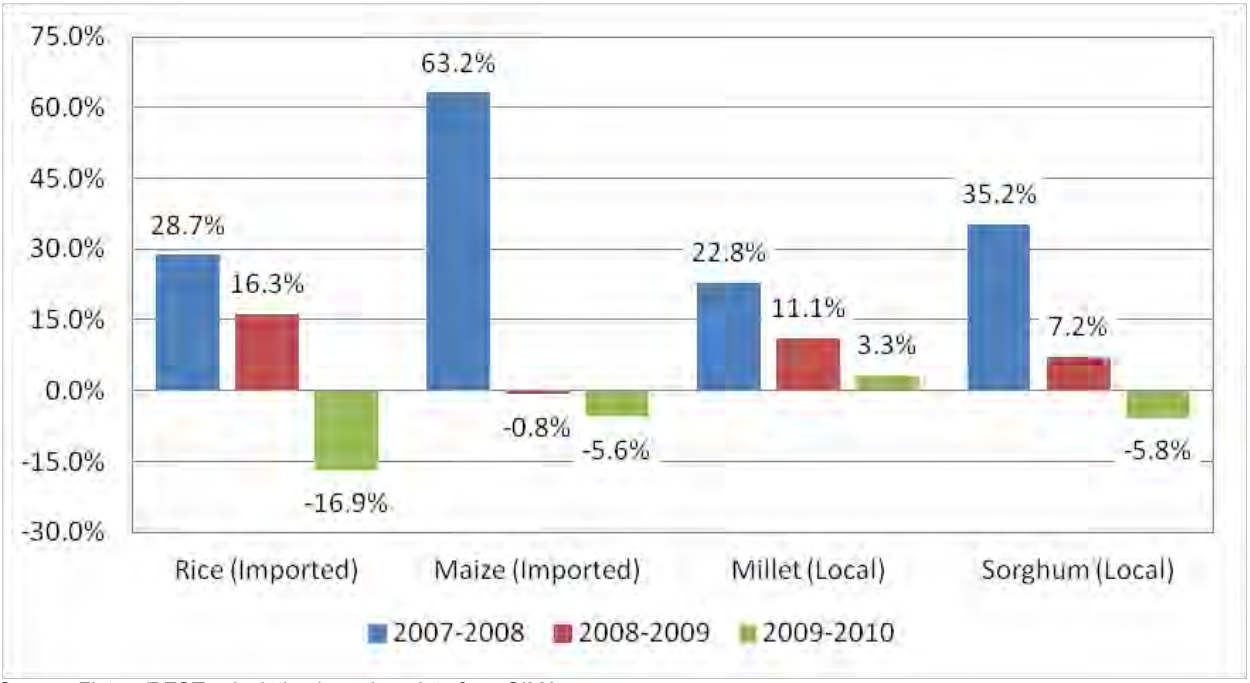
Source: SIMA

IV.viii.iv. Niamey

Niamey, the capital of Niger, is its most important urban center and market.

In 2007, and as reflected in the above figure, consumer prices were generally stable for all grains in Niamey. In 2008, prices for all four of analyzed commodities started to gradually increase until September. Rice prices, which had increased significantly between July and September 2008, thereafter continued to generally increase until April 2009, and despite some modest declines remained at relatively high levels during the balance of 2009. In 2010, rice prices started to mostly decline, but some increases did occur during the year. During the first quarter of 2011, rice prices increased notably—peaking at about the same level as the first quarter of 2009; prices decreased from April to June 2011. As for maize, millet and sorghum, after 2008 consumer prices did not vary significantly.

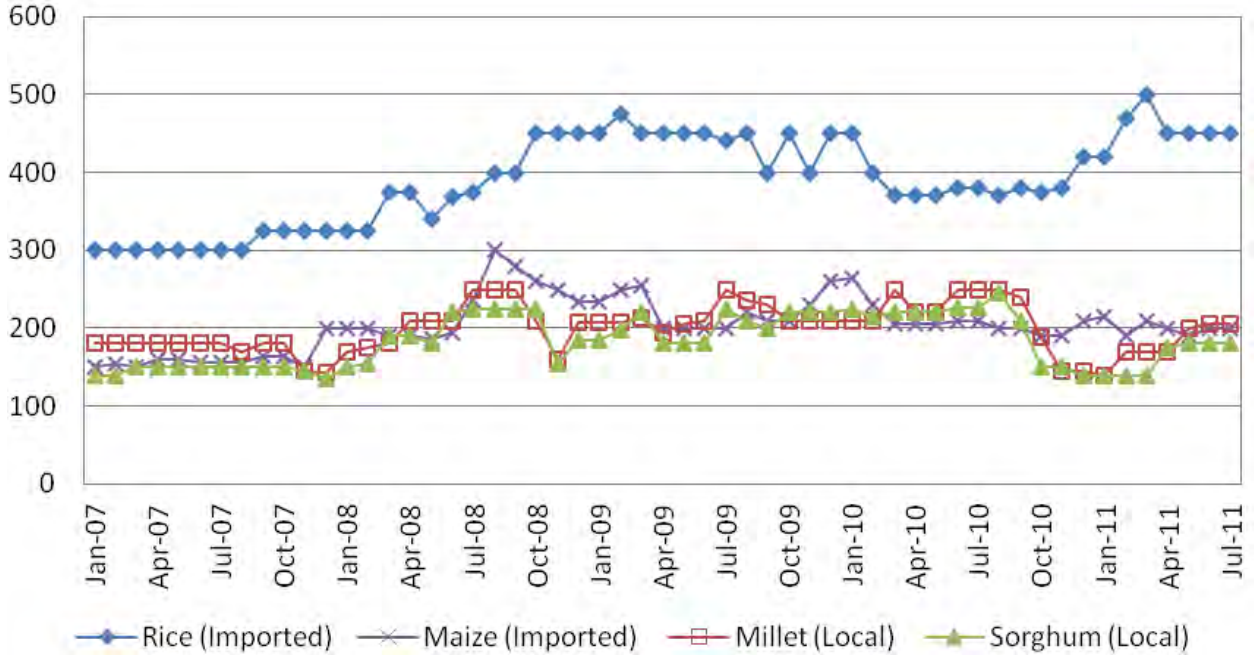
Figure 41. Niamey Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

In 2007–2008, nominal consumer prices increased for maize (63.2%) and sorghum (35.2%). Rice prices increased 28.7% and millet 22.8%. During 2008–2009, prices increased for all commodities except maize, but much more modestly than in the previous year. Specifically, maize prices decreased 0.8%, sorghum prices increased 7.2%, millet prices increased 11.1%, and rice prices increased 16.3%. From 2009 to 2010, all prices declined with the exception of millet, which had a price increase of 3.3%. Average rice prices were 16.9% lower, and maize and sorghum prices were more than 5% lower.

Figure 42. 2007–2011 Tillaberi Monthly Price Changes (CFAF/kg)



Source: SIMA

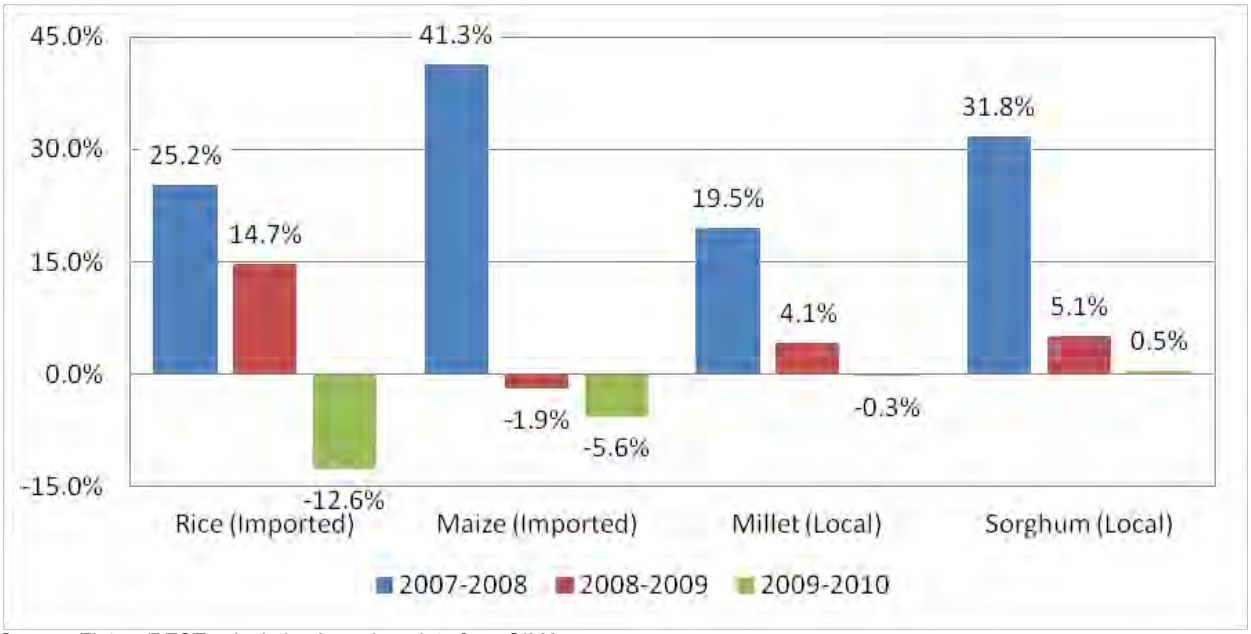
IV.viii.v. Tillaberi

Nominal consumer prices for all four grains were stable in 2007. In 2008, rice prices started to climb gradually; in 2009, rice prices remained high but stable with few variations at the end of the year. In 2010, rice prices started to decrease and remained relatively unchanged until the end of the year. In 2011, prices have started to gradually increase again and have remained stable from March onward, but at higher levels.

As for maize, millet and sorghum, consumer prices varied from 2008 until 2011. Maize prices increased and remain higher throughout 2008. In 2009, prices started to decrease and remained generally stable, with the exception of the last four months of the year. In 2010, maize prices showed a downward trend and have remained relatively stable through June 2011.

In 2008, millet and sorghum prices showed an upward trend similar to that for maize. From January 2009 to August 2010, millet and sorghum prices remained relatively stable with few variations. At the end of 2010, prices declined and remained mostly lower until the first part of 2011, when prices slightly increased but have remained mostly unchanged through July 2011.

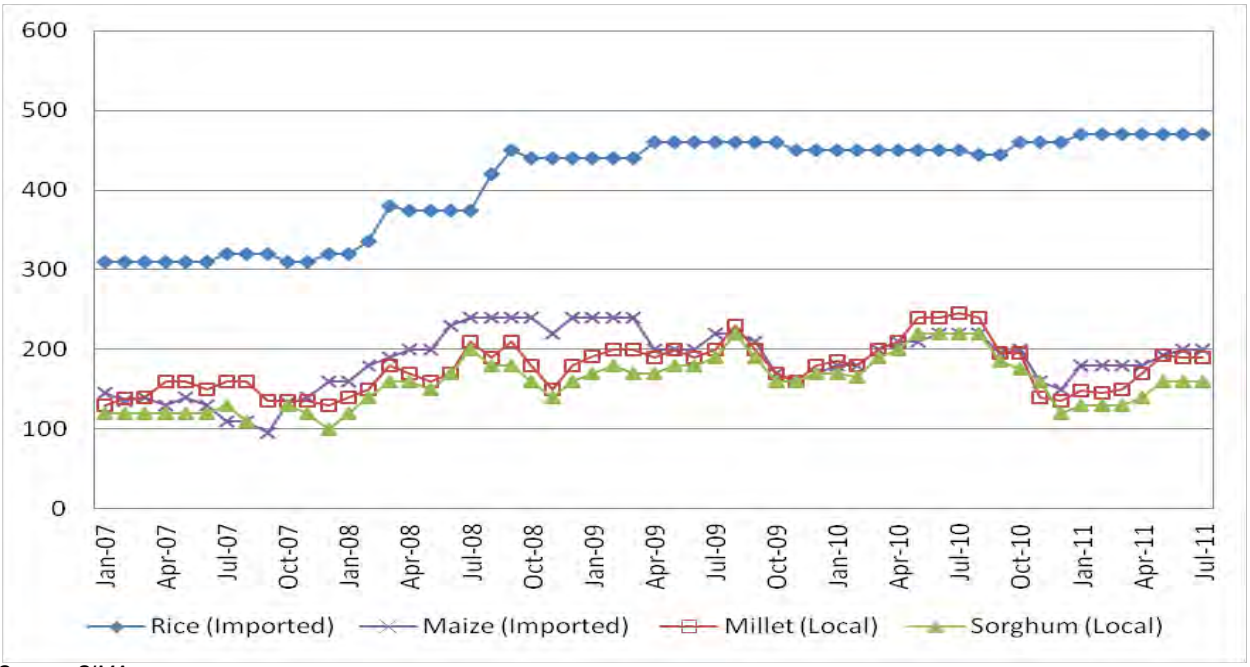
Figure 43. Tillaberi Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

In the crop year 2007–2008, Tillaberi prices increased for all grains. Maize prices had the largest percentage increase (41.3%), followed by prices for sorghum (31.8%), rice (25.2%), and millet (19.5%). Price changes in 2008–2009 were smaller; average maize prices decreased 1.9%; rice prices had the largest percentage increase (14.7%). In 2009–2010, rice, maize, and millet prices decreased; the highest percentage price decrease was for rice (12.6%). Sorghum was the only commodity that increased in price during this period, by 0.5%.

Figure 44. 2007–2011 Zinder Monthly Price Changes (CFAF/kg)



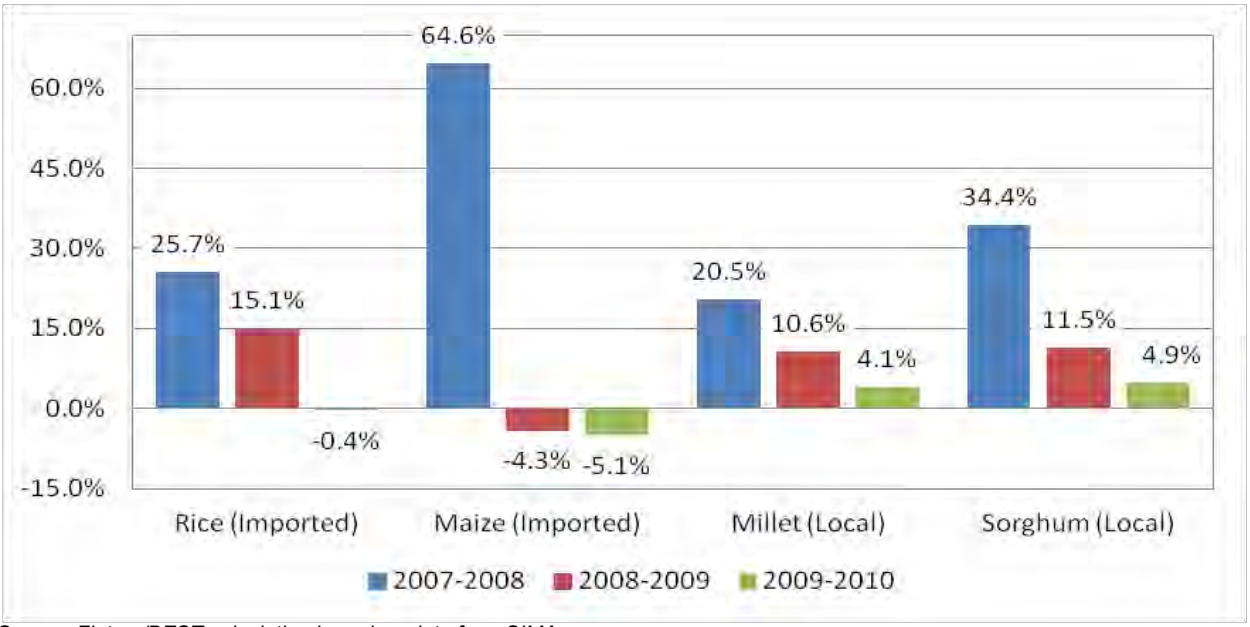
Source: SIMA

IV.viii.vi. Zinder

In 2007, rice prices in Zinder were relatively stable. After a gradual increase in 2008, rice prices have remained relatively unchanged—but higher than the 2007 levels—through the first half of 2011.

As for maize, millet and sorghum, from 2008 to 2011, prices moved up and down constantly. However, maize prices were relatively stable (but higher than 2007) from April 2008 to April 2009, and after that has varied constantly though the first half of 2011.

Figure 45. Zinder Percentage Change



Source: Fintrac/BEST calculation based on data from SIMA

In 2007–2008, the average price for maize increased nearly 65%, sorghum prices increased 34.4%, rice prices increased 25.7%, and millet prices increased 20.5%. In 2008–2009, rice, millet, and sorghum prices increased moderately, and maize prices decreased 4.3%. In the crop year 2009–2010, average rice and maize prices decreased by 0.4% and 5.1% respectively; millet and sorghum prices increased more than 4% each.

IV.ix. Market Integration by Commodity

IV.ix.i. Imported Rice

Imported rice retail prices are generally found to be strongly correlated among Nigerien markets (**Error! Reference source not found.**). All markets had strong significant correlation coefficients, averaging above 0.855, probably influenced by international rice prices.

Table 17. Imported Rice Correlation Coefficients

Area	Agadez	Dosso	Maradi	Niamey	Tillaberi	Zinder
Agadez	1					
Dosso	.889**	1				
Maradi	.905**	.956**	1			
Niamey	.888**	.955**	.946**	1		
Tillaberi	.889**	.917**	.915**	.932**	1	
Zinder	.895**	.855**	.886**	.879**	.909**	1

***. Correlation is significant at the 0.01 level . *. Correlation is significant at the 0.05 level (2-tailed).*

Generally, domestically produced rice prices in Niamey are slightly lower than imported rice prices. Figure 46 below shows international rice prices (free on board Bangkok) as compared to

the National average retail price[8] of imported rice. On average, imported rice prices in Niger have followed the international price closely, even during the surge in international rice prices in late 2007 and early 2008. Neither international rice prices nor local rice prices have returned to the pre-crisis levels.

Figure 46. International (FOB Bangkok) vs. National Average Retail Price of Imported Rice in Niger, January 2006–June 2011, (CFA/kg)

Source: International prices from FAO (Thai A1 Super White Broken) and imported rice prices from SIMA. Please note international price line reflects a converted price from US$ to FCFA. The national average price is the average imported retail rice prices for the capital cities of several Nigerien markets: Agadez, Dosso, Maradi, Niamey, Tillaberi, and Zinder.

IV.ix.ii. Millet and Maize

Markets for millet and maize appear to move in tandem. The average correlation coefficient for millet for all six markets from January 2006 to June 2011 is .83, with a majority of coefficients between .725 and .889. These results reflect the actual situation in the market, as millet is grown in the Maradi and Zinder regions, which accounts for approximately 40% of the millet and sorghum production alone. Millet then flows from this surplus region to the rest of the country. As has been well-documented in literature (Aker, August 2007), intra- and inter-market correlations exist in Niger's cereal markets. The inter-market correlation in drought (low production) years was found to be significantly higher than those in non-drought years. This suggests that millet markets are more integrated during low production years, as traders and consumers trade with other markets to meet their millet demand.

Maize markets also appear to be well-integrated. Almost all the maize consumed in Niger is cultivated in Nigeria. Therefore, maize flows from Nigeria, Gaya, and Diffa markets to the deficit areas of the country.

[8] The National average price is the average imported retail rice prices for the capital cities of several Nigerien markets: Agadez, Dosso, Maradi, Niamey, Tillaberi, and Zinder.

Table 18. Millet Correlation Coefficients

Area	Agadez	Dosso	Maradi	Niamey	Tillaberi	Zinder
Agadez	1					
Dosso	.778**	1				
Maradi	.814**	.828**	1			
Niamey	.865**	.901**	.905**	1		
Tillaberi	.828**	.725**	.740**	.770**	1	
Zinder	.889**	.805**	.843**	.886**	.851**	1

***. Correlation is significant at the 0.01 level . *. Correlation is significant at the 0.05 level (2-tailed).*

Table 19. Maize Correlation Coefficients

Area	Agadez	Dosso	Maradi	Niamey	Tillaberi	Zinder
Agadez	1					
Dosso	.785**	1				
Maradi	.775**	.848**	1			
Niamey	.798**	.877**	.878**	1		
Tillaberi	.652**	.704**	.745**	.786**	1	
Zinder	.816**	.872**	.840**	.886**	.729**	1

***. Correlation is significant at the 0.01 level . *. Correlation is significant at the 0.05 level (2-tailed).*

IV.ix.iii. Sorghum

Of all six pairs of sorghum markets analyzed. Only one pair (Dosso and Agadez, with a 0.387 correlation coefficient) showed poor price integration. Dosso is in a production area and Agadez is located in a deficit area. Most of the sorghum consumed in Agadez comes from the Zinder and Tahoua area, probably due to relatively good infrastructure from Zinder to Agadez.

Table 20. Sorghum Correlation Coefficients

Area	Agadez	Dosso	Maradi	Niamey	Tillaberi	Zinder
Agadez	1					
Dosso	.387**	1				
Maradi	.647**	.734**	1			
Niamey	.588**	.802**	.824**	1		
Tillaberi	.641**	.636**	.726**	.684**	1	
Zinder	.775**	.728**	.823**	.753**	.843**	1

***. Correlation is significant at the 0.01 level . *. Correlation is significant at the 0.05 level (2-tailed).*

IV.x. Malnutrition Rates

Niger has one of the highest malnutrition rates in the world and is making inadequate progress towards achieving MDG 1. Existing high rates of maternal and child malnutrition are part of aftermath of the global financial and food crisis. The primary causes of malnutrition for the rural poor are:

- Lack of access to and consumption of food of adequate quality and in adequate quantities.
- Poor feeding practices for expectant mothers, infants, and young children.

The Government of Niger and partners have conducted national nutrition and child survival surveys since the 2005 crisis, and have done so at the same time every year to enhance comparability of results (FANTA II, July 2011). According to the FANTA II July 2011 report, national global acute malnutrition (GAM) prevalence rates have consistently exceeded 10% since 2007, and hit 16.7% in June 2010. A GoN report indicates that according to WHO standards, the national rate of GAM stood at 12.3% in June 2011 (Table 21). This rate, which is below the emergency threshold (15%), has decreased significantly compared with the June 2010 rate. GAM is highest among children 6 to 23 months of age (20.2%); the GAM for children 24 to 59 months of age is 8.3% (Government of Niger, June 2011). The GoN report also suggests that the recent decrease may be related to various measures taken by the US and its partners, but also to the good 2009–2010 crop year in Niger. The rate of severe acute malnutrition also declined from 3.2% to 1.9% between June 2010 and June 2011.

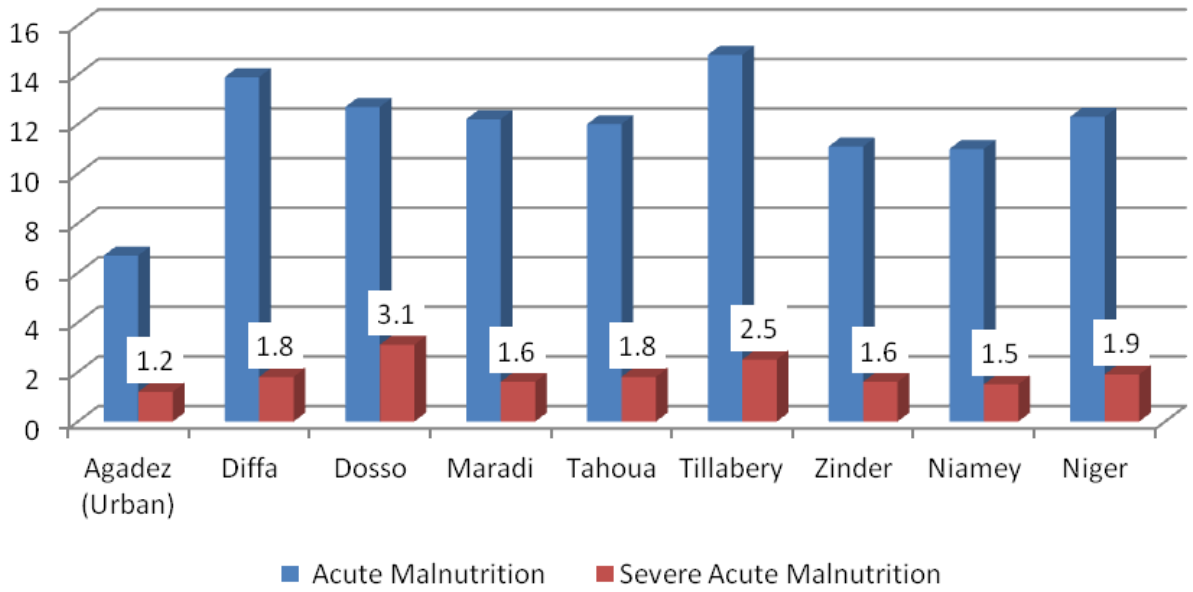
Malnutrition is systemic by nature. It is persistent in some regions of the country, and those regions also have high rates for its chronic and severe forms. Malnutrition in Niger results primarily from social behavior, poverty, and recurring food crises and affects a high proportion of children. When broken down by region, Tillaberi, Diffa, Dosso, Maradi, and Tahoua were the hardest hit regions according to the GoN June 2011 report, with GAM rates ranging from a low of 6.7% to a high of 14.8%.

Table 21. Percentage of Children with Global Acute and Severe Acute Malnutrition by Region, May–June 2011

Region	Global Acute Malnutrition[1]	Severe Acute Malnutrition[2]
Agadez[3]	6.7	1.2
Diffa	13.9	1.8
Dosso	12.7	3.1
Maradi	12.2	1.6
Tahoua	12.0	1.8
Tillaberi	14.8	2.5
Zinder	11.1	1.6
Niamey	11.0	1.5
Niger Totals	**12.3**	**1.9**

[1] *Global a*cute malnutrition represents the <-2 SD and/or edema.
[2] Severe acute malnutrition represents <-3 SD and/or edema.
[3] The Agadez region includes only urban areas (Agadez, Tchirozerine Arlit); security concerns prevented data collection in rural areas.
Source: Niger Government, National Statistics Institute, Ministry of Health Nutrition Department.

Figure 47. Percentage of Children with Global Acute and Severe Acute Malnutrition by Region, May–June 2011



Source: Niger Government, National Statistics Institute, Ministry of Health Nutrition Department.

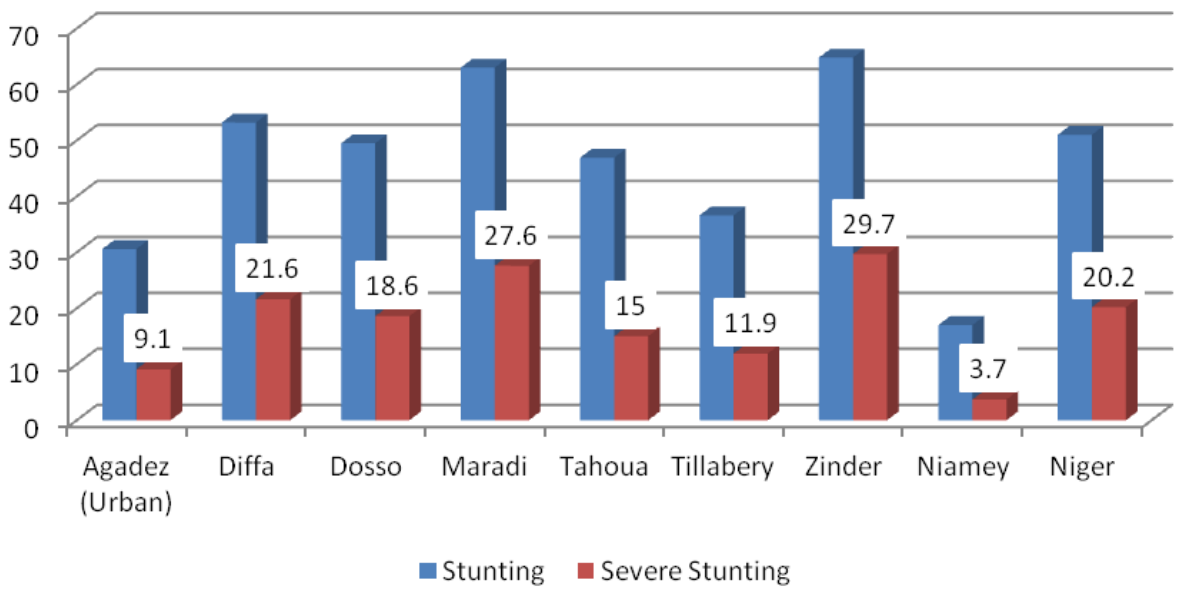
High levels of both stunting and wasting indicate that children in Niger suffer from both longer-term, chronic malnutrition and acute food deficits throughout the year. The proportion of children below 5 years of age with stunted growth stood at 50% in 2006, 51.4% for boys and 48.5% for girls (The Goverment of Niger, August 2007). In 2011, the proportion of children younger than 5 with stunted growth was 51%, and of that percentage, 20% had severe stunting. Maradi, Zinder, Diffa, and Dosso had the highest rates of stunting.

Table 22. Percentage of Children with Stunting and Severe Stunting by Region, May–June 2011

Region	Stunting[1]	Severe Stunting[2]
Agadez[3]	30.6	9.1
Diffa	53.2	21.6
Dosso	49.5	18.6
Maradi	63.0	27.6
Tahoua	46.9	15.0
Tillaberi	36.6	11.9
Zinder	64.8	29.7
Niamey	17.0	3.7
Niger Totals	**51.0**	**20.2**

[1] Stunting represents the <-2 SD and/or edema.
[2] Severe stunting represents <-3 SD and/or edema.
[3] The Agadez region includes only urban areas (Agadez, Tchirozerine Arlit); security concerns prevented data collection in rural areas.
Source: Niger Government, National Statistics Institute, Ministry of Health Nutrition Department.

Figure 48. Percentage of Children with Stunting and Severe Stunting by Region, May–June 2011



Source: Niger Government, National Statistics Institute, Ministry of Health Nutrition Department.

Maternal malnutrition is widespread in Niger (FANTA II, July 2011). A relatively high proportion of women (19%) suffer from chronic energy deficiency (CED), defined as having a Body Mass Index (BMI) less than 18.5 (Table 23). This could be a risk factor during pregnancy. CED rates are highest in Diffa, among women with lower education levels. On the other hand, 13% of Nigerien women are classified as overweight, and thus at risk for developing weight-related diseases such as diabetes, obesity, hypertension, and cardio-vascular disease (The Goverment of Niger, August 2007). Furthermore, nearly one-half of all Nigerien women (46%) are anemic compared with 24% for men.

Table 23. Maternal Malnutrition

Region	Percent of Women 15–49 with CED (%) (BMI <18.5) (WHO 2006)	Percent of Women 15–49 Who Are Anemic (%) (Non-pregnant) < 12.0 G/DL, Preg <11.0 G/DL)
Niamey	11.7	37
Agadez	22.5	48.1
Diffa	31.2	40.4
Dosso	17	40.4
Maradi	17.4	48.7
Tahoua	16.6	47.8
Tillaberi	17.2	38.3
Zinder	29.6	52.5
National	**19.2**	**45.6**
Rural	**20.7**	**47.2**
Urban	**13.3**	**38.8**

Source: FANTA II.

IV.xi. Access to Water, Sanitation, and Hygiene

At the national level, 68.7% of Nigerien households had access to drinking water in 2005, compared with 43% in 2000 (The Goverment of Niger, August 2007). Wells are the main source of drinking water for the entire country, and are used by approximately 60.8% percent of households. Of that total, 42.8% use unprotected wells and 18% use protected wells. However, in rural areas, the proportion of households that use unprotected wells is high—50.8% (The Goverment of Niger, August 2007). Furthermore, nearly 57% of households take more than 15 minutes to fetch water (The Goverment of Niger, August 2007), with wide, locale-dependent disparities in the actual time taken. The relative dearth of modern water points in rural built-up areas—and sub-par water service—force residents, particularly women, and to a lesser extent youths, to spend more time fetching water. The inordinate time spent on this task leads to a shortfall in production and poor school attendance for the children.

One of Niger's greatest public health challenges is sanitation, but there is significant momentum for change. A shocking 91% of Niger's residents do not use improved sanitation, and most use open air defecation (FANTA II, July 2011). The rural population most frequently uses the natural surroundings (about 90% of households), whereas in urban areas latrines seem to the most commonly used form of sanitation (62.7% of households outside Niamey); in Niamey, 75.2% of households use latrines (The Goverment of Niger, August 2007).

Annex V. Cotonou Port Description

This Annex covers details on port of Cotonou. Information is directly drawn from OT Africa Line's port description at http://www.otal.com/benin/beninport.htm.

Port Security: Control of the port area is the responsibility of the Harbor Master's office, which employs harbor officers and security agents for maintaining safety and enforcing police regulations. The Harbor Master's office is supported in this duty by:

- The Port Special Squad of Gendarme, which provides safety and security inside the port area.
- The Port Special Police Station, which provides safety and security outside the customs areas.

Both special units are supported by the Harbor Master's port security and safety agents.

Access Facilities: The port's water surface area is about 60,000m^2 and contains two breakwaters: (1) the main breakwater, called West Jetty, which is extended southward by a sand trap and (2) the East Jetty, or cross-piece, which protects the water level and allows ships to draw alongside.

The access channel along the coast is to -11.00m and -12.00m, and accommodates vessels of 10m maximum draft.

The swinging basin, 520m in diameter, runs into the former port (commercial quay) which consists of 4 berths of 660m each, capable of receiving 9m–9.50m draft ships. At the cross-piece, Berth P2, which is designed for bulk carriers and tankers, handles 10m draft ships and Berth C is designed for 9m draft ships. The port basin, 625m long and 220m wide, is reserved for 10m draft ships.

Berthing Facilities: Commercial quay: Located in the north of the port basin and 1,275m long, it is composed of 8–10 berths which can be adjusted according to a ship's length. Among these berths, a 220m berth is designed for container ships and a 200m berth is used for roll-on and roll-off ships.

The Cross-piece/East Jetty is 460m long and provides protection for the basin as well as ships drawing alongside. It includes 3 berths as follows: a berth of 200m for bulk carriers containing cargo such as clinker (imported cement) and crude oil (petroleum); a 160m berth for vessels carrying vegetable oils; and a 100m berth to handle low-tonnage refrigerated ships and trawlers.

Terminal for Oleaginous Products: Built and operated since 1999 by the ADDAX-ORYX consortium, this terminal has a 250m long berth and offers an ultra-modern delivery and warehousing system for refined oil products. SONACOP (*Société Nationale de Commercialisation des Produits Pétroliers*), a parastatal petroleum company, owns 43,700m^3 of storage tanks for petroleum products and vegetable oils.

Warehousing Facilities: Dock stores and transit warehouses; *Bonded facilities:* Cover an area of 57,000m^2 with a container depot of 65,000 m^2 and a free zone reserved for Niger, Mali, and Burkina Faso. *Unbonded facilities:* Numerous warehouses and store yards belong to the port.

Handling Facilities: Three port operators share the cargo handling business in the port of Cotonou: SMTC (Bolloré Group); COMAN (AP Moller Group), which loads and unloads container ships; and SOBEMAP (a state-owned company), which offers handling services to container ships and other types of ships (such conventional ships, bulk carriers, and bagged cargo ships). Cranes are provided at each berth. There are 5 mobile cranes that have capacities ranging from 109MT–144 MT.

WFP and MYAP PVO's imports are generally brought in tax-free based on a tax exemption privilege, or under individual Host Country Food for Peace Country Agreements (HCFFPCA) between MYAP Cooperating Sponsors and the GoN.

Annex VI. Detailed IPP Calculations

VI.i. Thai 15% Broken Rice, CIF Niamey via Cotonou (US$)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Month/Year	Thai 15-percent broken FOB	Port Fees	Ocean Freight	Insurance	CIF, Benin	Benin Customs and Fees	Inland Freight	Customs and Other Fees, Niger	IPP Niamey	IPP Moving Average (MA)	MA +/- 10%	MA +/- 10%	Sales price	Sales Price vs. IPP
Jan-06	280.0	2.8	54.7	0.5	338.0	9.84	154.91	$58.33	**561.1**	568.74	625.61	511.86		
Feb-06	290.0	2.8	53.8	0.5	347.1	9.87	154.94	$58.58	**570.5**	570.79	627.87	513.71		
Mar-06	290.0	2.8	57.8	0.5	351.1	9.88	154.95	$58.69	**574.6**	573.06	630.36	515.75		
Apr-06	290.0	2.9	59.9	0.5	353.3	9.88	154.96	$58.75	**576.9**	578.86	636.74	520.97		
May-06	294.0	2.9	61.0	0.5	358.4	9.90	154.98	$58.88	**582.1**	584.23	642.65	525.80		
Jun-06	298.0	2.9	64.6	0.5	366.1	9.92	155.01	$59.09	**590.1**	589.70	648.67	530.73		
Jul-06	301.0	2.9	68.7	0.6	373.1	9.93	155.03	$59.28	**597.4**	595.86	655.44	536.27		
Aug-06	299.0	2.9	75.1	0.6	377.6	9.94	155.05	$59.40	**602.0**	598.71	658.58	538.84		
Sep-06	299.0	3.0	78.8	0.6	381.3	9.95	156.60	$59.84	**607.7**	598.79	658.67	538.91		
Oct-06	288.0	3.0	78.9	0.6	370.4	9.93	156.56	$59.55	**596.4**	599.99	659.99	539.99		
Nov-06	285.0	3.0	76.0	0.5	364.6	9.91	156.54	$59.39	**590.5**	602.31	662.54	542.08		
Dec-06	295.0	3.1	78.5	0.6	377.2	9.94	156.58	$59.73	**603.4**	604.30	664.73	543.87		
Jan-07	302.0	3.1	81.3	0.6	387.0	9.97	156.62	$59.99	**613.6**	610.56	671.62	549.51		
Feb-07	305.0	3.2	82.1	0.6	390.9	9.98	156.63	$60.10	**617.7**	619.09	681.00	557.18		
Mar-07	309.0	3.3	87.8	0.6	400.7	10.00	156.66	$60.37	**627.8**	628.70	691.57	565.83	538.62	86%
Apr-07	307.0	3.4	94.9	0.6	405.9	10.01	156.68	$60.51	**633.1**	637.58	701.34	573.82		
May-07	308.0	3.4	111.7	0.6	423.7	10.06	156.74	$60.99	**651.5**	647.58	712.34	582.83		
Jun-07	314.0	3.4	111.9	0.6	429.9	10.07	156.77	$61.15	**657.9**	656.99	722.69	591.29		
Jul-07	319.0	3.6	116.2	0.7	439.4	10.10	156.80	$61.41	**667.7**	669.13	736.04	602.22	545.74	82%
Aug-07	317.0	3.5	124.9	0.7	446.1	10.12	156.82	$61.72	**674.8**	684.41	752.85	615.97		
Sep-07	315.0	3.4	143.7	0.7	462.8	10.16	158.44	$62.38	**693.8**	703.04	773.34	632.74	594.36	86%
Oct-07	321.0	3.5	170.5	0.7	495.8	10.24	158.55	$63.27	**727.9**	722.24	794.47	650.02	468.75	64%
Nov-07	333.0	3.5	181.0	0.8	518.3	10.30	158.63	$63.88	**751.1**	738.84	812.73	664.96		
Dec-07	353.0	3.6	173.0	0.8	530.5	10.33	158.67	$64.21	**763.7**	765.10	841.61	688.59		
Jan-08	368.0	3.7	152.3	0.8	524.8	10.31	158.65	$64.06	**757.8**	813.45	894.80	732.11		
Feb-08	437.6	3.5	147.9	0.9	589.9	10.47	158.88	$65.82	**825.1**	918.41	1,010.25	826.57		
Mar-08	559.0	3.6	166.2	1.1	729.8	10.82	159.37	$69.59	**969.6**	1,026.85	1,129.54	924.17		
Apr-08	853.5	3.5	167.8	1.5	1,026.3	11.57	160.41	$77.60	**1,275.9**	1,103.99	1,214.39	993.59		
May-08	875.1	3.5	175.2	1.6	1,055.4	11.64	160.51	$78.38	**1,305.9**	1,161.68	1,277.85	1,045.51		
Jun-08	718.0	3.4	175.4	1.3	898.1	11.25	159.96	$74.14	**1,143.5**	1,177.90	1,295.69	1,060.11		
Jul-08	688.8	3.3	175.7	1.3	869.1	11.17	159.86	$73.35	**1,113.5**	1,126.95	1,239.64	1,014.25		
Aug-08	650.0	3.3	153.8	1.2	808.3	11.02	159.65	$71.71	**1,050.7**	1,042.33	1,146.57	938.10		
Sep-08	640.0	3.3	133.4	1.2	777.9	10.94	161.10	$71.23	**1,021.1**	965.78	1,062.35	869.20		
Oct-08	563.0	3.3	76.7	1.0	644.0	10.61	160.64	$67.62	**882.8**	891.55	980.71	802.40		
Nov-08	483.0	3.2	38.7	0.8	525.7	10.31	160.22	$64.43	**760.7**	838.42	922.27	754.58		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Dec-08	465.0	3.2	39.1	0.8	508.0	10.27	160.16	$63.95	**742.4**	794.75	874.22	715.27		
Jan-09	506.0	3.2	39.3	0.8	549.3	10.37	160.31	$65.06	**785.1**	778.70	856.57	700.83		
Feb-09	515.0	3.2	47.4	0.8	566.5	10.42	160.37	$65.53	**802.8**	781.26	859.38	703.13		
Mar-09	516.0	3.1	46.3	0.8	566.3	10.42	160.36	$65.52	**802.6**	790.53	869.58	711.48		
Apr-09	491.0	3.2	43.1	0.8	538.1	10.35	160.27	$64.76	**773.5**	798.85	878.74	718.97		
May-09	497.0	3.2	51.8	0.8	552.9	10.38	160.32	$65.16	**788.8**	805.59	886.15	725.03		
Jun-09	526.0	3.3	59.5	0.9	589.6	10.47	160.45	$66.15	**826.7**	803.72	884.09	723.35		
Jul-09	531.0	3.3	63.9	0.9	599.1	10.50	160.48	$66.41	**836.5**	805.36	885.89	724.82		
Aug-09	492.0	3.3	61.1	0.8	557.2	10.39	160.33	$65.28	**793.2**	798.47	878.31	718.62	793.43	100%
Sep-09	477.0	3.3	63.0	0.8	544.2	10.36	161.87	$65.27	**781.7**	791.79	870.97	712.61		
Oct-09	451.0	3.4	62.5	0.8	517.7	10.29	161.78	$64.56	**754.3**	796.72	876.39	717.05		
Nov-09	481.0	3.4	70.2	0.8	555.4	10.39	161.91	$65.58	**793.3**	808.73	889.61	727.86		
Dec-09	549.0	3.4	67.7	0.9	621.1	10.55	162.14	$67.35	**861.1**	817.86	899.65	736.07		
Jan-10	539.0	3.4	70.1	0.9	613.5	10.53	162.12	$67.14	**853.3**	825.61	908.17	743.05		
Feb-10	516.0	3.4	68.1	0.9	588.4	10.47	162.03	$66.47	**827.3**	820.25	902.27	738.22	813.33	98%
Mar-10	474.0	3.5	76.9	0.8	555.2	10.39	161.91	$65.57	**793.1**	797.49	877.24	717.74		
Apr-10	445.0	3.5	80.2	0.8	529.5	10.32	161.82	$64.88	**766.5**	771.74	848.92	694.57		
May-10	421.0	3.5	85.6	0.8	510.9	10.28	161.76	$64.37	**747.3**	750.22	825.24	675.20		
Jun-10	409.0	3.5	75.6	0.7	488.9	10.22	161.68	$63.78	**724.5**	739.13	813.05	665.22	600.42	83%
Jul-10	411.0	3.5	69.0	0.7	484.2	10.21	161.66	$63.65	**719.7**	740.77	814.84	666.69	621.16	86%
Aug-10	425.0	3.6	72.2	0.8	501.5	10.25	161.72	$64.12	**737.6**	747.39	822.12	672.65	652.59	88%
Sep-10	458.0	3.7	73.0	0.8	535.5	10.34	163.44	$65.39	**774.7**	765.36	841.90	688.82		
Oct-10	465.0	3.8	71.4	0.8	541.1	10.35	163.46	$65.54	**780.4**	786.88	865.57	708.19		
Nov-10	499.0	3.8	70.3	0.9	574.0	10.43	163.57	$66.43	**814.4**	801.28	881.40	721.15		
Dec-10	513.0	3.8	68.8	0.9	586.5	10.47	163.62	$66.77	**827.3**	807.92	888.71	727.13		
Jan-11	496.0	3.8	68.7	0.9	569.3	10.42	163.56	$66.30	**809.6**	810.17	891.19	729.16		
Feb-11	495.0	3.7	68.1	0.9	567.7	10.42	163.55	$66.26	**807.9**	804.35	884.79	723.92		
Mar-11	473.0	3.8	74.4	0.8	552.0	10.38	163.50	$65.83	**791.7**	795.12	874.63	715.61		
Apr-11	467.0	3.8	74.2	0.8	545.8	10.36	163.47	$65.67	**785.3**	795.38	874.92	715.84	827.93	105%
May-11	466.0	3.8	71.2	0.8	541.8	10.35	163.46	$65.56	**781.1**	800.90	880.99	720.81		
Jun-11	496.0	3.8	69.9	0.9	570.6	10.43	163.56	$66.34	**810.9**	809.78	890.76	728.80	853.17	105%
Jul-11	523.0	3.8	66.7	0.9	594.4	10.49	163.64	$66.98	**835.5**	815.90	897.49	734.31	865.925	104%
Aug-11	523.0	3.8	67.2	0.9	594.9	10.49	163.65	$66.99	**836.1**	827.48	910.23	744.73		

Overall sales performance vs. IPP for period: 91% of IPP

Key	
1	Thai 15% broken FOB, per USDA
2	Thai Port Fees: Laem Chabang International Terminal Co.,Ltd.: http://www.lcit.com/services/tariff.html - export container fees
3	Ocean Freight: estimation of shipping from Thailand-Togo. Includes Freight Forwarding
4	Insurance – 0.15%
5	CIF Togo: FOB Thailand plus ocean shipping plus insurance
6	Benin Customs and Fees: Sum various fees including port fees, customs, and Fonds de Garantie
7	Inland Freight: Africare, plus insurance estimation
8	Customs and other fees, Niger- sum of various fees, including customs, Fonds de Garantie (Niger), etc.
9	IPP: sum of items 5, 6, 7, and 8
10	IPP Moving Average (MA): Average of period IPP and IPP for the two months before and after.
11	MA + 10%: Item 10 plus 10% of its value
12	MA - 10%: Item 10 minus 10% of its value.
13	Sales Price: data from Africare
14	Sales Price vs. IPP: Item 13 divided by item 9

VI.ii. Detailed IPP Calculation for Malaysian Palm Oil, CIF Niamey via Cotonou

ID	Item	Cost
1	Price FOB Malaysia Crude Palm Oil ($/MT)*	$943.00
2	Ocean Freight ($/MT)*	$71.76
3	Insurance	$1.41
4	Subtotal - CIF (Penang, Cotonou)	$1,016.18
5	Benin Customs and Duties	$11.54
6	Inland Freight	$164.56
7	Niger Customs and Duties	$78.35
8	Total - IPP Niamey, $/MT	$1,270.62

Key	
1	FOB: Rate as of 10/26/2011. http://palmoil.com/, fob Malaysia.
2	Ocean Freight: Calculated. Speed for vessel (14knots/hour) taken from sample Handysize vessels from http://www.clipper-group.com; Days of voyage taken from http://www.searates.com
3	Insurance: Insurance Fee: 0.15% (per Kuehne & Nagel)
4	CIF Cotonou: FOB price of crude palm oil, ocean freight, and insurance.
5	Benin Customs and Duties: port fees, duties, and other fees.
6	Inland freight: rate from Africare; rate for insurance (0.35%) from Kuehne + Nagel
7	Niger Customs and Duties: includes customs, duties, and other fees.
8	IPP (CIF Niamey): Price of palm oil transported to Niamey via Cotonou. Includes CIF Cotonou, Benin Customs and Duties, Inland Freight, and Niger Customs and Duties.

Annex VII. Methodology for Determining Impact of Monetized Food Aid[9]

VII.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.

VII.ii. Analytical Process

VII.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 ~~s~~substantial" in different country and regional contexts. Official trade data is often incomplete, out-of-date, or contradictory.

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

[9] 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.

quantities; and 2) factors affecting demand and supply of commodities with which a monetized commodity would likely compete.

The following set of ~~t~~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 US 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.[10]

[10] 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

Assessment of the 5-year supply trend considers products of the same specification, or those that 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 VII.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 VII.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 displaced volume should not exceed five percent of domestic production (averaged over five years) per BEST's current guideline.

VII.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

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.

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 import[11]
- Port charges at port of entry (taxes, handling, packaging, storage, agents' fees, etc.)
- 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

[11] BEST will use CIF at port prices whenever they are available.

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.

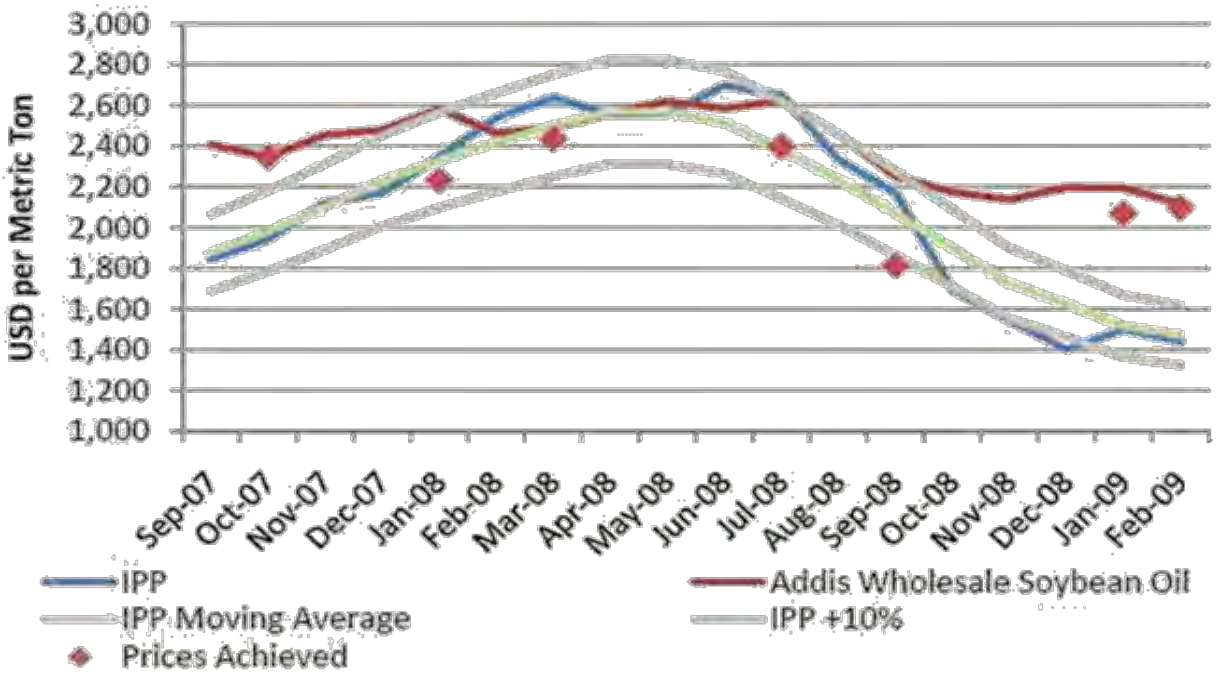
If there is little or no history of monetization sales transactions to compare with IPP, then market structure and conduct must be assessed as indicators of the potential for achieving a fair market price.

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 24. 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 49. 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 distribution.[12]

[12] 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.

VII.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 5 percent of domestic production, averaged over 5 years, per BEST's current guideline.[13] Anticipated proceeds from such a sale are presented.

[13] A threshold of 10 percent of commercial imports (5 percent of domestic production) has been used, but is 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 5 initial commodities are reviewed for potential monetization: CDSO, HRWW, NFDM, rice, and pinto beans.

Figure 50. Decision Tree

5 initial commodities considered for Monetization in Country X:

- CSDO
- HRWW
- NFDM
- Rice
- Pinto Beans

No policy restrictions prevent the importation of HRWW, NFDM, Rice, or Pinto Beans, but there are restrictions for CDSO.

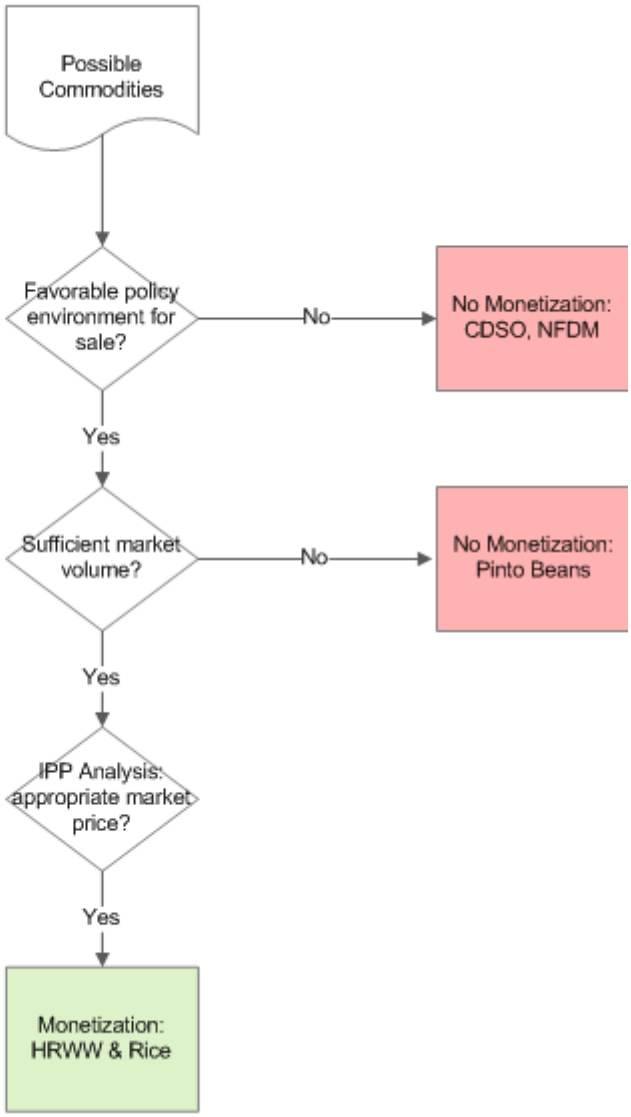
BEST research also indicates that the buyer for NFDM would probably use it to manufacture breast milk substitute, which preclude its monetization.

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 VII.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 US 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 VII.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? In general, is local or imported product cheaper?
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 VII.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 parastatals 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?*

Staatz, John, Pat Diskin, and Nancy Estes (Dec 1999*). Food Aid Monetization in West Africa: How to Make it More Effective.*

Annex VIII. Methodology for Determining Impact of Distributed Food Aid[14]

VIII.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 distributed[15] 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).[16] 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;

[14] 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.

[15] 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 behavior of beneficiary households.

[16] 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.[17] 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 (~~"l~~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 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

[17] For a review of the economic rationale, see Christopher Barrett, 2002, "~~F~~ood Aid Effectiveness: It's the Targeting, Stupid!"

targeted programs can never prevent all leakage.[18] 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.[19] 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.[20] 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 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 that are likely to influence the production and market responses to food aid. The analysis focuses on three inter-related

[18] For more background on targeting, see Hoddinott (1999), Barrett (2002), and EU/FAO (2008).

[19] 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 ~~-s~~ubstantial" will rest with the informed judgment of the relevant USG decision-maker (typically the USAID Mission Director).

[20] 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.

subject matters: needs assessments, effectiveness of targeting, and analysis of markets that are critical for food security. An overview of a standard analytical process follows.

VIII.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.[21] 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 ~~l~~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 that 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 has often used an estimated national food deficit to determine 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

[21] If commodities considered for distribution are highly substitutable for 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.

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.[22]

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 VIII.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.

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 indicators(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:

[22] 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.

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 that 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 ~~"f~~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 VIII.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 commodities 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 that 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 Theory[23] to the realities of markets in developing countries.[24]

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, 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 that substantially diminishes the purchasing power of households, though an equilibrium, has undesirable social outcomes that 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 that 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.**

[23] See Bain (1959).

[24] 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).

Basic conditions broadly describe basic traits of the country and economy, including seasons and seasonality, infrastructure, consumption characteristics such as elasticities[25] and income distribution, stability, government policies, and incentives for producers and traders.

Basic conditions set the parameters for **market structure**, which is composed of 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 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

[25] 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).

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 traders[26] 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 ~~-o~~n 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.

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.

[26] When 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.

Annex VIII.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.27

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?

[27] 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 ~~l~~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 ~~i~~inferior good," one consumed in disproportionately greater quantities by the poor?

Annex VIII.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 Score[28] (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

[28] 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 Consumption Score in Food Security Analysis", accessible via

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 that 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.[29]

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.[30]

Extreme poverty

Poverty is the best indicator of access-driven food insecurity. Extreme poverty is an indicator that a household is unable to meet its basic nutritional requirements. This is because households living under conditions of extreme poverty simply do not have enough money to purchase sufficient foods for meeting the energy and nutrient needs of all of their members. Such households can be described as ―food poor." 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.[31] However, extreme poverty is not a quantitative measure of a nutrition gap that can be used to determine the extent to which a proposed food aid ration might fill (or potentially overfill) that gap. Nevertheless, households living in extreme poverty can reasonably be considered households for whom food aid would likely represent additional consumption.

Prevalence of malnutrition in children

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.

[29] 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.

[30] 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.

[31] 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.

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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FEWS NET(May 2008). *Structure-Conduct-Performance and Food Security*. FEWS NET Market Guidance No. 2.

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